Católica-Lisbon School of Business and Economics

International Master of Science in Management

Equity Valuation of Continental AG

MSc Dissertation

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Dissertation written under the supervision of Henrique Bonfim.

Dissertation submitted in partial fulfilment of requirements for the International MSc in Management, at the Universidade Católica Portuguesa, 19.12.2016.

Abstract

The subsequent master's thesis comprises a valuation of the equity stake of Continental AG (Conti), a German 1st tier automotive supplier which is globally active through its Automotive, Tire as well as ContiTech divisions.

Therefore, the current state of the art concerning the field of equity valuation is presented and the most appropriate methods for Conti are chosen. Those are a Discounted Cash Flow (DCF) approach with the Weighted Average Cost of Capital (WACC) and a multiples approach using the Sum of Parts (SOP) of Conti's single divisions. Subsequently, a profound analysis of the automotive industry as well as an internal analysis of Conti itself is presented.

Afterwards, the main part of the thesis presents the drafted financial model and issues the investor a hold recommendation with a target share price of EUR186 dated on 31st December 2016. This evaluation also includes a sensitivity analysis considering various scenarios for the business development of Conti and a Value at Risk (VaR) assessment using a Monte Carlo simulation for predicting the maximum possible daily loss respectively gain. Moreover, a comparison of the author's valuation and a valuation of Exane BNP Paribas is composed.

Resumo

A presente tese de mestrado compreende a avaliação da participação da Continental AG (Conti), uma reconhecida fornecedora da indústria automobilística alemã, globalmente ativa através das suas divisões: Automóvel, Pneus e ContiTech.

Por conseguinte, é apresentado o atual estado da arte relativamente à avaliação do capital próprio da Conti, através dos métodos mais adequados: Discounted Cash Flow (DCF) em conjunto com o Weighted Average Cost of Capital (WACC) e uma abordagem aos Múltiplos, utilizando a Sum of Parts (SOP) das divisões individuais da Conti. Subsequentemente, é apresentada uma análise profunda da indústria automobilística, bem como uma análise interna da própria Conti.

Posteriormente, a parte principal da tese apresenta o modelo financeiro elaborado e dirige uma recomendação aos investidores expressa num preço alvo por ação de 186 euros, a 31 de dezembro de 2016. Esta avaliação também inclui uma análise de sensibilidade considerando vários cenários para o desenvolvimento da Conti e uma análise do Value at Risk (VaR) utilizando uma simulação pelo Método de Monte Carlo com o intuito de prever a perda diária máxima respectivamente ganha. Adicionalmente, é feita uma comparação entre a avaliação do autor e uma avaliação da Exane BNP Paribas.

Acknowledgements

First of all, I want to thank my supervisor Henrique Bonfim and my thesis seminar teacher José Carlos Tudela Martins, who always offered me time, support and the necessary guidance to fulfil the thesis requirements.

Second, I want to thank all of my family members, namely my mother, my father and my sister. They always supported me with their guidance, motivation and encouragement not just throughout the whole master program but also throughout my whole life.

Last, a big thank you goes to all of my friends, who were always there for me and offered advice for this thesis. More specifically, this includes Robin Schrag as well as Martin Wist.

Contents

List of Abbreviations

ADAS	Advanced Driver Assistance System
Approx.	Approximately
APT	Arbitrage Pricing Theory
APV	Adjusted Present Value
AR	Annual Report
B	Book Value of Equity
BC	Bankruptcy Costs
CAGR	Compound Annual Growth Rate
CAPEX	Capital Expenditures
CAPM	Capital Asset Pricing Model
CoC	Cost of Capital
COGS	Cost of Goods Sold
Conti	Continental AG
D&A	Depreciation, Amortization and Impairment
DAX	Deutscher Aktienindex (German High-Cap Stock Index)
DCF	Discounted Cash Flow
DPS	Dividends per Share
EBIT	Earnings before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Depreciation, Amortization & Impairment
ECB	European Central Bank
EPS	Earnings per Share
ERP	Equity Risk Premium

EUR	Euro (Currency)
EV	Enterprise Value
FCFD	Free Cash Flow to Debt
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to the Firm
FED	United States Federal Reserve
FY	Financial Year
GDP	Gross Domestic Product
HMI	Human Machine Interface
i.e.	Id est (“that is to say”)
ICS	Industry Classification System
IMF	International Monetary Fund
IR	Interim Report
LV	Light Vehicle
M	Million
M&A	Mergers and Acquisitions
MDAX	Mid-Cap DAX
MEUR	Million Euros
NAFTA	North American Free Trade Association
NOPLAT	Net Operating Profit Less Adjusted Taxes
OEM	Overall Equipment Manufacturer
OPEC	Organization of the Petroleum Exporting Countries
OTC	Over the Counter
P	Market Price of Equity

PPE	Property, Plant and Equipment
PPS	Price per Share
Q	Quarter
R&D	Research & Development
ROCE	Return on Capital Employed
ROIC	Return on Invested Capital
S&P	Standard & Poors (Rating Agency)
Schaeffler	Schaeffler AG
SGA	Selling, General and Administrative Expenses
SIC	Standard Industrial Classification
SOP	Sum of Parts
TS	Tax Shield
U.S.	United States of America
VaR	Value at Risk
WACC	Weighted Average Cost of Capital
WC	Working Capital
YoY	Year on Year

List of Tables

List of Figures

List of Equations

1 Introduction

The goal of this master's thesis is to determine the equity value of Continental AG (Conti). Conti is a German DAX-listed company, located in Hannover, and is worldwide active through its Automotive, Tire as well as ContiTech division (Continental AR, 2015).

1.1 Motivation

The motivation for this work stems from the fact that the global automotive industry is in the middle of a rapid change. Autonomous driving, connectivity/digitalization, electrification and shared mobility are just a few buzzwords to highlight the most current trends (Continental AR, 2015; Hirsch, Kakkar, Singh, & Wilk, 2015). Consequently, the question which needs to be answered is how this affects Conti, as it is one of the three largest 1st tier suppliers within this industry and if it is able to adapt to those trends (Statista, 2016a). Since the corporation is also engaged in various businesses and geographical areas, its diversified structure is another fact which makes it an interesting and complex object for a valuation.

1.2 Research Question and Structure

Because the objective of this master's thesis is the investigation of Conti's intrinsic equity value, the research question is formulated as follows:

- What is the value of Continental AG's equity at 31st December 2016?

This comprises a step-by-step evaluation, done according to the following sub-questions:

  - What is the state of the art in equity valuation and what are the most appropriate methods to use for valuing Conti?
  - What are the current industry trends? How do they affect the company?
  - How does the company run its business and how is it internally structured? Does its strategy match the current industry trends?

First, a **literature review** will be presented to introduce the most up-to-date concepts in the field of equity valuation.

Afterwards, an **industry analysis** is conducted which focuses onto the automotive industry (Continental AR, 2015).

Before the final valuation, an **internal company analysis** is composed. In general, this includes Conti's firm structure, its corporate and financing strategy as well as stock-related information.

The **final valuation** is subsequently executed according to the Discounted Cash Flow (DCF) as well as the multiples method, using a Sum of Parts (SOP) approach.

The results of the valuation will then be **compared to an investment bank report of Exane BNP Paribas**. It will be highlighted if and why the results of the author are deviating from their values.

Finally, **the conclusion** summarizes all mentioned aspects.

2 Literature Review

The following section contains the state of the art concerning equity valuation and presents the most suitable approaches for the valuation of Conti.

2.1 Relative Valuation

In a relative valuation, one tries to value an asset by comparing it to the prices of similar assets on the market. The question to be answered is "how much is the market paying for the asset? (Damodaran, 2006)." Nonetheless, this approach just works if the markets are efficient, i.e. if they are not over- or undervaluing an asset. Therefore, the process of a relative valuation comprises exactly three steps. The first is **to find comparable assets** that are priced by the market. In case of this thesis this is done via a peer group analysis for comparable companies of Conti. The second step is **to scale the market prices to a common variable**, namely to so called multiples. Least, **adjustments to the obtained multiples** have to be done, if there are extraordinary factors (e.g. impairment) which make them deviate from their peers (Damodaran, 2006). It has to be mentioned that many academics hold the opinion that a relative valuation is a useful tool for a comparison after a profound intrinsic valuation had already been conducted and not suitable on a standalone basis (Fernández, 2001).

2.1.1 Peer Group

In a more narrow sense, a peer group is a set of comparable companies operating in the same industry as the company being valued. There are various studies attempting to elaborate ways of identifying the closest peers of a specific enterprise. First, some authors defend using Industry Classification Systems (ICS) like the Standard Industrial Classification (SIC), Dow Jones or Yahoo for ascertaining peers. Thereby, the accuracy of the final output is strongly correlated to the accuracy of the ICS. The better the classification system, the better the peer group and the more accurate the final multiples (Eberhart, 2004). Furthermore, because ICS are loosely defined, some academics argue for a further refinement of this approach. They state that companies being even active in the same industry can deviate significantly in terms of fundamentals as growth rate, Return on Invested Capital (ROIC) or their capital structure. Consequently, the authors propose to use the ROIC as well as the growth rate as an additional evaluation criteria applied to the ascertained companies from the same industry (Bhojraj & Lee, 2002; Goedhart,

Koller, & Wessels, 2005). A second approach is introduced by Damodaran (2005) who mentions that companies do not have to operate in the same industry if they are equal concerning fundamentals as beta, Earnings per Share (EPS) or growth rate. This is especially helpful in industries with only few incumbents, making it hard to ascertain a vast sample of comparables, because the wider definition criteria increases the sample size.

2.1.2 Types of Multiples

In order to be able to compare the fundamentals of various peers, they are scaled down to a common ratio called multiple (Damodaran, 2005). There are various multiples and opinions on how to categorize them, but in this thesis they are separated into equity (company's market capitalization) (Table 1), asset (market capitalization + debt) and growth referenced multiples (Fernández, 2001). This is for the sake of clarity.

Table 1: Equity Multiples (Source: Fernández, 2001)

Name	**Equity Multiples**
Price to Earnings	P/E
Price to Sales	P/S
Price to Book Value	P/BV

Multiples based on market capitalization are principally easy to compute and to interpret. Nevertheless, the P/E ratio, which is most often used, has the drawback of being affected by the leverage of the respective company. The higher the leverage, the lower the P/E ratio – even though the company's performance might be the same (Fernández, 2001). In addition, many non-operating items such as write-offs might artificially distort the denominator of the multiple (earnings) (Goedhart et al., 2005; Foushee, Koller, & Mehta, 2012). Furthermore, the future growth rate of the evaluated company has a significant effect on the numerator of the multiple (price) (Goedhart et al., 2005).

Asset multiples use the Enterprise Value (EV) as the numerator for the ratio computation (Fernández, 2001) (Table 2).

Table 2: Asset Multiples (Source: Fernández, 2001)

Name	Asset Multiples
Enterprise Value to EBITDA	EV/EBITDA
Enterprise Value to EBIT	EV/EBIT
Enterprise Value to Sales	EV/Sales

Foushee et al. (2012) as well as Goedhart et al. (2005) argue for the application of asset instead of equity multiples, because they are not distorted by the above mentioned limitations that affect earnings. Sales multiples are rather considered a bad estimate as it could, based on high sales levels, lead analysts to assign firms high EVs, even though the firms might have low or even no earnings (Damodaran, 2002).

Least, growth referenced multiples are an equity or an asset multiple combined with the growth rate of the company being evaluated (Fernández, 2001) (Table 3).

Table 3: Growth Referenced Multiples (Source: Fernández, 2001)

Name	Growth Referenced Multiples
Price to Earnings Growth	P/EG
Enterprise Value to Earnings Growth	EV/EG

There are various opinions in literature about which multiples to use for the respective industry. Goedhart et al. (2005) as well as Lie & Lie (2002) agree that the manner in which you use the multiple is more significant than the ratio itself. They also concur that it is more accurate to use forward/leading multiples compared to trailing multiples.

It has to be mentioned that, in specific cases, adjustments have to be done to the multiples to account for extraordinary events in the history of the company (Damodaran, 2006).

2.2 Discounted Cash Flow Valuation

The Discounted Cash Flow Methods (DCF) aim at determining a company's value by discounting its estimated future free cash flows at a risk-adjusted discount rate. Conceptually, it can be considered the only correct valuation method (Fernández, 2013).

2.2.1 Free Cash Flows

In general, one can decide between three different free cash flows: **Free Cash Flow to the Firm (FCFF)**, **Free Cash Flow to Equity (FCFE**) and **Free Cash Flow to Debt (FCFD)**. Cash flows express the cash being available to a certain party and can be computed in various ways, starting from Net Income, EBITDA, etc. (Berk & DeMarzo, 2007; Fernández, 2013). For the purpose of this thesis, the starting point for the free cash flow computation is the EBIT.

According to Pinto, Henry, Robinson, & Stowe (2007), the **FCFF** can be described as the cash being available to all capital providers of the company (equity and debt holders), after the payments of all operating expenses (unlevered taxes included), necessary investments in working capital (WC) as well as fixed assets have been made (Equation 1).

	Earnings before Interest and Taxes (EBIT)
-	Taxes on EBIT (Unlevered Taxes)
	Net Operating Profit Less Adjusted Taxes (NOPLAT)
+	Depreciation and Amortization (D&A)
-	Investments in Net Working Capital (ΔNWC)
-	Capital Expenditures (CAPEX)
	Free Cash Flow to the Firm (FCFF)

Equation 1: FCFF Computation (Source: Berk & DeMarzo, 2007)

The **FCFE** is the cash being available for the distribution to the stockholders of the company. To obtain the FCFE, one needs to deduct interest payments after taxes (because it is tax deductible) and principal payments from the FCFF and add new debt issued (Pinto et al., 2007; Fernández, 2013) (Equation 2).

Free Cash Flow to the Firm (FCFF)
- Interest Expenses x (1-Tax Rate)
- Principal Payments
+ New Debt

Free Cash Flow to Equity (FCFE)

Equation 2: FCFE Computation (Source: Berk & DeMarzo, 2007)

Last, the **FCFD** is the sum of interest and principal payments rendered to debtholders (Fernández, 2013).

2.2.2 Risk-Free Rate and Equity Risk Premium

According to Damodaran (1999), an asset can be defined as **risk-free** if it has no risk of default and if there is no reinvestment risk. This excludes every type of private firm, because even the most stable ones are exposed to some kind of default risk. Even though this also applies to certain countries, governmental securities are still closest to a risk-free asset and consequently considered as risk-free. The rate should be long-term and match the predicted cash flows of the evaluated company (Damodaran, 2002; Fernández, 2004). It needs to be highlighted that the current yield of the governmental securities has to be used and not a historical average (Fernández, 2004).

The **Equity Risk Premium (ERP)** is the premium above the risk-free rate that one needs to earn for accepting the additional risk associated with an equity investment (Damodaran, 2002). It can be measured by deducting a risk-free rate from the average historical equity returns, by surveying investors and managers to determine a forward-looking ERP as well as through an implied approach where a forward-looking ERP is determined by current equity prices (Fernández, 2006; Damodaran, 2008). Goedhart & Haden (2003) state that for multinational companies ERPs vary from country to country due to various factors like macroeconomic or political distress, but that the risk can be diversified away if one takes a portfolio investment perspective. Damodaran (2009) professes that one should account for the fact of a multinational company by applying various ERPs of the geographical regions in which the company is active and by weighing them according to an indicator like sales.

2.2.3 Beta Levered and Unlevered

Within the Capital Asset Pricing Model (CAPM), the beta is a measure of how a security fluctuates in relationship to the market as a whole. Generally speaking, it indicates how much risk an asset adds to the overall market portfolio (Damodaran, 2002). Thereby, the phrase "levered" describes the fact that the beta is measured for a company having a certain amount of leverage. A beta above "1" implies that the security fluctuates stronger than the market, a beta below "1" indicates that the security fluctuates weaker than the market and for a beta of "1" it fluctuates with the market (Damodaran, 1999a) (Equation 3).

$$\beta_i = \rho_{i,m} \times \frac{\sigma_i}{\sigma_m} = \frac{Cov_{i,m}}{\sigma_m^2}$$

β_i= Beta; σ_i= Standard Deviation of the Asset; σ_m= Standard Deviation of the Market Index

$p_{i,m}$= Correlation Coefficient; $Cov_{i,m}$= Covariance; σ_m^2= Variance of the Market Index

Equation 3: Beta Levered – Formula (Source: Damodaran, 1999a)

To compute beta, one needs to regress the returns of a specific asset over an individually chosen market index (Damodaran, 1999a) (Equation 4).

$$R_i = \alpha_i + \beta_i \times R_m$$

R_i= Return of the Asset; R_m= Return of the Market Index; α_i= Regression's Intercept

Equation 4: Beta Levered – Regression Analysis (Source: Damodaran, 1999a)

For the regression analysis, the selection of the market index, a time period and a return interval are the crucial parameters. The market index should be chosen concerning the number of included securities. The more securities an index contains, the more suitable is the index. The time period should reflect a usual business cycle of a company. If in the past, uncommon events like an M&A, a crisis or a change in leverage happened, one needs to consider excluding them from the dataset in order to prevent deterring the beta. A shorter time interval basically increases the number of observations but also affects the beta, because assets are not traded on a continuous basis. This drawback context has to be regarded when choosing the time interval (Damodaran, 1999a).

Blume (1971) states that the levered beta has the tendency to revert around the mean over time, which is "1" for the market. Consequently, one needs to account for this trend by adjusting the beta (Equation 5).

$$\beta_{adjusted} = \beta_{raw} \times \frac{2}{3} + \frac{1}{3}$$

Equation 5: Beta Adjusted (Source: Blume, 1971)

Since leverage increases the beta of an asset, one might want to know which value beta takes for the respective asset if it would be unlevered (Fernández, 2003) (Equation 6).

$$\beta_L = \beta_U + (\beta_U - \beta_D) \times (1 - T_c) \times \frac{D}{E}$$

β_L = Beta Levered; β_U = Beta Unlevered; β_D = Beta Debt; T_c = Tax Rate; D = Debt; E = Equity

Equation 6: Beta Unlevered (Source: Fernández, 2003)

According to Fernández (2003), debt also takes a beta value since its value fluctuates with the market. In times of a financial crisis, a company might have a higher beta debt, because a default is a more realistic scenario. On the other hand, Hamada (1972) states that the beta debt can be assumed to be "0" since the systematic risk for debt can be neglected.

2.2.4 Cost of Capital

The cost of capital is the best available return in the market for investments with a similar amount of risk. It is the cost at which a company can fund its operations, projects and its overall business (Damodaran, 2002; Berk & DeMarzo, 2011).

2.2.4.1 Cost of Equity

The cost of equity is the return that an equity investor requires from a firm to invest into its business. High risk firms should consequently bear a higher cost of equity capital than low risk firms. The most famous approach for the determination of the cost of equity is the **CAPM**. Alternatively, one could use multifactor models like the **Arbitrage Pricing Theory (APT)** or the **Fama and French Model** (Damodaran, 2002).

The **CAPM** was developed by William Sharpe (1964) and John Lintner (1965) and is based on the portfolio theory of Harry Markowitz. It is a powerful tool to measure risk and it assumes that the only risk investors are exposed to arises from the systematic risk (non-diversifiable

risk), caused by market fluctuations. Beta incorporates a measure of this systematic risk since it gauges the asset's movements in relation to the market as a whole. Unsystematic risk (company-specific risk) can be prevented through portfolio diversification (Black, Jensen, & Scholes, 1972; Fama & French, 2004) (Equation 7).

$$\mathbf{k_e = r_f + \beta_i \text{ x } ERP}$$

k_e= Cost of Equity; r_f = Risk-Free Rate; β_i = Beta; ERP = Equity Risk Premium

Equation 7: CAPM (Source: Black et al., 1972)

The Fama and French 3-Factor Model assumes that besides the systematic risk other factors are additionally influencing the risk composition. Therefore, two supplementary factors, a size factor (SMB) and a value factor (HML), are added to the model. The size factor underlies the assumption that companies with smaller market capitalizations gain higher returns in the long-term than companies with larger ones. In addition, the value factor implies that companies with a low P/B ratio offer higher returns in the long-term than companies with a high P/B ratio (Fama & French, 1992) (Equation 8).

$$\mathbf{k_e = r_f + \beta_i \text{ x } ERP + \beta_{i,Size} \text{ x } (SMB) + \beta_{i,\,Value} \text{x } (HML)}$$

SMB = Returns of Small Market Cap. minus Returns of High Market Cap.

HML = Returns of High B/P minus Returns of Low B/P

Equation 8: Fama and French 3-Factor Model (Source: Fama & French, 1992)

The returns for the size (SMB) as well as the value premium (HML) are based on six portfolios which are rebalanced every six months (Fama & French, 1992). Fama & French (2014) recently enlarged their former 3-factor model to a 5-factor model. The disadvantage of the model is that for stable industrial large-cap companies, the deviation from the CAPM is relatively small, meaning that the R^2 does not significantly increase by adding new factors (Bini, 2016).

The APT is another multifactor model, trying to measure the risk associated with an investment in a financial asset and was developed by Stephen Ross (1976). It requests no market equilibrium but an arbitrage free capital market, consisting of various macroeconomic variables as additional risk factors (Ross, 1976) (Equation 9).

$$\mathbf{k_e = r_f + \beta_1 \ x \ ERP_1 + \beta_2 \ x \ ERP_2 + \ldots + \beta_i \ x \ ERP_i}$$

β_i= Beta of Particular Factor; ERP_i= Risk Premium of Particular Factor

Equation 9: Arbitrage Pricing Theory (Source: Ross, 1976)

The disadvantage of the APT is the absence of predefined risk factors and the necessity to undergo a comprehensive analysis to ascertain them (Ross, 1976).

2.2.4.2 Cost of Debt

The cost of debt determines the cost at which a company can borrow from capital markets. The easiest way to compute the cost of debt is if a company's overall debt is widely traded long-term debt. In this case, one might consider the **respective yield** as the cost of debt, because it is the return that the market requires from the company (Damodaran, 2002).

The risk-free rate, the default risk and an associated default spread (as well as the tax advantage associated with debt) are the basic variables incorporated into the cost of debt. The concept of the risk-free rate has already been explained in chapter 2.2.2. The default risk and the associated default spread can be estimated by examining the company's most **recent ratings** and apply a related default spread (Damodaran, 2002).

If the company is not rated, one might check the company's most recent **borrowing history** and apply the respective interest rates as a cost of debt or use the approach of a **synthetic rating** (Damodaran, 2002; Nova, 2016). In the latter case, one needs to compute the interest coverage ratio of a company (Equation 10).

$$\mathbf{Interest\ Coverage\ Ratio} = \frac{\mathbf{EBIT}}{\mathbf{Interest}}$$

Equation 10: Interest Coverage Ratio (Source: Berk & DeMarzo, 2007)

Afterwards, a synthetic rating and a respective default spread need to be assigned. This default spread is subsequently added to a risk-free rate (Damodaran, 2002).

Because interest expenses are tax deductible, one needs to compute the after-tax cost of debt (Damodaran, 2002) (Equation 11).

$$\mathbf{After\text{-}Tax\ Cost\ of\ Debt = Pre\text{-}Tax\ Cost\ of\ Debt \ x \ (1\text{-}T_C)}$$

Equation 11: After-Tax Cost of Debt (Source: Damodaran, 2002)

2.2.4.3 WACC and Unlevered Cost of Capital

The WACC is a weighted average of all capital sources of a company like equity, debt or preferred stock. The weights should be based on market values, not book values, since they perfectly reveal the long-term funding of a firm (Damodaran, 2002; Fernández, 2010) (Equation 12).

$$\mathbf{WACC} = \frac{\mathbf{E}}{\mathbf{D+E}} \mathbf{\ x\ k_e} + \frac{\mathbf{D}}{\mathbf{D+E}} \mathbf{\ x\ k_{d,\ After\text{-}Tax}}$$

WACC = Weighted Average Cost of Capital; k_d= Cost of Debt

Equation 12: WACC (Source: Fernández, 2010)

In literature, there are various point of views for using gross debt or net debt for the WACC computation. According to Damodaran (2016), both approaches can be utilized but the valuator has to be consistent applying the same approach for the whole valuation process.

The Unlevered Cost of Capital (also known as return on assets) describes the cost of capital for a 100% equity-funded firm. It can be computed by inserting the unlevered beta into the CAPM (Pinto et al., 2007).

2.2.5 Discounting Methods

After determining the company's cash flows and the risk-adjusted discount rates, one needs to discount the cash flows to arrive at the enterprise or the equity value.

2.2.5.1 FCFF at WACC and Unlevered Cost of Capital

To obtain the EV, the future FCFFs of the company are discounted at the WACC (Fernández, 2013) (Equation 13).

$$\mathbf{EV} = \frac{\mathbf{FCFF_1}}{\mathbf{(1+WACC)}} + \frac{\mathbf{FCFF_2}}{\mathbf{(1+WACC)^2}} + \ldots + \frac{\mathbf{FCFF_i}}{\mathbf{(1+WACC)^i}}$$

Equation 13: Valuation – FCFF at WACC (Source: Fernández, 2013)

Since this approach would require a prediction of cash flows until infinity, one needs to estimate a Terminal Value (TV) at the end of a specific forecasting period and discount it back to the current date. There are basically two assumptions for the computation of the TV. The first is

that the company is in steady state, without any growth, and the second one expects the company to grow at a steady growth rate until infinity. For the latter, the so called Gordon Growth Model is applied (Damodaran, 2002; Fernández, 2013) (Equation 14).

$$\textbf{Terminal Value without Growth}_t = \frac{\textbf{FCFF}_t}{\textbf{WACC}}$$

$$\textbf{Terminal Value with Growth}_t = \frac{\textbf{FCFF}_{t+1}}{\textbf{WACC-g}}$$

Equation 14: Terminal Value Computation (Source: Fernández, 2013)

In addition to these two approaches, multiples can be used to estimate a TV after the specific forecasting horizon. This is a common method in Leverage Buyouts (LBO) for the estimation of an exit price (Damodaran, 2002; Chaplinsky, 2011).

Besides discounting the FCFFs at the WACC, the FCFFs could be discounted at the unlevered cost of capital to obtain the EV unlevered. This is the value the EV would take as if the company would be 100% equity-financed (Damodaran, 2002).

After the determination of the EV, the company's market value of debt needs to be deducted to receive the equity value, which in turn needs to be divided by the number of shares outstanding to obtain the Price per Share (PPS). In addition to debt, expected liabilities on lawsuits, unfunded pension liabilities as well as deferred tax liabilities can be subtracted from the EV. Thereby, it is necessary to evaluate what sources are already included into the NWC for the company's forecasts (Damodaran, 2002; Stern School of Business, 2016).

2.2.5.2 FCFE at Cost of Equity

Alternatively to the FCFFs at WACC, discounting the FCFEs at the cost of equity does not deliver the EV but instead the equity value of the company (Koller, Goedhart, & Wessels, 2010) (Equation 15).

$$\textbf{Equity Value} = \frac{\textbf{FCFE}_1}{(1+k_e)} + \frac{\textbf{FCFE}_2}{(1+k_e)^2} + \ldots + \frac{\textbf{FCFE}_i}{(1+k_e)^i}$$

Equation 15: Valuation – FCFE at Cost of Equity (Source: Koller et al., 2010)

Similar to the explained FCFF valuation, one needs to determine a TV after a specific forecasting horizon. The precondition is again that the company is in steady state, meaning that it is not growing at all or at a constant rate (Damodaran, 2002; Koller et al., 2010).

2.2.5.3 FCFD at Cost of Debt

Discounting the payments rendered to debtholders at the cost of debt leads to the fair value of debt (Koller et al., 2010) (Equation 16).

$$\textbf{Debt Value} = \frac{\textbf{FCFD}_1}{(1+k_D)} + \frac{\textbf{FCFD}_2}{(1+k_D)^2} + \ldots + \frac{\textbf{FCFD}_i}{(1+k_D)^i}$$

Equation 16: Valuation – FCFD at Cost of Debt (Source: Koller et al., 2010)

2.2.5.4 Adjusted Present Value

There are academics which favour an approach where the different parts of the EV puzzle are computed on a separate basis, called Adjusted Present Value (APV). They claim that the assumption of a constant target leverage, underlying the WACC computation, is not realistic and therefore not implementable. Moreover, valuing the various sources of value separately might clarify where the value of an enterprise exactly comes from (Luehrman, 1997; Luehrman, 1997a).

$$\textbf{EV}_{\textbf{Levered}} = \textbf{EV}_{\textbf{Unlevered}} + \textbf{Value of Tax Shield - Bankruptcy Costs}$$

Equation 17: Adjusted Present Value (Source: Nova, 2016)

The **EV unlevered** corresponds to the EV of a 100% equity-financed firm. The value of the **Tax Shield (TS)** arises through the fact that interests are tax deductible. Consequently, using debt increases the value of an enterprise since a higher portion of cash flows back to capital providers and less to the government through taxes (Luehrman, 1997; Luehrman, 1997a).

Bankruptcy costs (BC), consisting of direct and indirect costs, are the costs that occur if a company goes bankrupt. Relative to the EV, direct costs (e.g. auditing fees) are expected to be small and indirect costs (e.g. loss of customers) vary widely between companies (Damodaran, 2002a). Since they represent lost money for capital providers, an increasing leverage also increases their risk, leading them to demand a higher risk premium (Damodaran, 2002; Nova, 2016).

The choice of an appropriate discount rate for the TS is inconsistent among academics. Some argue for using the cost of debt because the TS incorporates the same amount of risk than debt. Others argue for using a higher discount rate like the unlevered cost of capital, because the company can only utilize the tax benefits if the business as a whole performs well (Luehrman, 1997).

2.2.6 Sum of Parts

If a company is active in various lines of businesses, separate valuations for every division can be performed (Fernández, 2013). Damodaran (2009) suggests that the method of choice heavily depends on the company's available reported information by division and how the valuator intends to aggregate the different business lines of the company. Financial information of similar divisions might, for example, be aggregated and treated as one business unit. After splitting up the business into its parts, the different risk parameters have to be adapted to their particularities. An automotive division might, for instance, have a lower beta than a luxury goods division or a division operating in an emerging market might demand a higher ERP than one operating in a western country (Damodaran, 2002).

3 Industry Analysis

To understand Conti's future developmental potential, it is important to comprehend the industry in which it is operating. For all of its divisions, this is generally the automotive industry. In addition, its ContiTech division develops and manufactures elastomer products for various industries different than automotive (50%). Given that it is the smallest business unit representing only 13% of Conti's sales, the subsequent report focuses completely on the automotive industry (Continental AR, 2015).

3.1 Macroeconomic Factors

In recent years, the automotive industry has been one of the main pillars for global growth and accounted for roughly 3 % of total global GDP in 2013 (Klink, Mathur, Kidambi, & Sen, 2013). Based on current FY15 data, **the Eurozone** grew 1,5% (1,2% expected), which was attributable to the expansive monetary policy of the European Central Bank (ECB). Due to a declining unemployment rate, the U.S. Federal Reserve (FED) started to raise interest rates again. As a result, the **U.S's** FY15 GDP was with 2,4% below the estimated 3,6%. Even though the **Japanese** Central Bank follows a similar expansive monetary approach as the ECB, the GPD just grew 0,6% due to weak domestic demand. Other core markets like **Russia** (mostly attributable to sanctions) and **Brazil** declined by –3,7% respectively –3,8% (Continental AR, 2015). Nonetheless, if Brazil is excluded from the estimates, **South America** as a whole even posted a growth (Gomes, 2016). The main global growth drivers were still the emerging economies of **China** with 6,9% and **India** with 7,3% (Continental AR, 2015). While analysing these numbers, the core question is if the emerging economies like China and India are able to compensate the lost potential of current crisis markets like Russia or Brazil. In addition, one needs to evaluate the development of so far stable markets like the U.S., the Eurozone and the stagnating Japan.

According to the IMF (2016), the real GPD growth for Conti's current major market **Germany** is expected to continuously decline from 1,7% (FY16) to 1,2% (FY21). **Europe** as a whole is assumed to decline from 1,9% (FY16) to 1,7% (FY21). Contrariwise, **NAFTA** will increase from 1,4% (FY16) to 1,8% (FY21) and **Asia** from 5,7% (FY16) to 6% (FY21) (Figure 1).

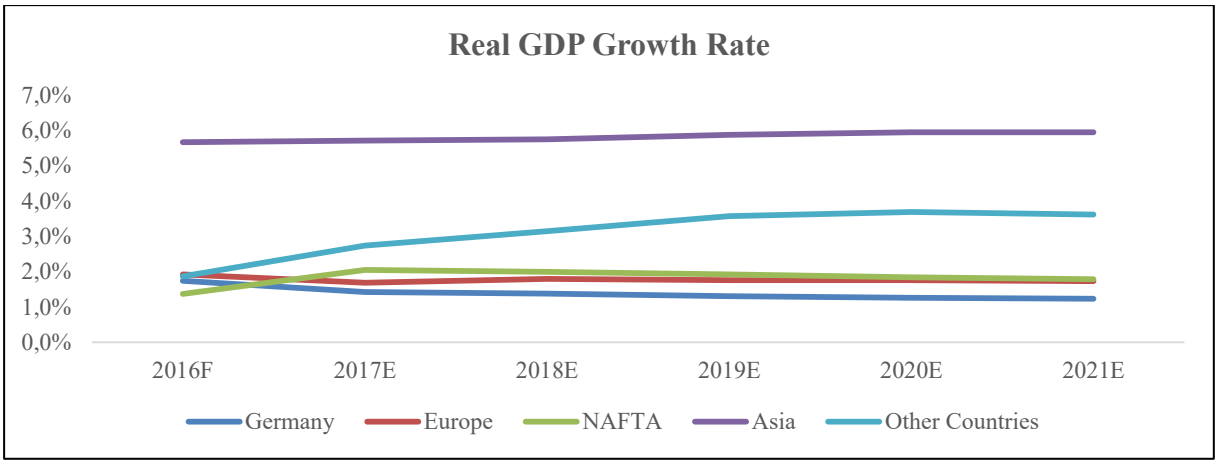


Figure 1: Real GDP Growth Rate (Source: IMF, 2016)

Since the company's sales are reported on a nominal basis, one needs to estimate the inflation rate in addition to the real GDP growth rate. It is expected that the inflation rates within **Germany, Europe and NAFTA** will rise after FY16 from approx. 1% to 2% in FY21 (Figure 2). **Asia** will slightly increase from 3% (FY16) to 3,6% (FY21) (IMF, 2016).

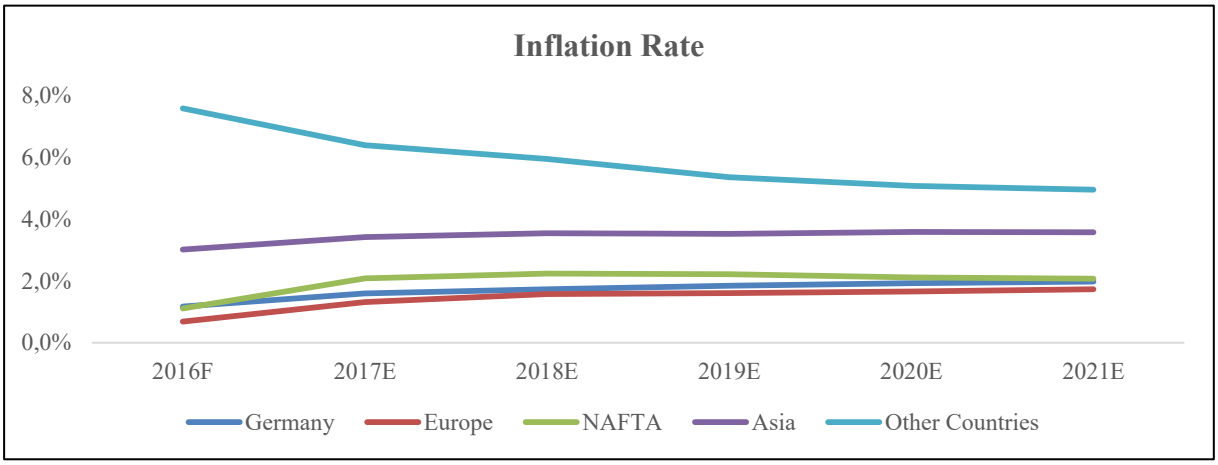


Figure 2: Inflation Rate (Source: IMF, 2016)

Besides the mentioned aspects, Conti's divisions are highly sensitive to the development of raw material prices. For the **Automotive** division, those are mainly steel, copper and aluminium. For the **Tire** as well as the **ContiTech** division, those are natural rubber, Brent oil, butadiene as well as styrene. Except for stainless steel, which price stayed stable, it can be said that all of the named raw material prices sharply decreased since 2011 and consequently improved Conti's margins (Continental AR, 2015). The World Bank (2016) estimates metal prices to rise by 4% in 2017 after a further 9% drop in 2016 due to tightening supplies. Oil prices are expected to

average at 55$/bbl in 2017, compared to an average of 53$/bbl in 2016. In November 2016, the OPEC reached an agreement for the first production oil cuts since eight years which should further increase the price (Bloomberg, 2016).

3.2 Demand Side Analysis

IHS Automotive (2016) estimates that Light Vehicle (LV) sales growth in **Germany** will accelerate from 1,5% (2017) to 3,9% (2021). **Europe** will be rather unstable with a growth of 3,4% in 2016 up to 5,9% in 2018 to 2,6% in 2021. **NAFTA** sales will even decline from 2018 onwards. The **Asian** sales growth rate will increase from 2,2% (2016) to 5,5% (2017) and subsequently decline to 3,6% (2021) (Figure 3).

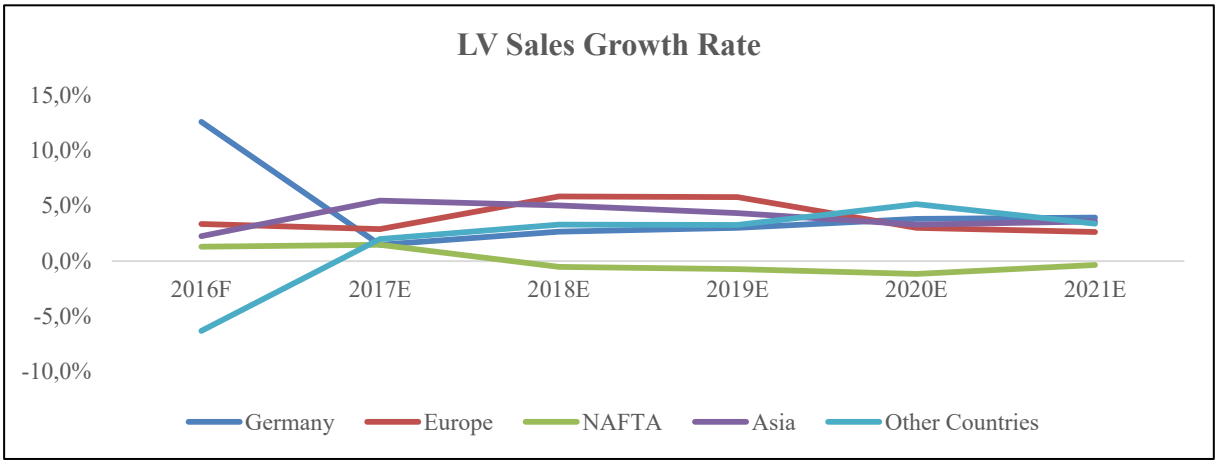


Figure 3: LV Sales Growth Rate (Source: IHS Automotive, 2016)

Besides a globally increasing demand for vehicles, the demand side is affected by various new disruptive trends. If Conti will successfully align to those factors, they should offer great growth potential but are also connected with high investments. In detail, those trends are **autonomous driving**, **electrification of the car**, **connectivity/digitalization** as well as **shared mobility** (KPMG, 2016; Mohr & Kaas, 2016).

Autonomous driving is the capability of a vehicle to move from Point A to Point B without any interaction with the driver. Even though the establishment of autonomous driving is not expected until 2030 (KPMG, 2016; Mohr & Kaas, 2016), a stepwise increase of car "intelligence" features is assumed to be the first move towards this vision (Hirsch et al., 2015; Hirsch, Jullens, Singh, & Wilk, 2016).

Due to eco-friendly legislations, the **electrification of the car** will become another important aspect (KPMG, 2016; Mohr & Kaas, 2016). According to Hirsch et al. (2016), this does not come with a full electrification of the car but just a partial one combined with the simultaneous increase of the efficiency of combustion engines.

Considering KPMG's (2016) global automotive executive survey, **connectivity/digitalization** has been identified as the main trend for the next few years. A specific buzzword associated with this topic is the "Internet of Things", meaning that the intelligent car of tomorrow is able to communicate automatically with various objects in its environments. This might be for both safety and entertainment reasons (Mohr & Mueller, 2013; Mohr & Kaas, 2016).

Another emerging trend will be **shared mobility**, resulting in an increasing use of on-demand car solutions. The main reason for this development is the ongoing urbanization and the rise of so called megacities. The currently most quoted example in this category might be the application "Uber" (Hirsch et al., 2016; Mohr & Kaas, 2016).

3.3 Supply Side Analysis

The automotive industry consists of raw material suppliers, 1st tier and 2nd tier suppliers, OEMs as well as dealers (Figure 4). Conti itself can be described as a **tier 1 supplier** for mainly all major OEMs like Daimler AG, Fiat-Chrysler, Volkswagen or General Motors. Moreover, it delivers tires to the end customer market and is providing elastomer solutions through its ContiTech division (Continental AR, 2015).

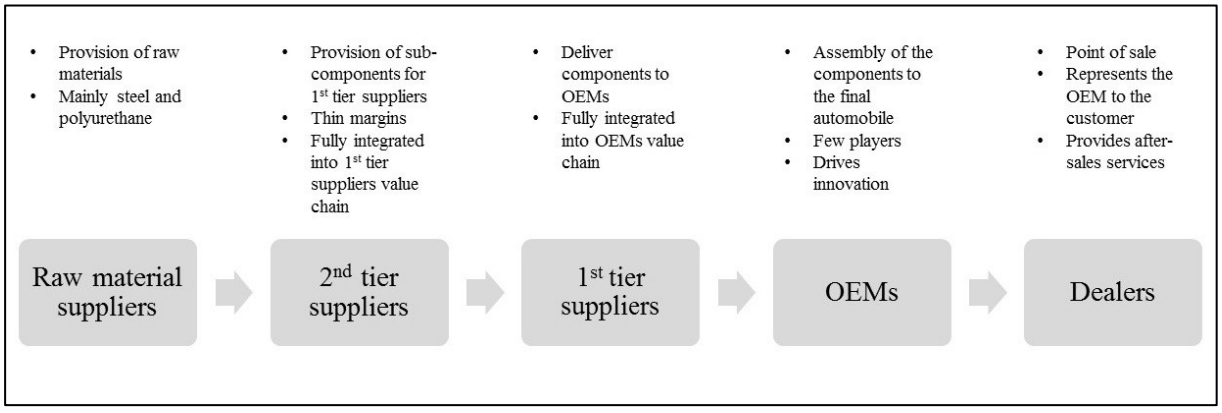


Figure 4: Value Chain – Automotive Industry (Source: Noealt, 2009)

Simultaneously to the demand side, the supply side will incur some major changes in the future. Those can be described as **pressure for efficiency**, **market entry of new players** as well as **strategic partnerships** (Hirsch et al., 2016; Mohr & Kaas, 2016).

The increasing cost pressure and the therewith related **pressure for efficiency** forces all players along the value chain to continuously improve their operations (Hirsch et al., 2015; Hirsch et al., 2016).

Additionally, the **market entry of new players**, mostly active in the technology industry, will force a transformation of the industry (Hirsch et al. 2016; Mohr & Kaas, 2016). Since technological knowledge represents one of the core capabilities for staying competitive in the future, firms like Tesla, Google or Apple are already working on projects like autonomous driving (Painter, 2016).

As a response to the above-mentioned factors, **strategic partnerships** between incumbents and new market entrants will become more important (Hirsch et al. 2015; Mohr & Kaas, 2016). A recent example is the negotiation of Apple with Daimler and BMW to cooperate on the development of the iCar, which was nonetheless rejected by the two carmakers (Reiche, 2016).

Due to the mentioned aspects, Conti's **margins are presumed to be pressured** in the close future. This is because of higher expenses (e.g. new investments in R&D) and the fact that the company has to operate on lower margins because of higher competition.

4 Internal Analysis

Continental AG, located in Hannover, Germany, is one of the three biggest automotive component suppliers in the world (Automotive News, 2013; Statista, 2016a). The company was founded and went public in 1871. In the end of FY15, it employed 207.899 workers at more than 430 subsidiaries in 55 countries. Conti had sales of roughly MEUR39.232 and a net income of MEUR2.727 (Continental AR, 2015).

4.1 Divisions

The group is subdivided into a Chassis & Safety, a Powertrain, an Interior, a Tire as well as a ContiTech division. The first three are summarized to a division called Automotive since they are all involved in the provision of components for OEM manufacturers. The last two are summarized to a Rubber division. The five divisions also contain various subdivisions that are not specifically described within the following but listed in the subsequent figure (Continental AR, 2015).

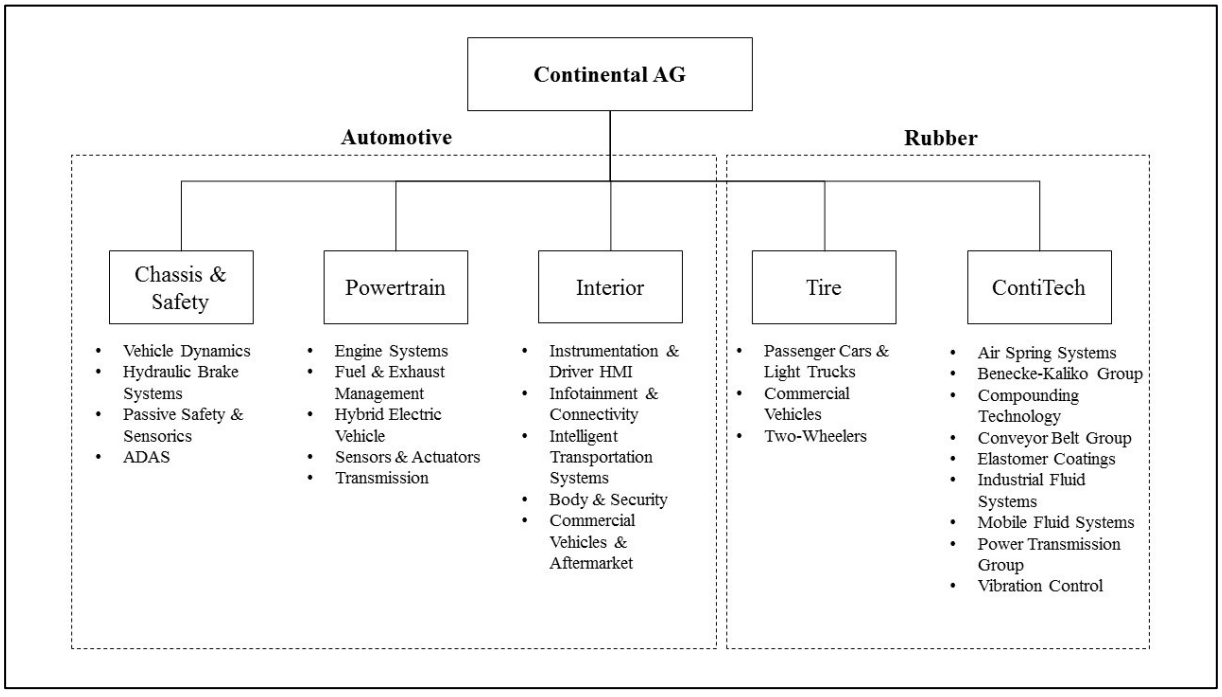


Figure 5: Continental – Divisions (Source: Continental AR, 2015)

The **Chassis & Safety** division provides active and passive technologies that enable a better safety, a higher comfort as well as an improved convenience. Its current aim is to offer solutions which focus on the vision of autonomous driving (Continental AR, 2015).

The **Powertrain** division produces all kinds of powertrain components with the goal of making driving more environmentally compatible. Due to the new environmental legislations, mentioned before, electrified driving systems are a central issue of the division (Continental AR, 2015).

The **Interior** division focuses onto information management between the driver, passenger, mobile devices as well as the vehicle. Therefore, connectivity/digitalization is the central issue of the division (Continental AR, 2015).

In the global automotive supplier ranking, Conti has always been underneath the top three suppliers in recent years (Statista, 2016a). Its strong competitive position stems from its long-term relationships with OEMs, to which 72% of its FY15 year sales accounted as well as its pressure for innovation (Pearson & Peterc, 2014). In 2015, Conti acquired the German software developer Elektrobit Automotive to strengthen its position in the technology segment. Historically, the **Automotive** division had a stable EBITDA Margin with an average of 12,3%, which nonetheless dropped in Q3 of FY16 to 5%. This sharp decline is mainly attributable to one-time cost effects like cartel penalty provisions. Historically, CAPEX/Sales remained stable at 5,3% (average). This leads to the question if the company will rise this ratio to adapt to the mentioned industry trends (e.g. investments in software) and if the EBITDA Margin will be further pressured (Continental AR, 2015; Continental IR, 2016) (Appendix I–Appendix II).

The **Tire** division sells tires for passenger cars & light trucks, commercial vehicles as well as two-wheelers (Continental AR, 2015). According to Statista (2016), Continental is the fourth biggest tire producer worldwide behind Bridgestone, Michelin and Goodyear. In FY15, it was able to achieve a record EBITDA Margin of 25,1%, mainly due to low raw material prices, full production capacity utilization as well as through its strong competitive position that is because of its brand and its high-quality products (Spina, 2016). In FY16 (Q1–Q3), it even increased to an average of 26,4%. With a ROCE of 39,2%, the division has the highest profitability measure of the whole tire industry (Continental AR, 2015; Continental IR, 2016) (Appendix I–Appendix II).

Through the acquisition of Veyance in FY15 for MEUR1.400, **ContiTech** strengthened its position as the world's leading supplier of non-tire elastomer applications before Bridgestone and Freudenberg. Fifty percent of the final customers are located within the automotive industry and the other 50% in various industries beyond the automotive industry (Continental AR, 2015). The downside effect of the Veyance acquisition is the fact that ContiTech's EBITDA Margin fell by 3,5% from 14,4% (FY14) to 10,9% (FY15) due to acquisition-related costs. Another fact that pressured the company's margins is the deterioration of the oil, gas and mining industry, which accounts for 25% of the division's sales (Spina, 2016). Nonetheless, the EBITDA Margin is currently improving and was in the first three quarters of 2016 already at an average of 13,4% again. Another negative side effect of the acquisition is the increase of the NWC from 15,9% of sales (FY14) to 17,7% of sales (FY15) (Continental AR, 2015; Continental IR, 2016) (Appendix I–Appendix II).

4.2 Corporate and Financing Strategy

„Highly developed, intelligent technologies for mobility, transport and processing make up our world. We want to provide the best solutions for each of our customers in each of our markets (Continental Vision, 2016)." To achieve these long-term goals, Conti developed **seven strategic dimensions** (Continental AR, 2015).

1. Value creation
2. Regional sales balance
3. Top market position
4. In the market for the market
5. Balanced customer portfolio
6. Technological balance
7. Great people culture

With this seven pillars, Conti tries to respond to the current industry trends. Those are, according to its opinion, digitalization, urbanization, automated driving as well as electrification. This is in line with the identified trends of the automotive industry. As a defined number, Conti wants to achieve more than MEUR50.000 of sales in 2020 that implies a CAGR of 5%. The **financing strategy** of Conti aims to keep the gearing ratio under 60% (Continental AR, 2015).

4.3 Share Performance

Since its foundation in 1871, Conti's share is listed. It has been a continuous member of the DAX, but was reclassified two times, namely in 1996 and 2008, to the MDAX. The share is traded in Frankfurt, Hannover, Hamburg, Stuttgart and OTC in the U.S. Just common stock is available (Continental AR, 2015). The performance of the share price is summarized in the subsequent figure. Since 31st October 2011, it has been rising from EUR54 up to EUR229 at its peak. Currently, it is at EUR182 (12th December 2016).

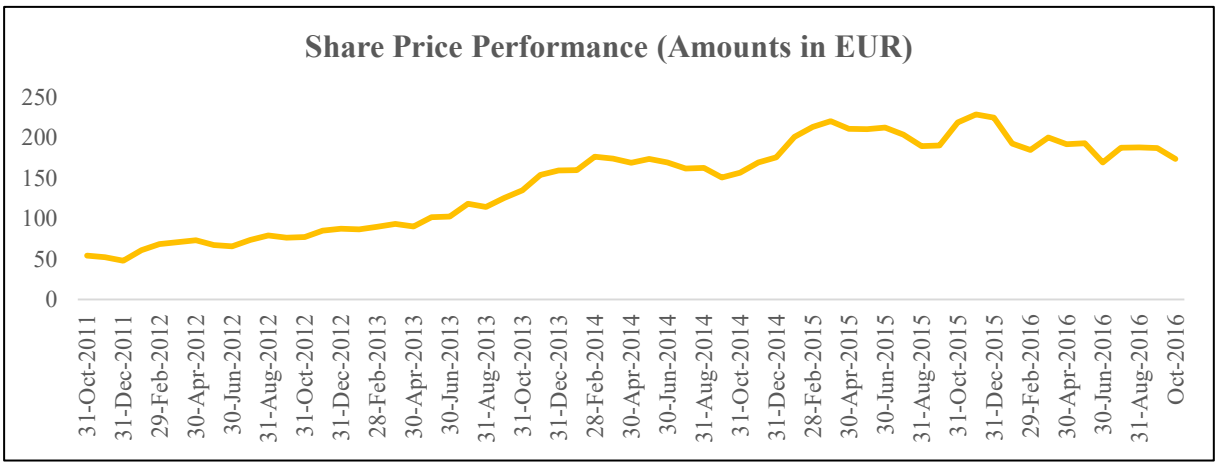


Figure 6: Share Price Performance (Source: Thomson Reuters Eikon)

4.4 Shareholder Structure

In 2008, the Schaeffler family, owners of the Schaeffler AG, tried to acquire Conti in a hostile takeover. Currently, the family holds 46% of the company's stock and therefore Conti is regarded as a sister enterprise of Schaeffler. The acquisition was considered highly speculative and due to the stock market crash, initiated by the Lehman Brothers collapse in 2008, Schaeffler almost went bankrupt. Even though Conti is not under its full control, the Schaeffler family can exercise significant influence. This had been witnessed by the announcement of Elmar Degenhart to CEO in 2009 (Jungbluth, 2015). The other 54% of the shares are free floating, whereby BlackRock (3,0%), Deutsche Asset Management (1,8%) and Norges Bank Investment Management (1,4%) are currently the biggest investors (Thomson Reuters Eikon).

5 Valuation

The subsequent chapter introduces the drafted financial model of the author as a basis for an investment decision.

5.1 Methodology

The SOP approach, applying a DCF analysis (with WACC) as well as multiples, has been chosen as the most suitable valuation methodology. This is due to the fact that Conti's divisions are heterogeneous in their business activities (Chapter 4.1.), making it necessary to distinct between certain risk parameters (e.g. beta or ERP).

For the purpose of this thesis, the author differentiated between the **Automotive** division, the **Tire** division and the **ContiTech** division. The Automotive division was not further subdivided into its three subdivisions (Figure 5), because it is presumed to be too difficult to find adequate peers just active within this specific kind of businesses.

The financial reporting scope and the quality is suitable for the mentioned kind of valuation since Conti reports various fundamentals like sales, EBIT, D&A, NWC as well as CAPEX by division (Appendix I–Appendix II).

The WACC is computed by division, whereby it is differentiated between two scenarios. First, it is assumed that the industry's median represents the target capital structure for which the company should aim. Second, the company's current capital structure is expected to be the optimal one. For the beta computation, the industries' betas (peer group betas) are used and relevered at the above-mentioned ratios. This basically delivers six betas, used to compute six costs of equity as well as six WACCs.

The multiples valuation uses the same peer groups as composed for the WACC and applies asset trailing as well as asset leading multiples (FY16 and FY17). No equity multiples are used, because the reporting quality does not enable an appropriate application of this approach. In detail, this is due to the fact that earnings are not reported by division and some assets/liabilities are not allocated to any specific division.

Additionally, a scenario analysis runs six different scenarios, including a high-growth or a low-growth scenario. One of them also performs an APV valuation, presuming a stepwise change in the company's capital structure. Within the single scenarios, the WACC is differentiated

+/– 0,5%. Basically, it should enable the reader to gain an overview of the range the PPS could take under certain ceteris-paribus considerations.

After the determination of the final PPS, it is evaluated how much an investor could maximally lose (and gain) per day when purchasing Conti's stock. This is done through a Value at Risk (VaR) analysis, using a Monte Carlo simulation.

5.2 Financial Forecasts

In the following section, the financial forecasts by division are presented. **Appendix III–Appendix V** contains all of the historical data as well as the specific forecasts.

5.2.1 Sales

The **Automotive** group is Conti's biggest division according to sales and consequently of major importance. Currently, it achieves the majority of its sales in Europe, especially Germany, whereas the division is stepwise increasing its share in the NAFTA and in Asia (Table 4) (Continental Facts & Figures, 2015).

Table 4: Automotive – Sales by Region (Source: Continental AR, 2015)

Automotive							
Year	2010	2011	2012	2013	2014	2015	Average
Germany	29,0%	28,0%	26,7%	25,7%	25,0%	23,7%	26,3%
Europe (excluding Germany)	26,3%	26,7%	23,7%	23,0%	23,3%	23,0%	24,3%
NAFTA	19,3%	19,7%	22,7%	23,0%	22,7%	25,7%	22,2%
Asia	21,0%	21,7%	23,7%	25,0%	25,7%	26,0%	23,8%
Other Countries	4,3%	4,0%	3,3%	3,3%	3,3%	1,7%	3,3%

Conti expects high growth (25%–100%) for gasoline particulate filters, switchable coolant and oil pumps as well as lane departure warning systems. Medium growth (15%–24%) is expected for turbochargers, start-stop systems as well as battery propulsion systems. This is attributable to the mentioned change to environmentally friendly powertrains. Tackling this issue, Conti is already able to reduce CO2 emissions by 20%–25% with its hybrid electric vehicle or by 15%–20% with compressed natural gas. As a result, it already holds various competitive products in its portfolio. Also the trend of connectivity/digitalization is taken into consideration with various applications like tire pressure monitoring systems (environment), hands-free telephony (safety) or intelligent transport systems (Continental Facts & Figures, 2015). The Advanced Driver Assistance System (ADAS) is another important product in Conti's portfolio that is currently gaining high importance (Pearson & Peterc, 2014).

Conti's automotive sales are expected to be influenced by the current economic cycle, measured on a nominal basis, and the increase of global vehicle sales. For the FY16 growth, the current interim growth rates (Q1–Q3) are mainly taken into consideration. All of the inputs are weighted according to Conti's sales exposure to its various geographical business regions. Because of the strong competition within the automotive segment, it is presumed that Conti is highly exposed to the current economic cycle (40%) and to the vehicle sales growth (60%). The author holds the opinion that Conti will grow weaker than the nominal GDP growth rate but more than the global vehicle sales growth rate due to the fact that, through its innovative products and long-term OEM relationships, Conti should exceed the global vehicle sales growth and gain new market share. The growth rate is presumed to stabilize for all divisions after a forecasting horizon of six years (Table 5). The whole computation can be withdrawn from Appendix VI.

Table 5: Automotive – Sales Forecast (Source: Own Calculations)

Automotive							
Amounts in MEUR	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	23.565	24.340	25.253	26.271	27.285	28.207	29.193
Sales YoY Growth (%)		3,3%	3,8%	4,0%	3,9%	3,4%	3,5%

For the **Tire** division, increasing safety and environmental regulations around the globe should further support Conti in growing its sales. More specifically, this is the pressure for using winter or environmentally friendly labelled tires. Conti Tire has its strongest presence in Europe, specifically Germany. In Europe, Conti shares approx. 50% of the total market share with Goodyear and Michelin. Sales in NAFTA have recently been increasing. The current weak exposure to Asia results from the fact that Asian suppliers like Bridgestone or Hankook are already occupying the market (Continental Facts & Figures, 2015) (Table 6).

Table 6: Tire – Sales by Region (Source: Continental AR, 2015)

Tire							
Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Average**
Germany	19,0%	19,0%	18,0%	17,0%	17,0%	15,0%	17,5%
Europe (excluding Germany)	46,0%	49,0%	43,0%	43,0%	43,0%	42,0%	44,3%
NAFTA	21,0%	20,0%	24,0%	23,0%	24,0%	27,0%	23,2%
Asia	6,0%	6,0%	8,0%	9,0%	8,0%	9,0%	7,7%
Other Countries	8,0%	6,0%	7,0%	8,0%	8,0%	7,0%	7,3%

The Tire growth rate is based on the same sales drivers as the Automotive division, except that also the tire replacement growth rate (historical CAGR of the industry) is taken into consideration. The author expects Tire to be less influenced by the economic cycle (20%) and more by

the global vehicle sales growth rate (70%) as well as slightly by the tire replacement growth rate (10%). As a result, the Tire division will post a weaker growth than Automotive. This is due to the assumption that there will be no rapid industry disruption, as expected for the automotive segment, resulting in only minimal space to create new market share through innovation (Spina, 2016) (Table 7). Nevertheless, because of the new environmental legislations and Conti's high-quality rubber products (from which its competitive advantage results), the tire growth rate should be slightly above the global LV sales growth rate. Appendix VII contains the whole computation.

Table 7: Tire – Sales Forecast (Source: Own Calculations)

Tire							
Amounts in MEUR	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	10.388	10.667	10.966	11.350	11.740	12.049	12.365
Sales YoY Growth (%)		2,7%	2,8%	3,5%	3,4%	2,6%	2,6%

ContiTech's sales by region are, like for the other divisions, scattered with a main focus on Europe, especially Germany. With the recent Veyance acquisition, Conti tried to increase its exposure to NAFTA as well as to Southern America (Continental AR, 2015) (Table 8).

Table 8: ContiTech – Sales by Region (Source: Continental AR, 2015)

ContiTech							
Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Average**
Germany	38,0%	16,0%	34,0%	33,0%	33,0%	24,0%	29,7%
Europe (excluding Germany)	34,0%	34,0%	32,0%	31,0%	31,0%	25,0%	31,2%
NAFTA	7,0%	30,0%	10,0%	12,0%	14,0%	26,0%	16,5%
Asia	14,0%	8,0%	16,0%	16,0%	17,0%	17,0%	14,7%
Other Countries	7,0%	12,0%	8,0%	8,0%	5,0%	8,0%	8,0%

It is assumed that ContiTech's growth rate is solely based on the nominal GDP growth rate, except in FY16 where the current interim growth rates are taken into consideration. In addition, a discount of 2% is applied to the nominal GDP growth rate, to account for the fact that the group will not grow as strong as the overall economy. This is mainly due to the fact that Conti's rubber products do not offer enough opportunities to create higher market share through innovation (Spina, 2016) (Table 9) (Appendix VIII).

Table 9: ContiTech – Sales Forecast (Source: Own Calculations)

ContiTech							
Amounts in MEUR	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	5.279	5.372	5.525	5.664	5.809	5.958	6.110
Sales YoY Growth (%)		1,8%	2,8%	2,5%	2,6%	2,6%	2,5%

5.2.2 EBITDA Margin

Even though the consolidated income statement of Conti is reported according to the function of expense-method, the single divisions just report profit metrics like EBIT and EBITDA. Consequently, expenses like COGS, SGA and R&D cannot be appropriately separated and therefore, the forecasts have to be done by applying margins. As a result, EBITDA Margins are forecasted for the single divisions.

Within the **Automotive Division,** the EBITDA Margin has been stable around an average of 12,3% between FY11 and FY15. It is expected that the margin will be at 11,6% in FY16, which is the median of the first three quarters of FY16. This metric is used to exclude the Q3 outlier (FY16) which is just at 5,0%, mainly because of one-time effects like cartel penalty provisions. In FY17 and FY18, it will slightly decline by 0,3%. From FY20 onwards, it will stay stable at 10%. The decline is attributable to increasing raw material prices (World Bank, 2016), the market entrance of new technology players and increasing R&D costs (investments to adapt to industry trends) that will all pressure Conti's margins (Figure 7).

The EBITDA Margin at the **Tire Division** has continuously improved from 17,5% in FY11 to 25,1% in FY15. In FY16, the interim median is even at 26,2%. Nonetheless, it is assumed that raw material prices (especially oil) will increase (World Bank, 2016) and that the current capacity utilization cannot be kept at record levels. As a consequence, the EBITDA Margin should stepwise decrease by 2% each year, from 26,2% in FY16 to 22,2% in FY18. From FY19 onwards, it will be stable at 21,8% (FY11-FY15 average). Due to Conti's strong competitive advantage in the Tire business, it is not presumed to fall below that level (Figure 7).

Before 2015, the EBITDA Margin of **ContiTech** has been stable around an average of 15,1% but dropped to 10,9% in FY15 (due to the Veyance acquisition). As the EBITDA Margins within the FY16 interim reports are already ascending to the former levels (13,2% median in Q1–Q3), it is presumed that the margin will rebound and stay stable at the 5-years median from FY17 onwards, since the company is expected to successfully handle all the acquisition issues (Figure 7).

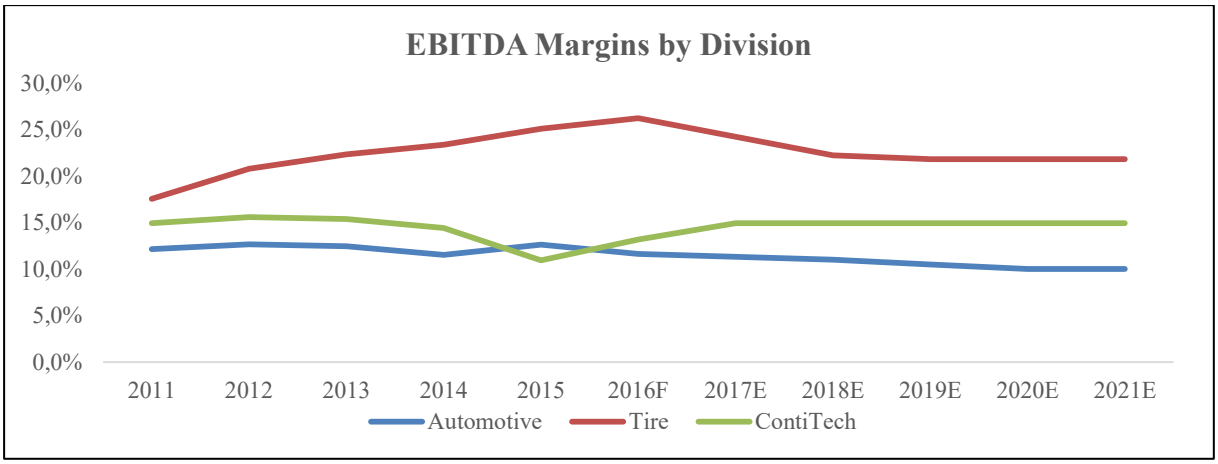


Figure 7: EBITDA Margin by Division (Source: Own Calculations)

5.2.3 D&A

In the subsequent sections, D&A, CAPEX as well NWC are measured as a percentage of sales to construct the forecasts. For the D&A forecasts, impairment is excluded, because extraordinary effects are not taken into consideration.

For the **Automotive** division, D&A/Sales has been decreasing from 6,5% in FY11 to 4,1% in FY15. As CAPEX/Sales is expected to increase due to higher investments to adapt to the current industry trends, also D&A will step-by-step increase from 4,1% (FY16–FY17) to 5% (FY18–FY21).

Contrary to the Automotive division, D&A/Sales has been increasing within the **Tire** division from 3,8% (FY11) to 5% (FY15). Nevertheless, no higher investments are expected for the Tire segment and that is why D&A/Sales will stay stable at the FY15 ratio.

ContiTech's D&A/Sales ratio has been stable in the past, except a recent sharp rise from 3,1% (FY14) to 7,7% (FY15). This is mainly related to an impairment loss for the Conveyor Belt Group of MEUR72 and an acquisition-related increase of D&A. For FY16, the interim median of Q1–Q3 is used (5,5%) and in FY17 a decline of 1,5% to 4% is presumed. Afterwards (FY18–FY21), the ratio will stay at the historical median (applied to exclude the FY15 outlier) of 3% (Figure 8).

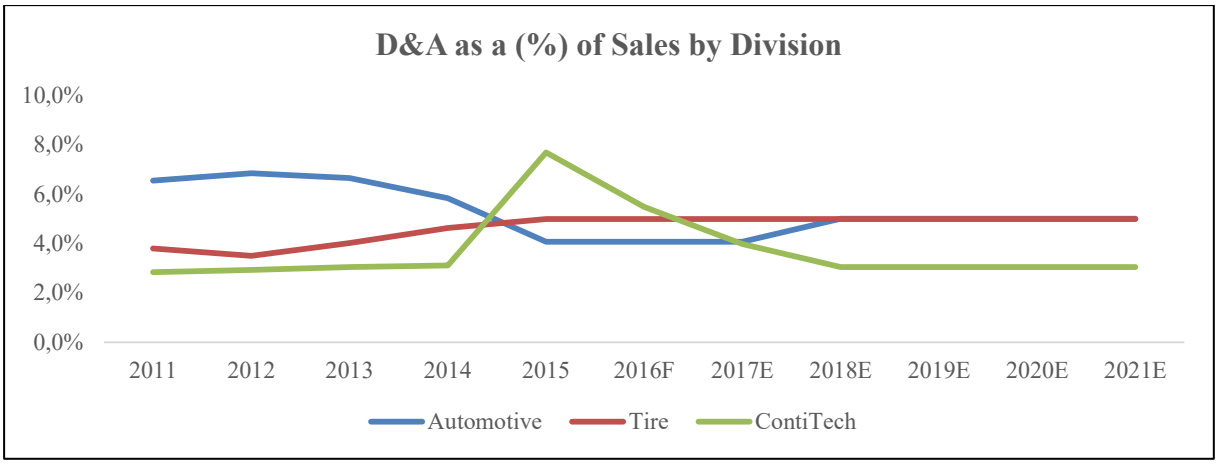


Figure 8: D&A as a (%) of Sales by Division (Source: Own Calculations)

5.2.4 CAPEX

Except for the Tire division, where it has been fluctuating, historical Capex/Sales for the other divisions stayed stable.

For the **Automotive** division, it has always hovered around 5%. Nonetheless, it is presumed that CAPEX/Sales will rise from 5,3% (FY16–FY17) to 6% (FY18–FY21) due to the fact that further investments for the adjustment to the current industry trends (especially software) are needed to stay competitive against new market entrants and incumbents (in addition to an increase of R&D costs).

CAPEX/Sales dropped from 7,3% (FY11) to 6,3% (FY15) within the **Tire** division. This is presumed to be a trend to lower CAPEX. Since Conti has already a very strong competitive positon in the market, which is underpinned by its ROCE of 39,2% that is highly above its peers, it is assumed to stay at 6,3% and that no additional investments are needed to strengthen this position. The FY16 Q1–Q3 median of 5,9% is in line with that assumption.

For **ContiTech,** CAPEX/Sales fluctuated around 4%–5% (except one outlier). Therefore, the median of 4,4% should be accurate for the forecasts (Figure 9).

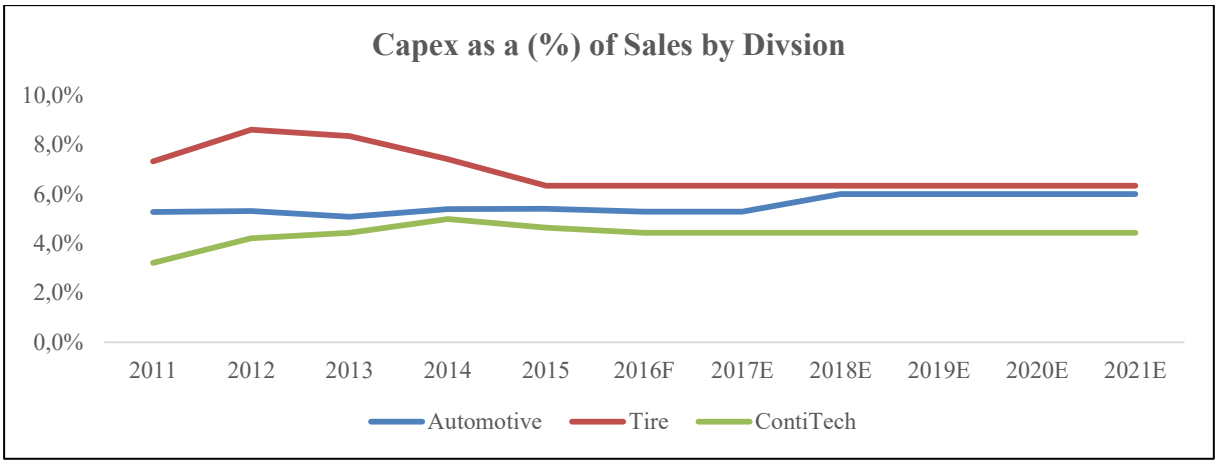


Figure 9: Capex as a (%) of Sales by Division (Source: Own Calculations)

5.2.5 NWC

Regarding the NWC levels, there have been major differences between the three divisions. Whilst the Automotive division ran a Working Capital (WC) management with a NWC level around 7% of sales in its recent history (FY11–FY15), the other two divisions were operating with NWCs as a percentage of sales above 20% (Tire) as well as 15% (ContiTech).

The NWC by division is computed by considering operating receivables, inventories as well as operating payables. Only minor balance sheet items like income tax receivables/payables as well as deferred tax assets/liabilities are not included in the NWC calculation.

After a decline in FY11, **Automotive's** NWC/Sales ratio has stayed around 6%–7%. Therefore, the 5-years average of 7% (FY11–FY15) is applied as the forecasting estimate.

Tire fluctuated around 21%, hence this average is utilized as the future estimate. No improvements/deteriorations of WC Management are presumed.

ContiTech's NWC stayed stable between 15% and 16% from FY11–FY14 and suddenly increased to 17,7% in FY15. The median of 16% is consequently regarded as the forecasting metric (Figure 12). The reason behind the NWC rise of ContiTech is that the current WC management of Veyance needs to be adjusted to Conti's group policies. This is expected to be already accomplished in FY16 (Figure 10).

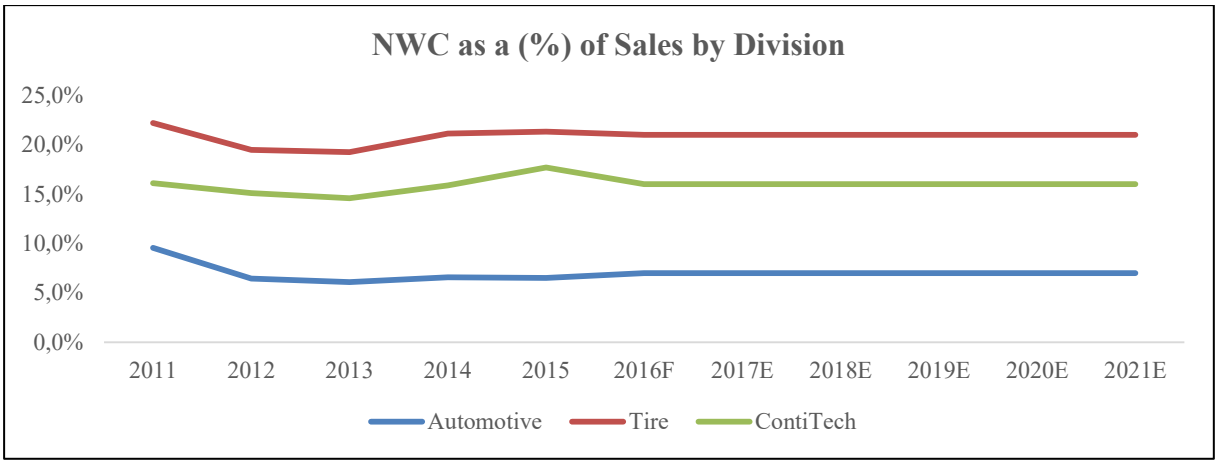


Figure 10: NWC as a (%) of Sales by Division (Source: Own Calculations)

5.2.6 Tax Rate

For the predicted tax rate, Conti's **current effective tax rate of 28,2%** (FY15) is applied. The effective tax rate has been rising in the recent two years from 18,3% in FY13 to 20,2% in FY14 up to 28,2% in FY15. In Conti's AR 2015, it is stated that a further increase is not presumed, but cannot be fully ruled out. Nonetheless, since the company seems to be confident and the current 28,2% are close to the marginal German tax rate of 29,65% (Damodaran, 2016), it is considered a good forecast.

5.2.7 FCFF

The **Automotive** division's FCFFs are expected to be fluctuating, especially because of the decreasing EBITDA Margin and an increasing CAPEX/Sales ratio (Table 10).

Table 10: Automotive – FCFF Forecast (Source: Own Calculations)

Automotive							
Amounts in MEUR		**Forecast**					
Year	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	**23.565**	**24.340**	**25.253**	**26.271**	**27.285**	**28.207**	**29.193**
Expenses	20.592	21.508	22.399	23.381	24.420	25.386	26.274
EBITDA	**2.973**	**2.832**	**2.854**	**2.890**	**2.865**	**2.821**	**2.919**
EBITDA Margin (%)	*12,6%*	*11,6%*	*11,3%*	*11,0%*	*10,5%*	*10,0%*	*10,0%*
D&A	958	990	1.027	1.314	1.364	1.410	1.460
EBIT	**2.015**	**1.842**	**1.827**	**1.576**	**1.501**	**1.410**	**1.460**
EBIT Margin (%)	8,6%	7,6%	7,2%	6,0%	5,5%	5,0%	5,0%
NOPLAT	**1.448**	**1.323**	**1.312**	**1.132**	**1.078**	**1.013**	**1.049**
D&A	958	990	1.027	1.314	1.364	1.410	1.460
D&A as a (%) of Sales	*4,1%*	*4,1%*	*4,1%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*
ΔNWC	162	170	64	71	71	65	69
CAPEX	1.274	1.288	1.336	1.576	1.637	1.692	1.752
CAPEX as a (%) of Sales	*5,4%*	*5,3%*	*5,3%*	*6,0%*	*6,0%*	*6,0%*	*6,0%*
FCFF	**970**	**855**	**939**	**798**	**734**	**667**	**688**
NWC	**1.534**	**1.704**	**1.768**	**1.839**	**1.910**	**1.974**	**2.043**
NWC as a (%) of Sales	*6,5%*	*7,0%*	*7,0%*	*7,0%*	*7,0%*	*7,0%*	*7,0%*

For the **Tire** division, the FCFFs are fluctuating because of the declining EBITDA Margin. D&A/Sales, Capex/Sales as well as NWC/Sales are presumed to remain stable (Table 11).

Table 11: Tire – FCFF Forecast (Source: Own Calculations)

Tire							
Amounts in MEUR		**Forecast**					
Year	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	**10.388**	**10.667**	**10.966**	**11.350**	**11.740**	**12.049**	**12.365**
Expenses	7.784	7.869	8.308	8.827	9.179	9.420	9.668
EBITDA	**2.604**	**2.799**	**2.658**	**2.524**	**2.561**	**2.629**	**2.698**
EBITDA Margin (%)	*25,1%*	*26,2%*	*24,2%*	*22,2%*	*21,8%*	*21,8%*	*21,8%*
D&A	519	533	548	567	587	602	618
EBIT	**2.085**	**2.266**	**2.110**	**1.957**	**1.975**	**2.027**	**2.080**
EBIT Margin (%)	20,1%	21,2%	19,2%	17,2%	16,8%	16,8%	16,8%
NOPLAT	**1.498**	**1.628**	**1.516**	**1.406**	**1.419**	**1.456**	**1.494**
D&A	519	533	548	567	587	602	618
D&A as a (%) of Sales	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*
ΔNWC	149	26	63	81	82	65	66
CAPEX	658	676	695	719	744	763	783
CAPEX as a (%) of Sales	*6,3%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*
FCFF	**1.210**	**1.459**	**1.306**	**1.173**	**1.180**	**1.230**	**1.262**
NWC	**2.214**	**2.240**	**2.303**	**2.384**	**2.465**	**2.530**	**2.597**
NWC as a (%) of Sales	*21,3%*	*21,0%*	*21,0%*	*21,0%*	*21,0%*	*21,0%*	*21,0%*

As the EBITDA Margin is expected to stay stable from FY17 onwards, **ContiTech's** FCFFs are continuously increasing from FY18 onwards (Table 12).

Table 12: ContiTech – FCFF Forecast (Source: Own Calculations)

ContiTech							
Amounts in MEUR		**Forecast**					
Year	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	**5.279**	**5.372**	**5.525**	**5.664**	**5.809**	**5.958**	**6.110**
Expenses	4.702	4.664	4.699	4.818	4.941	5.068	5.197
EBITDA	**577**	**708**	**825**	**846**	**868**	**890**	**913**
EBITDA Margin (%)	*10,9%*	*13,2%*	*14,9%*	*14,9%*	*14,9%*	*14,9%*	*14,9%*
D&A	406	294	220	172	177	181	186
EBIT	**171**	**414**	**605**	**674**	**691**	**709**	**727**
EBIT Margin (%)	3,2%	7,7%	11,0%	11,9%	11,9%	11,9%	11,9%
NOPLAT	**123**	**297**	**435**	**484**	**497**	**509**	**522**
D&A	406	294	220	172	177	181	186
D&A as a (%) of Sales	*7,7%*	*5,5%*	*4,0%*	*3,0%*	*3,0%*	*3,0%*	*3,0%*
ΔNWC	326	-75	24	22	23	24	24
CAPEX	245	238	245	251	257	264	271
CAPEX as a (%) of Sales	*4,6%*	*4,4%*	*4,4%*	*4,4%*	*4,4%*	*4,4%*	*4,4%*
FCFF	**-42**	**428**	**386**	**383**	**393**	**403**	**413**
NWC	**934**	**860**	**884**	**906**	**929**	**953**	**978**
NWC as a (%) of Sales	*17,7%*	*16,0%*	*16,0%*	*16,0%*	*16,0%*	*16,0%*	*16,0%*

To gain a better overview of the whole Continental group, both an aggregated profit and loss statement as well as a cash flow computation are enclosed in Appendix IX–Appendix X.

5.3 Peer Group

The peer group is used for the determination of the industries' betas and the re-levered betas, the determination of the target capital structure as well as for the multiples valuation. Three peer groups are composed, one for Automotive, one for Tire as well as one for ContiTech.

First, a wider peer group is created by using Thomson Reuters Eikon, industry research reports, financial statements and different available online data. Second, six different evaluation criteria are appointed to assess the sample. Third, different weights for each criteria are assigned. The evaluation criteria are the industry/product fit, the geographical fit, the D/E ratio (capital structure), the EBITDA Margin (efficiency measure), the ROCE (profitability measure) and the 5-years CAGR (growth perspective). The weights range from 1–2, whereby the rating scale ranges from a maximum of 3 (high-fit) over 2 (medium-fit) to a minimum of 1 (low-fit) (Appendix XI).

The **industry/product fit** as well as the **geographical fit** require a subjective analysis of Conti's ascertained peers. Regarding the industry, a good-fit peer sells almost the same components as Conti (specified in Appendix XII). A good geographical fit would be a competitor globally active with a main focus on Europe, especially Germany, while a low-fit peer would be just regionally active (e.g. only Asia).

For the **D/E ratio**, it is presumed that all divisions have the same capital structure since they are all capital intensive and profitable (Damodaran, 2006). Consequently, the current D/E ratio of Conti of 14,9% is utilized (at market values). It has to be mentioned that due to the fact that market values are applied, this ratio is changing almost every trading day. Therefore, only the first ascertained value is used and kept stable for the further assessment.

The **EBITDA Margin** and the **ROCE** are individually determined for each division. The ROCE is used instead of the ROIC to exclude tax effects on the profitability measure. In addition, it is a core metric within Conti's corporate management philosophy. For the Tire division as well as ContiTech, adaptations are made to the EBITDA Margin as well as to the ROCE (5-years median and not most current ratio), as the current metrics are not recurrent due to the already mentioned reasons (raw material prices, Veyance acquisition, etc.).

For the company's **growth rate**, the 5-years CAGR is used. This is due to the fact that the YoY-growth could be too heavily influenced by extraordinary events. For Automotive as well as

ContiTech, M&A activities are not taken into consideration and the growth before consolidation is regarded. The subsequent table summarizes all benchmarks by division.

Table 13: Peer Benchmarks by Division (Source: Own Calculations)

Division	D/E Ratio	EBITDA Margin (%)	ROCE	Sales 5-Years CAGR
Automotive	14,9%	12,6%	17,9%	6,5%
Tire	14,9%	22,3%	37,6%	7,5%
ContiTech	14,9%	14,9%	36,5%	5,2%

The final peer groups comprise eighteen peers for the Automotive division, six peers for the Tire division as well as six peers for the ContiTech division (Table 14). The specific assessment by division is summarized in Appendix XIII–Appendix XV.

Table 14: Final Peer Groups by Division (Source: Own Calculations)

Automotive
Aisin Seiki Co Ltd
Autoliv Inc
Cie Automotive SA
Delfingen Industry SA
Denso Corp
ElringKlinger AG
Faurecia SA
GKN PLC
Hella KGaA Hueck & Co
Hyundai Mobis Co Ltd
Lear Corp
Leoni AG
Magna International Inc
Progress Werk Oberkirch AG
Rheinmetall AG
Schaeffler AG
SHW AG
Valeo SA

Tire
Apollo Tyres Ltd
Bridgestone Corp
Compagnie Generale des Etablissements Michelin SCA
Nexen Tire Corp
Nokian Tyres plc
Toyo Tire & Rubber Co Ltd

ContiTech
Arkema SA
Compagnie Plastic Omnium SA
Lanxess AG
Sumitomo Riko Co Ltd
Toray Industries Inc
Trelleborg AB

5.4 Cost of Capital

This sections explains how the cost of capital is obtained as a discounting parameter for the future FCFFs.

5.4.1 Target Capital Structure

For the target capital structure, the D/E ratios of the ascertained peers are taken into consideration, whereby the current market capitalization is used for the equity component. Because of

the scope of the analysis, the debt cannot be valued individually for each peer. As a consequence, their book values are applied.

For the computation of the re-levered beta and the WACC, the capital structure's median is used to exclude outliers like Schaeffler. When regarding the median, Automotive resulted in a target D/E ratio of 27,5%, Tire of 14,2% and ContiTech of 33% (Table 15).

Table 15: Target Capital Structure by Division (Source: Own Calculations)

Automotive	
Company	**D/E Ratio**
Aisin Seiki Co Ltd	24,7%
Autoliv Inc	17,2%
Cie Automotive SA	43,9%
Delfingen Industry SA	97,3%
Denso Corp	13,1%
ElringKlinger AG	54,5%
Faurecia SA	39,0%
GKN PLC	21,4%
Hella KGaA Hueck & Co	34,4%
Hyundai Mobis Co Ltd	11,8%
Lear Corp	23,5%
Leoni AG	54,5%
Magna International Inc	15,7%
Progress Werk Oberkirch AG	125,8%
Rheinmetall AG	30,2%
Schaeffler AG	269,7%
SHW AG	8,0%
Valeo SA	14,2%
Average	**49,9%**
Median	**27,5%**

Tire	
Company	**D/E Ratio**
Apollo Tyres Ltd	12,5%
Bridgestone Corp	12,2%
Compagnie Generale des Etablissements Michelin SCA	15,9%
Nexen Tire Corp	71,0%
Nokian Tyres plc	5,2%
Toyo Tire & Rubber Co Ltd	74,5%
Average	**31,9%**
Median	**14,2%**

ContiTech	
Company	**D/E Ratio**
Arkema SA	33,6%
Compagnie Plastic Omnium SA	22,4%
Lanxess AG	32,4%
Sumitomo Riko Co Ltd	79,2%
Toray Industries Inc	40,6%
Trelleborg AB	24,1%
Average	**38,7%**
Median	**33,0%**

5.4.2 Beta

After the examination of the target capital structure, the industries' betas are obtained. Firstly, this is done by regressing the MSCI AC World Equity Index over the monthly five-year's returns of the different peers to obtain their levered betas. In extraordinary cases, where five-year's data is not available (e.g. Schaeffler which is just listed since April 2016), smaller time intervals are chosen. The mentioned index is selected, because it represents a measure of worldwide equity performance and contains a vast amount of securities from twenty-three industrial countries. The five-year's time interval thereby reflects a whole business cycle of the companies. No longer period is taken into consideration since the effects of the financial crisis of 2008 should be excluded as it represents an extraordinary event and therefore a distortion of beta. After all the levered betas are computed, they are adapted according to the Blume (1972) method.

Secondly, the adapted betas are unlevered, using the Hamada approach and assuming a beta debt of 0. Nonetheless, only statistically significant data is applied, resulting in the exclusion of companies with a R^2 lower than 10% within the previous regression analysis (Bini, 2016).

Thirdly, the averages of the statistically significant betas (by division) are re-levered at the target industry capital structure as well as at the current ratio. This delivers six re-levered betas, more specifically two per division (Table 16). A comprehensive computation of beta is enclosed in Appendix XVI–XVIII.

Table 16: Beta Unlevered and Re-Levered (Source: Own Calculations)

Beta Re-Levered at Industry Median

Division	Beta Re-Levered	D/E Ratio	Tax Rate	Industry's Beta
Automotive	1,14	27,47%	28,16%	0,95
Tire	1,10	14,19%	28,16%	1,00
ContiTech	1,31	33,02%	28,16%	1,06

Beta Re-Levered at Current Capital Structure

Division	Beta Re-Levered	D/E Ratio	Tax Rate	Industry's Beta
Automotive	1,06	14,92%	28,16%	0,95
Tire	1,10	14,92%	28,16%	1,00
ContiTech	1,17	14,92%	28,16%	1,06

5.4.3 Cost of Equity

The cost of equity is calculated by using the CAPM approach. Basically, six different costs of equity are obtained. Three for the beta re-levered at the industry median and three for the beta re-levered at the current ratio. Thereby, the author accounts for various levels of risk for each business unit, whereby ContiTech bears the highest cost of equity in both scenarios (Table 17).

Table 17: Cost of Equity by Division (Source: Own Calculations)

D/E at Industry Median

Automotive	
Risk-Free Rate	0,05%
Beta	1,14
ERP	7,74%
Cost of Equity	**8,89%**

Tire	
Risk-Free Rate	0,05%
Beta	1,10
ERP	7,94%
Cost of Equity	**8,77%**

ContiTech	
Risk-Free Rate	0,05%
Beta	1,31
ERP	7,74%
Cost of Equity	**10,17%**

D/E at Current Ratio

Automotive	
Risk-Free Rate	0,05%
Beta	1,06
ERP	7,74%
Cost of Equity	**8,22%**

Tire	
Risk-Free Rate	0,05%
Beta	1,10
ERP	7,94%
Cost of Equity	**8,81%**

ContiTech	
Risk-Free Rate	0,05%
Beta	1,17
ERP	7,74%
Cost of Equity	**9,11%**

For the risk-free rate, a 10-year German governmental bond with a current yield of 0,05% is applied. The ERPs per country/region are obtained from Damodaran and weighted according to the divisions' geographical sales exposure, to reflect the various levels of risk that the company incurs through its international operations.

5.4.4 Cost of Debt

For the computation of the cost of debt, the long-term ratings of Conti at the rating agencies Standard and Poor's (S&P), Fitch and Moody's are assessed and utilized to obtain an interest rate spread that is added to a risk-free rate. The risk-free rate is the same as used for the cost of equity computation (0,05%). This approach results in a cost of debt of 2,3% (Table 18). The table applied to obtain the spread is enclosed in Appendix XIX.

Table 18: Cost of Debt – Rating Approach (Source: Own Calculations)

Ratings		
S&P	**Fitch**	**Moody's**
BBB	BBB	Baa1
Risk-Free Rate	**Spread**	**Cost of Debt**
0,05%	2,25%	2,30%

This number is in line, when comparing it to the long-term bond yields of two of Conti's key competitors, namely Valeo and Faurecia. Valeo's current bond yield is, on the one hand, at 1,35% (issued in March 2016 and matures in March 2026), whereas Faurecia's current bond yield is, on the other hand, at 3,34% (issued in April 2016 and matures in June 2023). As a result, Conti's cost of debt can be regarded as an average of those two.

5.4.5 WACC and Unlevered Cost of Capital

For the WACC, the six ascertained costs of equity are used to compute six different WACCs, by keeping the cost of debt as well as the tax rate for all divisions constant (Table 19).

Additionally, the unlevered cost of capital is computed to perform an APV valuation as part of the scenario analysis. Thereby, the obtained industry betas are inserted into the CAPM. One unlevered cost of capital represents the weighted average (according to the sales level) of the unlevered costs of capital of the various divisions and is used later as a discount rate for the TS (Table 20).

Table 19: WACC by Division (Source: Own Calculations)

D/E at Industry Median	
Automotive	
Cost of Equity	8,89%
E/EV	78,45%
Cost of Debt	2,30%
D/EV	21,55%
Tax Rate	28,16%
D/E	27,47%
WACC	**7,33%**
Tire	
Cost of Equity	8,77%
E/EV	87,57%
Cost of Debt	2,30%
D/EV	12,43%
Tax Rate	28,16%
D/E	14,19%
WACC	**7,89%**
ContiTech	
Cost of Equity	10,17%
E/EV	75,18%
Cost of Debt	2,30%
D/EV	24,82%
Tax Rate	28,16%
D/E	33,02%
WACC	**8,06%**

D/E at Current Ratio	
Automotive	
Cost of Equity	8,22%
E/EV	87,02%
Cost of Debt	2,30%
D/EV	12,98%
Tax Rate	28,16%
D/E	14,92%
WACC	**7,37%**
Tire	
Cost of Equity	8,81%
E/EV	87,02%
Cost of Debt	2,30%
D/EV	12,98%
Tax Rate	28,16%
D/E	14,92%
WACC	**7,89%**
ContiTech	
Cost of Equity	9,11%
E/EV	87,02%
Cost of Debt	2,30%
D/EV	12,98%
Tax Rate	28,16%
D/E	14,92%
WACC	**8,14%**

Table 20: Unlevered Cost of Capital by Division (Source: Own Calculations)

Automotive	
Risk-Free Rate	0,05%
Beta	0,95
ERP	7,74%
Unlevered Cost of Capital	**7,43%**

Tire	
Risk-Free Rate	0,05%
Beta	1,00
ERP	7,94%
Unlevered Cost of Capital	**7,97%**

ContiTech	
Risk-Free Rate	0,05%
Beta	1,06
ERP	7,74%
Unlevered Cost of Capital	**8,23%**

Weighted Unlevered Cost of Capital	**7,68%**

5.5 Debt Valuation

For the purpose of obtaining a D/E ratio based on market values as well as calculating the fair amount of debt that is deducted from the EV to arrive at the equity value, Conti's debt is valued. It has to be mentioned that this amount of debt is used to compute the current D/E ratio applied in the previous analysis, hence this step of the thesis can also be considered as one of the first to be executed. Conti's current indebtedness is depicted in the subsequent table.

Table 21: Indebtedness (Source: Continental AR, 2015)

Amounts in MEUR	Total	Current	Non-Current
Bonds	2.785	3	2.782
Bank Loans and Overdrafts	1.726	1.569	157
Derivative Instruments	13	11	2
Finance Lease Liabilities	41	11	30
Liabilities from Sale of Receivables Programs	638	438	200
Other Indebtedness	43	38	5
Total	**5.245**	**2.070**	**3.175**

For the bonds, Conti has four different types outstanding that are actively traded in the market. One is not actively traded and one matured in November 2016. The first four are Eurobonds, denominated in Euro with fixed coupon payments. As they are actively traded, their current prices are used to determine their market values of debt (Table 22).

Table 22: Debt Valuation – Bonds Traded (Source: Thomson Reuters Eikon)

Description	Maturity Date	Amount Issued	Coupon	Last Price as a (%) of Par	Fair Value
CGF Eurobond	20-Mar-2017	750	2,50%	101	758
CAG Eurobond	16-Jul-2018	750	3,00%	105	789
CRoA Eurobond	19-Feb-2019	500	0,50%	101	505
CAG Eurobond	09-Sep-2020	750	3,13%	112	838

The payments of the bond not actively traded in the market are discounted at the cost of debt to gain the bond's fair value. This results in MEUR56.

For the Finance Leases, the fair value of MEUR45 (indicated in Conti's AR) is utilized.

For the other sources of debt, summarized as „Other Indebtedness", the average of the percentage difference between the book values and the fair values of the previously mentioned sources of debt is used. This is similar to a multiples approach and results in a value of MEUR2.652 (Table 23).

Table 23: Fair Value of Debt (Source: Own Calculations)

Amounts in MEUR	Book Value	Fair Value	Difference
Bonds Traded	2.730	2.890	5,9%
Bonds Untraded	50	56	12,9%
Finance Leases	41	45	10,1%
Other Indebtedness	2.420	2.652	9,6%
Total	**5.240**	**5.644**	**7,7%**

5.6 DCF Valuation

After the calculation of the respective FCFFs and the various discount rates, the DCF valuation is performed. For the **D/E at industry median**, the Tire division is the most valuable division with MEUR21.757, followed by Automotive division with MEUR16.172 and ContiTech with MEUR6.791 (Table 24).

Table 24: DCF Valuation – D/E at Industry Median (Source: Own Calculations)

Automotive						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		939	798	734	667	688
Discounted Cash Flows FY17–FY21 @ WACC = 7,33%		875	693	594	502	483
Terminal Value @ Growth Rate = 3,5%						18.553
Sum of Discounted Cash Flows FY17–FY21	3.147					
Discounted Terminal Value @ WACC = 7,33%	13.025					
Division's Value	**16.172**					

Tire						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		1.306	1.173	1.180	1.230	1.262
Discounted Cash Flows FY17–FY21 @ WACC = 7,89%		1.211	1.008	939	908	864
Terminal Value @ Growth Rate = 2,6%						24.599
Sum of Discounted Cash Flows FY17–FY21	4.929					
Discounted Terminal Value @ WACC = 7,89%	16.828					
Division's Value	**21.757**					

ContiTech						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		386	383	393	403	413
Discounted Cash Flows FY17–FY21 @ WACC = 8,06%		357	328	311	295	281
Terminal Value @ Growth Rate = 2,5%						7.689
Sum of Discounted Cash Flows FY17–FY21	1.573					
Discounted Terminal Value @ WACC = 8,06%	5.219					
Division's Value	**6.791**					

The order of the value per division is the same for the **D/E at current ratio**, whereby Tire resulted in a value of MEUR21.772, Automotive in MEUR16.007 and ContiTech in MEUR6.691 (Table 25).

Table 25: DCF Valuation – D/E at Current Ratio (Source: Own Calculations)

Automotive						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		939	798	734	667	688
Discounted Cash Flows FY17–FY21 @ WACC = 7,37%		874	693	593	502	482
Terminal Value @ Growth Rate = 3,5%						18.357
Sum of Discounted Cash Flows FY17–FY21	3.143					
Discounted Terminal Value @ WACC = 7,37%	12.863					
Division's Value	**16.007**					

Tire						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		1.306	1.173	1.180	1.230	1.262
Discounted Cash Flows FY17–FY21 @ WACC = 7,89%		1.211	1.008	940	908	864
Terminal Value @ Growth Rate = 2,6%						24.615
Sum of Discounted Cash Flows FY17–FY21	4.930					
Discounted Terminal Value @ WACC = 7,89%	16.842					
Division's Value	**21.772**					

ContiTech						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		386	383	393	403	413
Discounted Cash Flows FY17–FY21 @ WACC = 8,14%		357	328	311	295	279
Terminal Value @ Growth Rate = 2,5%						7.574
Sum of Discounted Cash Flows FY17–FY21	1.569					
Discounted Terminal Value @ WACC = 8,14%	5.121					
Division's Value	**6.691**					

The values of the divisions are added up together to arrive at the core EV. Afterwards, the market value of debt, minority interest, unfunded pension provisions and similar obligations as well as other excess liabilities not included into the NWC of the single divisions are deducted from the EV. Excess assets are added to the EV to arrive at the equity value (excess assets/other excess liabilities depicted in Appendix XX). Because items like pension obligations or minority interest are difficult to forecast, the author considers the FY15 values as appropriate to utilize for the valuation at the end of FY16. Therefore, they are kept stable. The final equity value is divided by the number of shares outstanding (M201) to obtain the PPS, which is EUR187 and EUR185. Therefore, the average of EUR186 is applied as the target PPS (Table 26).

Table 26: DCF Valuation – PPS (Source: Own Calculations)

Core Enterprise Value	**44.721**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Excess Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**37.430**
Shares Outstanding	201
Price per Share	**187**

Core Enterprise Value	**44.469**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Excess Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**37.178**
Shares Outstanding	201
Price per Share	**185**

5.7 Multiples Valuation

For the multiples valuation, the asset multiples of EV/EBIT and EV/EBITDA are used to value each single division, followed by a SOP approach. The EV/Sales ratio is considered too biased, since high sales do not automatically imply high earnings. Regarding EV/EBIT as well as EV/EBITDA, both a trailing (FY15) and a leading multiples (FY16–FY17) valuation is conducted. The items deducted respectively added from/to the EV are the same as for the DCF valuation.

The EV/EBITDA valuation delivers a PPS of EUR150 (FY15), EUR157 (FY16) as well as EUR158 (FY17) and the EV/EBIT valuation leads to a PPS of EUR160 (FY15), EUR176 (FY16) as well as EUR182 (FY17). The trailing multiples in FY15 are biased by the current low margins of the ContiTech division and cannot be regarded a good estimate. Concerning the literature review (Chapter 2.1.2.), forward/leading multiples should result in a better estimate, wherefore the **FY17 multiple** is regarded as the best valuation metric. In addition, the continuously declining margins of the Automotive and the Tire division are in a state more close to the long-term condition of Conti compared to FY15. As the Automotive industry is very capital-intensive, **EV/EBIT** is regarded as the **best estimate** since it includes D&A. Therefore, the **target PPS** of the multiples valuation is set at **EUR182** and is consequently just slightly lower (EUR4) than the DCF valuation (Table 27). The whole multiples valuation is summarized in Appendix XXI–XXV.

Table 27: Multiples Valuation – PPS (Source: Own Calculations)

Amounts in MEUR	Trailing	Leading FY16	Leading FY17
EV/EBITDA	150	157	158
EV/EBIT	160	176	182
Average	155	166	170

5.8 Scenario Analysis

To gain a vaster overview over the price that Conti's stock could take under various ceteris-paribus assumptions, a scenario analysis is conducted. This analysis differentiates between six scenarios and also tests each scenario for a change in WACC of +/– 0,5%.

Scenario A simulates a sharp increase of raw material prices for the Tire division. More specifically, the EBITDA Margin stays at 25% in FY16 and subsequently falls to 23% in FY17 and 21% in FY18. Afterwards, it declines each year by 1% until it reaches 18% in FY21. The values of the other divisions are kept stable. Finally, the simulation leads to a PPS range of EUR142 (WACC –0,5%) up to EUR184 (WACC +0,5%). The value for applying the initial WACC is EUR161.

Scenario B considers the case that ContiTech might not be able to return to its former EBITDA Margin and NWC levels after its Veyance acquisition. It is presumed that from FY16–FY18 the EBITDA Margin will stay at 13,2% and afterwards increase to 14% (FY18–FY21). The final PPS range is EUR162–EUR209, with a PPS of EUR183 for the initial WACC.

Scenario C combines the former two simulations and just keeps the base case assumptions for the automotive division stable. This leads to a PPS range of EUR138–EUR180 (EUR157 for the initial WACC).

Scenario D simulates a downside growth scenario, by using the ideas of Pearson, Spina, & O'Brien (2016) published in "The great credit illusion". They forecast lower growth rates, specifically in the U.S. and China, because the current high levels of consumption are just possible due to cheap credit conditions and extended maturities. The final PPS amounts to EUR137 with a range of EUR124–EUR152.

Scenario E is an upside growth simulation and predicts that Conti is able to meet its target of a 5% CAGR until 2020. The final PPS results in EUR191, with a PPS range of EUR169–EUR217.

Scenario F is an APV valuation and presumes that the company will stepwise change its leverage to the industry target ratio (increase of 2% per year). As three optimal D/E ratios for each division were obtained, the weighted average of those results is utilized, which amounts to 24,7%. For the market capitalization, it is assumed that the market stays stable with a current value of MEUR37.834. For the discount rate of the TS, the weighted unlevered cost of capital of all three divisions is applied, because it is presumed that the TS is as risky as the overall business. The final PPS of this approach results in EUR188 with a PPS range of EUR167–EUR214. The whole valuation is depicted in Appendix XXVI. Within this scenario, there was

no change in the WACC (+/– 0,5%) but in the unlevered cost of capital. All results are summarized in Figure 11. This also includes a change in WACC +/– 0,5 for the initial DCF valuations.

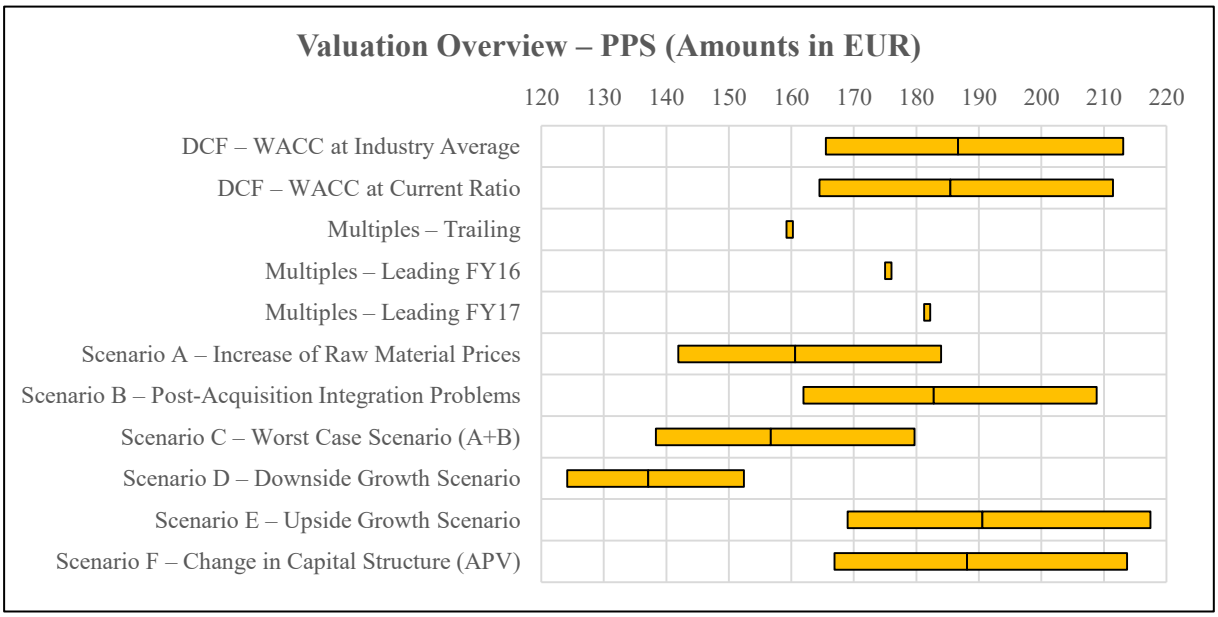


Figure 11: Valuation Overview – PPS (Source: Own Calculations)

As one can see, the potential PPSs range from a minimum of EUR124 (downside growth scenario with a WACC +0,5%) up to EUR217 (upside growth scenario with a WACC –0,5%). The intrinsic valuation approaches, namely the two WACCs and the APV, all result in values of EUR185–EUR188 and have a range from EUR165–EUR214. They were executed using the most probable assumptions. Furthermore, the multiples valuation leads to a PPS of EUR182 (FY17). Considering the current share price of EUR182, investors should be confident about **holding** Conti's stock. This is because there are both chances for a downside (Scenario D) as well as an upside development (Scenario E). Currently, scenario B and C are rather considered as unlikely to happen due to the fact that the margins of ContiTech are already recovering. Only Scenario A might be more realistic but heavily depends on further raw material price developments (e.g. decisions of the OPEC).

5.9 Value at Risk

The VaR is a tool to determine how much a person could maximally lose (or gain) on an investment in a predefined period of time. Damodaran (2002a) differentiates between a historical simulation, the variance-covariance method as well as the Monte Carlo simulation as approaches to calculate the VaR. For this thesis, the Monte Carlo approach is chosen. Monte Carlo

simulations are part of the stochastic methods whereby future samples for a specific experiment are created (Damodaran, 2002b). It is regarded as the most suitable method, because it does not just consider historical data but future one. As input data, 5-year daily returns of Conti's stock are used to compute their respective arithmetic mean of 0,09% and their standard deviation of 1,88%. The latter two are inserted into a random number generator to simulate future returns with a total of 20.000 trials (Figure 12).

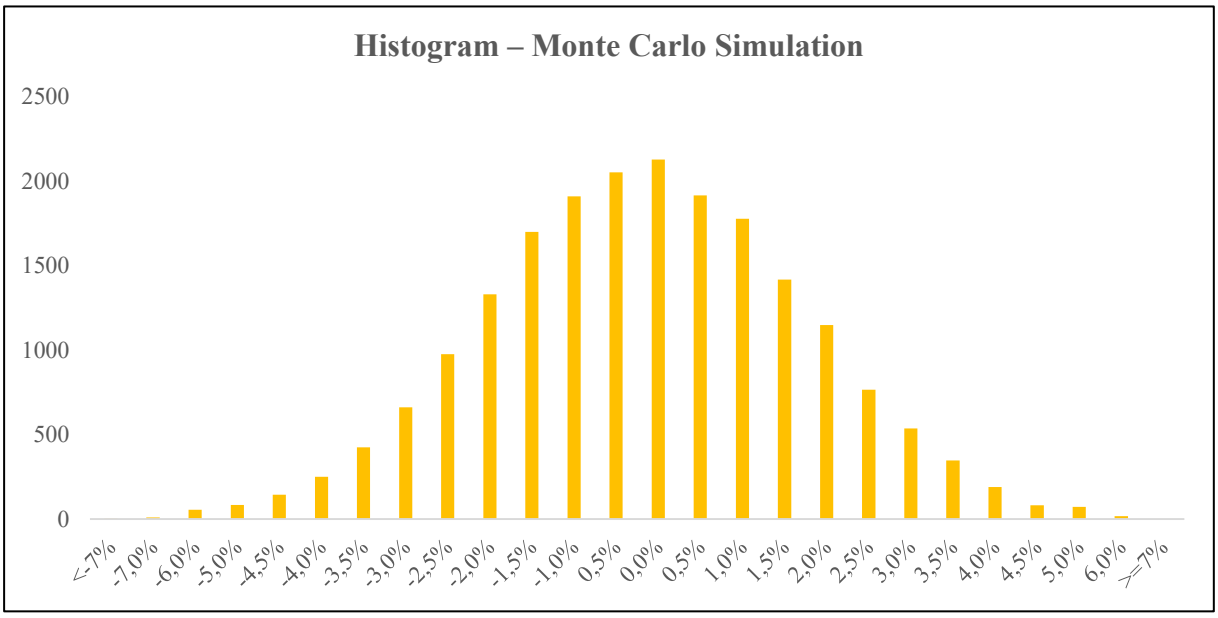


Figure 12: Histogram – Monte Carlo Simulation (Source: Own Calculations)

As a result, it can be stated that with 90% certainty the daily loss will not be higher than –2,28%, with a 95% certainty not higher than –2,96% as well as with a 99% certainty not higher than –4,27%. In case of the current share price of EUR182 (12th December 2016), this would result in a maximum daily loss of EUR7,77 (99% certainty).

On the contrary, one could also determine how much an investor could maximally gain per day. It can be said that with 90% certainty an investor could maximally earn 2,57%, with 95% certainty not more than 3,31% as well as with 99% certainty not more than 4,60%. This would translate into a maximum daily gain of EUR8,37 (99% certainty).

The key information an investor could draw from this assessment is that if he decides to buy/hold Conti's share and the worst case scenario happens, he could **maximally lose 19,6%** per week (5 trading days). If that is regarded as too risky, he should not buy/sell Conti's stock. Vice versa, the investor could **maximally gain 25,2%** on his investment per week. If that represents an attractive chance, he should consider buying/holding the share.

6 Valuation Comparison with Exane BNP Paribas

In this section, the author's valuation is compared to an investment note from Exane BNP Paribas (2016), written by analyst Edoardo Spina. The title is „Even giants tire" and it issues an „underperform" (sell) opinion with a target price of EUR154 for Conti's stock. BNP stuck to this price until November 2016 and then slightly adapted it to EUR165.

The valuation itself uses a SOP leading multiples approach (FY17), similar to the one presented in the multiples valuation chapter of this thesis. The analyst uses the average of an EV/Sales and an EV/EBIT multiple to determine the final EV. Contrariwise, the author just applies an EV/EBIT multiple. BNP's first-step equity value of EUR171 is below the EUR182 of the drafted leading multiples valuation (FY17). In a second step, a holding discount of 10% is applied to the EUR171, meaning that the analyst considers Conti's fair value to be lower, because the estimated EV might be too optimistic due to a conglomerate overvaluation. The author regards this to be unnecessary as Conti's lines of business are mainly focused onto the automotive sector and are therefore reasonably similar in their operations. The final PPS is EUR154 in BNP's valuation (Figure 13).

2017E SOP	EV/Sales			EV/EBIT			AVERAGE	
	Sales	Multiple	EV	EBIT	Multiple	EV	€bn	€/sh
Chassis & Safety	9,279	75%	6,959	909	7.5x	6,820	6,889	34
Powertrain	7,583	65%	4,929	514	7.0x	3,596	4,262	21
Interior	9,581	75%	7,186	939	8.0x	7,512	7,349	37
Automotive	**26,443**	**72%**	**19,074**	**2,362**	**7.6x**	**17,927**	**18,501**	**93**
Tires	11,029	150%	16,543	2,095	8.0x	16,764	16,653	83
ContiTech	5,509	95%	5,233	468	9.0x	4,214	4,724	24
Eliminations	(274)	100%	(274)	(133)	2.1x	(274)	(274)	(1)
ENTERPRISE VALUE	**42,706**	**95%**	**40,576**	**4,793**	**8.1x**	**38,631**	**39,603**	**198**
Net Industrial Cash							(1,224)	(6)
Pension / OPEB							(3,035)	(15)
Minorities							(1,099)	(5)
TOTAL EQUITY VALUE							**34,245**	**171**
Holding discount								10%
FAIR VALUE								**154**
NoSh								200

Figure 13: Exane BNP Paribas Valuation (Source: Spina, 2016)

Comparing it to the financial model of the author, the predicted sales and the EBIT of BNP are slightly higher due to higher sales expectations in FY16–FY17 (Table 28).

Table 28: Sales and EBIT Comparison (Source: Own Calculations)

Amounts in MEUR	Forecast	
Year	**2016F**	**2017E**
Sales Own Estimates	40.380	41.744
Sales Exane BNP Paribas Estimates	41.190	42.706
Difference in (%)	-2,0%	-2,3%

Year	**2016F**	**2017E**
EBIT Own Estimates	4.522	4.542
EBIT Exane BNP Paribas Estimates	4.636	4.793
Difference in (%)	-2,5%	-5,2%

Besides the slightly higher sales level, BNP uses lower EV/EBIT multiples than the author to support their assumption of Conti's limited long-term growth potential (Table 29).

Table 29: Multiples Comparison (Source: Own Calculations)

Year	**Automotive**	**Tire**	**ContiTech**
EV/Sales Multiple Own Estimates	0,67	1,30	1,12
EV/Sales Multiple Exane BNP Paribas Estimates	0,72	1,50	0,95
Difference in (%)	-7%	-13%	18%

Year	**Automotive**	**Tire**	**ContiTech**
EV/EBIT Multiple Own Estimates	9,90	8,19	13,96
EV/EBIT Multiple Exane BNP Paribas Estimates	7,60	8,00	9,00
Difference in (%)	30%	2%	55%

For the multiples themselves, BNP applies implied leading multiples and not the industry's average/median. This multiples are computed under the premise that Conti achieves its CAGR of 5% until 2020. Because not just the multiples approach delivered a value of EUR182 but also the intrinsic DCF valuations resulted in a value of EUR185–EUR187 (APV even EUR188), it can be concluded that the valuation of Exane BNP Paribas might be more "conservatively" conducted and could underestimate Conti's real long-term growth potential. BNP specifically states in the note that the importance of new technologies at Conti might be overestimated, an assumption unshared by the author. Additionally, the applied conglomerate discount is regarded as unnecessary. This stance is underpinned by the fact that currently only three analysts issue a sell recommendation, whereby nine opt for hold, five for buy and eight for strong buy (Thomson Reuters Eikon). A trend in favour of Conti.

7 Conclusion

To answer the research question „what is the value of Continental AG's equity at 31st December 2016?", the state of the art of equity valuation was depicted and the most up-to-date approaches were presented. After the assessment of these techniques, the author opted for using a SOP DCF (with WACC) as well as a SOP multiples approach as the most appropriate ones to determine Conti's PPS. In addition, an analysis of both the automotive industry and Conti itself were conducted.

Finally, the **DCF valuations** resulted in a **PPS of EUR186** (EUR187 and EUR185**)** and the **leading multiples valuation (FY17)** in a value **of EUR182**. Also an **APV valuation** delivered a final **PPS of EUR188.** In the scenario analysis, the **PPS range** was calculated as **EUR124–EUR217**. Chances for an upside development of the target share price as well as risks for a decline were identified. Nevertheless, since the most probable assumptions were used for the DCF as well as the APV valuation and their PPS range was computed as EUR165–EUR214, it is currently a good decision to **hold** Conti's share considering the **actual share price** of **EUR182** (12th December 2016)**.** Additionally, it was highlighted through a Monte Carlo simulation that even if the worst case would happen, an investor could maximally lose 19,6% (and gain 25,2 %) on his initial investment per week (99% certainty). If this amount of risk is not acceptable, he should consider **not holding/selling** the share. Vice versa, if the potential upside development represents an attractive chance, he should consider **holding/buying** the share.

Within the valuation comparison chapter, the target prices of the author and Conti deviated by EUR35 (EUR151 vs. EUR186). This is mainly due to the fact that BNP considers Conti's exposure to high growth products as low and the application of a conglomerate discount as necessary, an opinion unshared by the author.

One of the key issue for Conti's further development is how its automotive division will adapt to the current industry trends that is regarded as positive. Other factors are the future development of raw material prices (e.g. further OPEC decisions) as well as the successful integration of the Veyance group for ContiTech. A final investment note that summarizes the results is enclosed in Appendix XXVII.

8 Appendix

I. Appendix: Historical Performance by Division

Automotive						
Amounts in MEUR						
Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Sales	**16.024**	**18.354**	**19.505**	**20.014**	**20.905**	**23.565**
Sales YoY Growth (%)		*14,5%*	*6,3%*	*2,6%*	*4,5%*	*12,7%*
Expenses		16.128	17.035	17.524	18.498	20.592
EBITDA		**2.226**	**2.470**	**2.490**	**2.407**	**2.973**
EBITDA Margin (%)		*12,1%*	*12,7%*	*12,4%*	*11,5%*	*12,6%*
D&A		*1.201*	*1.335*	*1.330*	*1.218*	*958*
D&A as a (%) of Sales		*6,5%*	*6,8%*	*6,6%*	*5,8%*	*4,1%*
EBIT		**1.025**	**1.135**	**1.160**	**1.189**	**2.015**
EBIT Margin (%)		*5,6%*	*5,8%*	*5,8%*	*5,7%*	*8,6%*
NWC	*1.523*	*1.757*	*1.258*	*1.220*	*1.372*	*1.534*
NWC as a (%) of Sales	*9,5%*	*9,6%*	*6,5%*	*6,1%*	*6,6%*	*6,5%*
CAPEX		*969*	*1.036*	*1.016*	*1.126*	*1.274*
CAPEX as a (%) of Sales		*5,3%*	*5,3%*	*5,1%*	*5,4%*	*5,4%*
ROCE (%)		*9,0%*	*9,3%*	*10,6%*	*11,3%*	*17,9%*

Sales CAGR 5-years (%)	8,0%
Sales CAGR 5-years before Consolidation (%)	6,5%

Tire						
Amounts in MEUR						
Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Sales	**7.249**	**8.705**	**9.648**	**9.568**	**9.768**	**10.388**
Sales YoY Growth (%)		*20,1%*	*10,8%*	*-0,8%*	*2,1%*	*6,3%*
Expenses		7.178	7.643	7.430	7.487	7.784
EBITDA		**1.527**	**2.005**	**2.138**	**2.281**	**2.604**
EBITDA Margin (%)		*17,5%*	*20,8%*	*22,3%*	*23,4%*	*25,1%*
D&A		*331*	*338*	*385*	*452*	*519*
D&A as a (%) of Sales		*3,8%*	*3,5%*	*4,0%*	*4,6%*	*5,0%*
EBIT		**1.196**	**1.667**	**1.753**	**1.829**	**2.085**
EBIT Margin (%)		*13,7%*	*17,3%*	*18,3%*	*18,7%*	*20,1%*
NWC	*1.568*	*1.932*	*1.880*	*1.842*	*2.065*	*2.214*
NWC as a (%) of Sales	*21,6%*	*22,2%*	*19,5%*	*19,3%*	*21,1%*	*21,3%*
CAPEX		*637*	*830*	*799*	*724*	*658*
CAPEX as a (%) of Sales		*7,3%*	*8,6%*	*8,4%*	*7,4%*	*6,3%*
ROCE (%)		33,6%	37,6%	37,7%	37,1%	39,2%

Sales CAGR 5-years (%)	7,5%

ContiTech						
Amounts in MEUR						
Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Sales	**3.095**	**3.447**	**3.584**	**3.749**	**3.832**	**5.279**
Sales YoY Growth (%)		*11,4%*	*4,0%*	*4,6%*	*2,2%*	*37,8%*
Expenses		2.932	3.025	3.173	3.280	4.702
EBITDA		**515**	**559**	**576**	**552**	**577**
EBITDA Margin (%)		*14,9%*	*15,6%*	*15,4%*	*14,4%*	*10,9%*
D&A		*98*	*105*	*114*	*119*	*406*
D&A as a (%) of Sales		*2,8%*	*2,9%*	*3,0%*	*3,1%*	*7,7%*
EBIT		**417**	**454**	**462**	**433**	**171**
EBIT Margin (%)		*12,1%*	*12,7%*	*12,3%*	*11,3%*	*3,2%*
NWC	*523*	*555*	*541*	*547*	*608*	*934*
NWC as a (%) of Sales	*16,9%*	*16,1%*	*15,1%*	*14,6%*	*15,9%*	*17,7%*
CAPEX		*111*	*151*	*166*	*191*	*245*
CAPEX as a (%) of Sales		*3,2%*	*4,2%*	*4,4%*	*5,0%*	*4,6%*
ROCE (%)		39,1%	37,5%	36,5%	30,8%	5,3%

Sales CAGR 5-years (%)	11,3%
Sales CAGR 5-years (%) before Consolidation	5,2%

II. Appendix: Current Trading by Division

Automotive							
Amounts in MEUR							
Year	**Mar-2015**	**Jun-2015**	**Sep-2015**	**Dec-2015**	**Mar-2016**	**Jun-2016**	**Sep-2016**
Sales	**5.910**	**5.993**	**5.659**	**6.004**	**6.008**	**6.155**	**5.954**
Sales YoY Growth (%)	*1,7%*	*2,7%*	*5,2%*				
Expenses	5.183	5.216	4.972	5.223	5.309	5.389	5.659
EBITDA	**727**	**777**	**687**	**781**	**699**	**766**	**295**
EBITDA Margin (%)	12,3%	*13,0%*	*12,1%*	*13,0%*	*11,6%*	*12,4%*	*5,0%*
D&A	*225*	*233*	*247*	*255*	*256*	*267*	*262*
D&A as a (%) of Sales	*3,8%*	*3,9%*	*4,4%*	*4,2%*	*4,3%*	*4,3%*	*4,4%*
EBIT	**503**	**544**	**442**	**527**	**440**	**502**	**24**
EBIT Margin (%)	8,5%	*9,1%*	*7,8%*	*8,8%*	*7,3%*	*8,2%*	*0,4%*
CAPEX	*205*	*268*	*302*	*501*	*202*	*295*	*390*
CAPEX as a (%) of Sales	*3,5%*	*4,5%*	*5,3%*	*8,3%*	*3,4%*	*4,8%*	*6,6%*
Quarter Sales as a (%) of Total Annual Sales	25,1%	25,4%	24,0%	25,5%			
Average Growth Rate	3,2%						

Tire							
Amounts in MEUR							
Year	**Mar-2015**	**Jun-2015**	**Sep-2015**	**Dec-2015**	**Mar-2016**	**Jun-2016**	**Sep-2016**
Sales	**2.415**	**2.639**	**2.650**	**2.685**	**2.508**	**2.686**	**2.704**
Sales YoY Growth (%)	*3,9%*	*1,8%*	*2,0%*				
Expenses	1.835	1.904	1.982	2.063	1.850	1.913	2.046
EBITDA	**580**	**735**	**668**	**622**	**658**	**773**	**658**
EBITDA Margin (%)	24,0%	*27,9%*	*25,2%*	*23,2%*	*26,2%*	*28,8%*	*24,3%*
D&A	126	131	126	137	128	128	*136*
D&A as a (%) of Sales	*5,2%*	*5,0%*	*4,8%*	*5,1%*	*5,1%*	*4,8%*	*5,0%*
EBIT	**454**	**604**	**537**	**491**	**530**	**645**	**522**
EBIT Margin (%)	18,8%	*22,9%*	*20,3%*	*18,3%*	*21,1%*	*24,0%*	*19,3%*
CAPEX	*101*	*132*	*139*	*286*	*147*	*180*	*120*
CAPEX as a (%) of Sales	*4,2%*	*5,0%*	*5,2%*	*10,7%*	*5,9%*	*6,7%*	*4,4%*
Quarter Sales as a (%) of Total Annual Sales	23,2%	25,4%	25,5%	25,8%			
Average Growth Rate	2,5%						

ContiTech							
Amounts in MEUR							
Year	**Mar-2015**	**Jun-2015**	**Sep-2015**	**Dec-2015**	**Mar-2016**	**Jun-2016**	**Sep-2016**
Sales	**1.245**	**1.397**	**1.310**	**1.328**	**1.335**	**1.350**	**1.326**
Sales YoY Growth (%)	*7,2%*	*-3,4%*	*1,2%*				
Expenses	1.116	1.228	1.150	1.209	1.159	1.153	1.162
EBITDA	**129**	**169**	**160**	**119**	**176**	**197**	**164**
EBITDA Margin (%)	10,4%	*12,1%*	*12,2%*	*9,0%*	*13,2%*	*14,6%*	*12,4%*
D&A	74	87	79	167	74	74	*72*
D&A as a (%) of Sales	*5,9%*	*6,2%*	*6,0%*	*12,6%*	*5,5%*	*5,5%*	*5,4%*
EBIT	**55**	**82**	**81**	**-47**	**99**	**127**	**88**
EBIT Margin (%)	4,4%	*5,9%*	*6,2%*	*-3,5%*	*7,4%*	*9,4%*	*6,6%*
CAPEX	*51*	*59*	*54*	*81*	*49*	*46*	*48*
CAPEX as a (%) of Sales	*4,1%*	*4,2%*	*4,1%*	*6,1%*	*3,7%*	*3,4%*	*3,6%*
Quarter Sales as a (%) of Total Annual Sales	23,6%	26,5%	24,8%	25,2%			
Average Growth Rate	1,5%						

III. Appendix: FCFF Forecasts – Automotive Division

Automotive												
Amounts in MEUR	Historical						Forecast					
Year	2010	2011	2012	2013	2014	2015	2016F	2017E	2018E	2019E	2020E	2021E
Sales	**16.024**	**18.354**	**19.505**	**20.014**	**20.905**	**23.565**	**24.340**	**25.253**	**26.271**	**27.285**	**28.207**	**29.193**
Expenses		16.128	17.035	17.524	18.498	20.592	21.508	22.399	23.381	24.420	25.386	26.274
EBITDA		**2.226**	**2.470**	**2.490**	**2.407**	**2.973**	**2.832**	**2.854**	**2.890**	**2.865**	**2.821**	**2.919**
EBITDA Margin (%)		*12,1%*	*12,7%*	*12,4%*	*11,5%*	*12,6%*	*11,6%*	*11,3%*	*11,0%*	*10,5%*	*10,0%*	*10,0%*
D&A		1.201	1.335	1.330	1.218	958	990	1.027	1.314	1.364	1.410	1.460
EBIT		**1.025**	**1.135**	**1.160**	**1.189**	**2.015**	**1.842**	**1.827**	**1.576**	**1.501**	**1.410**	**1.460**
EBIT Margin (%)		5,6%	5,8%	5,8%	5,7%	8,6%	7,6%	7,2%	6,0%	5,5%	5,0%	5,0%
NOPLAT		**730**	**840**	**948**	**949**	**1.448**	**1.323**	**1.312**	**1.132**	**1.078**	**1.013**	**1.049**
D&A		1.201	1.335	1.330	1.218	958	990	1.027	1.314	1.364	1.410	1.460
D&A as a (%) of Sales		*6,5%*	*6,8%*	*6,6%*	*5,8%*	*4,1%*	*4,1%*	*4,1%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*
ΔNWC		234	-499	-38	152	162	170	64	71	71	65	69
CAPEX		969	1.036	1.016	1.126	1.274	1.288	1.336	1.576	1.637	1.692	1.752
CAPEX as a (%) of Sales		*5,3%*	*5,3%*	*5,1%*	*5,4%*	*5,4%*	*5,3%*	*5,3%*	*6,0%*	*6,0%*	*6,0%*	*6,0%*
FCFF		**728**	**1.638**	**1.300**	**889**	**970**	**855**	**939**	**798**	**734**	**667**	**688**

NWC	**1.523**	**1.757**	**1.258**	**1.220**	**1.372**	**1.534**	**1.704**	**1.768**	**1.839**	**1.910**	**1.974**	**2.043**
NWC as a (%) of Sales	*9,5%*	*9,6%*	*6,5%*	*6,1%*	*6,6%*	*6,5%*	*7,0%*	*7,0%*	*7,0%*	*7,0%*	*7,0%*	*7,0%*

IV. Appendix: FCFF Forecasts – Tire Division

Tire												
Amounts in MEUR	Historical						Forecast					
Year	2010	2011	2012	2013	2014	2015	2016F	2017E	2018E	2019E	2020E	2021E
Sales	**7.249**	**8.705**	**9.648**	**9.568**	**9.768**	**10.388**	**10.667**	**10.966**	**11.350**	**11.740**	**12.049**	**12.365**
Expenses		7.178	7.643	7.430	7.487	7.784	7.869	8.308	8.827	9.179	9.420	9.668
EBITDA		**1.527**	**2.005**	**2.138**	**2.281**	**2.604**	**2.799**	**2.658**	**2.524**	**2.561**	**2.629**	**2.698**
EBITDA Margin (%)		*17,5%*	*20,8%*	*22,3%*	*23,4%*	*25,1%*	*26,2%*	*24,2%*	*22,2%*	*21,8%*	*21,8%*	*21,8%*
D&A		331	338	385	452	519	533	548	567	587	602	618
EBIT		**1.196**	**1.667**	**1.753**	**1.829**	**2.085**	**2.266**	**2.110**	**1.957**	**1.975**	**2.027**	**2.080**
EBIT Margin (%)		13,7%	17,3%	18,3%	18,7%	20,1%	21,2%	19,2%	17,2%	16,8%	16,8%	16,8%
NOPLAT		**852**	**1.234**	**1.432**	**1.460**	**1.498**	**1.628**	**1.516**	**1.406**	**1.419**	**1.456**	**1.494**
D&A		331	338	385	452	519	533	548	567	587	602	618
D&A as a (%) of Sales		*3,8%*	*3,5%*	*4,0%*	*4,6%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*
ΔNWC		365	-52	-38	223	149	26	63	81	82	65	66
CAPEX		637	830	799	724	658	676	695	719	744	763	783
CAPEX as a (%) of Sales		*7,3%*	*8,6%*	*8,4%*	*7,4%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*	*6,3%*
FCFF		**181**	**794**	**1.056**	**965**	**1.210**	**1.459**	**1.306**	**1.173**	**1.180**	**1.230**	**1.262**
NWC	**1.568**	**1.932**	**1.880**	**1.842**	**2.065**	**2.214**	**2.240**	**2.303**	**2.384**	**2.465**	**2.530**	**2.597**
NWC as a (%) of Sales	*21,6%*	*22,2%*	*19,5%*	*19,3%*	*21,1%*	*21,3%*	*21,0%*	*21,0%*	*21,0%*	*21,0%*	*21,0%*	*21,0%*

V. Appendix: FCFF Forecasts – ContiTech Division

ContiTech												
Amounts in MEUR	Historical						Forecast					
Year	2010	2011	2012	2013	2014	2015	2016F	2017E	2018E	2019E	2020E	2021E
Sales	**3.095**	**3.447**	**3.584**	**3.749**	**3.832**	**5.279**	**5.372**	**5.525**	**5.664**	**5.809**	**5.958**	**6.110**
Expenses		2.932	3.025	3.173	3.280	4.702	4.664	4.699	4.818	4.941	5.068	5.197
EBITDA		**515**	**559**	**576**	**552**	**577**	**708**	**825**	**846**	**868**	**890**	**913**
EBITDA Margin (%)		*14,9%*	*15,6%*	*15,4%*	*14,4%*	*10,9%*	*13,2%*	*14,9%*	*14,9%*	*14,9%*	*14,9%*	*14,9%*
D&A		98	105	114	119	406	294	220	172	177	181	186
EBIT		**417**	**454**	**462**	**433**	**171**	**414**	**605**	**674**	**691**	**709**	**727**
EBIT Margin (%)		12,1%	12,7%	12,3%	11,3%	3,2%	*7,7%*	11,0%	11,9%	11,9%	11,9%	11,9%
NOPLAT		**297**	**336**	**377**	**346**	**123**	**297**	**435**	**484**	**497**	**509**	**522**
D&A		98	105	114	119	406	294	220	172	177	181	186
D&A as a (%) of Sales		*2,8%*	*2,9%*	*3,0%*	*3,1%*	*7,7%*	*5,5%*	*4,0%*	*3,0%*	*3,0%*	*3,0%*	*3,0%*
ΔNWC		32	-14	6	62	326	-75	24	22	23	24	24
CAPEX		111	151	166	191	245	238	245	251	257	264	271
CAPEX as a (%) of Sales		*3,2%*	*4,2%*	*4,4%*	*5,0%*	*4,6%*	*4,4%*	*4,4%*	*4,4%*	*4,4%*	*4,4%*	*4,4%*
FCFF		**252**	**304**	**320**	**212**	**-42**	**428**	**386**	**383**	**393**	**403**	**413**
NWC	**523**	**555**	**541**	**547**	**608**	**934**	**860**	**884**	**906**	**929**	**953**	**978**
NWC as a (%) of Sales	*16,9%*	*16,1%*	*15,1%*	*14,6%*	*15,9%*	*17,7%*	*16,0%*	*16,0%*	*16,0%*	*16,0%*	*16,0%*	*16,0%*

VI. Appendix: Automotive – Sales Growth Rate

Automotive	Weights								
Sales Driver	**2016E**	**2017E-2021E**	**Growth Rate Used**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FY16 Performance	90,0%		Weighted FY16 Interim Growth Rates	**3,2%**					
Economic Cycle	5,0%	40,0%	Weighted Real GDP Growth Rate (IMF)	2,7%	2,8%	2,8%	2,8%	2,8%	2,8%
			Weighted Inflation Rate (IMF)	1,6%	2,3%	2,5%	2,3%	2,3%	2,3%
			Nominal GDP Growth Rate	**4,3%**	**5,1%**	**5,3%**	**5,1%**	**5,1%**	**5,1%**
Global Vehicle Sales Growth Rate	5,0%	60,0%	Weighted IHS Automotive Estimates	**4,6%**	**2,8%**	**3,2%**	**3,0%**	**2,2%**	**2,4%**
			Final Growth Rate	**3,3%**	**3,8%**	**4,0%**	**3,9%**	**3,4%**	**3,5%**

VII. Appendix: Tire – Sales Growth Rate

Tire	Weights								
Sales Driver	**2016E**	**2017E-2021E**	**Growth Rate Used**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Current Performance FY16	70,0%		Weighted FY16 Interim Growth Rates	**2,5%**					
Economic Cycle	10,0%	20,0%	Weighted Real GDP Growth Rate (IMF)	2,1%	2,2%	2,2%	2,2%	2,2%	2,2%
			Weighted Inflation Rate (IMF)	1,6%	2,1%	2,3%	2,2%	2,2%	2,3%
			Nominal GDP Growth Rate	**3,6%**	**4,3%**	**4,5%**	**4,5%**	**4,5%**	**4,4%**
Replacement Tires Growth Rate	10,0%	10,0%	Weighted CAGR Replacement Tires (Continental Estimates)	**2,2%**	**2,2%**	**2,2%**	**2,2%**	**2,2%**	**2,2%**
Global Vehicle Sales Growth Rate	10,0%	70,0%	Weighted IHS Automotive Estimates	**3,4%**	**2,5%**	**3,4%**	**3,3%**	**2,2%**	**2,2%**
			Final Growth Rate	**2,7%**	**2,8%**	**3,5%**	**3,4%**	**2,6%**	**2,6%**

VIII. Appendix: ContiTech – Sales Growth Rate

ContiTech	Weights								
Sales Driver	**2016E**	**2017E-2021E**	**Growth Rate Used**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Current Performance FY16	90,0%		Weighted FY16 Interim Growth Rates	1,5%					
Economic Situation	10,0%	100,0%	Weighted Real GDP Growth Rate (IMF)	2,4%	2,5%	2,5%	2,5%	2,5%	2,5%
			Weighted Inflation Rate (IMF)	1,9%	2,4%	2,0%	2,0%	2,0%	2,1%
			Nominal GDP Growth Rate	**4,2%**	**4,8%**	**4,5%**	**4,6%**	**4,6%**	**4,5%**
Discount Factor	Subtractive Function		Own Estimate	**0,0%**	**2,0%**	**2,0%**	**2,0%**	**2,0%**	**2,0%**
			Final Growth Rate	**1,8%**	**2,8%**	**2,5%**	**2,6%**	**2,6%**	**2,5%**

IX. Appendix: Income Statement

Amounts in MEUR	Historical					Forecast					
Year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Sales	**30.506**	**32.737**	**33.331**	**34.505**	**39.232**	**40.380**	**41.744**	**43.286**	**44.835**	**46.215**	**47.668**
Attributable Expenses	26.238	27.703	28.127	29.265	33.078	34.041	35.407	37.026	38.540	39.875	41.138
Expenses not-attributable to any Division ("Other/Consolidation")	40	67	109	106	153	124	128	133	138	142	146
Expenses not-attributable to any Division as a (%) of Sales	*0,1%*	*0,2%*	*0,3%*	*0,3%*	*0,4%*	*0,3%*	*0,3%*	*0,3%*	*0,3%*	*0,3%*	*0,3%*
EBITDA	**4.228**	**4.967**	**5.095**	**5.134**	**6.001**	**6.215**	**6.209**	**6.127**	**6.157**	**6.198**	**6.384**
EBITDA Margin as a (%) of Sales	*13,9%*	*15,2%*	*15,3%*	*14,9%*	*15,3%*	*15,4%*	*14,9%*	*14,2%*	*13,7%*	*13,4%*	*13,4%*
D&A	1.631	1.781	1.831	1.789	1.885	1.817	1.794	2.053	2.127	2.194	2.263
D&A as a (%) of Sales	*5,3%*	*5,4%*	*5,5%*	*5,2%*	*4,8%*	*4,5%*	*4,3%*	*4,7%*	*4,7%*	*4,7%*	*4,7%*
EBIT	**2.597**	**3.186**	**3.264**	**3.345**	**4.116**	**4.398**	**4.414**	**4.074**	**4.029**	**4.004**	**4.120**
EBIT Margin as a (%) of Sales	*8,5%*	*9,7%*	*9,8%*	*9,7%*	*10,5%*	*10,9%*	*10,6%*	*9,4%*	*9,0%*	*8,7%*	*8,6%*
Interest Income	29	28	29	95	95	95	95	95	95	95	95
Interest Expenses	765	527	833	360	341	341	341	341	341	341	341
EBT	**1.861**	**2.687**	**2.459**	**3.080**	**3.870**	**4.152**	**4.169**	**3.829**	**3.784**	**3.759**	**3.875**
Income Tax Expense	536	698	450	622	1.090	1.169	1.174	1.078	1.066	1.059	1.091
Effective Tax Rate	28,8%	26,0%	18,3%	20,2%	28,2%	28,2%	28,2%	28,2%	28,2%	28,2%	28,2%
Net Income After Taxes	**1.325**	**1.989**	**2.009**	**2.458**	**2.780**	**2.983**	**2.995**	**2.750**	**2.718**	**2.700**	**2.783**
Minority Interest	83	84	87	82	52	52	52	52	52	52	52
Net Income	**1.242**	**1.905**	**1.923**	**2.375**	**2.727**	**2.931**	**2.943**	**2.698**	**2.666**	**2.648**	**2.731**
Return on Sales (%)	*4,1%*	*5,8%*	*5,8%*	*6,9%*	*7,0%*	*7,3%*	*7,0%*	*6,2%*	*5,9%*	*5,7%*	*5,7%*
DPS	1,5	2,25	2,5	3,25	3,75	4,13	4,14	3,80	3,75	3,73	3,85
Gross Dividends	300	450	500	650	750	825	829	760	751	746	769
Payout Ratio	24,2%	23,6%	26,0%	27,4%	27,5%	28,2%	28,2%	28,2%	28,2%	28,2%	28,2%
Retention Rate	75,8%	76,4%	74,0%	72,6%	72,5%	71,8%	71,8%	71,8%	71,8%	71,8%	71,8%
Shares Outstanding					200						

X. Appendix: Cash Flow Statement

Amounts in MEUR	Historical					Forecast					
Year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
EBIT - SOP						**4.522**	**4.542**	**4.207**	**4.167**	**4.146**	**4.267**
NOPLAT						**3.248**	**3.263**	**3.022**	**2.993**	**2.979**	**3.065**
D&A						1.817	1.794	2.053	2.127	2.194	2.263
ΔNWC						122	151	174	176	153	160
CAPEX						2.202	2.276	2.546	2.638	2.719	2.805
FCFF						**2.742**	**2.631**	**2.355**	**2.307**	**2.299**	**2.363**
Unlevered Taxes						1.273	1.279	1.185	1.173	1.168	1.202
Taxes Paid						1.169	1.174	1.078	1.066	1.059	1.091
Expenses not-attributable to any Division ("Other Segment")						124	128	133	138	142	146
Additional Adjustments to NWC						93					
Adjustments						**-112**	**-23**	**-26**	**-30**	**-33**	**-36**
Interest Income						95	95	95	95	95	95
Interest Expenses						341	341	341	341	341	341
Minority Interest						52	52	52	52	52	52
Dividends Paid						825	829	760	751	746	769
Financing Cash Flow						**-1.123**	**-1.126**	**-1.058**	**-1.048**	**-1.043**	**-1.067**
Cash Flow to the Company						**1.506**	**1.482**	**1.271**	**1.229**	**1.223**	**1.260**
Cash at the Beginning of the Period						1.622	3.128	4.610	5.881	7.109	8.332
Cash at the End of the Period						**3.128**	**4.610**	**5.881**	**7.109**	**8.332**	**9.593**

XI. Appendix: Peer Evaluation – Selection Criteria

Score	Industry and Product Fit	Geographical Fit	D/E Ratio	EBITDA Margin (%)	ROCE	Sales 5-Years CAGR (FY10-FY15)
3 - High	See subsequent Appendix.	Operates worldwide with a focus on Europe, specifically Germany.	Automotive: 10%-20% Tire: 10%-20% ContiTech: 10%-20%	Automotive: 8%-16% Tire: 20%-25% ContiTech: 10%-20%	Automotive: 15%-20% Tire: >30% ContiTech: >25%	Automotive: 5%-10% Tire: 5%-10% ContiTech: 5%-10%
2 - Medium	See subsequent Appendix.	Operates worldwide with some exposure to the European market.	Automotive: 5%-10% and 20%-25% Tire: 5%-10% and 20%-25% ContiTech: 5%-10% and 20%-25%	Automotive: 4%-8% and 16%-20% Tire: 15-20% and >25% ContiTech: 5%-10% and 20%-25%	Automotive: 10%-15% and 20%-25% Tire: 20%-30% ContiTech: 15%-25%	Automotive: 2,5%-5% and 10%-12,5% Tire: 2,5%-5% and 10%-12,5% ContiTech: 2,5%-5% and 10%-12,5%
1 - Low	See subsequent Appendix.	Regional focus; other geographical emphasis than Europe.	Automotive: <5% and >25% Tire: <5% and >25% ContiTech: <5% and >25%	Automotive: <4% and >20% Tire: <15% ContiTech: <5% and >25%	Automotive: <10%% and >25% Tire: <20% ContiTech: <15%	Automotive: <2,5% and >12,5% Tire: <2,5% and >12,5% ContiTech: <2,5% and >12,5%
Weight	**2**	**2**	**1**	**1**	**2**	**2**

XII. Appendix: Peer Evaluation – Industry and Product Fit

Score	Automotive	Tire	ContiTech
3 - High	1. Portfolio comprises components tackling the Chassis & Safety segment, namely HBS, Sensorics, Vehicle Dynamics as well as ADAS. 2. Sale of systems dealing with the effective management of powertrains, specifically Engine Systems, Fuel & Exhaust Management as well as all kind of sensors. 3. Offer of Interior components, more specifically systems dealing with infotaimment, connectivity as well as driver support systems (in the most extreme case autonomous driving).	Passanger and Light Truck Tires, Commercial Vehicle Tires as well as Two-Wheel Tires.	Elastomer products (plastics) for various industries (mining, gas, automotive, etc.); focus has to be on the automotive industry as the major customer.
2 - Medium	Competitor is active in different segments of the automotive industry (e.g. pistons) and is just partly exposed to the above-mentioned segments.	Passenger Car and Two-Wheel Tires.	Diversified portfolio with a focus on elastomer products; focus does not have to be on the automotive industry.
1 - Low	Low/no exposure to the above-mentioned components.	Low/no exposure to the Tire market; just focused on special niches (e.g. tractor tyres).	Low/no exposure to elastomer products; mainly active in other chemicals.

XIII. Appendix: Peer Evaluation – Automotive

Company	Industry and Product Fit	Geographical Fit	D/E Ratio	EBITDA Margin (%)	ROCE	Sales 5-Years CAGR (FY10-FY15)	Sum	
Weight	2	2	2	1	1	2	2	
Aisin Seiki Co Ltd	3	3	3	2	3	1	3	25
Albioma SA	1	1	1	1	1	1	2	12
Artea SA	1	1	1	1	1	1	1	10
Autoliv Inc	2	3	3	3	3	3	3	28
Bulten AB	1	2	2	3	3	2	1	18
Cie Automotive SA	2	3	3	1	3	2	3	24
Delfingen Industry SA	2	2	2	1	3	2	3	22
Delphi Automotive PLC	2	2	2	2	2	2	1	18
Denso Corp	3	2	2	3	3	1	3	24
Dometic Group AB (publ)	1	2	1	1	1	1	1	12
ElringKlinger AG	3	3	1	1	3	1	1	20
Faurecia SA	2	3	2	1	2	2	3	23
Freni Brembo SpA	2	3	2	3	2	1	1	19
GKN PLC	1	2	2	2	3	2	3	21
Grammer AG	1	3	2	1	2	1	3	19
Hella KGaA Hueck & Co	2	3	2	1	3	2	3	24
Hyundai Mobis Co Ltd	2	2	3	3	3	2	2	22
Landi Renzo SpA	2	3	2	1	2	1	1	17
Lear Corp	2	2	2	2	3	2	3	23
Leoni AG	2	3	2	1	2	1	3	21
Lingotes Especiales SA	1	2	2	2	3	2	2	19
Magna International Inc	3	3	3	3	3	2	3	28
MGI Coutier SA	1	2	2	3	3	2	1	18
Pankl Racing Systems AG	1	3	2	1	3	1	1	16
Paragon AG	1	1	2	1	3	2	3	18
Progress Werk Oberkirch AG	2	3	3	1	3	1	3	22
Rheinmetall AG	2	3	3	1	3	2	2	22
Saf Holland SA	1	2	1	1	3	2	2	18
Schaeffler AG	3	3	3	1	3	2	2	24
SHW AG	2	1	1	2	3	2	3	21
Sogefi SpA	2	2	2	1	3	1	2	18
Valeo SA	3	3	3	3	3	1	3	26

Green = company is added to the final peer group, because it scored >=20 points.

XIV. Appendix: Peer Evaluation – Tire

Company	Industry and Product Fit	Geographical Fit	D/E Ratio	EBITDA Margin (%)	ROCE	Sales 5-Years CAGR (FY10-FY15)	Sum	
Weight	2	2	1	1	2	2		
Aeolus Tyre Co Ltd	3	1	1	1	1	1		14
Apollo Tyres Ltd	2	2	3	2	2	3		23
Balkrishna Industries Ltd	1	1	3	2	1	3		17
Bridgestone Corp	3	2	3	2	1	3		23
Cheng Shin Rubber Ind. Co Ltd	2	2	2	2	1	2		18
Compagnie Generale des Etablissements Michelin SCA	3	3	3	2	1	2		23
Cooper Tire & Rubber Co	2	1	3	2	2	1		17
Dongah Tire Ind Co Ltd	2	1	1	1	1	1		12
Gajah Tunggal Tbk PT	2	2	1	1	1	3		18
Goodyear Tire & Rubber Co	3	3	1	1	1	1		18
Giti Zhou Tyre Co Ltd	2	2	1	1	1	1		14
Hankook Tire Worldwide Co Ltd	3	2	1	2	1	1		17
JK Tyre & Industries Ltd	3	1	1	2	2	2		19
Kumho Tire Co Inc	3	2	1	1	1	1		16
Nexen Tire Corp	3	2	1	3	1	3		22
Nokian Tyres plc	3	2	2	2	2	3		24
Toyo Tire & Rubber Co Ltd	2	2	1	3	1	3		20
Yokohama Rubber Co Ltd	2	2	1	1	1	3		18

Green = company is added to the final peer group, because it scored >=20 points.

XV. Appendix: Peer Evaluation – ContiTech

Company	Industry and Product Fit	Geographical Fit	D/E Ratio	EBITDA Margin (%)	ROCE	Sales 5-Years CAGR (FY10-FY15)	Sum
Weight	2	2	1	1	2	2	
Ashimu SA	2	3	1	3	1	3	22
Asahi Kasei Corp	1	1	1	3	1	2	14
Boubyan Petrochemical Co KSCP	1	1	1	2	1	3	15
Chemical Company of Malaysia Bhd	1	1	1	3	1	1	12
Clariant AG	2	3	1	3	1	1	18
Compagnie Plastic Omnium SA	3	3	2	3	2	3	25
Dow Chemical Co	2	2	1	3	1	1	16
Fujimi Inc	1	2	1	3	1	1	14
Fuso Chemical Co Ltd	1	1	1	1	2	2	14
Hanil Chemical Ind Co Ltd	1	1	3	1	1	1	12
Hodogaya Chemical Co Ltd	1	1	1	2	1	1	11
JSR Corp	1	2	3	3	1	2	18
Kemrock Industries and Exports Ltd	2	1	1	1	1	2	14
Koninklijke DSM NV	1	2	1	3	1	1	14
Lanxess AG	3	3	1	3	1	1	20
Linde AG	1	3	1	2	1	3	19
Maruwa Co Ltd	1	1	1	3	1	3	16
Matsumoto Yushi Seiyaku Co Ltd	1	1	1	3	1	2	14
MEC Co Ltd	1	1	1	1	2	3	16
Methanol Chemicals Co SJSC	1	1	1	3	1	2	14
Mitsubishi Chemical Holdings Corp	2	1	1	3	1	2	16
Mitsui Chemicals Inc	2	1	1	2	1	1	13
Olichim SA	3	3	1	1	1	1	18
Polytec Holding AG	3	2	1	2	2	1	19
Quang Binh Import and Export JSC	1	1	1	1	1	3	14
Sunyoung Chemical Co Ltd	1	1	1	1	3	1	14
Shandong Sinobioway Biomedicine Co Ltd	2	1	1	1	1	1	12
Shanghai Kangda New Materials Co Ltd	3	1	1	2	2	1	17
Shin-Etsu Chemical Co Ltd	2	2	1	2	1	2	17
Solvay SA	2	2	1	3	1	1	16
Sudarshan Chemical Industries Ltd	1	1	3	3	1	1	14
Sumco Corp	1	1	1	2	1	1	11
Sumitomo Riko Co Ltd	3	2	1	2	1	3	21
Teraplast SA	2	1	1	3	1	3	18
Toda Kogyo Corp	1	2	1	3	1	1	14
Tomoegawa Co Ltd	3	2	1	2	1	1	17
Tonsy Industries Inc	2	2	1	3	1	3	20
Trelleborg AB	3	3	2	3	1	1	21

Green = company is added to the final peer group, because it scored >=20 points.

XVI. Appendix: Industry Beta – Automotive

Company	Country	R^2	Beta Levered	Beta Adjusted (Blume)	D/E Ratio	Tax Rate	Beta Unlevered
Aisin Seiki Co Ltd	Japan	27,47%	1,36	1,24	24,69%	33,06%	1,06
Autoliv Inc	Sweden	35,23%	1,16	1,11	17,21%	22,00%	0,97
Cie Automotive SA	Spain	16,38%	0,74	0,83	43,94%	28,00%	0,63
Delfingen Industry SA	France	6,90%	0,86	0,90	97,25%	33,33%	0,55
Denso Corp	Japan	28,03%	1,34	1,22	13,12%	33,06%	1,13
ElringKlinger AG	Germany	16,54%	1,16	1,11	54,49%	29,65%	0,80
Faurecia SA	France	35,10%	2,04	1,69	38,95%	33,33%	1,34
GKN PLC	United Kingdom	27,50%	1,00	1,00	21,35%	20,00%	0,85
Hella KGaA Hueck & Co	Germany	16,37%	0,97	0,98	34,42%	29,65%	0,79
Hyundai Mobis Co Ltd	South Korea	0,55%	0,13	0,42	11,78%	24,20%	0,38
Lear Corp	United States	34,12%	1,23	1,15	23,49%	40,00%	1,01
Leoni AG	Germany	13,37%	1,16	1,11	54,48%	29,65%	0,80
Magna International Inc	Canada	21,75%	1,05	1,04	15,72%	26,50%	0,93
Progress Werk Oberkirch AG	Germany	20,45%	1,11	1,07	125,76%	29,65%	0,57
Rheinmetall AG	Germany	18,50%	1,11	1,07	30,24%	29,65%	0,88
Schaeffler AG	Germany	4,52%	0,59	0,72	269,67%	29,65%	0,25
SHW AG	Germany	19,74%	1,58	1,39	7,96%	29,65%	1,31
Valeo SA	France	31,42%	1,51	1,34	14,22%	33,33%	1,22
Average			**1,12**	**1,08**			**0,86**
Median			**1,13**	**1,09**			**0,87**
Average (excluding statistically non-significant data)			**1,23**	**1,16**			**0,95**
Median (excluding statistically non-significant data)			**1,16**	**1,11**			**0,95**

Red = statistically non-significant data, because R^2 <10%.

XVII. Appendix: Industry Beta – Tire

Company	Country	R^2	Beta Levered	Beta Adjusted (Blume)	D/E Ratio	Tax Rate	Beta Unlevered
Apollo Tyres Ltd	India	5,57%	0,90	0,93	12,48%	34,61%	0,86
Bridgestone Corp	Japan	19,62%	0,99	0,99	12,24%	33,06%	0,92
Compagnie Generale des Etablissements Michelin SCA	France	29,86%	1,11	1,07	15,90%	33,33%	0,97
Nexen Tire Corp	South Korea	3,60%	-0,49	0,01	70,95%	24,20%	0,01
Nokian Tyres plc	Finland	25,55%	1,22	1,15	5,24%	20,00%	1,10
Toyo Tire & Rubber Co Ltd	Japan	5,99%	0,98	0,98	74,45%	33,06%	0,66
Average			**0,76**	**0,84**			**0,75**
Median			**0,99**	**0,99**			**0,89**
Average (excluding statistically non-significant data)			**1,11**	**1,07**			**1,00**
Median (excluding statistically non-significant data)			**1,11**	**1,07**			**0,97**

Red = statistically non-significant data, because R^2 <10%.

XVIII. Appendix: Industry Beta – ContiTech

ContiTech							
Company	**Country**	**R^2**	**Beta Levered**	**Beta Adjusted (Blume)**	**D/E Ratio**	**Tax Rate**	**Beta Unlevered**
Arkema SA	France	31,64%	1,46	1,31	33,61%	33,33%	1,07
Compagnie Plastic Omnium SA	France	32,54%	1,92	1,62	22,36%	33,33%	1,41
Lanxess AG	Germany	26,39%	1,32	1,21	32,42%	29,65%	0,99
Sumitomo Riko Co Ltd	Japan	8,21%	0,70	0,80	79,20%	33,06%	0,52
Toray Industries Inc	Japan	9,71%	0,64	0,76	40,60%	33,06%	0,60
Trelleborg AB	Sweden	17,36%	0,86	0,91	24,06%	22,00%	0,77
Average			**1,15**	**1,10**			**0,89**
Median			**1,09**	**1,06**			**0,88**
Average (excluding statistically non-significant data)			**1,39**	**1,26**			**1,06**
Median (excluding statistically non-significant data)			**1,39**	**1,26**			**1,03**

Red = statistically non-significant data, because R^2 <10%.

XIX. Appendix: Spread Table (Source: Damodaran)

If interest coverage ratio is		Then	
>	≤	Rating is	Spread is
-100000	0,199999	D2/D	20,00%
0,2	0,649999	C2/C	16,00%
0,65	0,799999	Ca2/CC	12,00%
0,8	1,249999	Caa/CCC	9,00%
1,25	1,499999	B3/B-	7,50%
1,5	1,749999	B2/B	6,50%
1,75	1,999999	B1/B+	5,50%
2	2,2499999	Ba2/BB	4,25%
2,25	2,49999	Ba1/BB+	3,25%
2,5	2,999999	Baa2/BBB	2,25%
3	4,249999	A3/A-	1,75%
4,25	5,499999	A2/A	1,25%
5,5	6,499999	A1/A+	1,10%
6,5	8,499999	Aa2/AA	1,00%
8,50	100000	Aaa/AAA	0,75%

XX. Appendix: Excess Assets & Other Excess Liabilities

Excess Assets	
Amounts in MEUR	**Value**
Derivative Instruments and Interest-Bearing Investments	81
Other Financial Assets	109
Other Non-Operating Assets	445
Net Deferred Tax Assets	1.309
Net Income Tax Receivables	-570
Total	**1.374**

Other Excess Liabilities	
Amounts in MEUR	**Value**
Interest Payable and Other Financial Liabilities	48
Other Non-Operating Liabilities	634
Total	**683**

XXI. Appendix: Multiples – Automotive

Company	Equity		Asset		
	P/E	P/BV	EV/EBITDA	EV/EBIT	EV/Sales
Aisin Seiki Co Ltd	11,82	1,23	4,62	9,02	0,55
Autoliv Inc	16,42	2,52	8,27	11,66	1,03
Cie Automotive SA	16,34	3,48	8,83	12,94	1,27
Delfingen Industry SA	8,99	1,04	5,28	7,86	0,54
Denso Corp	15,39	1,13	5,40	9,66	0,64
ElringKlinger AG	12,06	1,20	7,12	12,20	1,02
Faurecia SA	13,11	1,92	3,92	6,58	0,33
GKN PLC	29,09	3,05	6,92	11,61	0,83
Hella KGaA Hueck & Co	12,47	1,91	5,13	9,69	0,65
Hyundai Mobis Co Ltd	8,30	0,96	6,23	7,44	0,60
Lear Corp	9,66	2,87	5,19	6,50	0,51
Leoni AG	17,84	1,17	5,43	11,31	0,36
Magna International Inc	8,52	1,72	5,76	7,86	0,57
Progress Werk Oberkirch AG	14,81	1,19	5,59	13,09	0,59
Rheinmetall AG	15,32	1,90	6,16	10,41	0,60
Schaeffler AG	11,53	6,88	3,55	5,30	0,58
SHW AG	19,30	1,87	5,72	13,63	0,54
Valeo SA	15,46	3,48	6,76	11,46	0,87
Average	**14,25**	**2,20**	**5,88**	**9,90**	**0,67**
Median	**13,96**	**1,88**	**5,65**	**10,05**	**0,60**

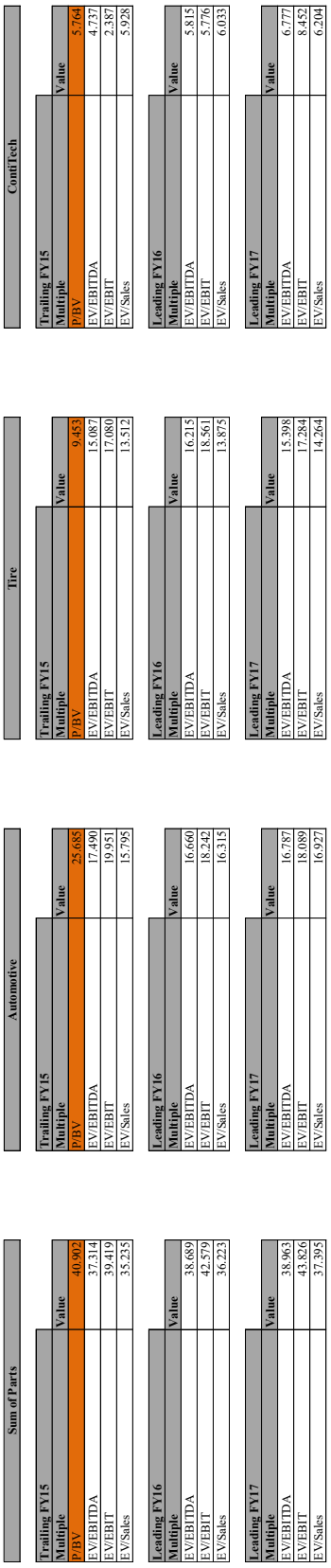
XXII. Appendix: Multiples – Tire

Company	Equity		Asset		
	P/E	P/BV	EV/EBITDA	EV/EBIT	EV/Sales
Apollo Tyres Ltd	10,13	1,84	6,05	7,77	0,99
Bridgestone Corp	11,77	1,52	4,43	6,20	0,86
Compagnie Generale des Etablissements Michelin SCA	14,78	1,89	4,75	7,16	0,93
Nexen Tire Corp	9,98	1,24	5,50	8,76	1,15
Nokian Tyres plc	28,50	3,38	10,46	14,20	3,11
Toyo Tire & Rubber Co Ltd	24,17	1,30	3,57	5,07	0,77
Average	**16,56**	**1,86**	**5,79**	**8,19**	**1,30**
Median	**13,28**	**1,68**	**5,13**	**7,46**	**0,96**

XXIII. Appendix: Multiples – ContiTech

Company	Equity		Asset		
	P/E	P/BV	EV/EBITDA	EV/EBIT	EV/Sales
Arkema SA	17,44	1,56	6,29	11,86	1,02
Compagnie Plastic Omnium SA	16,46	3,39	6,97	11,47	0,96
Lanxess AG	28,06	2,23	6,51	11,24	0,85
Sumitomo Riko Co Ltd	32,39	0,70	4,53	13,80	0,42
Toray Industries Inc	16,13	1,69	8,56	13,89	1,05
Trelleborg AB	26,18	1,93	16,41	21,50	2,44
Average	**22,78**	**1,92**	**8,21**	**13,96**	**1,12**
Median	**21,81**	**1,81**	**6,74**	**12,83**	**0,99**

XXIV. Appendix: Multiples – Sum of Parts



Sum of Parts	
Trailing FY15	
Multiple	Value
P/BV	40.902
EV/EBITDA	37.314
EV/EBIT	39.419
EV/Sales	35.235
Leading FY16	
Multiple	Value
EV/EBITDA	38.689
EV/EBIT	42.579
EV/Sales	36.223
Leading FY17	
Multiple	Value
EV/EBITDA	38.963
EV/EBIT	43.826
EV/Sales	37.395

Automotive	
Trailing FY15	
Multiple	Value
P/BV	25.685
EV/EBITDA	17.490
EV/EBIT	19.951
EV/Sales	15.795
Leading FY16	
Multiple	Value
EV/EBITDA	16.660
EV/EBIT	18.242
EV/Sales	16.315
Leading FY17	
Multiple	Value
EV/EBITDA	16.787
EV/EBIT	18.089
EV/Sales	16.927

Tire	
Trailing FY15	
Multiple	Value
P/BV	9.453
EV/EBITDA	15.087
EV/EBIT	17.080
EV/Sales	13.512
Leading FY16	
Multiple	Value
EV/EBITDA	16.215
EV/EBIT	18.561
EV/Sales	13.875
Leading FY17	
Multiple	Value
EV/EBITDA	15.398
EV/EBIT	17.284
EV/Sales	14.264

ContiTech	
Trailing FY15	
Multiple	Value
P/BV	5.764
EV/EBITDA	4.737
EV/EBIT	2.387
EV/Sales	5.928
Leading FY16	
Multiple	Value
EV/EBITDA	5.815
EV/EBIT	5.776
EV/Sales	6.033
Leading FY17	
Multiple	Value
EV/EBITDA	6.777
EV/EBIT	8.452
EV/Sales	6.204

Red = multiple not applicable, because of incomplete asset distribution to each division.

XXV. Appendix: Multiples – Price per Share

EV/EBITDA and EV/EBIT Average

Trailing FY15	
Core Enterprise Value	**38.366**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**31.075**
Shares Outstanding	201
Price per Share	**155**

Leading FY16	
Core Enterprise Value	**40.634**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**33.343**
Shares Outstanding	201
Price per Share	**166**

Leading FY17	
Core Enterprise Value	**41.394**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**34.103**
Shares Outstanding	201
Price per Share	**170**

EV/EBITDA

Trailing FY15	
Core Enterprise Value	**37.314**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**30.023**
Shares Outstanding	201
Price per Share	**150**

Leading FY16	
Core Enterprise Value	**38.689**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**31.398**
Shares Outstanding	201
Price per Share	**157**

Leading FY17	
Core Enterprise Value	**38.963**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**31.672**
Shares Outstanding	201
Price per Share	**158**

EV/EBIT

Trailing FY15	
Core Enterprise Value	**39.419**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**32.128**
Shares Outstanding	201
Price per Share	**160**

Leading FY16	
Core Enterprise Value	**42.579**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**35.288**
Shares Outstanding	201
Price per Share	**176**

Leading FY17	
Core Enterprise Value	**43.826**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622
Equity Value	**36.535**
Shares Outstanding	201
Price per Share	**182**

XXVI. Appendix: APV Valuation

Core Enterprise Value	**45.002**
Value of Debt	5.644
Minority Interest	428
Unfunded Pension Provisions and Similar Obligations	3.533
Other Liabilities	683
Excess Assets	1.374
Cash and Cash Equivalents	1.622

Equity Value	**37.711**
Shares Outstanding	201
Value per Share	**188**

Automotive						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		939	798	734	667	688
Discounted Cash Flows FY17–FY21 @ CoC = 7,43%		874	692	592	500	480
Terminal Value @ Growth Rate = 3,5%						18.068
Sum of Discounted Cash Flows FY17–FY21	3.138					
Discounted Terminal Value @ CoC = 7,43%	12.624					
Unlevered Divison's Value	**15.763**					

Tire						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		1.306	1.173	1.180	1.230	1.262
Discounted Cash Flows FY17–FY21 @ CoC = 7,97%		1.210	1.006	937	905	861
Terminal Value @ Growth Rate = 2,6%						24.240
Sum of Discounted Cash Flows FY17–FY21	4.919					
Discounted Terminal Value @ CoC = 7,97%	16.523					
Unlevered Divison's Value	**21.442**					

ContiTech						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
FCFF		386	383	393	403	413
Discounted Cash Flows FY17–FY21 @ CoC = 8,23%		357	327	310	294	278
Terminal Value @ Growth Rate = 2,5%						7.453
Sum of Discounted Cash Flows FY17–FY21	1.565					
Discounted Terminal Value @ CoC = 8,23%	5.080					
Unlevered Divison's Value	**6.646**					

Tax Shield						
Amounts in MEUR	**Forecast**					
Year	**2016F**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**
Interest		147	165	182	199	215
Tax Shield		41	46	51	56	61
Discounted Tax Shields FY17–FY21 @ CoC = 7,68%		38	40	41	42	42
Terminal Value @ Growth Rate = 3,1%						1.373
Sum of Discounted Tax Shields FY17–FY21	203					
Discounted Terminal Value @ CoC = 7,68%	948					
Tax Shield's Value	**1.152**					

Debt Level	5.644	6.400	7.157	7.914	8.670	9.345
Market Capitalization	37.834	37.834	37.834	37.834	37.834	37.834
D/E Ratio (Market)	14,9%	16,9%	18,9%	20,9%	22,9%	24,7%
Industry Target D/E		24,7%	24,7%	24,7%	24,7%	24,7%

XXVII. Appendix: Investment Note

Company	Recommendation	Target Price
Continental AG	HOLD	EUR186
Country	Reuters	Current Price (12th December 2016)
Germany	CONG.DE	EUR182
Industry	Bloomberg	Lower Boundary
Automotive	CON:GR	EUR124
		Upper Boundary
		EUR217

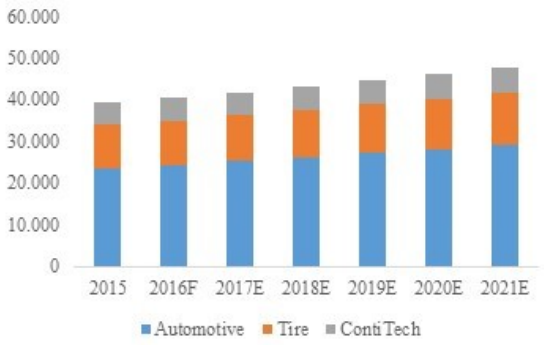
Investment Summary
Continental AG, located in Hannover, Germany, is one of the 3 biggest automotive 1st tier suppliers in the world. It is globally active through its Automotive, Tire as well as ContiTech division.

Especially the **Automotive** division currently has to face various disruptive industry trends, namely autonomous driving, electrification, connectivity/digitalization as well as shared mobility. To adapt to those trends, the analyst expects the CAPEX/Sales ratio to increase from historically 5% to 6%. The EBITDA Margin will stepwise decline from approximately 12% in FY16 to 10% in FY21, because of increased competition due to new market entrants and increasing R&D costs.

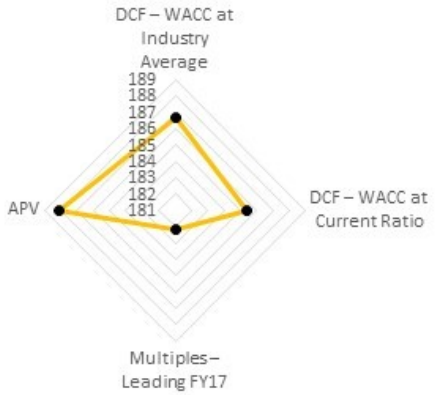
The **Tire** division currently has a record EBITDA Margin of 25,1% (FY15), compared to Automotive's 12,6%. It is even expected to increase to 26,2% in FY16. This is attributable to low raw material prices, full production capacity utilization, a strong branding and high-quality products. Even though the analyst expects the raw material prices to increase (regarding current OPEC decisions) and the capacity utilization to be shortened, the EBITDA Margin will stay relatively high at 21,8% within the close future, due to Conti's strong market position. New safety legislations for Tire will additionally help the company to grow.

After its acquisition of Veyance, **ContiTech** is the world's leading supplier of non-tire elastomer applications before Bridgestone and Freudenberg. Currently, the EBITDA Margin dropped by 3,5% from 14,4% (FY14) to 10,9% (FY15). This is because of acquisition-related costs as well as the deterioration of the oil, gas and mining sector, which accounts for 25% of sales. Nonetheless, in Q1-Q3 of FY16, the margin's median ascended already to 13,2% again, why the analyst expects the company to overcome its current weaknesses soon.

Sales by Division



Valuation Overview



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