



Equity Valuation of PANDORA

By

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Abstract

This dissertation presents the valuation of PANDORA A/S, traded in the Nasdaq Copenhagen Stock Exchange. For the purpose of the dissertation, first we discuss the different valuation methods, their advantages and disadvantages. As a result, for the valuation itself the DCF method and Relative Valuation were chosen. When applying the DCF valuation method we forecast an enterprise value for PANDORA of DKK130.558 million, an equity value of DKK131.848 million. Thus, the price per share is DKK1.014. Based on this target price PANDORA is undervalued since the current market price is DKK600.50. Additionally, a sensitivity analysis to the riskier components of the valuation was performed to account for the uncertainty tied to the industry and the markets where the company operates. Finally, the price target was compared to the valuation performed by J.P. Morgan Cazenove, published in February 2015, where the recommended price target is DKK650. Even being the conclusion the same, we compare the different assumptions of both models that led to different price targets.

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List of Abbreviations

APT	Arbitrage Pricing Theory
APV	Adjusted Present Value
ASP	Average Sales Price
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditure
CAPM	Capital Asset Pricing Model
COGS	Cost of Goods Sold
DCF	Discounted Cash-Flow
DDM	Dividend Discount Model
DPS	Dividend per Share
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
EV	Enterprise Value
FCF	Free cash flow
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to the Firm
GDP	Gross Domestic Product
LFL	Like-for-like
NWC	Net Working Capital
NIBD	Net Interest Bearing Debt
OW	Overweight
PVTS	Present Value of Tax Shields
P/E	Price-to-Earnings Ratio
Rf	Risk Free Rate
ROIC	Return on invested capital
VAT	Value-added tax
WACC	Weighted Average Cost of Capital
YTD	Year to date
YoY	Year over Year

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1. Introduction

Over the past few years, the world has experienced a major financial crisis that was followed by a global recession still affecting many economies. In fact, it was considered for most of the experts the worst of the post-war era. During the crisis, the economy struggled and, especially in Europe, the real economy was strongly affected.

In this scenario, a couple of countries in Europe, namely in Northern Europe where countries like Denmark decided to stay out of the Eurozone and let the Krona float freely, had become pockets of resistance where the impact of the recession has been felt less than elsewhere and founded their way to growth. Motivated by searching a growing company in this scenario, PANDORA A/S (“PANDORA” or “company”) appears like an enthusiastic company with a promising future.

The present dissertation is subject to the Equity Valuation theme. Therefore the dissertation’s purpose is to value PANDORA, by carefully presenting the assumptions and adjustments required to establish the fair price target for the company.

The structure of this dissertation is as follow. Firstly, the literature review in Section 2 analyzes the main topics on equity valuation through the discussion of different theories and its usage in the valuation of the chosen company. Section 3, gives some insides over the industry where PANDORA is inserted and Section 4 contains the company overview. Finally, Section 5 contains the valuation of the company along with the corresponding price target and a recommendation, where it is also explained the difference between the value for the company and the one published by a leading investment bank.

2. Literature Review

According to Damodaran (2006) “valuation lies at the heart of much of what we do in finance”. Valuation is one of the most discussed topics within the financial world and it plays a key role in transactions and companies’ decisions. However, it can mean different things to different people. Over the years different authors have defined valuation and presented how to compute the value of a specific business using different approaches, ranging from the simplest to the most complicated method but sharing some common characteristics. Thus, in this chapter we will discuss the most well-known methods used in finance including the consistency of the assumptions and their main advantages and disadvantages, then concluding which is the most appropriated on valuing PANDORA.

2.1. Valuation Methods Overview

Over the last years the importance of the valuation of business has been increasing. For the owners and investors it is crucial to answer to the following questions: “How much is the business worth?” and “How it can be more valuable?”. The answer to these questions has changed motivated by different growth drivers and ambitions but the valuation methods have remain very stable.

For the purpose of this dissertation we will use the segregation mentioned by Damodaran (2002) and Young et al. (1999) according to which there are three approaches to valuation.

The first, Cash Flow Based Valuation, relates the value of the asset to the present value of the expected future cash flows on that same asset. In this case cash flows are discounted at a risk-adjusted discount rate, usually Weighted Average Cost of Capital (WACC), to arrive at an estimate of value.

The second, relative valuation, estimates the value of the asset by looking at the pricing of the comparable assets relative to a common variable such as earnings, cash flows, book value or sales. This method is commonly known as multiples.

According to some empirical studies the Discounted Cash-Flow (DCF) approach outperform when compared to the multiple valuation method. In this context, the findings of Kaplan and Ruback (1995 and 1996) suggest that both the DCF and the multiple approaches add relevant information to the company valuation. However, DCF method appears to produce lightly better results. Nevertheless, given today’s economic environment, forecasting revenues and cash flows for a long period seems to be more difficult. As a result, the combination of both methods gives an extra inside about the true value of a company. Finally, the third method, contingent claim valuation, uses option pricing models to measure the value of assets that share option characteristics.

This method is often called real options and was initially used to value traded options but there has been more recently an attempt to extend the reach of these models into more traditional valuation.

Young et al. (1999) states that no single approach is expected to be consistently more reliable than others. Thus, it is important to take into consideration the available data, the nature of the company and the assumptions of each model to ensure that we use the most appropriated method.

2.2. Discounted Cash Flow model

The basic cash-flow based models are WACC, Adjusted Present Value (APV) and Dividend Discount Model (DDM model), all of them presented later in detail.

The DCF valuation is based upon expected future cash flows and discount rates. As so, this approach is to be used for companies whose cash flows are currently positive and can be estimated with some reliability for future periods and expected to remain positive. The mentioned assumptions are an important limitation of the models.

The DCF model outputs the enterprise value and the equation is as follow:

$$(1) \text{ Enterprise value} = \sum_{t=1}^n \frac{FCFF_t}{(1 + \text{discount rate})^t} + \frac{FCFF_{n+1}/(\text{discount rate} - g)}{(1 + \text{discount rate})^n}$$

Additionally to the cash flows forecast the important features to compute the enterprise value are: terminal growth rate (g), explicit period (n) and which discount rate to use, all being developed in the following chapters.

The method is based on the work produced by Modigliani and Miller (1958) where the authors argue that the firm's value should be the division of the expected profit before deduction of interest by the rate of return of the company. As a matter of fact, after this approach many academics developed a cost of capital that takes into account the different capital employed in the firm.

2.2.1. Cash Flows

The value of an asset comes from its capacity to generate cash flows. The first step is to estimate the earnings generated by a firm, the second is to estimate the portion of this income that would go towards taxes and finally, the third is to develop a measure of how a firm is reinvesting back for future growth (working capital and capital expenditure). This approach demonstrates the sum of the cash flows to all claimholders in the firm.

The Free Cash Flow to Equity (FCFE) reflects the equity value of a company and how much cash being generated by company's operations a firm can afford to return to its stockholders.

$$(2) \text{ FCFE} = \text{Net Income} + \text{Depreciation \& Amortization} - \Delta \text{Net Working Capital} \\ + \text{Net Debt Flows} - \text{Capital Expenditure}$$

FCFE Model is also known as a model that discount potential dividends instead of actual dividends (DDM Model detailed later).

The Free Cash Flow to the Firm (FCFF) is basically the FCFE not deducted from the net debt payments or taxes, Copeland et al. (2000), so being based upon after-tax operating earnings.

$$(3) \text{ FCFF} = \text{EBIT} (1 - \text{Tax rate}) + \text{Depreciation \& Amortization} \\ - \Delta \text{Net Working Capital} - \text{Capital Expenditure}$$

The differences between FCFF and FCFE arise primarily from cash flows associated with debt. Net debt payments might be important for some models where interest tax shield is a distinctive part of value, for instance, when the future tax savings is risky because the company may become non-taxpaying.

Put simply, as referred by Damodaran (2006) one way to approach DCF valuation is to value the equity stake in the business, usually called equity valuation, considering the cash flows after debt payments and reinvestments, FCFE and discount at cost of equity. The alternative to equity valuation is to value the entire business that is obtained by discounting the FCFF at the weighted average cost of capital. The last is known as Firm DCF model and takes into consideration the tax benefits of debt and expected additional risk associated with debt.

2.2.2. Discount Rate

To measure the value of operations, we should discount each year's forecast of free cash flow for time and risk. Koller et al. (2010) state that in any company free cash flow must be available to all investors and consequently, the discount factor must represent the risk faced by all investors.

Independently of the DCF model chosen, the essential is that they all need a discount rate. A key insight from finance theory is that the use of capital imposes an opportunity cost on investors since funds are diverted from earning a return on the next best equal-risk investment. As referred by Bruner et al. (1998) since investors have access to a host of financial market opportunities, corporate uses of capital must be benchmarked against these capital market alternatives. The cost of capital provides this benchmark.

The discount rate takes into account the time value of money and the risk or uncertainty of the future cash flows.

Accordingly, it should always compensate the investor for the opportunity cost of investing in a particular asset instead of another with the same risk and time condition Copeland et al (2000).

The discount rate should be applied accurately to the specific case of each company and to the cash flows to be computed. Thus, depending on the origin of the cash flows, from equity or debt, they should be discounted respectively to the cost of equity or the cost of debt.

2.2.2.1. Cost of equity

Several methods are available to calculate the cost of capital for a specific investment. Three of the more common models are Capital Asset Pricing Model (CAPM), Fama-French Three Factor Model and Arbitrage Pricing Theory (APT).

Using the portfolio theory, Sharpe (1964) placed risk into two categories, systematic risk and unsystematic risk. Systematic risk referred to as Beta (β), is the risk of being in the market, and cannot be diversified. Unsystematic risk is the risk that is specific to each individual company

CAPM comes from capital markets and assumes that prudent investors will eliminate unsystematic risk by holding large and well-diversified portfolios. The CAPM model assumes that there are no transaction costs, all assets are traded, investments are infinitely divisible and there is no private information. Thus, the cost of capital that is the rate of return that investors require to invest in the equity of a company can be defined as follow:

$$(4) r_i = r_f + \beta_i(r_M - r_f)$$

To use the CAPM model we need three inputs, namely, r_f that is the risk free rate, $r_M - r_f$ is the risk premium and β represents the systematic risk a specific asset has when compared to the market, which has a systematic risk of 1. Then, according to Sharpe (1964) the expected rate of return demonstrates a constant relationship between expected return and systematic risk.

Although, Fama and French (xxx) demonstrate that the CAPM model is too simple and that other variables should be added to the model to find the correct rate of return, namely size, book to market and momentum. On the other hand, the APT model is built on the simple idea that two investments with the same exposure to risk should be priced to earn the same expected return.

Additionally, as mentioned by Bruner et al. (1998) the cost of capital should be the current costs reflecting current financial market conditions, not historical or sunk costs to allow to equal the investors' anticipated internal rate of return on future cash flows.

However, based on the results of Kaplan and Ruback (1995 and 1996) that run evidence that DCF valuation methods provide reliable estimates of market value, CAPM will be the method explained in this literature review and used later on for PANDORA's valuation.

a) Risk Free

According to Damodaran (2008b, 2010b) some asset might be considered as risk free if they met several conditions, namely no default risk, which generally implies that the security has to be issued by a government and no uncertainty about reinvestment rates which implies that there are no intermediate cash flows (zero coupon bond). In this context, a risk free investment that requires neither default nor reinvestment risk is long term government bond rates: default-free zero coupon.

Ideally, the risk free asset should be adjusted for each cash flow in different periods. However, this is not completely feasible. Then, to choose the government bond to use it is important to match up the maturity with the cash flows occurrence as much as possible. According to Koller et al. (2010) an investor should look for long-term government bonds in the use of a risk free rate.

Typically, US or German bonds can be considered as default-free government bonds for US valuations and European valuations, respectively. However, as Koller et al (2010) highlight it is crucial to use government bonds yields denominated in the same currency as the firm's cash flows.

Nowadays, after the sovereign-debt crisis it becomes harder to find what can be called a risk free asset. Nevertheless, the most famous Rating Agencies (Fitch, Standard & Poors and Moody's) publish regularly the ratings of each country sovereign debt that can be used to define which ones are the riskless assets.

In Europe, the standard and the most suitable approach would be German government bond adding up the default risk premium related with the rating of the country at the time of the valuation. Thus, in PANDORA's valuation the German Bonds cannot be used since PANDORA's Cash flows are in Danish Krone (DKK). Thus, according to Damodaran (2010b), one should consider the Danish bonds added up with default risk premium.

b) Beta

The CAPM relates the expected return on a stock to its beta, the systematic risk or non-diversifiable. So, the accuracy of the cost of equity estimates relies on the accuracy of the beta estimate. It seems reasonable to consider that a company use both debt and equity to finance its assets which has profound implications in the likelihood of the equity investors in case of bankruptcy. Hence, it is necessary to consider two CAPM' equations depending on the mix structure of the firm, levered or unlevered.

Later in this literature review we will confirm that the levered formula should be used in the WACC method, where we assume that the company has a mix capital structure, and that the unlevered equation should be used in the APV method where the firm is only equity financed.

$$(5) r_e = r_f + \beta_{lev}(r_M - r_f)$$

$$(6) r_u = r_f + \beta_{unlev}(r_M - r_f)$$

If we assume that the debt carries no market risk, thus having a beta of zero, according to Damodaran (2002) the beta of equity alone can be defined as a function of the unlevered beta and the debt-equity ratio:

$$(7) \beta_{lev} = \beta_{unlev} \left(1 + \frac{D}{E} (1 - \text{tax rate})\right)$$

As we have seen, beta is a standardized measure of the risk that an investor adds to the market portfolio and statistically this added risk is computed by the covariance of the market with the asset. The computation of a beta is defined by Ross (1976) as the covariance of an investment and the market performance, normalized by the variance of the market return. After, Koller et al. (2005) defines the computation of the beta as a simple regression between the company stock returns and a diversified portfolio.

Furthermore, the beta represents the only firm-specific input in the CAPM model and the only one requiring estimation. As so, one can conclude that the only reason for a firm to have a different expected return from another is because both have different betas.

Damodaran (2002) refers three different approaches for the computation of beta.

First, the historical market beta that is a common approach for publicly traded companies, where one estimate returns that an investor would have made investing in an equity interval, such as a week or month, and then related to the returns on an equity market index. However, as mentioned by the author the length period estimation, the definition of the return period and the chosen market index used to compare can be difficult.

On the other hand, one can also use a service beta. The beta provided by Bloomberg is one of them and have the particularity of given details about the computation of the adjusted beta, which is estimated as follows:

$$(8) \beta_{adj} = \frac{2}{3} \beta_{equity} + \frac{1}{3} \beta_{market}$$

Bloomberg uses price appreciation in the chosen stock and the market index in estimating betas. However, they ignore dividends which can have a huge impact in companies that pay no dividend or when the dividends are significantly higher than the market.

On the other hand, the usage of the adjusted beta of Bloomberg is very important particularly in cases where comparison with comparable peers is not possible.

Nevertheless, one of the issues of the historical betas is that is depending on the firm's financial leverage in the past that can diverge from future options.

The second approach is the fundamental betas that rely less on historical betas and is more on intuitive underpinnings of betas. In this case, the author presents another way to compute the beta, called Bottom-up Beta, where there is no need to use past prices.

This approach includes the following process as defined: 1) identifying the business that make up the firm, 2) estimate the average unlevered betas for publicly traded firms, peer group of the company, 3) calculate the unlevered beta for the firm and take a weighted average of the unlevered betas using the proportion of firm value derived from each business as the weights, 4) calculate the current debt to equity ratio for the firm using market values if available and, finally, 5) estimate the levered beta for the equity in the firm using the unlevered beta and the debt to equity ratio computed before.

Finally, the third approach is to estimate the beta of a firm or its equity from accounting earnings instead of the traded price. However, this approach is not recommended due to the possible manipulation of the accounting earnings, the impact of non-operating factors in the accounting earnings and the time frame of measurement, usually quarterly.

c) Risk premium

Equity risk premium is one of the master pieces of CAPM theory and the perspective to this subject has changed over time. Finance theory says that equity market risk premium should equal the excess return expected by investors on the market portfolio relative to riskless assets. However, measures expected future returns on the market portfolio is one of the problems left to solve. According to Sharpe (1964) the risk premium in the CAPM measures the extra return that would be demanded by investors for shifting their money from a riskless investment to the market portfolio or risky investment, on average.

In CAPM model, one of the assumptions is that the market is a perfect benchmark having a beta of 1, thus making the price of risk simply the difference between the market return and the risk free rate.

Damodaran (2011) consider three approaches to estimate the equity risk premium, namely, survey investors and managers to get a sense of their expectations about equity returns in the future, historical approach and implied premiums.

The first approach is, according to Damodaran, the one that has weaker prediction power. The historical premium approach, which remains the standard approach to estimating equity risk premiums, is simple.

However, this method has some important limitations and the author points out three reasons: different time periods for estimation, differences in risk free and market indices and differences in the way in which returns are averaged over time.

Even if an investor agree that historical risk premium are the best estimates of future equity risk premiums, one can still disagree about how far back in time to go.

The second issue is based on the risk free chosen, because the risk premium is larger when estimated relative to short term government securities than when estimated against long term bonds. In relation to this topic, Damodaran conclude that the risk free rate chosen in computing the premium has to be consistent with the risk free rate used to compute the excess return. Finally, analyzing the consensus in corporate finance and valuation theory the argument for using geometric average premiums as estimates seems stronger.

The problem with any historical premium approach is that is backward looking. Thus, Damodaran propose a new approach, implied equity premiums by equity prices, assuming that the market, overall, is correctly priced, reflecting a forward-looking approach.

Bruner et al. (1998) conducted a survey concluding that most of the best-practice companies' use a premium of 6% or lower and Koller et al. (2010) argue that the market risk premium should be in between 4.5% to 5.5% range.

2.2.2.2. Cost of debt

According to Hitchner (2006) the cost of debt is the actual rate a company pays on interest-bearing debt, the pretax cost of debt, assuming that the company is borrowing at market rates. It is the theoretical cost that the company should bear to issue new debt. However, when there is long-term debt, the rates being paid now may differ from the prevailing market due to changes in required yields on debt of comparable risk.

Since the interest paid on debt instruments is tax deductible, the cost to the company does not include this part. The after-tax cost to the company represents its effective rate.

$$(9) \text{Cost of debt} = r_f + \text{Default spread}$$

2.2.3. Time frame

An important part of DCF valuation is how to estimate when the firm will reach “stable growth”. When doing a DCF valuation, at a certain point predicting year-by-year, called the explicit period, becomes impractical. As so, when the key drivers of the valuation are considered to be stable it is possible to use perpetuity based continuing value, Koller et al (2010). The same authors recommend a use of an explicit period of 10 to 15 years. However it's difficult to forecast for such a long period. Nevertheless, explicit period should be just enough to allow the company to reach a steady state.

Additionally, Myers (1974) proved that increasing the number of years of projections can decrease the error incurred in the assumptions, especially in the case of an incorrect discount rate. Hitchner (2006) defines terminal value as the value of the business after the explicit or forecast period. The terminal value, generally referred as residual value, is of considerable importance as it often represents a substantial portion of the total value of any company.

The perpetual growth rate used in terminal value should be aligned with the GDP long-term growth rates or inflation where the company being evaluated is inserted.

On this subject, Kaplan and Ruback (1995) mentioned that the terminal value can be obtained using a terminal capital cash flow and assuming a constant nominal growth rate in perpetuity. The authors argue that the company will be, in this case, in what one can call stable growth. Thus, the cash flow should be normalized when the company is in a situation of constant and equal investment, meaning that the CAPEX equalize the Depreciations and Amortizations.

2.2.4. Growth rate

The most popular view nowadays is that a company must grow to survive and prosper. However, growth creates value only when a company generates returns on invested capital Koller et al. (2010). How to achieve the balance between the two aspects is critical.

The average industry revenue growth changes considerably across industries and drivers are different. Koller et al. (2010) consider three main components in the overall growth rate: Portfolio momentum, market share performance and mergers and acquisitions. Portfolio momentum is the organic revenue growth a company enjoys because of the overall expansion in the market segments represented in its portfolio whereas market share performance is the organic revenue growth a company records by gaining or losing share in any particular market.

Sustainable growth is difficult to accomplish because most product markets have natural life cycles. Growth can accelerate as more people want to buy the product, until it reaches its point of maximum penetration Koller et al. (2010). However, as highlighted by Damodaran (2006) the growth rate used in the model has to be less than or equal to the growth rate in the economy.

In the specific case of PANDORA, a company that is still expanding to new markets and launching new products it seems reasonable to consider that the company remains as a growing company far from its maximum penetration in the market.

According to Hitchner (2006) there is often a need to identify companies capable of “sustainable growth” that is, a level of continued growth that a firm can reasonably be expected to sustain over the long term. As a long-term sustainable growth one can use between 3 and 6 percent, depending on the underlying characteristics of the company and its future prospects.

On the other hand many analysts use the anticipated inflation rate, which has average approximately 3 percent historically assuming no real growth in the underlying business

The expected growth rate in earnings and cash flows is a key input when valuing a company, Damodaran (2008a). The same author present several alternative to try to estimate the expected earnings growth.

The first is by looking at the historical growth, which raises some problems since it is by definition a backward looking approach. Second, for publicly traded firms one of the most common sources of expected earnings growth rates is to look to the equity research analysts who follow the firm, which could be biased and present some substantial error. Finally, the author looks into the fundamentals of growth, reinvestment and the return on capital on these investments or improved efficiency. So the expected growth rate is defined as the reinvestment rate multiplied by the return on capital.

Thus, for the purpose of PANDORA's valuation and assuming that the company will reaches steady state after a certain number of years and starts growing at a stable growth rate after that, g_s , the value of the firm can be computed as in formula (1).

2.2.5. Models description

2.2.5.1. WACC

The WACC blends the rates of returns required for both of debt holders and equity holders since the different sources of financing required a different return. WACC is an average figure used to indicate the cost of financing a company's asset base. Thus, WACC should be used in companies that are financed with debt and equity and is defined as follow:

$$(10)WACC = Re * \frac{E}{D + E} + Rd * \frac{D}{D + E} * (1 - t)$$

Where:

Re - cost of equity,

Rd - cost of debt

E – Market Value of the firm's equity

D – Market Value of the firm's debt

T – Tax rate

Academics and investors have a strong preference for WACC-based models, considering that the discount rate WACC works best when a company maintains a relatively stable debt-to-value ratio.

There are different assumptions about the debt level. Modigliani and Miller (1963) assume that the level of debt is constant. Therefore, the value of the WACC is constant over time. On the other hand, Miles and Ezzel (1980) and Harris and Pringles (1985) assume that the level of debt is rebalanced continuously so as to maintain a constant debt ratio. Moreover, as the level of debt is always proportional to the value of the unlevered firm, the expected return on the tax shield is the same as the cost of capital of the unlevered firm which implies a constant WACC.

2.2.5.2. APV

Modigliani and Miller (1958) develop the model assuming that a company's choice of financing structure will not affect the value of its economic assets. Only market imperfections, such as taxes and distress costs affect the company's value. However, the ideal world defined by the authors is not completely true. Then, as taxes exist the valuation of a company may need to account for changes in ratio of debt relative to value, because it keeps changing over time.

The DCF model usually discounts the future cash flows at a constant WACC. However, if the company planned to change its capital structure significantly, namely by paying down the debt as cash improves, is lowering their future debt-to-value ratios. In these cases we should turn to an alternative model, APV that separates two different components: the value of tax shields from debt financing and the value of operations as if the company were all equity financed.

Cooper and Nyborg (2007) explain the APV model by first assess the firm's unlevered value, meaning discounting the firm's operating FCF at the unlevered discount rate and then making a separate calculation of the present value of the debt tax shields. The way to compute the present value of tax shields (PVTs) is to multiply the corporate tax rate by the market value of debt.

In simple terms, the APV approach considers the value of the company without debt and then adding debt to the firm we should consider the up and down side of debt, thus including tax benefits since interest expenses are tax deductible and the increase in bankruptcy costs, as follows:

$$(11) \text{Value of the business} = \text{Value of the business 100\% equity financing} \\ + \text{PV of expected tax benefits of debt} - \text{expected bankruptcy costs}$$

If a company's debt-to-value is expected to change it is recommended to use the APV model that specifically forecasts and values any cash flows associated with the capital structure separately, rather than embedding their value in the cost of capital Koller et al. (2010)

When using this model, the assumption is that the company is completely equity financed and the discount rate should be the unlevered cost of equity. Nevertheless, is important to state that when applied correctly, APV or WACC method reach identical values, in the majority of the cases.

2.2.5.3. DDM

The simplest model for valuing equity is the DDM model and its primary attraction is its simplicity and its intuitive logic. As point out by Damodaran (2006) the only cash an investor receive from a firm when buy publicly traded stock is the dividend. Then, the value of a stock is the present value of expected dividends on it.

The model consists in two types of cash flows, the dividends during the period an investor holds the stock and an expected price at the end of the holding period. However, since the expected price is itself determine by future dividends, the value of a stock is the present value of dividends through infinity. Thus, the DDM model follows the following equation that reflects the expected dividend per share (DPS) and the cost of equity:

$$(12) \text{ Value per share of stock} = \sum_{t=1}^{t=\infty} \frac{E(DPS_t)}{(1 + Re)^t}$$

There are two main inputs in this model, cost of equity and expected dividends. The cost of equity is usually computed through the CAPM. To obtain the expected dividends per share one must make assumptions about expected future growth rates in earnings and payout ratios. In this sense, Gordon developed the Gordon Growth Model that can be used to value a firm that is in “steady state” with dividends growing at a rate that can be sustained forever, and is the simplest one but is too dependent on the inputs for the growth rate.

However, this model can only be used in firms where an investor is expect for a limited number of stable and high-dividend paying stock. On the other hand, the DDM model is based upon the premise that the only cash flows received by stockholders are dividend. However, stockholders can afford also the cash flows left over after meeting all financial obligations, including debt payments and after covering capital expenditure and working capital needs. In this case the DCF model is more accurate.

Comparing the DDM model with FCFE model one can obtain the same value under two conditions. The first, when dividends are equal to the FCFE and the second when the FCFE is greater than dividends but the excess cash (FCFE minus dividends) is invested in projects with Net Present Value of zero.

As mentioned, DDM Model is a simple model to value directly the equity stake in a company but it presents severe limitations. The most relevant one is related with dividends manipulation. Being based in dividends the valuation can be biased since companies can chose to hold back cash and do not distribute dividends to build large piles of cash in their balance sheet.

On the other hand companies can also chose to distribute always the same amount of dividends to shareholders in order to not disappoint shareholders even if they are not generated through cash flows from the company but instead from raise of debt. In this case, the valuation through DDM model would be too optimistic. As a result, this model will not be used to value PANDORA.

2.3. Multiples Model

One alternative to discounted cash flow models is relative valuation or multiples. Damodaran (2008a) defined relative valuation as an approach to find assets that are cheap or expensive relative to how similar assets are being priced by the market in the moment. Moreover, Koller et al. (2010) argue that multiples are a very useful tool to understand the expectations of the market about the industry and the companies. Following the same line of thoughts, Fernández (2001) argues that multiples valuation should be used after applying another valuation model to analyze the information and the main differences between the company being valued and its comparable firms. Many other authors agreed with this idea, and so multiples as valuation method will only be used as a complementary method for PANDORA's valuation.

According to Damodaran (2006) a comparable firm is one with cash flows, growth potential and risk similar to the firm being valued. This approach becomes more difficult to apply when the sector of activity is very fragmented or composed by few firms. By using a group of comparable companies one can place the DCF model in the proper context. If the market is, on average, correct the DCF valuation and relative valuation should converge in the conclusion.

However, applying multiples valuation method can be a challenge. Not only we need to choose the most suitable peer group for the company but also which multiple to use.

According to Goehart et al. (2005) the first step is to identify the company's industry players and then apply the four basic principles to have proper multiples: use peers with similar prospects for ROIC and growth, use forward-looking multiples, use enterprise-value multiples as they are less susceptible to manipulation by changes in capital structure.

Also, Liu et al. (2001) provided some additional evidence on forward-looking multiples concluding that they are more accurate than historical multiples which might seem coherent because expected future cash flows reflect better the future prospect of the company than historical cash flows.

One of the important justifications for paying higher values, or multiples, of earnings or book value for some firms than others is the growth rate expected for future cash flows, Damodaran (2008).

Generally, there are two types of commonly used types of multiples analysis, comparable transactions and multiples for publically listed companies. In the first, the valuation occurs looking to transactions that have taken place in the market for comparable companies. However, multiples for publically listed companies seems more appropriated for PANDORA since it is a public listed company and it is possible to find some comparable listed companies.

Thus, there are different multiples and the most commonly used are the Enterprise Value (EV) to EBITDA and Price-to-Earnings ratio (PER).

EV-to-EBITDA is considered for several authors to be a good multiple when compared to others, since it is less susceptible to changes in the capital structure of the firm and to non-operational cash-flows like amortizations and depreciations and extraordinary debt payments. On the other hand, PER despite being one of the most used multiples have received some critiques. First, PER considers earnings, an accounting figure that might be different from country to country when applying different accounting rules and they change over time. Second, it includes non-cash items and does not take into consideration the capital structure of the companies. Moreover, it only applies for companies with positive Earnings Per Share (EPS)

Thus, for the purpose of PANDORA's valuation we will use both mentioned multiples.

Saying that, after the peer group formation and all the assumptions met apply multiples is a simple task. It is just the multiplication of the operational indicator that we chose to use for the peer group multiple. To illustrate the EV-to-EBITDA and PER formulas are presented below:

$$(13) \text{ Enterprise Value} = \frac{EV^{peer\ group}}{EBITDA} * EBITDA^{firm}$$

$$(14) PER = \frac{Market\ value\ per\ share}{Earnings\ per\ share}$$

2.4. Real Options model

Scholes and Merton developed a model that avoids the need to estimate either future cash flows or the cost of capital. The model relies on a replicated portfolio for securities. Given the success of this approach more recently there have been attempts to translate the concepts of replicating portfolios to corporate valuation. As long as one can find a suitable replicating portfolio, there is no need to discount future cash flows. However, replicating portfolios for companies and their projects are difficult to create and today's applications are limited. Frequently this model is used in Oil & Gas industry or mining companies. As so, for the purpose of this dissertation this model will not be used.

2.5. Multinational companies' valuation and emerging market's valuation

Valuing companies that spread their business into different countries or segments present additional challenges to valuation. Furthermore, if a company is present in emerging markets, something that comes immediately to mind is the expected existence of an additional risk. Some of the risks associated with those countries are related with war, corruption, expropriation and the volatility associated can damage the operating results of the company. However, within the academics and finance world there is no consensus on how to adjust these risks.

Damodaran (2004) admits the use of a country risk premium that should be added to the market risk premium in order to adjust the discount factor since the country risk premium cannot be, according to the author, diversifiable. To estimate the risk premium one could use sovereign ratings provided by Rating Agencies. On the other hand, Koller et al. (2010) recommend the adjustment of cash flows rather than adjusting the discount rate as proposed by Damodaran since they believe that the country risk premium can be diversifiable.

Additionally, if a company has different business segments what one could expect is an impact on the beta of the company. Another particular question is related with the tax rate to use or the currency or exchange rate to valuing the company.

As Damodaran (2009) mentioned, the different risk, growth and cash flow profiles of the cash flow streams generated by multinational companies requires us to reconsider how to estimate discount rates and approach valuation.

One of the approaches is to consider the company as a whole, using the weighted average of the risk parameters and consider the consolidated cash flows. However, this approach can easily fail since the inputs in the discount rate and cash flows can have themselves differences within the countries. As so, the author presented us "The light side of valuation" where the computation and assumptions for the inputs in the DCF model are modified in order to include all the characteristics of multinational firms. If the information is available one should use the disaggregated figures to value the business separately.

The second alternative that Damodaran presents is to use the relative valuation, trying to find comparable firms, but within the segments or countries in which the company operates. As so, the author has developed some best practices in what concerns with the main inputs to the model to this specific type of valuations.

Taking this into consideration for PANDORA's valuation, due to the lack of information available related to different geographies where the company operates namely in terms of costs and investments, the valuation will be performed considering the company as a whole and the discount rate will be computed as if the company don't operate in emerging market.

However, higher discount rate and different revenues will be taken into consideration out in the sensitivity analysis to have a better look to the impact in the company.

2.6. Conclusion

After seeing the most relevant literature review it is possible to conclude which are the best models to apply in the case of PANDORA's valuation, in accordance to their characteristics.

In terms of Cash Flow based models, DCF method is the method chosen to use to value PANDORA since the company has a very stable capital structure. Moreover, when applying the DCF method we will take into account reasonable scenarios in addition to the base valuation case to understand the impact of critical variables on the price target of the company.

The explicit forecast period considered will be just the enough to account for all the expected operational changes in the company and take into consideration the strategic objectives and investment plans.

The APV method will not be used since it applies best when companies are expecting some changes in their capital structure, which is not the case of PANDORA. Also the DDM model presented before was not chosen to apply in case of PANDORA because it is easily manipulated by companies' decisions. A company might decide to pay constant dividends over the year not supported by operational results or by holding back cash to build large pills of cash in the balance sheet without distributing dividends. Moreover, PANDORA's dividend policy is expected to change, since PANDORA announced higher dividends in the following years.

Additionally, we will use the relative valuation based on forward looking multiples, the ones considered to be more acceptable. The multiples chosen are Enterprise Value to EBITDA ratio and Price Earnings ratio. First, is an easy method to use and allows us to have a good understanding of the industry and PANDORA's main competitors. Second, this method could help us to validate the conclusions of other methods. Nevertheless, we need to bear in mind that this valuation method assumes market efficiency and it relies on the chosen peer group, which can have a huge impact on the final conclusion.

3. Industry Review

3.1. Luxury goods industry

The luxury goods industry embrace companies with a value chain that starts in development, production, distribution, market and finally selling apparel, jewellery, watches, leather goods and accessories.

The definition of luxury is not easy to agree on. In fact, in the recent past this definition has become even harder since companies are expanding many luxury items into the hands of masses through lower prices. However, the industry itself is frequently defined according to the luxury pyramid that consists of three different segments.

First, the absolute luxury segment is characterized mainly by storied heritage, exclusive distribution, highest quality product and the highest price in their respective category. The positioning is to generate a sense of exclusivity and uniqueness where the brand's emotional environment attached is extremely important and advertising is not used. As a matter of fact, Europe has a higher concentration of absolute luxury brands. Some well-known examples placed in this segment will be Hermes and Brioni. In terms of price segment it would be higher than \$3.000 price tag.

Second, aspirational luxury segment, sits in the middle of the pyramid and is more concentrated in distinctiveness and more convenient prices. In this case, advertise plays a support role in the communication of the brand that is driven by public relations and events. The middle segment has been the most affected by the macroeconomic slowdown of the last years. Examples of this segment are Gucci and Yves Saint Laurent. The price range change from \$500 to \$3.000.

Finally, the accessible luxury segment includes companies like Coach and Tiffani & Co., with prices below \$500, is focused on affordability, status and membership component. The communication with clients' needs to be constant and the focus is on the performance characteristics of the product which can be accomplished by advertising.

Taking into consideration the characteristics of the industry, PANDORA is within the accessible luxury segment.

Furthermore, the luxury goods industry includes mostly companies that are family-controlled or even family-owned. Thus, profits, brand and human resources are managed with a long-term vision and not necessarily the next-quarter. This different approach is sometimes difficult to investors to overcome when companies chose to sacrifice the next-quarter result in favor of the long term strategy. In cases of listed companies, like Burberry and Tiffany, with a free float of 100%, the growth has been made through acquisitions.

Some of the most well-known characteristics of the industry are high operational margins, solid generation of cash and a considerable exposure to the emerging markets. In what concerns to the *modus operandi* of the majority of the companies in this industry, it is common to be retail-driven meaning that companies sell their own jewellery in their own stores.

3.2. Macroeconomic implications

The luxury goods industry was believed to be crisis proof and a highly profitable sector. However, the recession of 2008 was more than a crunch on demand, it was a dramatic change.

The dynamism of the luxury goods industry over the past five years, after the hard period of crisis, was driven by the existence and development of brands positioned at accessible prices, which combines with new middle-class in the emerging markets. On the other hand, the world market is ripening and also the luxury industry is evolving accordingly.

Being an industry dependent in the fluctuation of the raw materials used the performance can be highly affected, namely in what concerns EBITDA margins. Some companies have chosen to reflect the price fluctuation to clients through changes in selling prices. Over the last months some of the most used raw materials in jewellery industry, gold and silver, impacted positively the margins.

In what concerns stock performance of the listed companies in the industry, the historical growth is strong. Nevertheless, the doubt is in the sustainability of the stock performance.

3.3. Geographic analysis

Luxury goods companies' headquarters are mainly located in Europe and USA. Until this point, luxury has been connected with mystique, rich, and heritage that are yet characteristics associated with the old continent. However, new opportunities to grow are in the emerging markets. Therefore, US and European companies have shifted to take advantage of opportunities in emerging countries and have been especially keen to raise their profile in Asia-Pacific countries.

The crisis hit with less intensity the emerging markets since they were affected only indirectly. Nevertheless, for companies into luxury industry it can be a challenge to expand into small but high-growth markets while they need to protect also the foundations in the epicenters of luxury.

The differentiation between countries and regions presented later in this chapter will focus, for some of them, on significant differences among the global luxury market and its consumer distribution by nationality, based on a report published by Bain & Company in January 2014, called "*Lens on the worldwide luxury consumer*". In this report the consumer base is, in 2013, 330 million people and the luxury market for the same period is of €217 billion in value.

For the company to be assessed the regions that really matter in what concerns the company's activity and future investments are, Europe, North America and Emerging Markets with a specific focus on China.

3.3.1. Europe

According to Euromonitor International, Europe includes five of the top ten luxury markets in the world, that are Italy, France, UK, Germany and Spain.

According to Bain & Company report mentioned before, Western Europe has approximately 80 million consumers and Eastern European countries another 20 million consumers.

In 2013 the spending per capita in the Western Europe, the second biggest market in the world, was of approximately €450, and represented 24% of the total consumers and only 17% of the luxury market since the spending per capital is lower than the average.

3.3.2. North America

North America remain as the largest luxury market in the world with a consumer base of approximately 90 million people, which represents 27% of the luxury consumers in the world but only 17% of the total market in terms of value, with one of the lowest spending per capita of approximately €400. It is interesting to notice that the USA represents alone more than one quarter of global sales.

3.3.3. Emerging markets

Some of the emerging markets to be considered in luxury market are China, Russia, Brazil and India. Some of these countries or other developing countries have faced a deceleration of growth in the last couple of years after a period of extreme growth. In emerging countries like India and Brazil the growth rate have been held up by regulatory issues, like restrictions to withdraw the profits.

These countries have improved in their governance, competitiveness and demographics and the outlook persist very positive for the future. In the following years, emerging markets are expected to have strong economic growth and to contribute positively to the luxury goods industry in terms of consumption and production.

3.3.4. China

In 2010, China was the world's fifth largest luxury market which demonstrates an incredible growth process over the last years. According to Bain & Company, the Chinese' market has approximately 50 million people, being within the top three in 2013 in terms of consumer base. China has grown to become the world's largest jewellery market with a market value of DKK 487 billion in 2013, according to the Annual Report of 2013 of Pandora.

China is now the third largest consumer based, with 14% of the total consumers in luxury market, and the second highest spending with 28% of the total market value, meaning that is one of the biggest countries in terms of spending per capita, approximately €1.250, only preceded by Middle Eastern with a spending per capita of €1.400.

Additionally, Bain & Company states that, in 2013, 67% of all Chinese luxury purchases were made overseas. Moreover, according to Euromonitor International, 2013, *The State of the Luxury Market*, “luxury spending in China is rising steeply”. But establishing operations in China is not an easy task and companies have faced a stumbling block.

3.4. Drivers of Growth

Given the constant evolution of the luxury industry there are some interesting changes that had led the companies to growth in the past and are now taking place as a driver of growth and are capable of shape the industry in the future.

3.4.1. Past growth

The luxury goods industry was driven by the exposure to emerging markets, not only by the presence in those countries but also through tourism and purchases in developed countries.

According to a report recently published by Mckinsey in 2014, titled “*The jewelry industry in 2020*”, most of the growth came from the expansion of established jewelry brands.

3.4.2. Future growth

As for future trends, companies start to integrate the whole business, through value chain integration, from design to sourcing of raw materials, to production, marketing and distribution. The objective is to control the quality and the service level to customers to be able to protect the brand. It is expected that the majority of the luxury good companies will enjoy restrict control over all aspects of their business.

Secondly, the online sales have increased and the omnichannel is starting to get some influence. Even companies that were originally averse to the internet, and have struggled to sell online given their concern about exclusivity and prestige, are now using their websites to communicate fashion shows, stories and important factors for the business and customer.

According to Euromonitor International, in 2013, e-commerce sales of luxury goods represented 5.3% of total luxury goods sales, which reflects an increase of 23% since 2008.

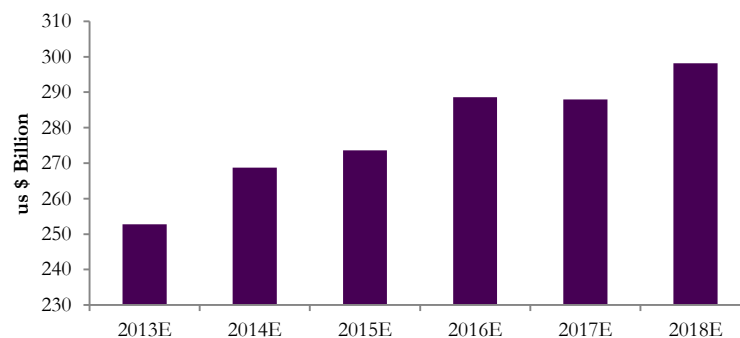
As a direct result of increasing control over the business, the direct retail and also e-commerce operations are becoming one of the most important figures of the distribution model. Over the last several years, a revolution in the luxury industry has occurred due to the rise of the social media and mobile applications.

Third, the market is now much more demanding in terms of collections and speed of delivery. What started by Inditex's phenomena is now one of the most important trends that companies need to deal with. Consumers are pressing for innovation. On the other hand, products are now copied much faster, which means that companies need to build some kind of temporary monopolies, toward innovation, to compete in the market at the first place. Additionally, the rise of men's luxury is another tendency that could influence the market in the near future.

And finally, up to this time, brand image was one of the most important variables for the luxury business but consumer behavior changed and now quality sometimes means more than brand image. After the crisis consumers became less concern in acquiring status since they became more aware of the value of money.

3.4.3. Future of the Industry

The prospect for the industry seems to be very tempting. For instance, according to *The State of the Luxury Market, 2013*, from Euromonitor International, the global luxury sales until 2018, is expected to behave as follow.



Graphic 1: Expected Global Luxury Sales 2013 – 2018

Source: Euromonitor International

According to the same source, developed markets will continue to be the largest spenders and in 2018 the emerging markets are expected to account for almost 30% of sales.

To put it simply, luxury industry is one of most attractive industries in the market nowadays. According to a study performed by Bain & Company called “*Luxury Goods Worldwide Market Study Winter 2014*”, published in January 2014, “the number of luxury consumers worldwide was more than triples over the past 20 years, from roughly 90 million consumers in 1995 to 330 million at the end of 2013”. The same report mentioned that the number of consumers in the market is expected to rise up to 400 million luxury consumers worldwide by 2020 and 500 million by 2030. This boost represents 10 million new consumers per year.

Moreover, based on interviews to twenty executives at global jewellery companies, analysis of public data and annual reports of the same companies, McKinsey (2014), in the report *The Jewellery Industry* estimates that in 2020 the sales of the jewellery industry will totalize approximately €250 billion, which represents a growth rate of 5 to 6 per cent each year, driven by the new appetite for jewellery. According to Euromonitor International report in 2013 the luxury jewellery is roughly €60 billion.

To face the demand of affordable luxury goods, a significant number of high profile luxury goods companies have shifted down market, reorganized their portfolio to have products to support their core business at more accessible prices.

This shift in segments that are common across all industry, though having also companies going upmarket, will lead to a completed segmented market. In the future it is reasonable to expect that affordable luxury will work as a standalone industry.

On the other hand, the expertise and distribution channels will continue to be crucial characteristics in the industry.

3.5. M&A in the sector

Having survived a recession and experienced a change in consumer demand in 2011, a number of luxury firms were in a position to make opportunistic acquisitions.

The enthusiasm for European and American brands in emerging markets is strong and growing, motivating many luxury goods companies to expand their international expansion, particularly in Asia and the Middle East. At the same time, buyers and investment groups in emerging markets are looking for western brands. Thus, one of the most active buyers of luxury brands are private equity firms that play a crucial role in providing the necessary capital to help young brands to grow.

Additionally, as mentioned before, as companies are going through vertical integration process the M&A activity has been increasing and takes place at both ends of the value chain.

On the other hand, for the big conglomerates M&A activities has also increase toward the consolidation of the business, by expanding to other complementary businesses to gain scale and own expertise.

4. Company Review

4. 1. PANDORA

4.1.1. History

PANDORA was founded in 1982 as a wholesaler, importing from Thailand, aiming to offer women across the world high quality, modern and genuine jewellery at low prices. A couple of years after, as a result of the increasing demand, the focus changed to direct clients in Denmark. In 1987, the wholesale business was discontinued. In 1989 the company decided to start in-house production in Thailand. Over the following years PANDORA start to expand to other markets and today is a distinctive brand that just in 30 years went from a local jeweler in Denmark to a world-leading international company.

In 2000 PANDORA launch the charm bracelet concept that is now the most well-known product. The first concept store opened in 2006 and now the company has more than 800 concept stores, most of them operated by franchisees. As mentioned by PANDORA, the company does not distinguish between own and operated stores and stores driven by franchisees.

PANDORA is present in more than 90 countries, over 9.900 points of sale, through a retail category concept ranging from Concept stores, Shop-in-Shop and Gold stores to Silver and White multi-brand stores.

Since 5 October 2010 PANDORA shares have been listed on the Nasdaq Copenhagen Stock Exchange. At the end of 2014 PANDORA operate more than 1.400 concept stores, 251 of them owned by the company, and 70 owned shop-in-shops. PANDORA employs over 11.400 people worldwide, of whom than 7.900 are based in Thailand, where the company manufactures its jewelry.

The company has established a well-defined brand within the luxury segment and one of the most recognized characteristics of the company in the market respects to its appealing store design and store environment that is uniform across all markets. Currently, PANDORA has 6.2 million members of PANDORA club, an online VIP area for the most enthusiastic customers that according to the company helps to build a strong sense of brand loyalty. PANDORA controls every step of the value chain of almost all jewellery products from in-house design to production and also distribution of jewellery products to sales channels through own distribution subsidiaries, third party distributors and directly operated stores. The vertically integrated business model includes i) Design & Development ii) Forecast & Production iii) Communication & Launch iv) Sell & Replenish and v) Distribution & Service.

When in 2012 PANDORA started to deliver seven collections per year instead of two the business model and the relation with clients changed. Now it is possible to assort, retire and introduce designs to maintain and attractive collection. The seven annual launches are Valentine's Day, Spring, Mother's day, High Summer, Pre-Autumn, Autumn and Christmas.

4.1.2. Shareholders

Accordingly with the Annual Report of 2013, until May 2013, Prometheus Invest ApS owned more than 50% of the share capital of PANDORA. In 2013 the holdings of the share capital were distributed to the relevant owners of Prometheus Invest ApS, including three funds controlled by Axcel Management A/S (Axcel) and at the end of 2013, Axcel held 17.6% of the total share capital and the total voting rights corresponding to 22.892.471 shares in PANDORA.

During 2013 PANDORA launched a share buyback programme under which the company expected to buy back its own shares of up to DKK2.4 billion. The programme ended in 31 December 2014

According to the company, at 31 December 2014, PANDORA A/S owned treasury shares corresponding to 5.6% of shares and thus more than 5% of total share capital and voting rights. Institutional investors in Denmark held 13% of the free float compared with 26% in 31 December of 2013. Additionally, other institutional investors in Europe and North America investors held 21% and 17% of the free float, respectively. Moreover, 9% of the PANDORA shares in the free float were held by Danish retail investors. Finally, the Board of Directors and Executive Management held 0.1% of the total shares outstanding.

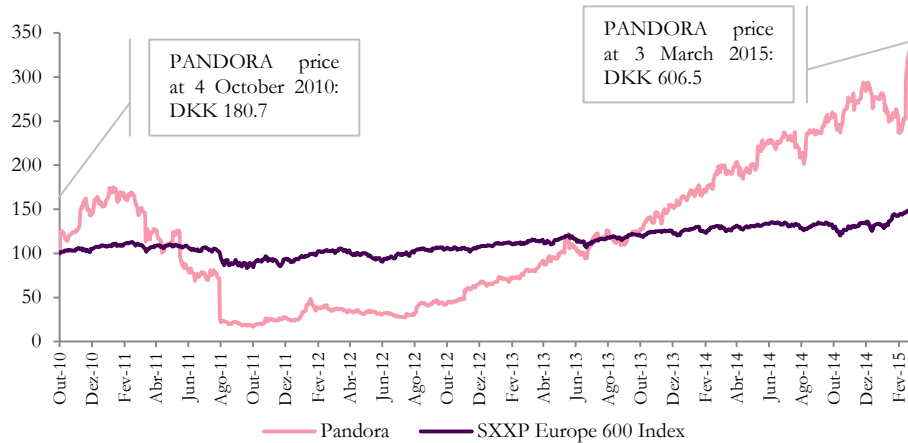
4.1.3 Overview

The analysis of recent financial statements of the company reveals a strong performance. The assets of the company account for DKK10.556 million in 2014 compared with DKK9.275 million in 2013. In terms of capital structure the equity of the company represents 67% of total assets and this proportion has been roughly the same since 2011 as the company considers being in the optimal capital structure. In the liabilities side one can confirm that they are mainly composed by current liabilities. Moreover, the net income of DKK3.098 million in 2014 corresponds to 25.9% of total revenue and follows a positive consistent path.

The cash flow management of PANDORA allows the company to invest DKK455 million in 2014 in Capex which represents 3.8% of total revenue and a soft decrease when compared with 2013, DKK490 million. It is important to notice that, despite the good performance of the company, PANDORA decided, at the end of 2014, to postpone the investments announced for the fourth quarter of 2014 to 2015.

In 2014 PANDORA decided to increase the nominal dividend per share to DKK9, comparing with DKK6.5 in 2013. According to the company it is expected that the same policy continue for the following years.

Finally, in terms of share price the evolution has been positive. In mid-2011 PANDORA had a severe profit warning due especially to the deviation from the core products. Thus, in 2012 the company refocused and is now a company with an extraordinary track record and one of the best performances in the STOXX Europe 600 Index.



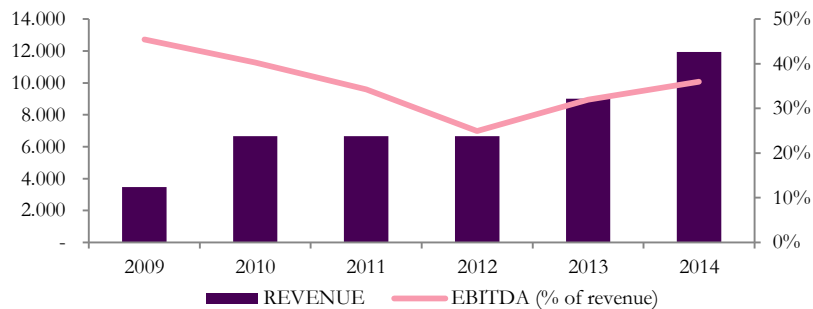
Graphic 2: PANDORA vs SXXP 600 Index stock price evolution (4 October 2010 = 100)

Source: Bloomberg

In 2014 the lowest closing price was DKK 302 (2 January) and the highest was DKK 531 (28 November), corresponding to an increase of 71.6%. Since the beginning of 2015 the stock price has showed an extraordinary performance, mainly after the presentation of 2014 results, above market expectations.

4.1.3.1 Revenues

According to the company, PANDORA is the market leader in the charm bracelet and charms fine jewelry market in the affordable segment of the industry and hold a position as one of the world's top three largest jewelry brands in terms of estimated revenue at retail value.



Graphic 3: Revenue and EBITDA margin

Source: Annual Reports

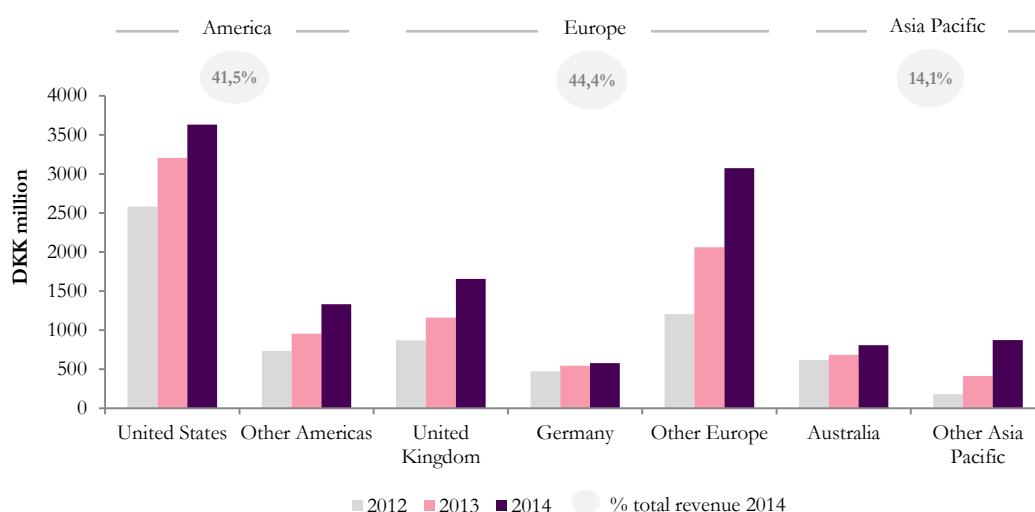
In 2014, the group revenue was DKK11.942 million above the expected DKK11.500 million. Also, EBITDA margin rise from 32% in 2013 to 36% in 2014. Until 2011 the EBITDA margin decreased due to the negative impact of commodity prices and a reduction in selling prices.

The company announced that expects revenues of DKK14.000 million in 2015 and an EBITDA margin of 37%, driven both for like-for-like growth in existing stores and expansion of the global network To continue to expand the network around the world PANDORA is focused in continuously increase the number of franchisees.

In 2014, the average sales price (ASP) was DKK140, compared with DKK130 in 2013, due to a higher share of revenues from rings, sold at higher average prices, and a proportionally higher share of revenue from owned and operated stores.

A. Revenues by Geography

To build presence in foreign countries the strategy followed by PANDORA has been to set up joint ventures or enter into partnerships with distributors in different countries. Currently, the main regions of activity are: Europe, Asia Pacific and America.



Graphic 4: Revenues breakdown by geography

Source: Annual Reports

America plays an important role. In this region, the US represents more than 30% of total group revenue with positive LFL. On the other hand, Europe represents 44.4% of total group revenue and is the biggest market. The revenue increase 41.0% in Europe from 2013 to 2014 primarily driven by United Kingdom (UK) and Other Europe. UK is the largest single market in Europe and represents alone 13.9% of the group revenue. The growth in UK was mainly driven by expansion of store network and a huge impact of PANDORA eSTORE. Germany is the second largest market in Europe and accounts for 4.8% of the revenues. In Germany, following the effort to increase the store network, PANDORA opened 22 owned concept stores.

But the most considerable increase in Europe was in Other European markets with an increase in revenues of 49.3% mainly driven by Russia, Italy and France, countries that PANDORA wants to continue to develop and consolidate in the future through the expansion of the network of sales. In fact, only in the first nine months of 2014, Other Europe achieved the same amount of revenue as the whole year of 2013, demonstrating the effort on this region.

Additionally, after the successful launch of eSTOREs in the UK, PANDORA has, at the end of 2014, eSTOREs in seven countries in Europe. As a matter of fact, online stores are one of the growth pillars of the company.

Finally, Asia Pacific represents 14.1% of total revenue, a growth of 53.5% when comparing to 2013 mainly driven by Hong Kong, Malaysia, Singapore, South Korea and Taiwan. Again, Other Asia Pacific' countries achieved in the first nine months of 2014 more than the total revenues of 2013 for this region.

Total revenues of PANDORA increased 32.5% due to an incredible increase from Europe and Asia Pacific regions. When analyzing the EBITDA margin, Asia Pacific region is the one that contributes more for the EBITDA margin of the company with 49.6% in 2014, followed by Europe with an EBITDA margin of 43.3% and then America with 41.4%.

The company aims to increase its presence in other geographies. However, the focus now is on building the market presence in France, Italy and Russia since they are among the biggest markets in Europe with a total market value of DKK32 billion in Italy, DKK28 billion in France and DKK53 billion in Russia of which PANDORA holds only a small portion.

B. Revenues by Sales Channels

PANDORA was a network of retail stores with different concepts. Concept stores are a full-own PANDORA store with a full assortment of PANDORA products with at least 40m²space. This concept has a branded PANDORA store front and is furnished only with fittings, displays and staff of the company.

Shop-in-shop concept is a clearly defined space in a store or department store dedicated only to PANDORA that carries a wide assortment of products, with a minimum of 8m² space. This concept looks like a small concept store on the inside of another.

On the other hand there are also gold, silver and white dealer concepts. Gold dealer are multi-brand retailers with a strong PANDORA profile and has almost all the same benefits as a concept or shop-in-shop store, with a minimum of 4m² dedicated space in the store.

Silver and White dealer are non-branded retail formats with some assortment of products. Silver store has a minimum of 2m² space and some fittings and displays of PANDORA while White stores has at least a window space and only the basic PANDORA displays.



Graphic 5: **Revenues Breakdown by Sales Channel (% total revenue)**

Source: Annual Reports

Concept stores, shop-in-shop and gold channels are collectively termed “branded points of sales” and are the main contributor for total revenue that is visible since 2011 as a result of PANDORA’s strategy. Branded sales represented 88.5% of total direct sales of PANDORA in 2014, compared with 84.8% in 2013, thus demonstrating the importance and focus in branded points of sale. The increase is due not only to the increasing focus on those points of sales but also from the relative higher value in these stores.

Considering PANDORA’s store network, in terms of total points of sale we can also demonstrate both the importance of Europe region and branded stores for the Group. In the following table we make evident the total number of stores in 2014 per region and according to each type of sales channel as well as the change in relation to previous year.

2014 Points of Sale	America		Europe		Asia Pacific		Total
	Total	Growth	Total	Growth	Total	Growth	
Concept Stores	414	82	786	184	210	44	1.410
Shop-in-shops	683	111	677	49	195	23	1.555
Gold	881	32	1.380	48	139	- 9	2.400
Silver	1.094	38	1.577	- 481	73	-	2.744
White and travel retail	308	- 118	1.431	- 363	58	- 13	1.797
Total	3.380	145	5.851	- 563	675	45	9.906

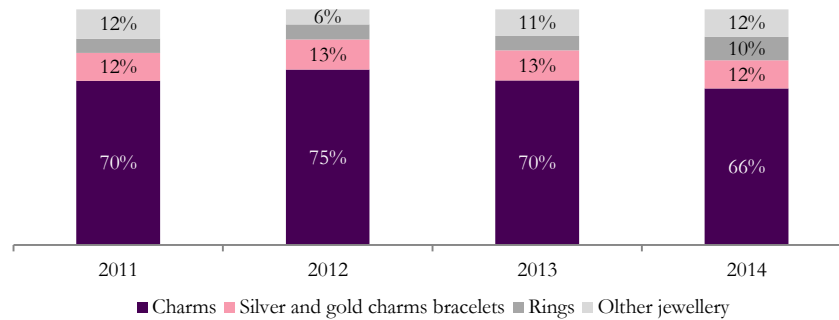
Table 1: **Number of Points of Sales 2014**

Source: Annual Reports

The distribution network in Europe was based on 6.414 stores in 2013 which represents a decrease of 92 stores compared to 2012. During 2014, PANDORA decided to re-focus to profitable stores and as a result 844 unprofitable stores were closed. Thus, as a result PANDORA has 5.851 stores, which represents a net decrease of 563 stores in this region.

C. Revenues by Product

The product range of PANDORA varies from charm bracelet, the most well-known product, to rings or other jewellery where it is included necklaces and pendants. Charm and bracelets includes more than 600 different charms and clips that can combine specially designed bracelets in sterling silver, 14k gold, leather or textile and is the main revenue driver. The category accounts for 78.4% of total revenue in 2014 compared with 82.7% in 2013.



Graphic 5: **Revenues Breakdown by Product (% total revenue)**

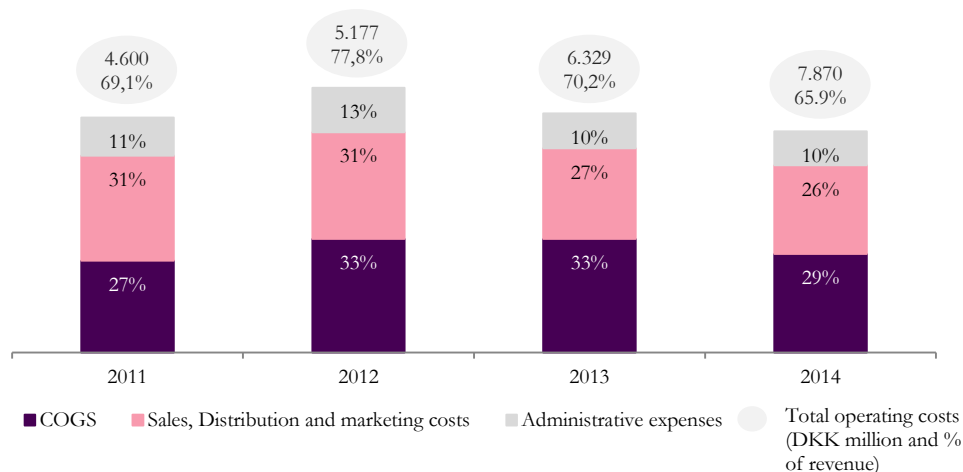
Source: Annual Reports

The substantial decrease in PANDORA's core category is explained by the extraordinary increase in revenues from Rings category. In 2014 revenues from Rings increased 116.7% to DKK1.192 million. The potential of this product is in improving the rings offering. Rings are the second core category of the company but delivered the highest revenue contribution. When combined with Other Jewellery those categories represent approximately 22% of the total revenue of PANDORA. Other Jewellery represents, in 2014, 11.6% of total revenue which compares to 11.2% and 6.3% in 2013 and 2012 respectively. The raise is due to some subcategories like necklaces and earrings.

The company is focused on the core categories, charms and bracelets, but understands other categories of products like necklaces and rings as a major growth vehicle for the future.

4.1.3.2 Costs

The cost structure of PANDORA follows the same representative cost structure of any company in the industry. PANDORA has seen its costs increase, in value, over the years given the expansion period the company is going.



Graphic 6: **Operating Costs breakdown (% of revenue)**

Source: Annual Reports

Cost of Goods Sold (COGS) represents an important part of the company's costs. Raw materials represent 85% of those costs and are driven by operation's revenue. Silver represents 55% to 60% of total COGS and gold approximately 15%. The raise of these costs lies not only on the increase in sales but also in the fluctuation of the commodities prices, namely silver and gold. In what concerns COGS evolution, PANDORA will be a strong beneficiary of the recent movements in the market related to the decrease in silver price. In the Q3 2014 report PANDORA said that expects 100 to 200 basis points gross margin impact for any 10% move on commodities.

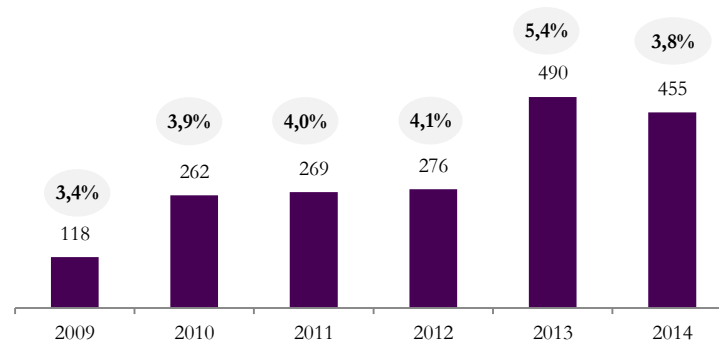
Moreover, the products are re-melted, according to PANDORA's inventory policy. The movement in those prices can have a positive impact for retailers and consumers if the price decreases. However, the company believes that it is already well positioned in the affordable luxury thus the positive impact is expected to be reflected only in the increased margin of retailers.

In 2013, the company spent approximately 10% of revenue in marketing to continue to build brand awareness which is one of the key factors of PANDORA and, according to the company the objective is to continue to invest a significant amount on marketing. Marketing expenses increased, in percentage of revenue in the fourth quarter of 2014 due to Christmas campaigns and the launch of the Disney collection in the US.

Additionally, distribution expenses increased in 2014 due to higher revenue and an increase in number of PANDORA owned stores as well as additional costs related with the e-commerce platform. Administrative expenses have increased in 2014 as a result of relocation of offices, higher IT costs and an agreement with the current CEO of the company, what we can consider as uncommon events. Administrative expenses also include losses arising from impairments, amortization and depreciation

A. Capital Expenditures and Depreciations

PANDORA has increased the absolute Capex investment in the past years and the expectation is this investment to go further. In 2013 PANDORA spent the highest amount in Capex ever. Furthermore, in 2013, PANDORA purchased the intellectual property to glass charms designs from Trollbeads with an investment of DKK190 million that is represented in the balance sheet of the company and should be amortized until 2030.



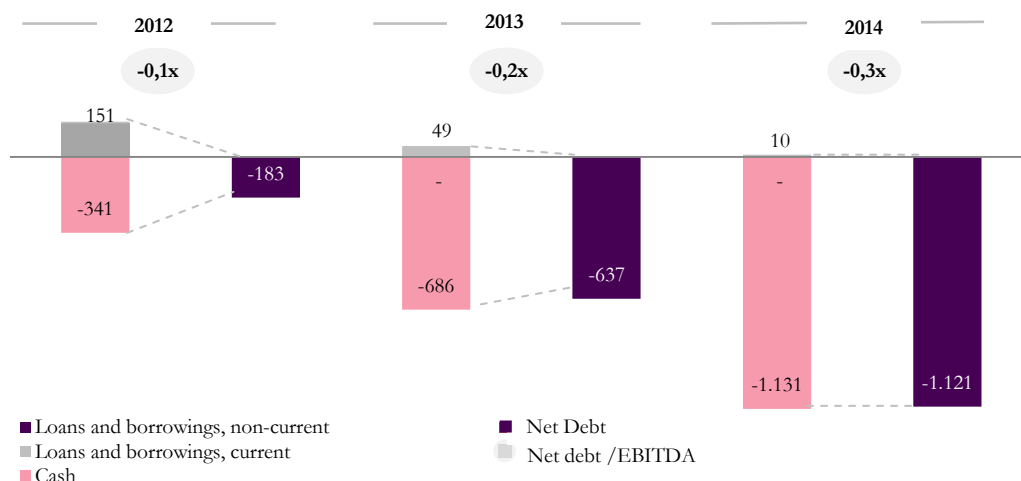
Graphic 7: CAPEX (DKK million and % of revenue)

Source: Annual Reports

Meanwhile, despite the raise in total Capex until 2013, an exception was made in 2014 as PANDORA decided to postpone a substantial part of the expected investment to 2015. During 2014 PANDORA reviewed its CAPEX investments expectations downwards from DKK550 million to DKK500 million as the expansion of the production facilities in Thailand was postponed to 2015. However, the final value presented in the Annual Report was DKK455 million, corresponding to 3.8% of total revenue. From the value invested, DKK164 million was related with PANDORA owned stores and IT investments, and DKK291 million related to investment in property, plant and equipment, mainly driven by investments in relocation of offices and crafting facilities in Thailand.

4.1.3.3 Net Debt

PANDORA has been decreasing its leverage, demonstrated by Net Debt/EBITDA ratio. Since 2012 that PANDORA presents a negative net debt, meaning that the company has higher cash and cash equivalents than debt. PANDORA's debt was mainly composed by non-current debt which allowed the company to continue to invest and it is expected that in the following years PANDORA stays within this policy.



Graphic 8: Net Debt Analysis

Source: Annual Reports

Furthermore, PANDORA has a revolving credit facility of DKK2.500 million, contracted in 2013, which is committed until July 2018, and in February 2014 the company had access to an additional revolving facility of DKK1.000 million. Once more, supporting what the company considers an adequate cash reserve.

4.1.3.4 Working Capital

Inventory is the most important component of PANDORA's working capital. In 2014, this component had a significant increase as a result of higher production to answer the increasing demand the company is facing. The favorable fluctuation in prices benefited this working capital component accounting for a decrease of around 17%, however it wasn't sufficient to offset the increase in inventory as a result of higher production level.

At this point, it is also important to notice that PANDORA policy is to re-melt products. The discontinued inventory, that is not expected to be sold and is part of some discontinued category or product is re-melted. Thus, the favorable impact of raw materials prices when buying is positive for the company but in terms of re-melted products the impact has a different signal, leading to losses and impacting directly the gross profit margin.

Both trade payables and trade receivables increased in 2014, again as a result of the increasing activity of the company. PANDORA has sustained over past years positive operating working capital due to the enormous impact of inventory item. When analyzing the investment the company has made in working capital one can also conclude that it is not very stable, as showed in the following graph. Moreover, the working capital policy has been changing over the years, namely in terms of trade payables since the company raised the average days to pay its suppliers. On the other hand, the average number of days of inventory has decreased.

4.1.4. Risk Parameters

One of the major downsides and potential risks of PANDORA's operations is related with the relation between the company and their partners in different geographies, in order to maintain the strong image of the brand. PANDORA's distribution strategy is designed to maintain control over the brand image and marketing strategy. Sometimes, PANDORA has entered the market using a third party distributor and then taken over the distribution in that market, either through PANDORA's own operations or through the acquisition of the distributor's business or the distributor itself. Meanwhile, in some markets the preferred strategy is to partner with third party distributors (distribution agreements and master franchise agreements).

On this subject it seems that the company has managed well these relations and the importance of 3rd parties in company's revenue is almost insignificant. This approach is consistent with PANDORA's strategy since the focus is on owned and operated stores in the most important markets and the usage of 3rd parties to enter into new markets.

Second, as a result of the unique concept and innovation of PANDORA, patents and intellectual property rights are some of the most important assets of the company. The ability to continue innovating and to protect the current patents against eventual competitors allows the company to stay ahead in the market.

Third, as mentioned before, one of the aspects that implies directly in the gross margin of the company is the price fluctuation of raw materials, namely gold and silver. PANDORA is dependent on the performance of these commodities. In the recent future it is expected that the fluctuation will beneficiate PANDORA, but the hedging process is very important to ensure consistency over the years.

Additionally, given the geographic dispersion of PANDORA's activities the majority of the revenues are in USD, EUR, GBP, AUD and CAD. Thus, the exchange rate fluctuation between currencies can also be a risk. A substantial drop in these currencies against DKK will ultimately result in a decline in sales and cash flows of PANDORA. On the other hand, also raw materials, silver and gold, are mainly purchased in USD, meaning that an exchange rate increase will also result in a decrease of the results and cash flows due to an increase in raw materials costs for the company. Nevertheless, PANDORA's policy is to hedge foreign currency risks.

On the other hand, the economic outlook both in emerging and developing countries affect future perspectives in terms of costs and revenues. Finally, the production facilities of the company are in the Thailand which may represent some additional risk in terms of supply in case of political unrest.

4.1.5. Future perspectives

The online sales channel represents an excellent opportunity to further expand the store network. PANDORA is positioned in the affordable jewelry and the concerns about the size of the piece of jewelry do not apply to PANDORA's products where we can apply the motto is "one size fits all". The first operated eSTORE was launched in 2012 in UK and now the company has eSTOREs also in Germany, Austria, France, Brazil, Poland and Italy, the latest two launched in November 2014, the potential for further expansion is huge. The company has a perfect product to sell online since charms and bracelets are mostly available only in one size and they are affordable and not expensive to transport so the expected rate of return is insignificant.

In terms of geographies, beside the ones the company is focus to develop in the recent future in Europe, China and Japan represent significant long-terms opportunities for the company. In fact, the emphasis in Japan is already in place. During the third quarter of 2014 PANDORA signed an agreement, for a strategic alliance, with Bluebell to jointly distribute PANDORA jewellery in Japan. The agreement converted into a business combination in January 2015, in a non-cash transaction, and last for five years. At the end, a take over into the distribution in Japan is expected from PANDORA. The total amount to be paid at the end is dependent on the revenues but the expected range is, according to the company, DKK 52-156 million.

On the other hand, in terms of products, rings are expected to be one of the future growth drivers of growth following the extraordinary performance so far after the launch in different geographies.

4.1.6 Competitors

The competition in the jewelry industry is strong, within the different industry segments presented before in the Industry Analysis. Over the last couple of years with the approximation to the affordable segment of companies previously placed in higher segments it becomes harder to completely define the main competitors in each of the segments.

Among the major competitors of PANDORA there are some well-known multinational companies that are now expanding to this attractive segment. None of those competitors completely focus on the jewellery segment since their core business remains in clothes, apparel or watches. Those companies decided to expand their core activity in order to expand to different markets and consumer segments, namely consumers with lower income but an extreme curiosity and interest in the heritage of the brands and status.

Most of the competitors maintain their previous business model which means they approach segments from the luxury collection to the less expensive.

Companies like Coach and Michael Kors are now embracing the middle ground of luxury goods. For instance, Michael Kors is now one of the most successful companies in the world in the accessible luxury segment. Signet, Foli Folie, Bijou Brigitte, Tiffani & Co, David Yurman, Mulberry, Jimmy Choo, Burberry, J.Crew, Ralph Lauren, Ferragamo, Harry Winston, Hermes and Cartier (Richemont Group) are among what we can consider PANDORA's competitors.

5. Company Valuation

5.1. Introduction

After having an understanding of the industry and the markets where PANDORA operates, we will review each component of the free cash flow to the firm. Then, to have a better sense of each of the critical components to the firm value we will also perform a sensitivity analysis to operational and discount factors. PANDORA' valuation will be based on geographic and product breakdown for revenues to understand what we consider to be the different sources of growth.

The valuation method used from the DCF method was WACC. Moreover, the currency to be assumed will be DKK (Danish Krone) and in the case of taxes the assumption was that revenues are in the Headquarters in Denmark and so subject to the corporate tax rate there (according to Damodaran approach for multinational companies, 2009b).

PANDORA was now seven collections trough out the year and the seasonality effect is expected to be moderate. Being in the jewellery business and being specialized retail company higher revenues are historically realized in the second half of the year, mainly due to Christmas effect. Although Mothers' Day and Valentines' Day launch are extraordinary periods of sales. In fact, the historical revenue per quarter demonstrates some seasonality effect with the fourth quarter representing in 2014 and 2013 around 30% of total sales of the year.



Graphic 9: PANDORA's Revenues by Quarter

Source: Annual Reports

By bearing in mind the seasonality effect of the business that is important because a major part of the expected results of the company are only due in the end of each year, we are forecasting the year after year and not segregating by quarters or any other shorter time period.

5.2. Explicit period length

The strategic options of the company that are, at this point, public must be taken into consideration in the valuation, so it requires a certain length of the forecast period. As mentioned before, PANDORA entered into agreement with Bluebell and the operational and financial objectives are due in 2019. Moreover, at the time of the valuation the results for 2014 were already announced. Therefore, the valuation period goes from 2015 to 2020, resulting in an explicit period of five years.

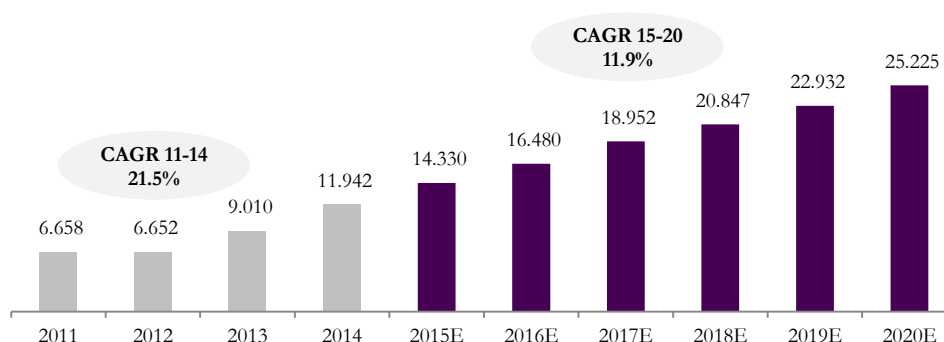
This period it's considered to be suitable since, as explained, the majority of the investments announced are due in 2019 and by going forward one more year we are able to forecast some of the most critical variables in a stable phase after a period of huge investment in order to assume that the company will be in a stable phase from that period onwards. Meanwhile, it becomes really hard to forecast if we consider a larger explicit period since there are many variables to take into consideration and it is not feasible to forecast with some confidence for all of them

5.3. Operational Forecasts

5.3.1. Revenues

2014 Annual Report announced earlier this year demonstrated a very robust set of results. Those results were already expected after the Q3 2014 report. However, PANDORA was able to surprise investors with even better results than the ones expected and announced. Furthermore, according to PANDORA, it was consequence of a solid LFL growth in both mature and new markets.

The expectation is this positive and solid performance to continue. Thus we expect PANDORA's total revenue to be DKK25 billion in 2020, which represents a CAGR of 11.97%. The projections were made according to the main growth drivers of the company and are to be detailed after.



Graphic 10: PANDORA's Revenue Projection (DKK million)

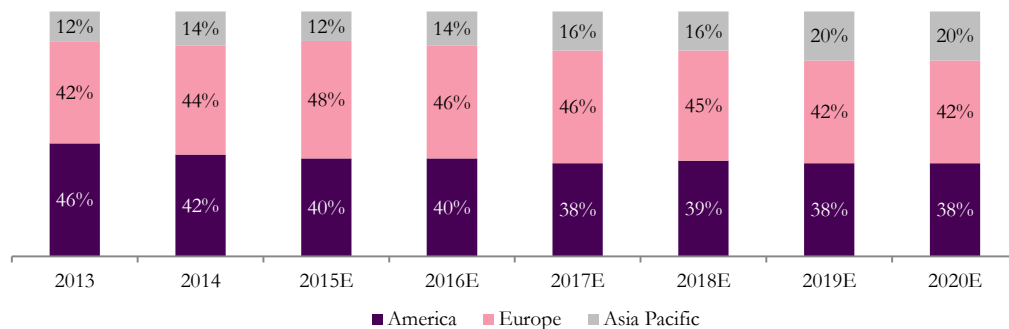
The expected increase in demand is a result of exploring new markets and a higher penetration of the brand and products in the existing markets.

Also, the expected increase in APS, due to higher added value of the products and brand awareness, are consistent with a continuous growth in revenues. Moreover, PANDORA is developing some categories that are considered to be long-term opportunities to support, in a couple of years, the growth of the company, for instance “Other Jewellery”.

The development of the eSTOREs is also expected to be a great support for company’s growth. At one hand it allows the company to attract more customers and also to delivered a customized offer to each client increasing the brand awareness and the added value and, at the other hand, eSTOREs have demonstrated a high potential in all geographies where it was implemented and the expected expansion to other countries where PANDORA operates may translate to higher revenues in each of the geographies.

5.3.1.1 PANDORA’s Revenue by Geography

According to the information released one of PANDORA’s key strategic pillars is based on expansion for new markets and increase penetration in the existing markets. PANDORA is focused on delivering positive LFL in all existing markets through the expansion of the stores network. The strategic alignment is to bet on Europe on the following two to three years, exploring some key markets, like Germany, where the company already made an interesting investment, and then moving to Asia Pacific region following the announced investment in Japan and start to explore China that is one of the most important markets for the industry nowadays. In terms of importance and weights for total revenue of each one of the regions our projection are as follows.



Graphic 11: PANDORA's Revenue Projection, Breakdown by Geography (% total revenue)

By making some additional comments in each of the expected revenues for regions we understand that the total expected growth is consistent with the strategy of the company and it seems plausible to assume that the company will be able to ensure positive LFL in each one of the regions even if the total weight of a particular region decrease.

In the US the company has implemented many new initiatives. The launch of the Disney collection in the US during the third quarter of 2014 was one of the most successful ones in the company and the retailers reacted very well.

In fact, the CEO noted that the response of retailers was “probably the best reception with retailers we have ever had on any of our launches”. Thus, US market results increased in the fourth quarter of 2014 and it is expected to continue during 2015.

US is expected to represent around 76% of revenues of the region, comparing with current 73%, and will continue to be the most relevant country for the company. Nevertheless, momentum is also strong in Other Americas part of the region and for the future is believe to be one of the main drivers of growth. We expect an average of 11% organic sales growth in the following years for the region.

In 2014 there was a change in terms of weight since America region become the second most important region in terms of revenues, even with the performance of the US. Based on the incredible success of the eSTOREs sales launch in the UK, the investment in non-mature countries in Europe and the expansion of the store network, Europe turn out to be the most important region for PANDORA in 2014 and it is expected this tendency to go on. Even if still boosted by the UK, other promising markets like Italy, France and Russia will sustain the growth of the region.

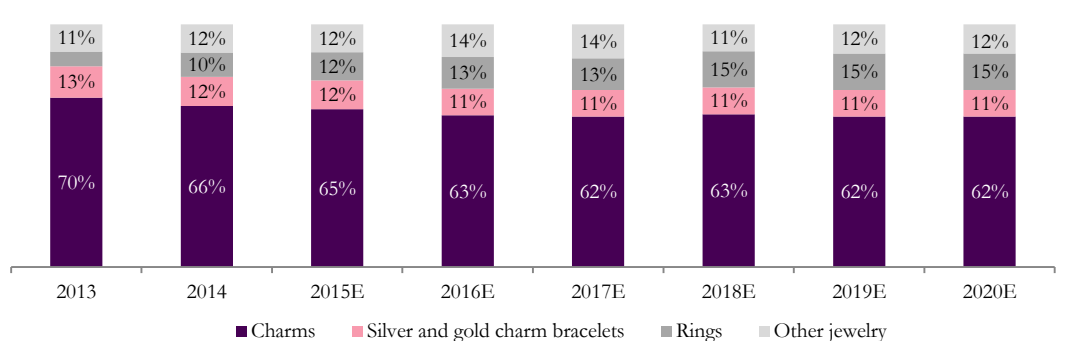
The expansion of the distribution channel in Germany has started to bear fruit and the agreement announced in January of 2015 for 78 stores leases is a demonstration of the increasing importance of the country for the company’ revenues. Other European markets also have high potential of growth and in fact, “Other Europe” part of the region had an organic growth of approximately 52% in 2014.

On the other hand, after the investment in Europe, PANDORA is expected to invest more in Asia Pacific region as a result of the increasing demand in those countries. PANDORA is currently investing in China and Japan to build up a distribution channel and infrastructures to be able to move forward in those markets in the beginning of 2015, according to the company. Asia Pacific region will be highly impacted by Bluebell agreement announced on 12 September 2014, which is effective since 1 January of 2015. Thus, the contribution for total revenues of those countries is expected to improve in 2015 and to have better results in terms of sales from 2016 onwards.

5.3.1.2 PANDORA’s Revenue by Product

The product assortment that is refreshed seven times a year contributes to the drive traffic in stores. Also, product diversification contributes for PANDORA’s penetration in different markets and to increase the customer’s base. Based on the analysis of previous years, since the implementation in mid-2012 of the seven collection launches, it is expected that growth should continue to be driven by this successful strategy.

It is important to stand out that 50% of sales in 2014 were generated by products launch within the last 12 months. Thus, the new launches of the company had been performing strongly and are expected to continue in the future. PANDORA demonstrates a good balance between newly launched products and older collections.



Graphic 12: PANDORA's Revenue Projection, Breakdown by Product (% of total revenue)

Rings, the newest category, have a bright future, representing now 12% of total revenue. In 2014 it has been constantly gaining market share and the incredible annual growth rate between 2012 and 2014 certainly make us expect this category to be one of the major growth drivers in the following years. Thus, we expect Rings to increase in the share of revenue, in all regions. As a result, Rings are expected to represent 15% of total revenue in 2020. The growth potential of rings category seems to be sustainable since it represented 35% of the global jewellery market in 2013, according to management.

Charms will remain PANDORA's core product category representing around 73% of total revenue on our estimates. The company will benefit of the roll-out of the Essence collection, introduced in the market on November 2013. The roll-out was concluded at the end of 2014, and is now implemented in all PANDORA's concept stores and results are expected to consolidate during 2015. We expect that these two categories, rings and charms, continue to be the major source of revenues.

On the other hand, Other Jewelry category has been decreasing in recent years in terms of contribution for total revenues, due to a negative impact of the discontinuation of watches. Nevertheless, year-of-year growth is positive since these categories are seen as longer term growth opportunities and new launches are expected in this category.

5.3.2. Costs

In terms of costs, the bottom-up strategy was used to forecast each cost component based on cost drivers. Almost all costs projection is made as a percentage of revenue.

The largest part of PANDORA's cost of sales is raw materials, being imported to Thailand. An increase in silver and gold prices might increase the cost of sales significantly. In fact, in 2014, as the commodities prices fluctuation was positive for the company the total weight of cost of sales in respect to revenues decrease from 33% in 2013 to 29% in 2014.

The Group uses financial instruments to hedge raw materials prices fluctuation because it is critical that PANDORA stays in the affordable luxury segment, meaning that it should try to avoid transfer fluctuations in raw materials prices to customers. Over the past years, the price to end customer's changes smoothly, allowing the company to increase sales and managing the raw materials price impact in the operation.

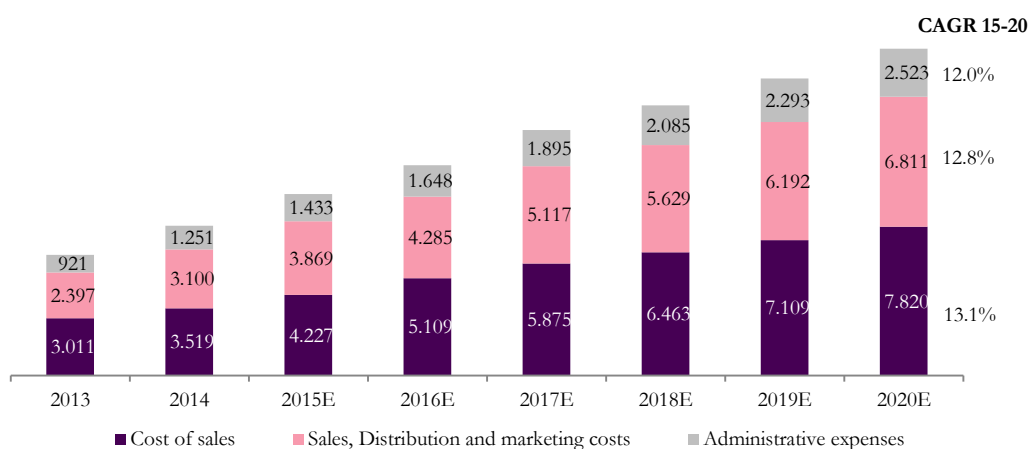
For the purpose of forecasting the raw materials cost we tried to find a link with the commodity prices the company mostly used raw materials, gold and silver. However, the correlation between the two variables was not sufficient enough, or either statistically relevant, to use this relation as estimation for future COGS. Moreover, we don't have sufficient detailed information about the suppliers and the hedging policy of the company to ensure that the possible tie we could find was consistent with PANDORA options. Thus, the complexity of the business in terms of raw materials management will be considered with a simplistic approach, based on the historical percentage of revenue.

Historically raw materials represented around 85% of total cost of sales and it is estimated to be the same in the following years. However, in 2014 cost of sales decrease as a percentage of total revenues as a result of a significant decrease in raw materials prices over the year. For future years, we will assume that the company will be back to historical cost of sales as a percentage of revenue. Hence, cost of sales is expected to represent around 31% of total revenue, the average weight of the last two years.

By using the average of previous years we are assuming that the constant weight reflects both years of positive and negative raw materials prices fluctuation within the company raw materials and inventories costs, as we will see in the working capital estimation, which seems to be reasonable. Thus, it means the company is able to adjust and to manage the expected evolution of the mostly used commodities. Moreover, since PANDORA is expecting a very significant increase in sales the evolution of cost of sales, in value, should be consistent with the necessity of higher production to ensure a proper response to the expected demand.

The impact in gross margins is also brilliant because PANDORA has been able to adjust smoothly the price to customers in accordance with this evolution, without losing sales or either adjusting the production method to make products with the similar characteristics in terms of weight of raw materials in each product but perceived by customers as the same.

The gross margin will also be impacted by the evolution of revenues and cost of sales and is expected to be around 69% representing an increase when compared to 2013 and 2014. The expected operational cost structure of the company is as follows.



Graphic 13: PANDORA's Operational Costs Breakdown (DKK million)

According to PANDORA, marketing expenses are expected to be around 10% of revenue each quarter in each market. In 2015 we expect marketing expenses to be 11% of total revenue due to national television programs announced in the majority of the markets that didn't exist in previous periods. Marketing expenses are expected to represent, on average, 38% of total Sales, Distribution and Marketing expenses, following the previous year's path.

Sales and Distribution expenses are related with the distribution network of the company. Hence, we should link this cost component to the evolution and expected revenues growth in different markets since it will be based on the increase demand in existing markets but also in new stores and markets. This operational cost component is one of the most important for PANDORA. We expect Sales and Distribution expenses to represent alone, on average, 17% of revenues, from 2015 to 2020, and an average of 62% of total Sales, Distribution and Market expenses.

It is important to stand out that PANDORA is making an effort to expand to new markets and consequently the distribution network has to increase. So, from 2015 to 20120 the expected growth rate in this cost component is 13.34% (CAGR). Finally, we assumed that Administrative Expenses will follow the same pattern and continue to represent 10% of total revenue.

5.4. Operational results

After analyzing revenues and operational costs forecast we are able to present the expected EBIT and EBITDA of the company.

DKK million	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
Operating profit (EBIT)	2.681	4.072	4.801	5.438	6.065	6.671	7.338	8.072
EBIT margin	29,8%	34,1%	33,5%	33,0%	32,0%	32,0%	32,0%	32,0%
EBITDA	2.881	4.294	5.376	6.103	6.858	7.543	8.298	9.128
EBITDA Margin	32,0%	36,0%	37,5%	37,0%	36,2%	36,2%	36,2%	36,2%

Table 2: **Operational results forecast**

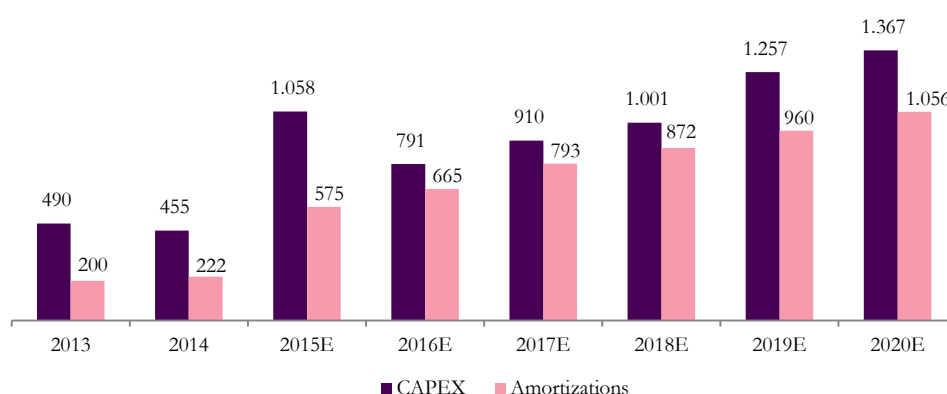
The detail of each component of the EBIT and EBITDA are presented in the Appendix A.7. However, it is important to point out that PANDORA is expected to delivered constant EBITDA margins, higher than in previous years. In fact, as mentioned before, in 2014 PANDORA surprised investors with higher EBITDA margin and according to the company in 2015 the expected EBITDA margin is to be 38%, higher than the estimated, mainly because we are more prudent in terms of revenues estimation than the company.

5.5. Capex and Amortizations

PANDORA downgraded capex expectations in 2014 from DKK550 million to DKK500 million as the planned expansion of a factory in Thailand is pushed into 2015. The new production facility is built to prepare for future demand, as mentioned by the company in the Annual Report of 2013.

Additionally, as announced by the company, PANDORA made an agreement to assume 78 stores leases in Germany, starting in 31 January 2015. The total amount to be paid depends on the number of leases agreed up to that point but the majority of the investment will be booked as Capex and spent over 2015. The expected amount is around DKK370 million.

In 2019, for Capex we should consider also the total amount to be paid to Bluebell in result of the agreement to expand the network of stores in Japan. In order to be prudent in the valuation we assumed the total investment to be DKK156 million, the highest price expected to be paid, as announced by the company.



Graphic 14: **PANDORA's Capex and Amortizations forecast (DKK million)**

It was assumed a based capex of 4.8% of revenues, the average of previous two years, to be constant over time. Furthermore, as mentioned before, in particular years where the company announced concrete investment amounts, those were taken into consideration and added to the base value. In 2015 due to the incredible amount the company is expected to invest in order to continue to grow we have the highest Capex amount spent in the company ever.

On the other hand, lacking information about the useful life of current assets and the projected ones, we assumed the average historical level of the last year's amortizations and to be constant as a percentage of cost of sales, in the case of assets related to cost of sales and administrative expenses. In respect to assets related to distribution expenses, where it is included the new production facility in Thailand and also the new concept stores we assume a constant percentage of cost of sales from 2015 onwards to be higher than previous years.

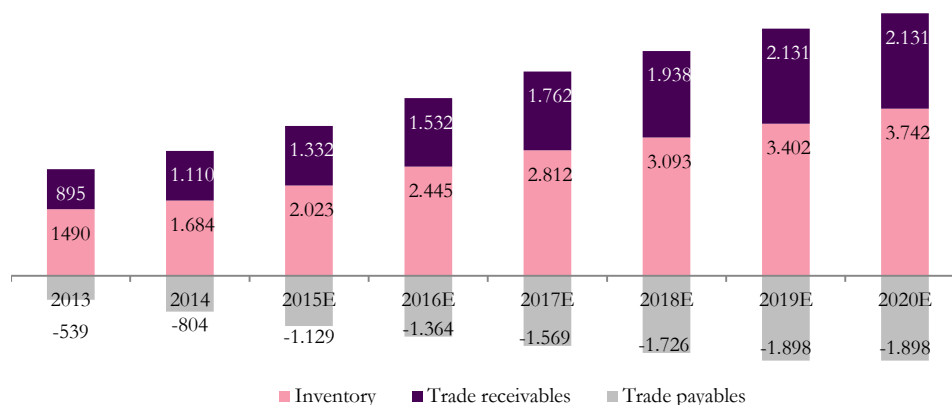
	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Capex / Revenue	5,4%	3,8%	7,4%	4,8%	4,8%	4,8%	5,5%	5,4%
Capex / Amortization	244,9%	205,0%	183,9%	119,0%	114,7%	114,7%	131,0%	129,5%

Table 3: **PANDORA's Capex and Amortization forecast**

As we can see from the table above the ratio Capex/Amortization with high values of the ratio reinforce the expectation of future growth and confirm that PANDORA is investing highly in long term assets. However, at some point the company needs to stabilize its investments, in the case where amortizations are higher or similar to the total invested amount in Capex. The average Capex/Amortization ratio during the explicit period, from 2015 to 2020 is 132.1%, highly impacted from 2015 value. The increase in investment implies also an increase in amortizations in the following years, thus the ratio is smaller from 2016 to 2018, after a period of huge investment from 2014 to 2016 and restart to growth in 2019 and 2020 as a result of an important investment in 2019. However, after this period the ratio is expected to stabilize.

5.6. Working Capital

As we have seen before in the Company Review, PANDORA has been having positive working capital over the last years. Hence, the same situation is reflected in explicit period forecast. Some changes are taken into consideration in terms of the operational working capital items, trade payables, trade receivables and inventory, as a result of the growth period the company is facing. The expected Operational Working Capital is represented in the following graph.



Graphic 15: **Operational Working Capital forecast**

After analyzing historically the working capital in terms of days, for each of the components, in the majority of the cases we chose to keep the last year days or the average of the last two years to forecast future cash flows since they are aligned with the most recent policy of cash flow management of PANDORA.

In respect to inventory, it is expected the total amount to increase in the near future due to higher revenues. Moreover, since the company has made a huge effort to increase the concept stores and some of them are own stores of PANDORA inventory should also increase. Moreover, when PANDORA purchase concept stores to enter in new markets, after entered with third parties, inventory is also impacted.

In what concerns to trade payables we expect them to follow the same pattern and as the operational activity of the company increase trade payables are also expected to increase. Trade receivables have decreased over the years in percentage of total revenue due to a continued strong cash collection. Nevertheless, in some markets PANDORA still have a policy of credit terms to clients and retailers.

DKK million	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
Net Operating Working Capital	1.846	1.990	2.226	2.612	3.004	3.305	3.635	3.975
Net Operating Working Capital (% revenue)	20,5%	16,7%	15,5%	15,9%	15,9%	15,9%	15,9%	15,8%
Working Capital	1.009	434	451	424	488	537	590	930
Investment in WC	- 487	- 575	17	- 26	64	49	54	340
Investment in WC (% revenue)	-5,4%	-4,8%	0,1%	-0,2%	0,3%	0,2%	0,2%	1,3%

Table 4: **PANDORA's Operating Working Capital**

The difference between each year Working Capital figures are part of the investment that PANDORA needs to make and will be considered for the computation of the free cash flow to the firm.

Following the investment PANDORA is making to growth, it is expected that also the investment in total working capital increase. In terms of Operating Working Capital is expected that from 2014 onwards it represents approximately 16% of total revenues.

Since 2011 that this item have been decrease in terms of total revenues due to changes in the working capital policy of the company.

Additionally, there are other items to be considered for total Working Capital computation, as we can see in Appendix A.8. Thus, even if the operational working capital is growing in terms of total value, the investment made by PANDORA in each year is not so relevant.

Some of other components that are taken into consideration for total working capital are provisions for sales returns and warranty provisions. The new products drop structure with seven annual launches instead of two is not expected to have material impact on the number of products returned. Warranty provisions are immaterial due to the re-melt value of goods, according to the Annual Report. In other receivables, with a value more relevant in 2013 and 2014, are included some taxes like VAT, and the decrease respects to a repayment from the Germany authorities.

5.7. Net Debt

As mentioned in the Annual Report of the company, in July 2013 PANDORA refinanced its bank debt and the new revolving credit facility amounts to DKK2.500 million, committed until July 2018. Moreover, the additional credit facility contract during 2014 has the same maturity.

PANDORA doesn't have short term debt and the long term debt in 2014, of DKK10 million is almost insignificant, representing only 0.3% of total liabilities. Thus, for valuation purposes we are assuming the same total amount of loans as of 2014, which seems to be reasonable, since the company announce to be in what considers the optimal capital structure. Hence, PANDORA is expected to continue with negative net debt.

Moreover, in order to maintain PANDORA's objectives of NIBD we increased payout ratio. It is also aligned with the company announcement related with dividend policy. Moreover, it also avoids PANDORA to be build pills of cash in its balance sheet.

5.8. Valuation

In this chapter we will perform the valuation methods chosen to value the PANDORA, as previously explained. First, we will present the DCF valuation method and then multiples valuation. For the DCF method we also implemented a sensitivity analysis in order to understand the impact of critical variables in terms of the value of the company. For both methods, the estimated components presented before are to be used.

5.8.1. DCF valuation

The DCF valuation was computed using the FCFF. Therefore, using formula (3) presented before in the Literature Review.

5.8.1.1 Free Cash Flow

After showing the main growth drivers for PANDORA's future growth individually, we will present the estimation of free cash flow during the explicit period (2015-2020) and the terminal value. The free cash flows are expected to be as follows:

DKK million	2015E	2016E	2017E	2018E	2019E	2020E
FCFF	3.341	4.251	4.672	5.160	5.520	5.806
Terminal Value						5.899

Table 5: PANDORA's expected FCFF

For the specific case of the computation of terminal value some additional inputs are needed namely the growth rate. Following what was explained in the Literature Review we chose to consider as growth rate the expected inflation rate for Denmark, according to the Central Bank of the country, of 1.6%.

The inflation rate is almost the unique driver of growth in long-term in terms of pricing, thus making a good assumption for the long term growth rate, assuming that the company is expected to continuing growth at this rate for the perpetuity.

Meanwhile, in order to determine the present value of the free cash flows, according to DCF method one should have an appropriate discount rate.

5.8.1.2 Discount Rate

At this point, the assumptions and the methodology behind the computation of the WACC, the discount rate to be used, are detailed. To compute the WACC several key inputs are needed, after tax cost of debt, cost of equity and the expected capital structure of the company.

In terms of cost of debt, one of the possible approaches would be to use a score provided by Rating Agencies that after analyzing the creditworthiness and solvency outlook of the company provide estimation to the cost of debt. However, nowadays any rating Agency is following the company. Thus, we computed the cost of debt as explained before in formula (9). However, as we have seen before the company doesn't have significant amounts of debt which means that the WACC will mainly represent the cost of equity of the company.

The risk-free rate used was the 10-year bonds of Denmark, more similar to the explicit period chosen for the valuation, adding up a default spread according to Damodaran approach. The chosen of the risk-free rate is based on the country from were PANDORA operates, Denmark, with the same currency, and considering that all the potential risks are already reflected in this risk-free rate. Moreover, PANDORA also presents its reports in Danish Kroners.

Denmark appears to be a very stable and safety country. According to Moody's the current rating of the country is Aaa, one of the most secured. Thus, and being a well-diversified company in terms of revenues and exposure to different country risks we assume the risk-free rate to be 10-years bond of Denmark instead of 10-years German Bonds, the common approach for European countries.

These two inputs, risk free rate and default spread yield a cost of debt of 1.33%. However, for the purpose of the discount rate we need the after tax cost of debt, that is just the previous cost of debt without the effective tax rate.

For the cost of equity three different inputs are needed, levered beta, risk free rate and market risk premium. The risk free rate is the same we considered for the cost of debt.

In order to compute the levered beta, that measures the market volatility against the company's volatility, we used the bottom-up strategy of Damodaran (2002) explained before in Literature Review chapter, using formula (7).

We consider the levered beta of the industry computed with the bottom-up strategy to be more accurate, which is also reinforced by Kaplan (1986) that argues that using the industry beta we achieve better results.

In terms of levered beta, we consider a levered beta of 0.81, which means that the volatility associated with the company is far less than the volatility of the market. The low volatility might be explained for the lack of cyclicity of the business, both in terms of revenues and costs. For the market risk premium, assuming that we are in presence of a diversified investor with access to international investments we assumed the theoretical value of 6%.

We didn't use the adjusted market risk premium as suggested by Damodaran approach, in the case were we should added a country risk premium forecasted for each country because Denmark appears to be a very stable and safety country. As we have seen in Literature Review one should use the market risk premium that represents the country where the company operates. However, PANDORA doesn't have revenues from Denmark and the most approximated market we can choose, from the MSCI is an European Market. Nevertheless, PANDORA is making an effort to growth in other countries and this approximation to the risk premiums in Europe appears not to be fair when analyzing the whole company. Thus, and being a well-diversified company in terms of revenues and exposure to different country' risks and assuming also a well-diversified investor we will assume just the theoretical market risk premium.

The final input to compute the WACC is related to the capital structure of the company. The current market value of debt and equity need to be addressed. For the purpose of the debt at markets value we will assume to be equal to the accounting value since no additional information is available.

Furthermore, in terms of capital structure PANDORA announced that it is expected to be remain very stable in the future since the company believes to be in its perfect capital structure. Thus, we can assume the current capital structure to be representative of the future and thus be considered as an input for WACC computation. Following formula (10) we arrive to a WACC of 5.75% detailed as follows.

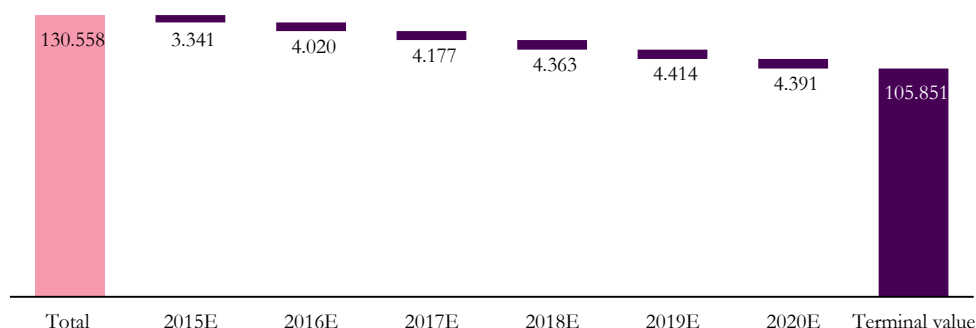
WACC	
Risk free rate	0,93%
+ Default spread	0,40%
After tax Cost of debt	1,06%
Risk free rate	0,93%
Levered Beta	0,81
Market risk premium	6,00%
Cost of equity	5,77%
E/V	99,47%
D/V	0,53%
WACC	5,75%

Table 6: WACC inputs

5.8.1.3 DCF Valuation Conclusion

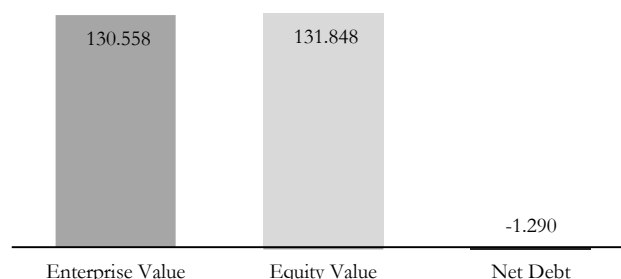
Concluding, if we discount each forecasted cash flow at the correct discount rate, WACC, we arrive to an enterprise value of DKK130.558 million.

Moreover, making the segregation by the explicit period and terminal value we can conclude that, as expected, the terminal value as a huge impact in the total value of the firm. Indeed, terminal value accounts for approximately 81% of the final enterprise value in the valuation. For that purpose, the growth rate chosen is one of the key factors to make a sensitivity analysis after.



Graphic 16: PANDORA's enterprise value breakdown

The enterprise value is the most critical value in any valuation and represents the amount that anyone interesting in acquiring the company needs to consider, being constituted by the equity plus the net debt. In this case, the net debt of the company is negative, meaning that PANDORA has more cash on its balance sheet than debt.



Graphic 17: **DCF valuation breakdown**

Therefore, considering the equity value we can translate to what should be the fair value of PANDORA'S share price. The price per share is of DKK1.014 above the current market price of DKK600.5, on the 3 March of 2015. It is clear that the company is being undervalued by the market

At this point it is important to mention that historically PANDORA had been paying dividends, corresponding to a payout ratio of approximately 60%. However, since the company is growing, and the free cash flow available allows the company to pay higher dividends we assume a higher payout ratio in the future of 70%. Moreover, in 2014 this path was already visible since the company increase dividend per share from the usually DKK6 to DKK9 per share.

5.8.1.4 Sensitivity Analysis

In order to understand the impact of the critical assumptions of the model in the valuation of PANDORA we perform a very useful sensitivity analysis to critical inputs in the model.

Before testing the impact of each of the critical variables in the model individually we will consider two additional scenarios to the base case, presented before, to consider a situation where the estimated results are revised upwards, growth scenario, and another one where the estimated results are revised downwards, decline scenario.

PANDORA faces three main risks. The first is related to the raw material prices, notably silver and gold. An increase in those prices will lead the company to face some stress and obviously decrease the expected gross margin.

Second the adjustment in the consumer confidence. This effect might be reflected in the medium purchase ticket or even the total number of consumers in the whole markets which implies a decrease in the expected revenues of the company.

Moreover, this is a risk that is common to fashion companies and is a natural result of the macroeconomic tendency. Additionally, the dependence on key markets and notably in the US market can also be a risk for PANDORA performance. Thus, impacting expected revenues. Finally, the fact that the production is based in Thailand can be a risk in a sense that there is a risk of disruption with the production or a potential change in logistics costs.

Hence, for the analysis of potential impact in the valuation of the company the sensitive analysis is based in different set of assumptions to reflect worst scenarios and also better scenarios in terms of revenues and EBIT margin and investment in Capex. All of the chosen variables to analyze impact directly the valuation of the company. The DCF valuation considering these three scenarios and the changes considered in some of the most important inputs of the model are summarized in Appendix A.11. The base scenario is the one presented before in our DCF valuation.

By combining positive changes, growth scenario, in our base scenario, we arrive to an estimate price per share of DKK1.295. This scenario assumes that the effort PANDORA is making to increase LFL revenues in all markets and to control operational costs is achieved with an extraordinary performance, above our expectations. We should consider that this is not such an unpredictable scenario since PANDORA was able to surprise investors also in 2014.

On the other hand, in the decline scenario, we consider that as a result of international macroeconomic environment PANDORA is forced to reduce the investment in Capex in order to sustain the profitability, revenues are lower than expected and thus, EBIT margin is impacted. In this scenario, combining all variables at the same time, we arrive to a price per share of DKK728.

Concluding, in all the three scenarios we argue that the market is undervaluing PANDORA. Even considering a bad scenario the target price is higher than the current market price of the company. However, it is important to point out that comparing the impact to the base scenario is very significant since in the bad scenario we achieve a target price 22.87% lower than previous expected and in the good scenario a 27.69% higher price.

Additionally, we also included the probability of each one of the scenarios to occur. We considered a probability of 50% of the base scenario to occur and then 25% for each one of the other two scenarios. Again, the conclusion is that the current market price is undervalued. In this case, the target price for PANDORA is DKK1968.

Furthermore, for a more detailed analysis to the impact of individual variables in the model we performed an additional sensitivity analysis to two critical inputs. Both the terminal growth rate and the discount rate are key figures to get the final target price for the company. The Table below summarizes the impact in the price target for PANDORA.

WACC / g	-0,50%	0%	0,50%	1%	1,60%	2%	2,50%
4%	1.024	1.126	1.257	1.432	1.738	2.044	2.656
4,50%	923	1.002	1.102	1.230	1.442	1.640	1.998
5%	840	903	981	1.078	1.233	1.370	1.603
5,75%	740	787	843	911	1.014	1.101	1.239
6%	712	755	806	866	957	1.033	1.152
6,50%	662	698	740	789	862	921	1.011
7%	619	649	684	725	784	831	902
7,50%	581	607	636	671	719	758	814

Table 7: **DCF, sensitivity analysis to critical inputs, share price (DKK)**

Although it is crucial to keep in mind that the extreme values considered in this sensitivity analysis are very much unlikely. However, this approach make us understand that an impact in the WACC input have a much higher impact in the share price of the company than the terminal growth rate.

5.8.2. Multiples

5.8.2.1 Peer Group

As mentioned before, find a set of comparable firms, i.e peer group, can be very difficult and no matter how carefully we construct the list of comparable firms we always end up with firms that are different from the one we are valuing. Moreover, multiples valuation are completely based on the peer group chosen for the company which has a huge impact on the final conclusion, thus if the peer group is not accurate also the conclusion from multiples valuation isn't.

As explained, none of the companies considered to be possible competitors are completely focused on selling jewellery in the same conditions of PANDORA, with their own and operated stores, or if they are only focused on selling jewelry the business model is in some critical aspects different from the one of PANDORA. As a result, in case of PANDORA it is very difficult to find a suitable peer group.

The peer group of the company was then defined after the analysis of each one of the companies in the luxury industry that seems, at the first hand, to compete with PANDORA, following some key factors for the analysis. Business model, international expression in terms of sales and network of stores or distribution, range of selling price with product segments bellow USD500, similar market size and capital structure. Moreover, in each case we analyze the origin in terms of geography, of revenues. The international presence of each of the companies was an important factor for the selection of the peer group in order to ensure, as much as possible, that companies compete with PANDORA in the majority of the markets where the company operates or either have online sales and distribution worldwide.

Hence, after the individual analysis of many competitors, four companies were considered to be in PANDORA peer group, namely: Signet, Foli Folie, Bijou Brigitte, Tiffany & Co.

For instance, for companies like Tiffany & Co, that have also an international business and the awareness of the brand is huge, the core business is not yet the affordable jewelry part of the business. However, Tiffany & Co is considered for most of the analysts and costumers to be one of the biggest competitors and one of the biggest players in the market.

Thus, for the purpose of the valuation we will consider this company as part of the peer group, but by bearing in mind that multiple's valuation might be biased by the inclusion of such a big company.

On the other hand, the smaller companies in terms of sales and international awareness that operates, somehow, like PANDORA, selling jewellery in their owned stores. In cases like Signet, Foli Folie and Bijou Brigitte, the average sale price might be lower than PANDORA's average sale price but the companies are also considered to belong to the affordable jewellery industry. Additionally, in terms of geographic operation all companies appeared to compete with PANDORA in almost all markets where the company being valued is present. These companies also have similar capital structure, excluding the case of Tiffany & Co.

As the peer group is not completely suitable to PANDORA, we will only consider multiples valuation as a cross-check and not as a valid valuation method *per se*. In fact, this was already mentioned in the review of multiples valuation and peer group before.

5.8.2.2 Multiples Valuation

The multiples to be used are forward-looking multiples for 2015, Price-Earnings ratio and EV-to-EBITDA ratio. These multiples are expected to present the most accurate results taking into consideration the characteristics of the company being valued.

Price-Earnings Ratio (PER) is widely accepted, namely in this industry, because luxury goods companies tend to trade a lot on these ratios as they are usually not very capital/debt intensive. The chosen peer group for the company has a similar capital structure, thus reinforcing the importance of PER multiple.

In order to use forward-looking multiples one must have access to an estimation of the operating results used in the computation of the multiples like, Net Income and EBITDA. For this purpose, data was taken from Bloomberg. In the specific case of PANDORA, data was taken from the DCF valuation already presented.

The PER normally used to compared estimated future earnings with current earnings. PER is computed by simply divide the current market price for expected earnings or net income. On the other end, we also compute a multiple EV-to-EBITDA based on the EBITDA of the peer group. This multiple is computed by dividing the enterprise value by the EBITDA.

The conclusions from multiples valuation are as follow:

Multiples valuation	With Tiffany		Without Tiffany	
	EV / EBITDA	P/E	EV / EBITDA	P/E
Harmonic Mean	9,50	18,31	7,40	17,50
EBITDA 2015	5.376	-	5.376	-
EARNINGS 2015	-	3.852	-	3.852
Enterprise Value	51.063	69.237	39.782	66.102
Equity value	52.353	70.527	41.072	67.392
# Shares (million)	130	130	130	130
Price per Share	403	543	316	518

Table 8: **PANDORA's multiples valuation**

Luxury goods can be described as a momentum sector since multiples tend to expand when earnings estimates are raised, and the reverse is also true.

5.8.3. Conclusion

After considering the DCF model, explain the assumptions behind the model and discussing the main drivers of each critical factor for the model PANDORA's enterprise value is worth DKK130.558 million, meaning an equity value of DKK131.848 million, and a price per share of DKK1.014. The proposed value is higher than the current market price, as of 3 of March of 2015, of DKK600.5. Hence, it implies that the company is currently considered to be undervalued.

According to HSBC (2012) the historically the sector has traded at an average 50% premium to the market. Some peaks occurred, for instance during the 2000 bubble when the sector was trading at a 100% premium. Thus, in accordance with what has happening in the sector PANDORA the proposed price target for PANDORA assumes a premium to the market of 40.79%.

So, the final take away from PANDORA's valuation presented is that the company presents an interesting investment opportunity and has a Buy recommendation. The risks associated with the recommendation are detailed in section 4.1.4 (Risk parameters) above.

5.9. Equity Research Comparison

For the purpose of comparing the valuation performed in this dissertation with one of a leading investment bank we will use a report of J.P. Morgan Cazenove published in 17 of February of 2015, after the announcement of the final results of the FY2014. The final conclusion is Overweight meaning that they expect over the next six to twelve months the stock to outperform the average total return of the stocks in the analyst's team's coverage universe. Thus, reinforcing the ongoing momentum PANDORA is facing.

J.P. Morgan suggest a price target of DKK650 comparing with a market price of DKK538 at the same day. Moreover, J.P. Morgan increased the price target from DKK565 announced in November 2014. First of all, it is important to notice that despite projecting a different target prices, both valuations lead to the same conclusion. PANDORA stock price is now undervalued. Moreover, J.P. Morgan has been increasing its target price over the last months. In November 2014 the price target was DKK565 after the Q3 2014 announcement which is already reflects an increase since August with a price target of DKK515.

However, there are some important differences between the assumptions considered in this dissertation and the ones published in the bank's report.

First, the DCF valuation of the J.P. Morgan has an explicit period from 2015 to 2016. In terms of revenue forecast, the Bank expects growth YoY above our expectations, 25% in 2015 and 14% in 2016. In our point of view this is an expectation of growth with significant differences YoY that is not aligned with historically growth of the company. Moreover, PANDORA announced expected revenues in 2015 of around DKK14 billion and the Bank is forecasting almost DKK15 billion, which seems excessive.

Second, J.P.Morgan forecast EBIT margin to be 30% and 17% in 2015 and 2016, respectively which is means that the company will have, in 2016, the worst EBIT margins ever published and, according to public information and what was announced by PANDORA for the following years there is nothing that would let us expect such a drastic change. In terms of Net Income, as a percentage of revenue, J.P. Morgan is expecting 28.3% and 29.2% in 2015 and 2016, respectively which is away above historically results, and again nothing let us forecast this change. Some that might impact this better result is related with financial results and we don't have enough information to forecast with some reliability different than historical trend.

Furthermore, the most important fundamental differences are related with the chosen terminal growth rate, tax rate and WACC.

J.P. Morgan considered a WACC of 9.1%, based on the peer group but we cannot conclude how the bank estimated exactly this item. However, as we have seen before, we believe that an accurate peer group is very hard to find for PANDORA and thus it might influence the fair cost of debt and equity of the company. Also, the capital structure of some companies that might be considered for the peer group can be very different from PANDORA's capital structure, especially if they consider mature and international companies where Debt has a higher weight. In terms of growth rate J.P. Morgan assumes 2%, which may be considered to be reasonable and is considered in the sensitivity analysis presented before, and a tax rate of 25%.

Hence, if we apply the same discount rate to our model and the same terminal growth rate as J.P. Morgan, maintain all other assumptions constant we would get a similar target price of DKK592.

5.10. Conclusion

To conclude, we are now able to say that we understand better the jewelry industry, its main players and the existent segments and, above all, we understand PANDORA's business model.

First, in the Literature Review chapter, we analyzed the most important valuation methods, their main advantages, constrains or limitations and their usage. Taking into consideration the characteristics of each asset being valued we are now able to identify which is the model that fits better. Second, in the Industry Review chapter we analyzed the industry where PANDORA operates, jewelry industry, and we identify the different segments, future growth prospects, main risks, and the what is expected to occur in some of the most important regions for the industry.

Furthermore, after understanding the industry and the company we move forward to forecast what is expected to occur in the short and medium term based on information released by PANDORA, in its Annual Report, as well as our understanding of the future of the industry and the company. After the forecasting the Balance Sheet, Income Statement and Cash Flow figures we performed a DCF valuation with an explicit period of five years. Also, a multiples valuation was performed to understand the company and its competitors. However, this valuation method is not suitable to the particular case of PANDORA, since it is based on the peer group chosen and for PANDORA it is not possible to find a peer group that fits in the most important financial and economic figures for this analysis.

We also created some scenarios where the critical inputs to the model change in order to understand the impact in the valuation.

Finally, we compared our valuation to the one presented by J.P. Morgan Cazenove in its report of 17 February of 2015. Since, different assumptions were made both valuations reach to different price target for PANDORA. However, the conclusion is the same, meaning that PANDORA is currently being undervalued by the market and presents an interesting investment opportunity. Our final recommendation is Overweight

Appendix A

Appendix A.1 – Balance Sheet as Reported

The table below presents the Balance Sheet of PANDORA, as reported by the company. The data was taken from the Annual Reports from 2008 to 2014

Dkk million	2008	2009	2010	2011	2012	2013	2014
Non current Assets							
Goodwill	932	1.208	1.905	1.928	1.922	1.904	2.080
Brand	1.032	1.047	1.052	1.053	1.053	1.053	1.053
Distribution network	426	396	366	336	331	300	268
Distribution rights	900	884	1.128	1.064	1.045	1.042	1.047
Other intangible assets	-	-	39	95	136	318	411
Property, plant and equipment	115	205	374	429	472	497	711
Deferred tax asset	29	77	107	209	190	276	407
Other non-current assets	1	21	28	34	26	48	99
Total non-current assets	3.435	3.838	4.999	5.148	5.175	5.438	6.076
Current Assets							
Inventories	143	433	1.272	1.609	1.318	1.490	1.684
Trade receivables	332	622	834	900	940	895	1.110
Receivables from parent company	17	-	-	-	-	-	-
Financial instruments	-	-	-	-	4	-	99
Other receivables	22	58	533	177	498	731	404
Tax receivable	28	41	97	41	138	35	52
Cash and short-term deposits	305	824	1.224	176	341	686	1.131
Total current assets	847	1.978	3.960	2.903	3.239	3.837	4.480
TOTAL ASSETS	848	1.999	3.988	2.937	3.265	1.004	10.556
Non current Liabilities							
Subordinated loan from parent company	1.299	1.363	-	-	-	-	-
Interest-bearing loans and borrowings	1.395	1.340	-	375	151	-	-
Provisions	1	4	536	64	7	35	61
Deferred tax liability	586	559	606	552	552	471	430
Other long-term liabilities	-	-	18	2	2	3	-
Total non-current liabilities	3.281	3.266	1.160	993	712	509	491
Current Liabilities							
Subordinated loan from parent company	16	37	-	-	-	-	-
Interest-bearing loans and borrowings	282	235	2.326	10	7	49	10
Provisions	23	64	76	230	463	471	678
Payables to parent company	-	-	-	-	-	-	-
Trade payables	30	106	245	288	219	539	804
Income tax payable	124	207	351	344	283	546	643
Other payables	98	252	486	775	645	551	630
Financial Instruments	-	-	-	-	47	148	268
Total current liabilities	573	901	3.484	1.647	1.664	2.304	3.033
TOTAL LIABILITIES	3.854	4.167	4.644	2.640	2.376	2.813	3.524
Issued capital / Share capital	-	1	130	130	130	130	128
Share premium	-	-	1.248	1.248	1.248	1.248	1.229
Treasury shares	-	-	38	38	38	738	2.679
Foreign currency translation reserve	119	164	521	768	-	-	-
Hedge reserve	-	-	302	236	-	-	-
Other reserves	3	11	88	88	652	205	729
Proposed dividend for the year	-	-	650	715	715	823	1.088
Retained earnings	306	1.276	1.414	2.736	3.331	4.794	6.537
Equity attrib. equityholders parent company	428	1.452	4.315	5.411	6.038	6.462	7.032
Non controlling interest	-	197	-	-	-	-	-
TOTAL SHAREHOLDER EQUITY	428	1.649	4.315	5.411	6.038	6.462	7.032
TOTAL EQUITY + LIABILITIES	1.001	2.550	7.799	7.058	7.702	8.766	10.556

Appendix A.2 – Income Statement as Reported

The table below presents the Income Statement of PANDORA, as reported by the company.

The data was taken from the Annual Reports from 2008 to 2014

Dkk million	2008	2009	2010	2011	2012	2013	2014
Revenue	1.658	3.461	6.666	6.658	6.652	9.010	11.942
Cost of sales	- 647	- 1.073	- 1.941	- 1.798	- 2.223	- 3.011	- 3.519
Gain and losses on raw material	- 19	83	-	-	-	-	-
Gross profit	992	2.471	4.725	4.860	4.429	5.999	8.423
Sales, Distribution and marketing costs	- 290	- 743	- 1.733	- 2.053	- 2.084	- 2.397	- 3.100
Administrative expenses	- 69	- 304	- 576	- 749	- 870	- 921	- 1.251
Operating profit (EBIT)	634	1.425	2.417	2.059	1.476	2.681	4.072
<i>EBIT margin</i>	<i>38,2%</i>	<i>41,2%</i>	<i>36,3%</i>	<i>30,9%</i>	<i>22,2%</i>	<i>29,8%</i>	<i>34,1%</i>
Financial income	23	79	54	642	132	167	14
Financial expense	- 240	- 314	- 218	- 331	- 128	- 106	- 214
Profit before tax	417	1.190	2.253	2.370	1.480	2.742	3.872
Income tax expense	- 110	- 184	- 381	- 332	- 277	- 522	- 774
Net profit for the year	307	1.006	1.872	2.038	1.203	2.220	3.098

Appendix A.3 – Revenues Forecast by Geography

Table below demonstrates the inputs considered for Revenues forecast, separately by each of the geographies where PANDORA operates. From 2013 to 2014 data was taken from PANDORA's Annual Report. From 2015 onwards the assumptions are the ones highlighted.

<i>DKK million</i>	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
America	4.156	4.959	5.732	6.592	7.202	8.130	8.714	9.586
% of Revenue	46,1%	41,5%	40,0%	40,0%	38,0%	39,0%	38,0%	38,0%
% Growth	25%	44%	16%	15%	9%	13%	7%	10%
US	3.201	3.629	4.356	4.614	5.041	5.691	6.100	6.710
% of America Revenue	77,0%	73,2%	76,0%	70,0%	70,0%	70,0%	70,0%	70,0%
% of Total Revenue	35,5%	30,4%	30,4%	28,0%	26,6%	27,3%	26,6%	29,3%
Other Americas	955	1.330	1.376	1.978	2.161	2.439	2.614	2.876
% of America revenues	23,0%	26,8%	24,0%	30,0%	30,0%	30,0%	30,0%	30,0%
% of total revenue	10,6%	11,1%	9,6%	12,0%	11,4%	11,7%	11,4%	11,4%
Europe	3.760	5.304	6.879	7.581	8.718	9.381	9.631	10.595
% of Revenue	41,7%	44,4%	48,0%	46,0%	46,0%	45,0%	42,0%	42,0%
% Growth	48%	53%	30%	10%	15%	8%	3%	10%
UK	1.158	1.654	1.788	1.971	2.179	1.970	2.119	2.331
% of Europe Revenue	30,8%	31,2%	26,0%	26,0%	25,0%	21,0%	22,0%	22,0%
% of Total Revenue	12,9%	13,9%	12,5%	12,0%	11,5%	9,5%	9,2%	10,2%
Germany	544	578	825	1.061	1.046	1.032	1.059	1.165
% of Europe Revenue	14,5%	10,9%	12,0%	14,0%	12,0%	11,0%	11,0%	11,0%
% of Total Revenue	6,0%	4,8%	5,8%	6,4%	5,5%	5,0%	4,6%	5,1%
Other Europe	2.058	3.072	4.265	4.548	5.492	6.379	6.453	7.098
% of Europe Revenue	54,7%	57,9%	62,0%	60,0%	63,0%	68,0%	67,0%	67,0%
% of Total Revenue	22,8%	25,7%	29,8%	27,6%	29,0%	30,6%	28,1%	31,0%
Asia Pacific	1.094	1.679	1.720	2.307	3.032	3.336	4.586	5.045
% of Revenue	12,1%	14,1%	12,0%	14,0%	16,0%	16,0%	20,0%	20,0%
% Growth	37%	55%	2%	34%	31%	10%	38%	10%
Australia	681	806	791	992	1.243	1.334	1.605	1.766
% of Asia Pacific	62,2%	48,0%	46,0%	43,0%	41,0%	40,0%	35,0%	35,0%
% of Total Revenue	7,6%	6,7%	5,5%	6,0%	6,6%	6,4%	7,0%	7,0%
Other Asia Pacific	413	873	929	1.315	1.789	2.001	2.981	3.279
% of Asia Pacific	37,8%	52,0%	54,0%	57,0%	59,0%	60,0%	65,0%	65,0%
% of Total Revenue	4,6%	7,3%	6,5%	8,0%	9,4%	9,6%	13,0%	13,0%
Total Revenue	9.010	11.942	14.330	16.480	18.952	20.847	22.932	25.225
% Growth	35,4%	32,5%	20,0%	15,0%	15,0%	10,0%	10,0%	10,0%

Appendix A.4 – Revenues Forecast by Product

Table below demonstrates the inputs considered for Revenues forecast, separately by each of the product category. From 2013 to 2014 data was taken from PANDORA's Annual Report. From 2015 onwards the assumptions are the ones highlighted.

<i>DKK million</i>	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
Charms	6.293	7.933	9.315	10.300	11.750	13.134	14.218	15.640
% total revenue	69,8%	66,4%	65,0%	62,5%	62,0%	63,0%	62,0%	62,0%
% Growth	27%	50%	17%	11%	14%	12%	8%	10%
Silver gold charm bracelet	1.157	1.427	1.720	1.813	2.085	2.293	2.523	2.775
% total revenue	12,8%	11,9%	12,0%	11,0%	11,0%	11,0%	11,0%	11,0%
% Growth	37%	48%	21%	5%	15%	10%	10%	10%
Rings	550	1.192	1.648	2.142	2.464	3.127	3.440	3.784
% total revenue	6,1%	10,0%	11,5%	13,0%	13,0%	15,0%	15,0%	15,0%
% Growth	29%	42%	38%	30%	15%	27%	10%	10%
Other jewelry	1.010	1.390	1.648	2.225	2.653	2.293	2.752	3.027
% total revenue	11,2%	11,6%	11,5%	13,5%	14,0%	11,0%	12,0%	12,0%
% Growth	140%	54%	19%	35%	19%	-14%	20%	10%
Total Revenue	9.010	11.942	14.330	16.480	18.952	20.847	22.932	25.225
% Growth	35,4%	32,5%	20,0%	15,0%	15,0%	10,0%	10,0%	10,0%

Appendix A.5 –Balance Sheet Forecast

Table below demonstrates the final Balance Sheet forecast based on the assumptions previously explained in Chapter 5.

Dkk million	2015E	2016E	2017E	2018E	2019E	2020E
Non current Assets						
Goodwill	2.101	2.122	2.143	2.164	2.186	2.208
Brand	1.053	1.053	1.053	1.053	1.053	1.053
Distribution network	271	273	276	279	282	284
Distribution rights	1.046	1.045	1.044	1.043	1.200	1.175
Other intangible assets	531	687	887	1.147	1.482	1.916
Property, plant and equipment	1.194	1.320	1.436	1.565	1.862	2.173
Deferred tax asset	487	552	615	677	744	819
Other non-current assets	99	99	99	99	99	99
Total non-current assets	6.781	7.150	7.554	8.026	8.908	9.727
Current Assets						
Inventories	2.023	2.445	2.812	3.093	3.402	3.742
Trade receivables	1.332	1.532	1.762	1.938	2.131	2.131
Receivables from parent company	-	-	-	-	-	-
Financial instruments	-	-	-	-	-	-
Other receivables	643	739	850	935	1.028	1.028
Tax receivable	83	95	109	120	132	132
Cash and short-term deposits	3.182	4.724	6.088	7.528	8.750	9.964
Total current assets	7.262	9.534	11.620	13.614	15.444	16.998
TOTAL ASSETS	14.044	16.684	19.174	21.640	24.352	26.725
Non current Liabilities						
Subordinated loan from parent company	-	-	-	-	-	-
Interest-bearing loans and borrowings	-	-	-	-	-	-
Provisions	61	61	61	61	61	61
Deferred tax liability	675	765	853	938	1.032	1.135
Other long-term liabilities	-	-	-	-	-	-
Total non-current liabilities	736	826	914	999	1.093	1.196
Current Liabilities						
Subordinated loan from parent company	-	-	-	-	-	-
Interest-bearing loans and borrowings	10	10	10	10	10	10
Provisions	881	1.064	1.224	1.346	1.481	1.481
Payables to parent company	-	-	-	-	-	-
Trade payables	1.129	1.364	1.569	1.726	1.898	1.898
Income tax payable	736	889	1.023	1.125	1.237	1.237
Other payables	885	1.069	1.229	1.352	1.487	1.487
Financial Instruments	-	-	-	-	-	-
Total current liabilities	3.640	4.397	5.054	5.559	6.114	6.114
TOTAL LIABILITIES	4.376	5.222	5.968	6.558	7.207	7.310
Issued capital / Share capital	128	128	128	128	128	128
Share premium	1.229	1.229	1.229	1.229	1.229	1.229
Treasury shares	- 2.679	- 2.679	- 2.679	- 2.679	- 2.679	- 2.679
Foreign currency translation reserve	-	-	-	-	-	-
Hedge reserve	-	-	-	-	-	-
Other reserves	794	857	928	1.005	1.090	1.184
Proposed dividend for the year	2.420	2.950	3.286	3.613	3.974	4.370
Retained earnings	7.775	8.976	10.314	11.785	13.403	15.182
Equity attrib. equityholders parent company	9.668	11.462	13.205	15.082	17.145	19.415
Non controlling interest	-	-	-	-	-	-
TOTAL SHAREHOLDER EQUITY	9.668	11.462	13.205	15.082	17.145	19.415
TOTAL EQUITY + LIABILITIES	14.044	16.684	19.174	21.640	24.352	26.725

Appendix A.6 –Income Statement Forecast

Table below demonstrates the final Income Statement forecast and the most relevant margins of PANDORA based on the assumptions previously explained in Chapter 5

Dkk million	2015E	2016E	2017E	2018E	2019E	2020E
Revenue	14.330	16.480	18.952	20.847	22.932	25.225
Cost of sales	- 4.227	- 5.109	- 5.875	- 6.463	- 7.109	- 7.820
Gain and losses on raw material	-	-	-	-	-	-
Gross profit	10.103	11.371	13.077	14.385	15.823	17.405
Sales, Distribution and marketing costs	- 3.869	- 4.285	- 5.117	- 5.629	- 6.192	- 6.811
Administrative expenses	- 1.433	- 1.648	- 1.895	- 2.085	- 2.293	- 2.523
Operating profit (EBIT)	4.801	5.438	6.065	6.671	7.338	8.072
<i>EBIT margin</i>	<i>33,5%</i>	<i>33,0%</i>	<i>32,0%</i>	<i>32,0%</i>	<i>32,0%</i>	<i>32,0%</i>
Financial income	14	14	14	14	14	14
Financial expense	- 160	- 184	- 212	- 233	- 256	- 282
Profit before tax	- 931	- 1.054	- 1.173	- 1.290	- 1.419	- 1.561
Income tax expense	- 931	- 1.054	- 1.173	- 1.290	- 1.419	- 1.561
Net profit for the year	3.724	4.215	4.694	5.162	5.677	6.244
EBITDA margin	37,5%	37,0%	36,2%	36,2%	36,2%	36,2%
Net profit margin	26,0%	25,6%	24,8%	24,8%	24,8%	24,8%
Payout Ratio	65,0%	70,0%	70,0%	70,0%	70,0%	70,0%

Appendix A.7 – Detailed Income Statement Forecast

Table below demonstrates the inputs considered for the Income Statement, separately by each of the most important figures. From 2013 to 2014 data was taken from PANDORA's Annual Report. From 2015 onwards the assumptions are the ones highlighted.

DKK million	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
Cost of sales	- 3.011	- 3.519	- 4.227	- 5.109	- 5.875	- 6.463	- 7.109	- 7.820
% revenue	-33%	-29%	29,5%	31,0%	31,0%	31,0%	31,0%	31,0%
Others cost of sales	- 452	- 528	- 634	- 766	- 881	- 969	- 1.066	- 1.173
% Cost of sales	15%	15%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
Raw materials	- 2.559	- 2.991	- 3.593	- 4.342	- 4.994	- 5.493	- 6.043	- 6.647
% Cost of sales	85%	85%	85,0%	85,0%	85,0%	85,0%	85,0%	85,0%
Gold	15%	15%	15%	15%	15%	15%	15%	15%
Silver	60%	60%	60%	60%	60%	60%	60%	60%
Others	10%	10%	10%	10%	10%	10%	10%	10%
Sales, Distribution and marketing costs	- 2.397	- 3.100	- 3.869	- 4.285	- 5.117	- 5.629	- 6.192	- 6.811
% revenue	27%	26%	-27%	-26%	-27%	-27%	-27%	-27%
Sales and distribution expenses	- 1.517	1.957	- 2.293	- 2.637	- 3.222	- 3.544	- 3.898	- 4.288
% of total sales, distrib and marketing exp	-63%	63%	59%	62%	63%	63%	63%	63%
% of revenue	17%	-16%	16,0%	16,0%	17,0%	17,0%	17,0%	17,0%
Marketing expenses	- 880	1.143	- 1.576	- 1.648	- 1.895	- 2.085	- 2.293	- 2.523
% Sales, Distribution and marketing	-37%	37%	41%	38%	37%	37%	37%	37%
% of revenue	-10%	10%	11,0%	10,0%	10,0%	10,0%	10,0%	10,0%
Administrative expenses	- 921	- 1.251	- 1.433	- 1.648	- 1.895	- 2.085	- 2.293	- 2.523
% revenue	10%	10%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%
Amortisation, Depreciation and Impairment								
Intangible assets & PPE								
For cost of sales	41	49	59	72	82	90	100	109
% of cost of sales	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%
For distribution expenses	83	92	344	396	483	532	585	643
% of distribution expenses	5%	-5%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
For administrative expenses	76	81	172	198	227	250	275	303
% of administrative expenses	8,3%	6,5%	12,0%	12,0%	12,0%	12,0%	12,0%	12,0%
Total amortizations	200	222	575	665	793	872	960	1.056
% of revenue	2,2%	1,9%	4,0%	4,0%	4,2%	4,2%	4,2%	4,2%

Appendix A.8 – Detailed Working Capital Forecast

Table below demonstrates the assumptions to compute the Working Capital figures that are to be incorporated in both the Balance Sheet and are used for the DCF valuation, namely the investment in working capital. From 2013 to 2014 data was taken from PANDORA's Annual Report. From 2015 onwards the assumptions are the ones highlighted

DKK million	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
Inventory	1.490	1.684	2.023	2.445	2.812	3.093	3.402	3.742
Days of COGS	181	175	175	175	175	175	175	175
% of COGS	17%	14%	14%	15%	15%	15%	15%	15%
Trade receivables	895	1.110	1.332	1.532	1.762	1.938	2.131	2.131
Days of Sales	36	34	34	34	34	34	34	34
% of revenue	10%	9%	9%	9%	9%	9%	9%	8%
Trade payables	539	804	1.129	1.364	1.569	1.726	1.898	1.898
Days of COGS	65	97	97	97	97	97	97	97
% of COGS	18%	23%	27%	27%	27%	27%	27%	27%
Operating Working Capital	1.846	1.990	2.226	2.612	3.004	3.305	3.635	3.975
% revenue	20%	17%	16%	16%	16%	16%	16%	16%
Other trade receivables	731	404	643	739	850	935	1.028	1.028
Days of Sales	30	16	16	16	16	16	16	16
% of revenue	8%	4%	4%	4%	4%	4%	4%	4%
Tax receivables	35	52	83	95	109	120	132	132
Days of Sales	1	2	2	2	2	2	2	2
% of revenue	0%	1%	1%	1%	1%	1%	1%	1%
Provisions	506	739	881	1.064	1.224	1.346	1.481	1.481
Days of COGS	61	90	76	76	76	76	76	76
% of COGS	17%	25%	21%	21%	21%	21%	21%	21%
Income tax payable	546	643	736	889	1.023	1.125	1.237	1.237
Days of COGS	66	78	64	64	64	64	64	64
% of COGS	18%	21%	17%	17%	17%	17%	17%	17%
Other payables	551	630	885	1.069	1.229	1.352	1.487	1.487
Days of COGS	67	76	76	76	76	76	76	76
% of COGS	18%	21%	21%	21%	21%	21%	21%	21%
Working Capital	1.009	434	451	424	488	537	590	930
% revenue	11,2%	3,6%	3,1%	2,6%	2,6%	2,6%	2,6%	3,7%
Investment in WC	- 487	- 575	17	- 26	64	49	54	340
% revenue	-5,4%	-4,8%	0,1%	-0,2%	0,3%	0,2%	0,2%	1,3%

Appendix A.9 – Detailed Capex Forecast

DKK million	2013	2014	2015E	2016E	2017E	2018E	2019E	2020E
Other intangible assets	318	411	531	687	887	1.147	1.482	1.916
Property, plant and equipment	497	711	1.194	1.320	1.436	1.565	1.862	2.173
Total	815	1.122	1.725	2.006	2.324	2.711	3.344	4.089
%	60,1%	40,6%	61,3%	39,4%	39,2%	36,9%	37,6%	33,4%
Agreement Bluebell (Japan)							156	156
Germany 78 stores leases			370					
Basica capex (4,8%)			688	791	910	1.001	1.101	1.211
Total CAPEX	490	455	1.058	791	910	1.001	1.257	1.367
% revenues	5,4%	3,8%	7,4%	4,8%	4,8%	4,8%	5,5%	5,4%

Appendix A.10 – DCF valuation

<i>DKK million</i>	2015E	2016E	2017E	2018E	2019E	2020E
EBIT	4.801	5.438	6.065	6.671	7.338	8.072
Taxes @ EBIT	960	1.088	1.213	1.334	1.468	1.614
Depreciation&Amortization	575	665	793	872	960	1.056
Change in NWC	17	- 26	64	49	54	340
Capex	1.058	791	910	1.001	1.257	1.367
FCFF	3.341	4.251	4.672	5.160	5.520	5.806
Terminal value						5.899
Discount factor	1,00	0,95	0,89	0,85	0,80	0,76
PV of cash flows	3.341	4.020	4.177	4.363	4.414	4.391
PV of terminal value						105.851
WACC	5,75%					
Terminal Growth Rate	1,60%					
PV of FCFE	24.707					
Terminal Value	105.851					
EV	130.558					
Equity Value	131.848					
# Shares	130					
Price per Share	1.014					

Appendix A.11–Sensitivity analysis, Growth and Decline scenario

Dkk million		Decline Scenario	Base Scenario	Growth Scenario
Assumptions	Revenues Growth YoY (2015-2020)	15%/10%/10%/5%/5%/5%	20%/15%/15%/10%/10%/10%	25%/20%/20%/15%/15%/15%
	EBITD margin (2015-2020)	31,8%/31,4%/30,4%/30,4%/30,4%/30,4%	33,5%/33%/32%/32%/32%/32%	35,2%/34,7%/33,6%/33,6%/33,6%/33,6%
	Long Term Capex (% revenue)	5%	5,40%	6%
Valuation	Enterprise value	100.405	130.558	167.063
	Equity value	101.695	131.848	168.353
	Target Share Price	782,27	1.014,21	1.295,02
	Share price	-22,87%	-	27,69%
Applying	Probability	50%	25%	25%
Probabilities	Equity Value	50.847	32.962	42.088
	Share price	391	254	324
Final	Equity value	125.898		
	Share price	968		

Appendix B

Appendix B.1– Research Note

Our Equity Research Note, concluding about our valuation of PANDORA, demonstrating the most important figures and explaining the main assumptions is presented below.

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