Equity valuation: CCC S.A.

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Company name: CCC S.A.
Stock Exchange: Warsaw Stock Exchange
Ticker symbol: CCC
Operating Industry: Clothes Retail
Subindustry: Footwear & accessories

Recommendation: BUY
Current price as of 15th March 2019: 203,20 PLN
Target price: 306,07 PLN (+50,63% upside)
Valuation range: PLN 283,01 to 333,08
Free Float: 64,28%

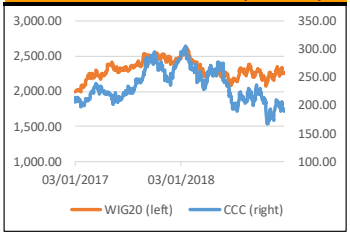
INVESTMENT SUMMARY

Market Profile	
Closing Price	203,20
52 week high	305,88
52 week low	167,00
Market Cap (m PLN)	7 958
Cost of equity	13,89%
Beta	1,52
Perpetuity Growth Rate	2,92%
5-year revenue CAGR	25,20%
Tax rate (Poland)	19%

Financial Data (m PLN)		
Year	2017	2018
Revenue	4 194	4 944
Gross Profit	2 150	2 498
EBITDA	497	338
IFRS16 EBITDA	497	815
Net Profit	302	57
EPS	7,34	1,37
Dividend paid	2,30	n/a

Margins		
Year	2017	2018
Gross Profit	51,3%	50,5%
EBITDA	11,9%	6,8%
IFRS16 EBITDA	11,9%	16,5%
Net Profit	7,2%	1,1%

Stock Performance (last 2Y)



Valuation Metrics		
Year	2019	2020
EV/EBITDA	11,14	9,50
EV/Sales	1,50	1,32
P/E	20,89	17,37

Operating metrics (2018)	
Days Sales Outstanding	10,72
Days Payables Outstanding	147,72
Days Inventory on Hand	308,71
Cash Conversion Cycle	171,71
Current Ratio	1,08
Cash Ratio	0,15

BUY: A buy recommendation was issued with a target price of 306,07 PLN per common share and a valuation range of PLN 283,01 to 333,08, which represents a strong upside potential (+50,63%). This recommendation is based on the combination of favourable macroeconomic environment and company-specific factors that place the company in a particularly strong and competitive position in the footwear retail sector in Central-Eastern Europe.

FAVOURABLE MACROECNOMIC ENVIRONMENT: countries of CEE are currently growing at above-average rate, gradually catching up with developed economies. High real GDP growth and increasing disposable income facilitate growing consumption, which in turn favour retail sales.

GROWTH TREND: With annual growth over last 5 years at of 25% and expected growth for the upcoming 7 years equal to 17,1% (CAGR terms), the company is expected to develop faster than the underlying economy. However, this growth should gradually slow down and eventually converge with the economy by 2025, when CCC is expected to reach its mature state.

KEY OPERATING FACTORS: Looking-forward, CCC plans to focus on further development of their e-commerce platform (eobouwie) as well continuing to expand in CEE markets by opening stores in the new format (enlarged area, modern interior design). Furthermore, several acquisitions have been made and their implementation is expected to yield synergies, mainly through broader product offer and widening of the customer base.

RISK FACTORS: Key risk for the business performance is potential contraction in the economy, resulting in lower GDP growth, followed by a slowdown in retail sales. Furthermore, possible entrance of e-commerce giants (e.g. Amazon) on the markets of CEE might result in greater customer attrition.

PROFILE: Poland-headquartered CCC S.A. is a major footwear retailer in the region of Central-Eastern Europe. Their main revenue stream comes from sales of shoes (88,4%), while the remaining part is generated through sales of bags and accessories.

Abstract

The aim of this dissertation is to determine the target share price of CCC S.A. as of 15th March 2019 (publication date of financial data for FY2018) and to issue an appropriate investment recommendation (buy, hold, sell) relative to the market price on that day. The target company is listed on the Warsaw Stock Exchange (Poland), operates in the footwear retail industry and is the key player on the Central-Eastern Europe market. As such, the underlying research question is: "What is CCC S.A. fair value per share as of 15th March 2019 and how does it differ from the price on the market?". The valuation process is built upon a thorough analysis of the company, its competitive environment, current macroeconomic conditions and expected market trends in the clothing retail industry. The primary valuation method used was the Discounted Cash-Flows model, aiming to reflect the intrinsic value of the company. This valuation was complemented with a relative valuation method, that utilizes forward-looking trading multiples for Comparable Companies. The valuation methods determined a target price range of PLN 283,01 to 333,08 per share. Given a closing price of 203,20 PLN per share on Friday, the 15th March 2019 (publication of end-of-year financial statements) a **BUY** recommendation has been issued. The recommendation is in line with equity research report issued by J.P. Morgan on 25th April 2019 (buy recommendation with target price of 274 PLN).

Key words: CCC, footwear retail industry, valuation, DCF, Poland

Resumo

O objetivo desta dissertação é determinar o preço das ações da CCC S.A. a partir de 15 de março de 2019 (data de publicação dos dados financeiros para FY2018) e emitir uma recomendação de investimento adequada (comprar, segurar, vender) em relação ao preço de mercado nesse dia. A empresa-alvo está listada na bolsa de valores de Varsóvia (Polônia), atua no setor de calçados e é considerada a principal empresa no mercado da Europa central-oriental. Como tal, a questão subjacente da pesquisa é: "Qual o valor justo da CCC S.A. por ação a partir de 15 de março de 2019 e como este difere do preço no mercado?". O processo de avaliação baseia-se numa análise aprofundada da empresa, do seu ambiente competitivo, actuais condições macroeconómicas e das tendências de mercado esperadas no sector. O método de avaliação principal utilizado foi o modelo de fluxos de caixa com desconto, visando refletir o valor intrínseco da empresa. Esta avaliação foi complementada pelo método de valorização relativa para empresas comparáveis. Os métodos de avaliação determinaram uma variação do preço-alvo de PLN 283,01 a 333,08 por ação. Dado o preço de fecho de 203,20 PLN por ação no dia 15 de março de 2019 uma recomendação COMPRA foi emitida. A recomendação está em consonância com o relatório de pesquisa de capital emitido pelo J.P. Morgan a 25 de abril de 2019 (recomendação de compra com preço-alvo de 274 PLN).

Palavras-chave: CCC, indústria de varejo de calçados, valuation, DCF, Polônia

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List of Abbreviations

APV	Adjusted Present Value
CAGR	Compounded Annual Growth Rate
CAPM	Capital Asset Pricing Model
CAPEX	Capital Expenditure
CEE	Central-Eastern Europe
COGS	Cost of Goods Sold
CSR	Corporate Social Responsibility
D&A	Depreciation and Amortization
DCF	Discounted Cash-Flows
DDM	Discounted Dividend Model
DIH	Days Inventory on Hand
DPO	Days Payable Outstanding
DSO	Days Sales Outstanding
DTA	Deferred Tax Asset
DTL	Deferred Tax Liability
EBIT	Earnings before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Depreciation and Amortization
EPS	Earnings per share
EUR	Euro
EV	Enterprise Value
EVA	Economic Value Added
FCF	Free Cash-Flows
FCFE	Free Cash Flow to Equity
FCFF	Free Cash Flow to Firm
FX rate	Foreign Exchange rate
FY	Financial Year
GDP	Gross Domestic Product
IFRS	International Financial Reporting Standards
M&A	Mergers and Acquisitions
MRP	Market Risk Premium
MV	Market Value
NAV	Net Asset Value
NOPAT	Net Operating Profit After Taxes
NWC	Net Working Capital
P/E	Price-to-Earnings
PEG	Price-to-Earnings adjusted for Growth
PLN	Polski Nowy Zloty
PV	Present Value
ROE	Return on equity
SG&A	Selling, General and Administrative Expenses
SWOT	Strengths, Weaknesses, Opportunities, Threats
TV	Terminal Value
USD	U.S. Dollar
WACC	Weighted Average Cost of Capital
WIG	Warszawski Index Gieldowy (Warsaw Stock Exchange Index)
WIG20	Warszawski Index Gieldowy 20 (Warsaw Stock Exchange main Index)
WSE	Warsaw Stock Exchange
YTM	Yield-to-Maturity

1. Introduction

1.1 Aim of this dissertation

The aim of this report is to provide investment recommendation for CCC S.A., a Polish retailer of shoes and apparel listed on the Warsaw Stock Exchange, as of 15th March 2019 (company's FY ends on the 31st of December, however the Financial Statements have been published on that day). This valuation has been performed for academic purpose and as such cannot be perceived as professional and binding investment advice.

This dissertation will have following structure: in the next chapter the most common valuation methods and the legitimacy of their use will be presented. This theoretical consideration will be followed by the analysis of target company's operating and financial performance, as well as the analysis of the industry it operates in and current macroeconomic environment. Upon this foundation, selected valuation methods will be used to derive the share price, which will be concluded with an appropriate investment recommendation. The computed valuation and subsequent recommendation will be compared with the equity research report from the investment bank (J.P. Morgan) and any discrepancies will be discussed.

1.2 Fundamental problem: why do we value an asset that already has a price?

This question is the foundation for valuation theory: why would people incur costs, spend time and make effort to build complicated valuation models, given that the company has an observable price in the market? This issue is even more justified when one assumes that the financial markets are believed to be (to some extent) efficient, and hence, the price should, in theory, reflect all the public information (semi-strong efficiency) or even non-public information (strong efficiency), thus making any technical and fundamental analysis redundant (Fama, 1970).

This conundrum has been also defined as the Grossman-Stiglitz paradox (Grossman & Stiglitz, 1980), which states, that if the markets were efficient, no rational investor would incur cost of valuation. The reasoning behind this theory is based on the assumption that as information is costly, prices cannot perfectly reflect the available information because there would be no compensation for the investors spending resources to obtain it.

The implication of this paradox is that investors believe in existing mispricing and thus are motivated to engage in the valuation process. While seeking the true value of the stock, they hope to be rewarded for their effort, that is defined as the abnormal risk-adjusted return (also

known as alpha). As this process is based on deep research and competitiveness, individual mistakes of the investors will eventually cancel out, brining efficiency to the market.

Therefore, the assumption of temporary mispricing, resulting in the possibility to achieve abnormal returns means that the observable price in the market can reflect the true value but does not necessarily have to.

Besides the underlying assumption that the mispricing exists and the observable market price is not equal the true intrinsic value of the asset, investors also have to assume that the convergence between them will occur in the foreseeable future. Even completely correct valuation can result in the incurrence of losses, if the convergence does not occur within the given investment horizon. This is particularly apparent in the history of investment funds and portfolio managers, who happened to observe the mispricing but were not able to hold their positions until the market eventually corrected itself.

Further, we should remember that the valuation is "a craft that combines art and science" (Damodaran, 2016). While some inputs require deep understanding of economics as well as financial and accounting knowledge, a substantial part of the valuation relies on the individual assumptions of the investor. Making predictions about the future is highly subjective and dependent on people's perception of the world, their personality and professional knowledge as well as the situation they are currently in. Many valuations will tend to be biased as the people performing them are influenced by the principal that has entrusted them with this task. The divergence in valuation between sell- and buy-side analysts and the prevalence of "buy" over "sell" recommendations in equity reports are best evidences of bias's occurrence (Jannati et al., 2016).

2. Literature Review

2.1 Overview of valuation methods

Any valuation process requires the analyst to select an appropriate valuation method. These can vary, depending on the characteristics of the asset. In this chapter I will briefly introduce the most commonly used methods for the purpose of firm valuation, their applications as well as their strengths and weaknesses. The underlying assumption here will be "going concern", which means, that the firm being appraised will continue to operate in the foreseeable future and is not subject to liquidation.

2.2 Absolute (intrinsic) valuation

Absolute valuation derives the value of the asset based on its individual characteristics (Graham, 1962) and the Present Value of cash-flows it will generate in the future (Damodaran, 2002). For the purpose of equity valuation, this finds application for stable, mature companies with predictable growth rates and profit margins. This method however, is not appropriate for small, dynamically growing businesses (especially start-ups) where Cash-Flows cannot be predicted accurately (Rosenbaum & Pearl, 2009).

By far the biggest advantage of absolute valuation methods is their reliance on the company's ability to generate cash-flows for investors, which are discounted with the required rate of return for the capital they have provided.

However, this method requires a wide range of assumptions about company's future performance and any predictions by definition will tend to contain an error. No analyst is able to completely forecast the future course of events, and hence many valuations will be flawed.

There are several valuation models that use cash-flows for investors. To use them correctly, the analyst should be able to distinguish between cash-flows available for shareholders and those that belong to all capital providers in the company (including debtholders).

2.2.1 Discounted Dividend Model

Dividends are fractions of net income generated by the company and paid out to its shareholders. As such, they are after-tax cash-flow that also excludes external sources of financing and should be discounted with the cost of equity.

Based on the pecking order theory (Myers et al., 1984), the company would use retained earnings first to finance new projects, as they are perceived to have lower cost of capital, compared to debt financing or new equity issuance. However, the company should pursue new

projects only if they are NPV positive and hence able to create value for shareholders (Berk & DeMarzo, 2014). If there is a lack of value-creating investment opportunities, the company should pay out earnings to the investors.

Based on the framework described above, we can assume that the Dividend Models will be appropriate for mature, stable companies that do not have many new investment opportunities. They should have a dividend policy that bears a consistent relationship to the company's profitability (Miller & Modigliani, 1961).

Companies tend to keep dividends at a certain level and are reluctant to cut it, as this would send a negative signal to the market, implying that the company is expecting lower profitability in the future (Ping & Ruland, 2006). Thus, dividends tend to be less volatile than earnings, which also implies that Dividend Models should be less sensitive to short-term fluctuations in underlying value as compared to other DCF models (Damodaran, 2009).

The relevance of Dividend Models has been decreasing over the last years as more companies choose to return capital to their shareholders in the form of share buy-backs rather than dividends due to tax efficiency (Fama & French, 2001). However, the dividend payout ratio for companies that are already paying dividends has increased, making DDM a useful tool for their valuation. Also, as stated in the Catering Theory (Baker & Wurgler, 2004), companies adapt their dividend policy over time to changing investors tastes. Assuming income and capital gain tax rate convergence, it is possible that Dividend Models will revive in the future.

The key input for the Dividends Models is the expected growth rate (g). Depending on our expectations regarding future, we can use two approaches: constant growth or growth pattern.

2.2.1.1 DDM with constant growth

If we expect dividends to grow at a stable rate indefinitely, then the appropriate valuation tool is Gordon Growth Model (Gordon & Shapiro, 1956). Both discount (r) and growth (g) rate should reflect long-term expectations. However, the usefulness of this model is compromised, when cost of equity and growth rate are approaching numbers.

Formula 1: Gordon Growth Model with constant growth rate

$$\boldsymbol{V_0 = \frac{D_0(1+g)}{r-g} = \frac{D_1}{r-g}}$$

$$Where: V_0 = Value\ of\ the\ stock, D_0 = current\ dividend\ ;$$
$$r = discount\ rate; g = growth\ rate; D_1 = dividend\ in\ the\ next\ period;$$

2.2.1.2 Multi-stage DDM with growth pattern

Since the assumption of stable growth rate is not realistic for most companies, one can overcome this problem with multi-stage model. Here, the valuation is divided into explicit forecast period (where the growth rate can vary) and terminal value (where the GGM or expected multiple of earnings can be used).

Formula 2: Multi-stage DDM

$$\boldsymbol{V_0 = \sum_{t=1}^{n} \frac{D_0(1+g)^t}{(1+r)^t} + \frac{V_n}{(1+r)^n}}$$

$$Where: V_n = Value\ of\ the\ stock\ in\ n\ period; other\ inputs\ as\ in\ Formula\ 1$$

2.2.2 Discounted Cash Flows Models

When the company is non-dividend paying or the dividend policy does not have relation with generated earnings or capacity to pay (e.g. constant dividends) we can apply Free Cash Flow Models. They are based on the actual cash-flows generated for the investors, but not necessarily paid out. Since future cash-flows are not as readily available as dividends, they must be predicted and require a range of assumptions (Rosenbaum & Pearl, 2009).

Valuation based on the FCFs is divided into projection period and terminal value. The projection period usually covers upcoming five years or the time until the company reaches the stable state (Koller et al., 2010). For this purpose, the assumptions regarding sales growth, costs structure, necessary capital expenditures and amortization as well as changes in the Net Working Capital have to be made. Terminal value assumes that the company is in its mature state and is growing at the constant rate. Therefore, it is a common practice to use Gordon Growth Model (described above) for its calculation.

Formula 3: Discounted Cash Flows Model

$$\boldsymbol{V_0 = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t} + TV}$$

$$Where: CF_t = Cash - Flow\ in\ year\ t; TV = Terminal\ Value; r = cost\ of\ capital$$

2.2.2.1 Free Cash-Flows to Equity (FCFE)

While the dividends are calculated on the base of an accounting measure (net income), FCFE is the real cash-flow available for common shareholders after all operating, investing and financing expenses have been paid. This implies, that while computing them, any costs and

benefits of external financing should be excluded. Thus, they should be discounted with the cost of equity.

Formula 4: FCFE

$$\text{FCFE} = \text{Net Income} + \text{Non-cash Charges} - \Delta\text{Fixed Capital} - \Delta\text{Working Capital} + \text{Net Borrowing}$$

2.2.2.2 Free Cash-Flow to the Firm (FCFF)

Probably more commonly used method is FCFF, as it reflects cash-flows for all capital providers of the company (Pinto et al., 2007). As such, it should be discounted with Weighted Average Cost of Capital (WACC) that includes costs and benefits of debt financing. To derive the value of equity, the value of debt and preferred shares should be subtracted from obtained value of the firm.

Formula 5: FCFF

$$\text{FCFF} = \text{EBIT}\ (1 - \text{tax rate}) + \text{Non-cash Charges} - \Delta\text{Fixed Capital} - \Delta\text{Working Capital}$$

2.2.2.3 Adjusted Present Value (APV)

While the FCFF method is based on the target (optimal) capital structure and as such uses constant WACC to discount company's cash-flow, this might not be an appropriate valuation tool for highly levered companies (Farber et al., 2006). As proven by Modigliani-Miller (1958) at some point the benefits of debt financing are compromised by the expected bankruptcy costs. To control for this problem, the APV method is an appropriate valuation tool, as it is composed of unlevered firm value and net effect of debt (Booth, 2007).

The first component (unlevered firm value) is obtained through discounting of FCFF with the cost of unlevered equity. Net effect of debt aligns the benefits of the Interest Tax Shield with the expected bankruptcy costs (Mitra, 2010).

Although some of the inputs are highly subjective (particularly bankruptcy costs), the APV method finds its application in the valuation industry, especially for levered buyouts transactions (Luehrmann, 1997).

2.2.3 Discount rates

Projected FCFs have to be discounted with an appropriate rate in order to return the value of the company. Depending on the type of cash-flows, they should reflect the rate that the particular capital providers require for their stake of capital.

2.2.3.1 Cost of equity

DDM and FCFE reflect cash-flows to common shareholders and as such should be discounted with cost of equity. There are several models that serve to estimate it and they will be further discussed in the next paragraph.

2.2.3.1.1 CAPM

By far the most popular model is Capital Asset Pricing Model (CAPM), developed in the 1960's by several academics (Treynor, 1961; Sharpe, 1964; Lintner, 1965), based on the former work of H. Markowitz on modern portfolio theory (Markowitz, 1952).

Formula 6: CAPM

$$\boldsymbol{k_e = r_f + \beta * Equity\ Risk\ Premium}$$

$$Where: k_e = cost\ of\ equity; r_f = risk - free\ rate;\ \beta - beta$$

The first component of the model, the risk-free rate, should reflect yield on the long-term government securities, matching the predicted cash-flows of the company (Fernandez, 2004). To truly reflect the risk-free investment, these should be issued by developed countries with high quality rating (e.g. German Bunds for the Eurozone).

Beta is measure of one's company stock risk in reference to the market (Koller et al., 2010). For publicly traded companies, it can be obtained through regression of the stock returns on market returns. When the company is not listed, beta can be obtained from its publicly peers by adjusting their average unlevered capital structure to the target capital structure of the company in focus (Bernardo et al, 2012; Pereiro, 2010).

The Equity Risk Premium is the incremental return over risk-free rate required for holding risky equities. The most common method of ERP computation is the average difference between historical return on the market index and the risk-free rate. However, as valuation is forward-looking, macroeconomic models or survey estimates can be applied to adjust it for future expectations (Damodaran, 2008).

2.2.3.1.2 Multifactor models: Fama-French 3 factor model

Based on the premise that the CAPM explains about 70% of the diversified portfolio returns, E. Fama and K. French developed 3-factor model that has a stronger (90%) predictive power (Fama & French, 1993).

Formula 7: Fama-French 3-factor model

$$\boldsymbol{k_e = r_f + \beta_{Market} * RMRF + \beta_{Size} * SMB + \beta_{Value} * HML}$$

$$Where: k_e = cost\ of\ equity;\ r_f = risk - free\ rate;$$

$$RMRF = market\ risk\ premium;\ SMB = size\ premium; HML = value\ premim$$

The first factor is return on the market portfolio over the risk-free rate (one-month T-Bill rate). The second factor is return on the portfolio composed of small market capitalization stocks minus return on the portfolio of large capitalization stock (implying that small companies are riskier). The third factor reflects return on the portfolio of stocks characterized by high book-to-market ratio minus return on portfolio of stocks featuring low book-to-market ratio (implying that value stocks are riskier than growth stocks).

2.2.3.1.3 Weighted Average Cost of Capital (CAPM)

Since FCFF reflect cash-flows available to all capital providers (both equity and debt financing), these cash-flows are discounted with WACC (Farber et al., 2006).

Formula 8: WACC

$$\boldsymbol{WACC = \frac{MV_D}{MV_D + MV_E} r_d(1 - t) + \frac{MV_E}{MV_D + MV_E} r_e}$$

$$Where: MV_D = MV\ of\ Debt;\ MV_E = MV\ of\ equity;$$

$$r_d = cost\ of\ debt;\ r_e = cost\ of\ equity; t = effective\ tax\ rate$$

The share of equity and debt is weighted by their market value. Since the value of equity is observable in the market and the calculation of its cost has already been covered, next paragraph will focus on the debt component.

Market value of debt can be calculated based on the book value adjusted for current market cost of debt. For public debt, current yield on all company's outstanding debt securities can be used (Koller et al., 2010). In case the company has only private debt, implied rating method or cost of debt for comparable companies (with similar capital structure) can be used. Debt component of WACC is multiplied by term (1 – effective tax rate), which reflects benefits of the tax shield. (Graham, 2008).

2.3 Relative valuation

Relative valuation, sometimes also defined as pricing, is derivation of the asset's value based on the current market price of similar assets. The underlying assumption here is the law of one price, stating that two assets with the same risk and cash-flows should trade at the same price in order to exclude the arbitrage opportunity. Since there are no two identical companies in the

world, this theoretical law can only be applied in the restricted form for the purpose of equity valuation. However, we assume that companies sharing the same business and financial profile should trade at roughly the same price. In order to control for the business size, the value of the target can be derived based on weighted multiples of key financial metrics and value drivers for its peer group (Eberhart, 2004).

While the calculation of the multiples is a straightforward task, identification of an appropriate peer group tends to be challenging (Bhojraj & Lee, 2002). In order to identify the best comparable, an analyst should obtain precise understanding of the company being valued, the characterises of its business model and key value drivers, as well as inherent risks and economic forces shaping the industry it is operating in (Rosenbaum & Pearl, 2009).

An ideal peer should offer the same product (service) as the company being in the focus, address the same customer group, use the same distribution channels, operate in the same geography and share the same capital structure. Nevertheless, this task is usually impossible, as the companies tend to differ significantly among each other, mainly in the characteristics of the product offered, size and capital structure and the markets they operate in. However, while using the multiples, an analyst should make effort to identify companies as similar to its target as possible (Damodaran, 2002).

We can divide relative valuation methods into two groups: precedent transactions and market multiples. In the first case, we can identify multiples paid for similar companies in the past transactions. However, the challenge here is to identify transactions that happened in the relatively recent period, thus reflecting current market conditions. What is more, the price paid will usually contain control premium, biasing the valuation upwards. This is particularly apparent for strategic investors, who are willing to pay for the takeover target above current market price, hoping to realize synergies. Conversely, market multiples are forward-looking, and they are believed to reflect the current market value of the company. They focus on the expectations regarding key value drivers, such as earnings or sales.

A certain advantage of relative valuation is the ease of use of multiples and their reflection of actual price paid (precedent transactions) or current market value (market multiples). However, as mentioned before, it might be difficult to find a reasonable peer group, especially for companies operating in a niche or industry composed of privately held companies (then the market price simply does not exist). Also, the multiples are subject to market moods and momentum and only give us the relative value of an asset as compared to the current market

price of similar assets. Hence, the equity valuation obtained from the relative methods can be in isolation from its intrinsic value and lead to wrong recommendations in times of the market turmoil (e.g. Tech Bubble).

Multiples can be divided into two groups (Fernandez, 2001): those referring to the equity value (price per share) and enterprise value (value of the entire company). The most common multiples are:

- **Price-to-Earnings (P/E).**

This multiple reflects how much investors are willing to pay for a company's current or future earnings. Since the ability to convert revenue into earnings is the key investment driver, this is one of the most often used multiples. Companies superior to their peers will tend to trade at higher P/E multiple, reflecting higher expected growth rate. However, usefulness of this multiple can be compromised if the earnings are negative or close to zero. Moreover, earnings are subject to managerial influence and accounting differences.

- **PEG ratio**

This ratio is an extension of the P/E multiple, that controls for the expected growth rate of earnings. Although it overcomes problem of negative earnings, it is just a simplification that ignores risk, does not account for differences in duration of growth and assumes it (growth) will be linearly aligned with the P/E ratio.

- **Price-to-Sales**

This multiple reflects how much the market values every dollar of the company's sales. Since the revenue cannot be negative and is subject to defined recognition policy, it is less prone to manipulation than earnings. Although it can serve as a reliable indicator of company's growth and can be applied to companies that are not profitable yet (e.g. start-ups), its relevance is limited. Not only it ignores the ultimate aim of the business, which is to generate income, but also it compares the stream available to the entire firm (revenue) with the price of equity.

- **Price-to-Book Value**

While not as popular as P/E or P/Sales, the P/BV ratio finds its use especially for companies that are not perceived as going concern or that are mostly composed of liquid assets (such as banks or insurance companies). However, the usefulness of this multiple is compromised for

companies with significant non-balance sheet items (e.g. human capital) or asset-light companies, that are mainly service-oriented.

- **EV/EBITDA**

This multiple is probably the most widely used one in the investment banking industry. It overcomes the problem of different capital structures, as it aligns the metric available to all capital providers with the value of the entire company. EBITDA is a rough approximation of the operating cash flow and eliminates any distortions resulting from different depreciation policies, interest charges and tax rates. When the D&A expense is not available or the target company has high investment outlays, this multiple can be modified into **EV/EBIT**. Such adjustment should also be applied when comparing companies operating in different industries to control for different capital expenditure requirements.

- **Sector specific multiples**

As shown above, we can create a multiple for nearly all value drivers of the company. Those described in detail refer to the most commonly used ones. However, for almost each sector we can identify specific multiples that reflect its unique financial or operating statistic in the denominator.

Just to briefly illustrate their application I decided to mention a few of them: EV/EBITDAR for retail sector (R stands for rent expense), EV/Reserves for natural resources companies, Price/Net Asset Value for Financial Institutions and Real Estate (Rosenbaum & Pearl, 2009).

2.4 Other valuation methods

2.4.1 Economic Value Added (EVA)

EVA is a method using company's profitability and derives its value based on the Residual Income. Defined as the return over the product of cost of capital and capital invested it reflects the value generated by the company (Pinto et al., 2010).

Formula 9: EVA

$$\boldsymbol{EVA = NOPAT - (WACC * Capital\ Invested)}$$

2.4.2 Net Asset Value (NAV)

For industries, that use mark-to-market value of their assets and liabilities (e.g. financial industry), FCF models are irrelevant. One of the appropriate valuation models for them is NAV that simply finds the difference between the market value of company's assets and liabilities.

2.4.3 Contingent claims (real options)

Some companies have a right to make a particular business decision in the future instead of making the immediate capital budgeting decision. This can be described as a real option, resulting from timing, sizing or flexibility (Copeland & Keenan, 1998). As such, it can be valued by the use of options pricing techniques, such as Black-Scholes model or binomial tree (Hull, 2012).

3. Company overview

In order to select an appropriate valuation method as well as to develop rational forecasts, an analyst is required to obtain a deep understanding of operational and financial performance of the company in focus. The aim of this chapter is to present the key characteristics of CCC S.A. In addition to the information presented below, supplementary material (e.g. SWOT analysis and specific financial metrics) are exhibited in appendix 1.

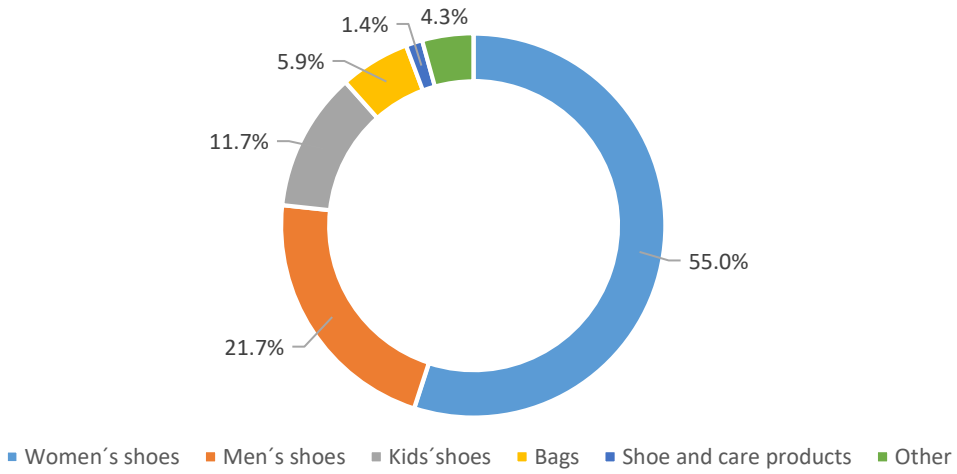
3.1 General information

CCC S.A. (thereinafter referred to as "the company", "the Group" or "CCC") is a Polish retailer of shoes and accessories. The company was incorporated in 1996 in Polkowice (south-western part of Poland) and went public in 2004 on the Warsaw Stock Exchange. As of 2018, CCC is the biggest footwear retailer in Poland and a major player in the European market (CCC Annual report, 2018).

3.2 Business model and product mix

The basic merchandise of the company is footwear. The assortment in their product portfolio is aimed at addressing the customer needs of any gender, age and income. As such, CCC sells shoes for women, men and kids, ranging from casual and sport to elegant leather footwear. The company sells products both under its own and licensed brands. Besides the shoes, CCC also offers the opportunity to purchase handbags, shoe care products and other accessories. However, they contribute minimally to the total sales of the company.

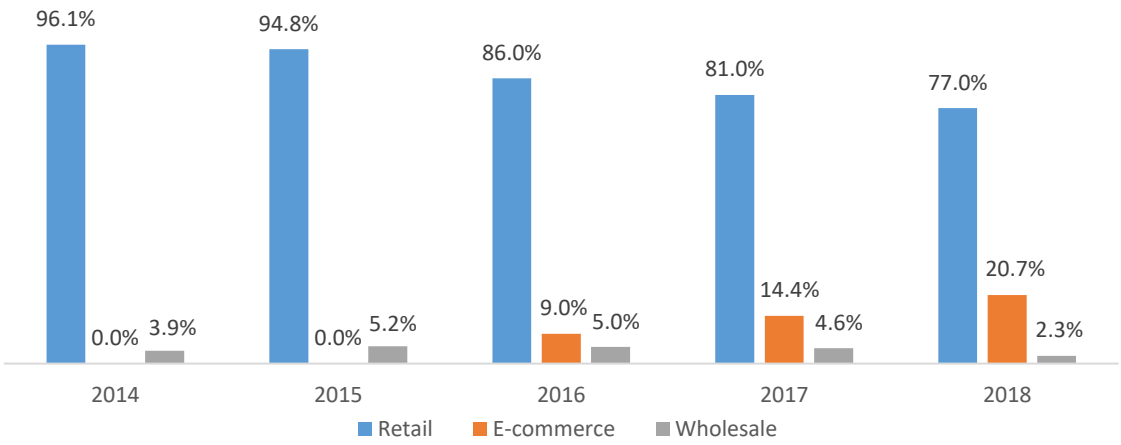
Figure 1: CCC S.A. sales structure by product (Annual report for FY2018)



A majority of sales are generated in their stationary shops, most of which operate as CCC's own stores. The remaining portion consists of franchised stores that represent the wholesale channel of the company. However, this segment is of minor importance as it generates almost

negligible revenue in the scale of the entire company. In 2015, CCC began selling its products online. This channel has been developed through the acquisition of the Polish footwear e-commerce platform eobuwie S.A. This transaction yielded significant synergies: access to a new customer base and broader product offer (eobowie S.A. sells licensed products from foreign producers, such as e.g. Puma, Adidas or Tommy Hilfiger). These synergies are reflected in the rapid growth of sales generated from the online channel, whose development is in the focus of the management for future company growth.

Figure 2: CCC S.A. sales structure by channel (Annual reports for FY 2014-2018)

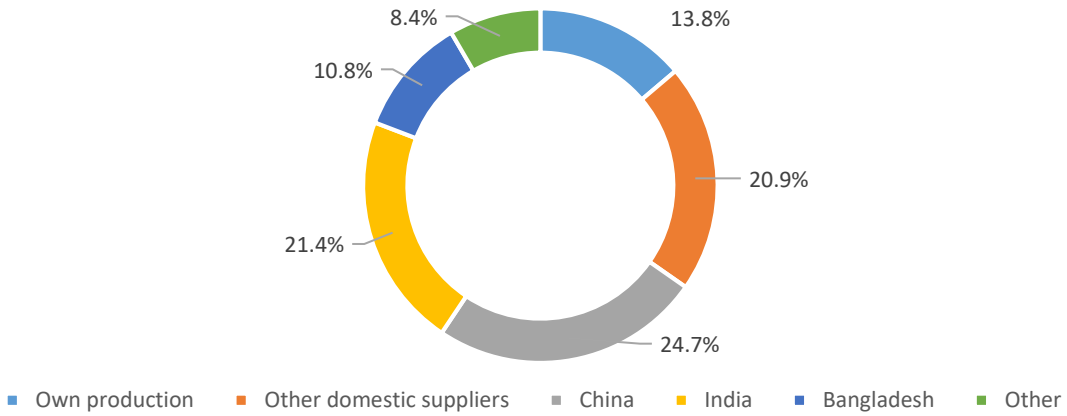


3.3 Value and supply chain

The company aims to sustain a wide offer of diversified products with different functionality. The Group offers nearly 4000 shoe designs in the spring-summer season and about 3000 designs for the fall-winter season. CCC has a total of 124 registered brands.

The Group has full control over the manufacturing process, quality, logistics, pricing and marketing policy. As such, it has a significant competitive advantage on the European footwear retail market.

Figure 3: CCC S.A. structure of suppliers (Annual report for FY2018

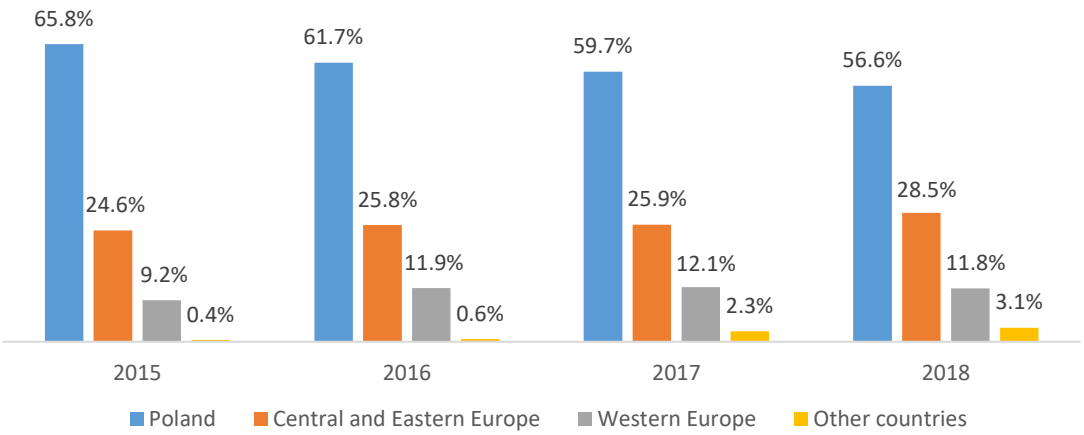


Although CCC has expertise in the field of designing and building collections, a majority of the production has been outsourced to external companies. Only 13,8% of goods sold is produced in their own factory. The remainder comes either from domestic suppliers (20,9%) or – mostly – from manufacturers located in the low-cost countries of the South-Eastern Asia. Since the company is usually the only customer for the Asian suppliers, they are highly dependent on its orders: their factories and employees are specialized in manufacture of CCC products and as such have little pricing power.

3.4 Geographical footprint

By far the biggest market for CCC is Poland. Here, the company operates 466 stores that generate (together with e-commerce channel) 56,6% of revenue. Nevertheless, since 2004 the Group has been expanding its international presence, mainly with an emphasis on Central-Eastern Europe countries (Czech Republic, Slovakia, Hungary, Romania). After having achieved strong and sustainable position in CEE countries, CCC decided to further expand in Western Europe. This strategy is being implemented both through organic growth as well as series of acquisitions of smaller players in the European footwear industry. As of the end of 2018, CCC is selling its products in 23 countries, of which 15 have access to the online channel. Exact sales structure by geographical region is presented below. More details regarding geographical footprint have been presented in Appendix 2.

Figure 4: CCC S.A. structure of sales by geographical region (Annual reports for FY 2015-2018)

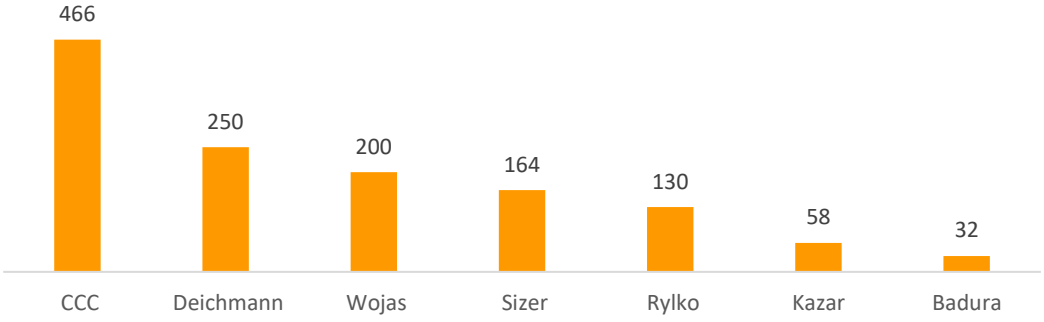


3.5 Competitive environment

The Polish shoe market has recently been subject to consolidation movements, resulting in high concentration. CCC directly competes with other Polish footwear retailers, of which the most important are: Wojas S.A. (listed retailer of elegant shoes), Ryłko S.A. (privately-held retailer of high-quality shoes) and Sizeer S.A. (privately-held retailer of athletic footwear). However,

as they are significantly smaller, they cannot be perceived as a serious challenger for CCC's leading market position. That being said, CCC does regard Deichmann SE (major German footwear retail chain and the biggest shoe vendor in Europe) as their main competitor within the international market.

Figure 5: Main footwear retailers in Poland by number of stores (various sources, 2018)



The Polish footwear market has an estimated value of 3778m USD (Statista, 2018), implying CCC holds a market share equal to 34,6%. However, due to lack of availability of financial information from CCC's competitors (they are mostly unlisted), it would prove difficult to determine their exact share positions within the market.

3.6 Share price performance

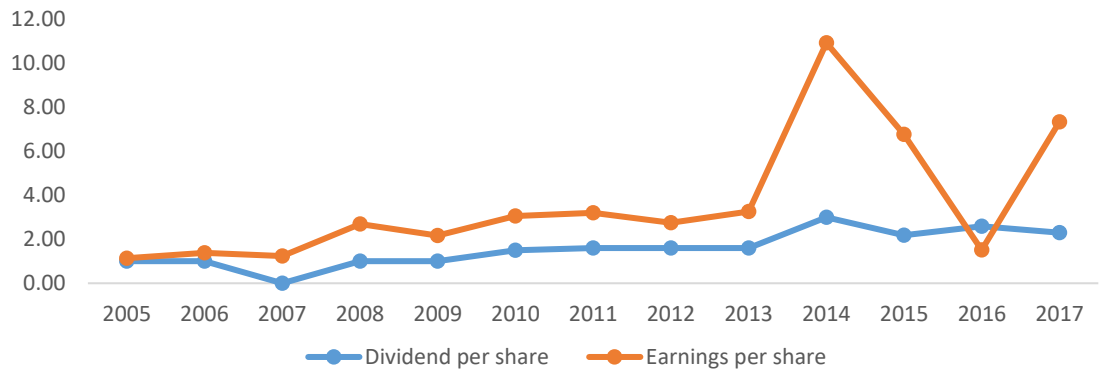
CCC has been listed on the Warsaw Stock Exchange (Poland) for almost 15 years. In December 2015, the company joined WIG20, the most prestigious index on the WSE. Besides, the Group is also included in WIG30, WIG Respect and WIG-Clothing.

As of 15th March 2019 common shares were priced at 203,20 PLN (€47,25) translating into market capitalization of almost 8,4 billion PLN (€2 B). Since its IPO, the value of a single share has increased by over 2000%.

Figure 6: Closing price of WIG20 Index and CCC stock (bankier.pl, 2019)

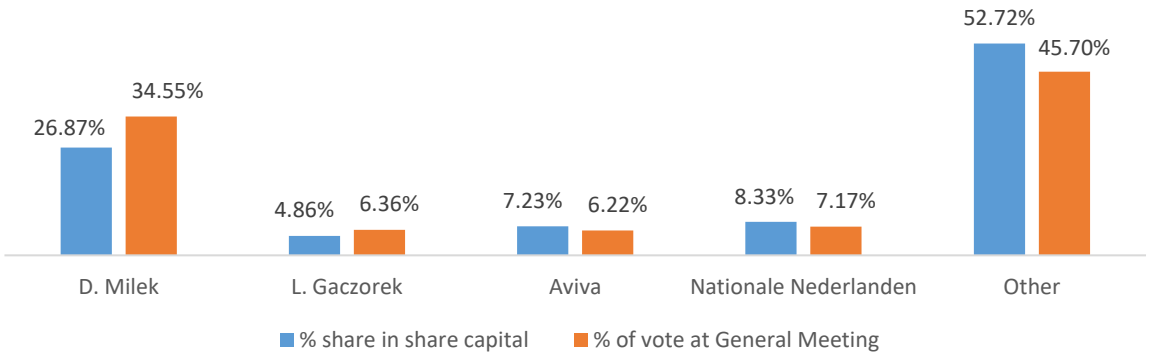
The company has established a dividend policy, which assumes that 33% to 66% of the consolidated profit can be distributed to shareholders, if certain debt ratios are maintained at contractual levels (most important: net debt to EBITDA below 3,0). Any distribution of earnings can also be influenced by the liquidity situation of the Group and its market and macro-economic prospects. Since its listing CCC has paid dividend each year, with the exception of FY2007.

Figure 7: Relationship between dividends paid and EPS for CCC S.A. (Annual report for FY2018)



The biggest shareholder is the founder of the company – a Polish entrepreneur, Dariusz Miłek. He was acting CEO until 28th February 2019, when he decided to resign and control the operations of the Group from the position of the Supervisory Board Chairman. Smaller but significant bulks of shares (above 5%) belong to: Leszek Gaczorek (co-founder of the company) and two pension funds (Aviva and Nationale-Nederlanden). Shares in the free float constitute 64,28 % of entire share capital.

Figure 8: Shareholders structure by percentage share in capital and votes number (Annual report for FY2018)



3.7 Strategy for the future

The company has already achieved the position of the biggest footwear producer and retailer within domestic market. Therefore, further growth in Poland will be slower. However, given that the stores are located unevenly across the country, there are some regions (mainly in the south-western Poland) that do offer growth potential.

CCC defines the main growth axis as the countries of Central and South-eastern Europe. The ultimate aim of the Group is to achieve the footwear market leader position in each of these regions. In the long run, the wholesale channel should be discontinued and franchise agreements terminated. As such, CCC will sell their products solely in the own brand stores and through e-commerce platform.

The long-term target defined by the Group is to double revenue and achieve EBITDA margin levels of leading companies from clothing and footwear retail industry. This should be accomplished through significant operating and financial improvements.

From the operating perspective, the main focus is given to digital transformation and modernization of the IT system. The company is currently implementing several software updates that will improve logistics, inventory planning and orders fulfilment. In 2019, CCC will also invest 100m PLN in a new, highly automatized logistics warehouse, which will result in increased operating capacity. These activities are supposed to significantly reduce operating costs, defined by management as up to 25% reduction in inventory.

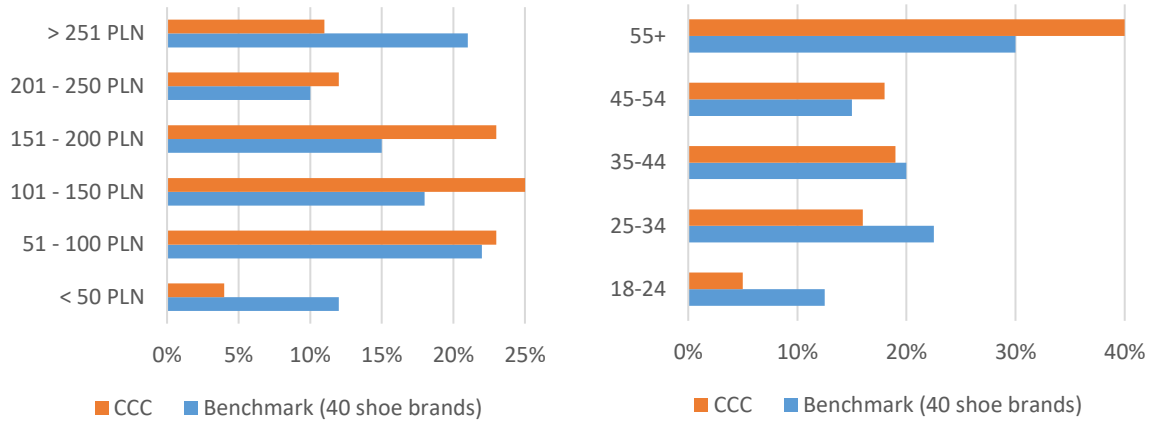
A key factor for an increase in sales should be a new approach to the customer. The Group is currently changing the stores' format, with increased area and eye-catching, large size screens. Sales conversion is expected to increase by 11% and cost per square meter to decrease by 5%.

Digital transformation encompasses several projects aimed at a better understanding and targeting of the client. Implementation of artificial intelligence, high personalisation and strong social media presence should result in highly effective reach of people and consequently a new customer base and higher sales.

From the financial perspective, the Group aims to reduce Working Capital levels through extension of the average maturity of trade liabilities. Ultimately their level should equal the level of inventory.

In order to reach new target groups, the company has in the last years acquired several smaller competitors. The most important ones are: Karl Voegle AG (Swiss shoe retailer), HR Group (German shoe retailer), DeZee LLP (Polish e-commerce platform for women footwear) and Gino Rossi S.A. (Polish retailer of high-end elegant shoes). These acquisitions are supposed to generate synergies and help the Group to realize challenges as indicated on the graphs below.

Figure 9: Potential of new clients: by price (left side) and by age (right side), CCC Investor Day Presentation



CCC is highly engaged in the CSR activities. It is the name sponsor of CCC Team, the cycling group with the UCI World Tour license and the name sponsor of the Polish leading women basketball team. These marketing engagements are expected to convert into higher sales due to stronger brand awareness. Brand recognition has also increased as CCC was the first Polish company to become a global partner of UNICEF.

3.8 Past financial performance

Analysis of the past financial performance of CCC covers the time span of five years. This period is long enough to cover recent reporting (IFRS16) changes, international expansion of the company as well as its recent acquisitions.

3.8.1 Revenue and gross profit dynamic

Figure 10: CCC S.A. – Revenue dynamic (Annual reports for FY2014-2018)

Million PLN	2014	2015	2016	2017	2018	CAGR
Revenue	**2 009,1**	**2 307,0**	**3 185,3**	**4 194,0**	**4 943,6**	**25,2%**
Cost of sales	**-902,9**	**-1 041,3**	**-1 505,2**	**-2 044,1**	**-2 446,0**	**28,3%**
Cost of purchase of goods sold	*-672,8*	*-848,5*	*-1 245,6*	*-1 854,7*	*-2 318,2*	*36,2%*
Cost of manufacturing goods sold	*-230,1*	*-186,4*	*-253,5*	*-189,7*	*-118,9*	*-15,2%*
Write-down on inventories	*0,0*	*-6,4*	*-6,1*	*0,3*	*-8,9*	*n/a*
Gross profit	**1 106,2**	**1 265,7**	**1 680,1**	**2 149,9**	**2 497,6**	**22,6%**
Gross margin	*55,06%*	*54,86%*	*52,75%*	*51,26%*	*50,52%*	*n/a*

Although revenue has more than doubled in the last 5 years, gross margin decreased over this time. This has been caused by COGS growing at a faster rate than sales. A main reason for this trend is development of the online platform that also sells licensed brands from other producers, forcing the company to operate at a lower margin. Nevertheless, this comes with the benefit of increased sales and wider product offering.

3.8.2 Operating profit (EBIT) dynamic

Figure 11: CCC S.A. – operating profit margin (Annual reports for FY2014-2018)

Million PLN	2014	2015	2016	2017	2018	CAGR
Gross profit	**1 106,2**	**1 265,7**	**1 680,1**	**2 149,9**	**2 497,6**	**22,6%**
SG&A	**-863,0**	**-1 009,1**	**-1 306,7**	**-1 745,4**	**-2 284,9**	**27,6%**
Costs of operating stores	*-631,9*	*-731,1*	*-931,3*	*-1 158,6*	*-1 446,1*	*23,0%*
Other cost of sale	*-144,9*	*-164,7*	*-292,6*	*-464,1*	*-694,8*	*48,0%*
Administrative expenses	*-76,8*	*-115,2*	*-109,0*	*-109,3*	*-196,1*	*26,4%*
Other cost and revenue	*-9,4*	*1,9*	*26,2*	*-13,4*	*52,1*	*n/a*
EBIT	**243,2**	**256,6**	**373,4**	**404,5**	**212,7**	**-3,3%**
Amortization/depereciation	*52,7*	*66,9*	*72,7*	*92,7*	*124,9*	*24,1%*
EBITDA	**295,9**	**323,5**	**446,1**	**497,2**	**337,6**	**3,4%**
Adjusted for IFRS16	*295,9*	*323,5*	*446,1*	*497,2*	*815,1*	*28,8%*
EBIT margin	*12,10%*	*11,12%*	*11,72%*	*9,64%*	*4,30%*	*n/a*
EBITDA margin	*14,73%*	*14,02%*	*14,00%*	*11,86%*	*6,83%*	*n/a*
Adjsuted EBITDA margin	*14,73%*	*14,02%*	*14,00%*	*11,86%*	*16,49%*	*n/a*

Based on the data presented above, it is noticeable that relative stable EBIT and EBITDA margin have been distorted in FY2018. This is mainly a result of higher administrative expenses that were caused by increased compensation for management and recalculation of motivation program's value. Significant increase of other revenue is a pure accounting measure, being the consequence of bargain purchase of Karl Voegle SA and its recognition on the company's books. Additionally, EBITDA has been presented on adjusted basis, taking into account recent changes in the IFRS16 (leases). Following implementation of the new standard, the company will recognise significantly higher depreciation expenses looking forward, as the right to use leased stores has to be presented on company's balance sheet and is subject to depreciation.

3.8.3 Net profit dynamic

Figure 12: CCC S.A. – net profit margin (Annual reports for FY2014-2018)

Million PLN	2014	2015	2016	2017	2018	CAGR
EBIT	**243,20**	**256,60**	**373,40**	**404,50**	**212,70**	**-3,3%**
Finance revenue	*3,10*	*0,10*	*4,10*	*3,20*	*3,70*	*4,5%*
Finance cost	*-21,20*	*-23,80*	*-31,50*	*-66,90*	*-125,10*	*55,9%*
EBT	**225,10**	**232,90**	**346,00**	**340,80**	**91,30**	**-20,2%**
Income tax	*195,30*	*26,40*	*-286,30*	*-38,50*	*-34,60*	*n/a*
Net Profit	**420,40**	**259,30**	**59,70**	**302,30**	**56,70**	**-39,4%**
Net profit margin	*20,92%*	*11,24%*	*1,87%*	*7,21%*	*1,15%*	*n/a*
EBT margin	*11,20%*	*10,10%*	*10,86%*	*8,13%*	*1,85%*	*n/a*

Net profit margin has varied across the analysed time period. This was driven mainly by effects of the income tax. In the years 2014-2015, the company received tax paybacks. This trend reverted in FY2016, when CCC realized a significant portion of deferred tax asset. From FY2017 onwards, income tax line is rather stable and should not be subject to any one-time, special events.

In 2018 the company has sold its loss-generating subsidiary in Germany. Its strong underperformance, amplified with unfavourable weather conditions throughout FY2018 were the main reasons for EBIT and Net Income at the level below long-term trend.

3.8.4 Past changes in Working Capital

Figure 13: CCC S.A. – Working Capital structure (Annual reports for FY2014-18)

Million PLN	2014	2015	2016	2017	2018	CAGR
Receivables	77,5	87,8	187,5	251,1	430,8	53,5%
Trade receivables	*35,9*	*51,3*	*89,3*	*95,7*	*124,4*	*36,4%*
Other receivables	*41,6*	*36,5*	*98,2*	*155,4*	*306,4*	*64,7%*
Inventory	741,3	680,5	1 019,7	1 417,7	1 806,1	24,9%
Cash and cash equivalents	161,9	340,6	143,4	511,6	375,8	23,4%
Current liabilities	-181,3	-178,5	-311,9	-402,4	-1 138,5	58,3%
Trade liabilities	*-99,8*	*-78,1*	*-174,3*	*-235,8*	*-864,2*	*71,5%*
Other liabilities	*-81,5*	*-100,4*	*-137,6*	*-166,6*	*-274,3*	*35,4%*
Net deferred tax asset/liability	260,8	306,1	26,0	30,2	40,6	-37,2%
Deferred tax asset	*267,3*	*312,5*	*60,1*	*63,4*	*74,8*	*-27,3%*
Deferred tax liability	*-6,5*	*-6,4*	*-34,1*	*-33,2*	*-34,2*	*51,5%*
Total Working Capital	**898,3**	**895,9**	**921,3**	**1 296,6**	**1 139,0**	**6,1%**
Change in Working Capital	**n/a**	**-2,4**	**25,4**	**375,3**	**-157,6**	**n/a**
IFRS16 adjustment: Lease liabilities	*0,0*	*0,0*	*0,0*	*0,0*	*425,2*	*n/a*
Adjusted Total Working Capital	**898,3**	**895,9**	**921,3**	**1 296,6**	**713,8**	**-5,6%**

Although there is no visible trend for changes in NWC, in FY2018 the company started implementing its new WC management policy. The long-term aim is to significantly increase trade liabilities through longer payment periods. Looking forward, this trend should be sustained, mainly due to improvements in the inventory management (lower levels of stock) and digitalization.

3.8.5 Changes in debt structure and cost of debt

Figure 14: CCC S.A. – debt structure (Annual reports for FY2014-18)

Debt structure (in m PLN)	2014	2015	2016	2017	2018	CAGR
Bank Debt liabilities	**368,00**	**508,80**	**585,50**	**707,10**	**800,00**	**21,4%**
Non-current	*6,00*	*86,00*	*156,00*	*226,00*	*0,00*	*-100,0%*
Current	*252,00*	*60,00*	*42,90*	*0,00*	*176,00*	*-8,6%*
In current account	*110,00*	*362,80*	*386,60*	*481,10*	*624,00*	*54,3%*
Bonds payable	**210,00**	**210,00**	**210,00**	**210,00**	**216,80**	**0,8%**
Lease liabilities	**0,00**	**0,00**	**0,00**	**0,00**	**1 909,20**	**n/a**
Short-term	*0,00*	*0,00*	*0,00*	*0,00*	*425,20*	*n/a*
Long-term	*0,00*	*0,00*	*0,00*	*0,00*	*1 484,00*	*n/a*
Total	**578,00**	**718,80**	**795,50**	**917,10**	**2 926,00**	**50,0%**

Figure 15: CCC S.A. – cost of debt financing (Annual reports for FY2014-18)

Interest paid (in m PLN)	2014	2015	2016	2017	2018	CAGR
Debt liabilities	-18,80	-9,70	-14,30	-24,20	-21,20	3,0%
Non-current	-2,60	-1,30	-2,90	-5,50	0,00	-100,0%
Current	-2,50	-4,80	-0,50	-2,50	-5,20	20,1%
In current account	-13,70	-3,60	-10,90	-16,20	-16,00	4,0%
Bonds payable	0,00	-7,10	-6,80	-6,90	-6,80	n/a
Lease liabilities	0,00	0,00	0,00	0,00	-32,60	n/a
Total	**-18,80**	**-16,80**	**-21,10**	**-31,10**	**-60,60**	**34,0%**

Over the past years, the Group managed to completely extinguish its long-term bank debt, effectively shifting the loan (bank) financing to current debt. Their only long-term debt instruments are bonds that are expected to be part of target capital structure. Total interest paid has grown at a lower rate than the nominal outstanding amount of debt, meaning that the company has reduced its cost of debt financing.

Further analysis of the company's key operating indicators as well as its solvency and liquidity metrics have been presented in the appendices 3, 4 and 5.

4. Macroeconomic environment and market overview

In order to ensure the accuracy of future cash flows' projections, an analyst should consider current macroeconomic situation and market characteristics in which target company operates. The purpose of this chapter is to analyse the European footwear market and current state of the economy, with particular attention dedicated to countries of Central-Eastern Europe, as this is the main market for the company in focus.

4.1 Macroeconomic environment

In the late 2000s, the world economy has suffered from the Great Recession, which was the aftermath of the financial crisis. This economic downturn was prolonged in Europe due to the Eurozone crisis (also referred to as European debt crisis). However, as of the end of 2018 we can state that implemented fiscal and monetary programs (TARP, Quantitative Easing, record-low interest rates level) proved to be efficient and the economy has recovered. This statement is based on a range of economic indicators. As of the last 4-5 years, most of the European economies have had a positive growth rate and increased industrial production and consumption expenditure, which was reflected in the record values of stock indices.

Figure 16: Consumption expenditure, annual percentage growth (World Bank, 2019)

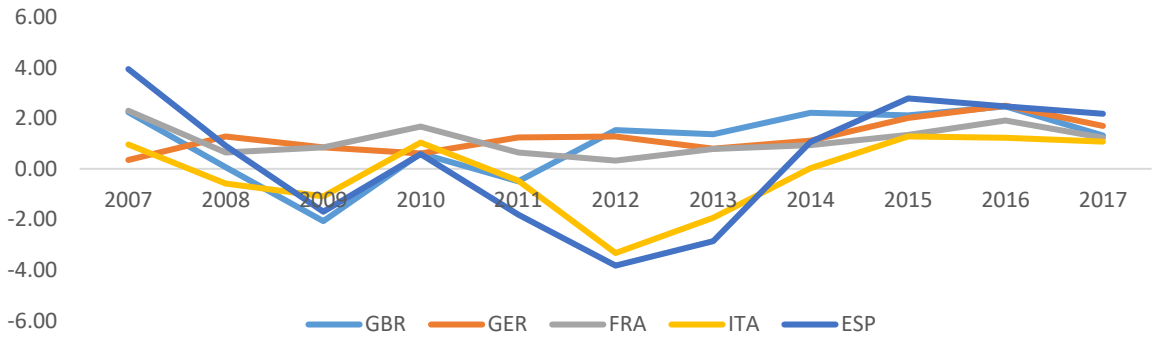
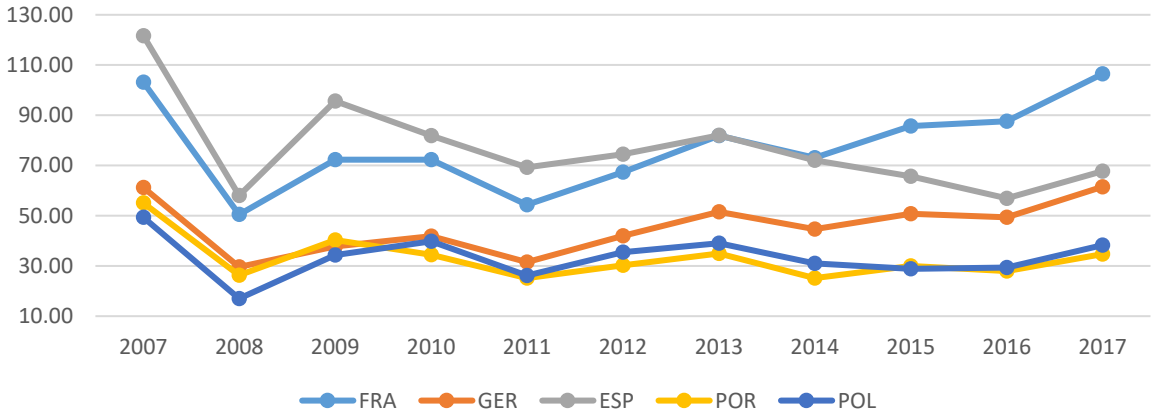


Figure 17: Retail trade volume in the EU, 28 countries rebased as of 2010 (Eurostat, 2019)

Nevertheless, prediction of the macroeconomic situation in the upcoming years is a challenging task, as most important indices seem to provide contrary signals. Although the European Central Bank has announced termination of its Quantitative Easing program, interest rates in the Eurozone still remain at zero or negative level (depending on the maturity of security). At the same time, the FED rates in the USA have been systematically raised in the recent years, with aim to slowly cool down the economy. The unemployment rate is reaching its record lows across European economies, in line with consistently increasing commodities' prices. Also a slowdown in the industrial production sends a warning signal. It might indicate that we are approaching the peak of the business cycle and a contraction in the near future could be expected. However, its exact scale and timing remains unknown. Nevertheless, we can identify some challenges that in the short-term will most probably highly influence the state of the economy: expected Brexit and tensions between the USA and China seem to be the most significant ones.

Figure 18: Market capitalization of domestic companies in percentage of GDP (World Bank, 2019).



4.1.1 Macro: Central-Eastern Europe

Most sales of CCC S.A. are generated in countries of Central-Eastern Europe (over 85% in 2018), with Poland being the most important market. Therefore, development of economies in countries from the CEE region will have significant impact on future performance of the company.

CEE countries have greatly benefited from their presence in the European Union. Significant amount of EU development funds invested in the infrastructure induced public spending and resulted in the above-average growth. Cheap and highly qualified labour attracted international companies to outsource their production to that region, further fostering this process. As the result, CEE economies are currently going through transition process from emerging markets

to developed ones. Low unemployment combined with growing disposable income encourages people to consumption, which is an optimistic outlook for the CCC.

Figure 19: Annual GDP growth in percentage (World Bank, 2019)

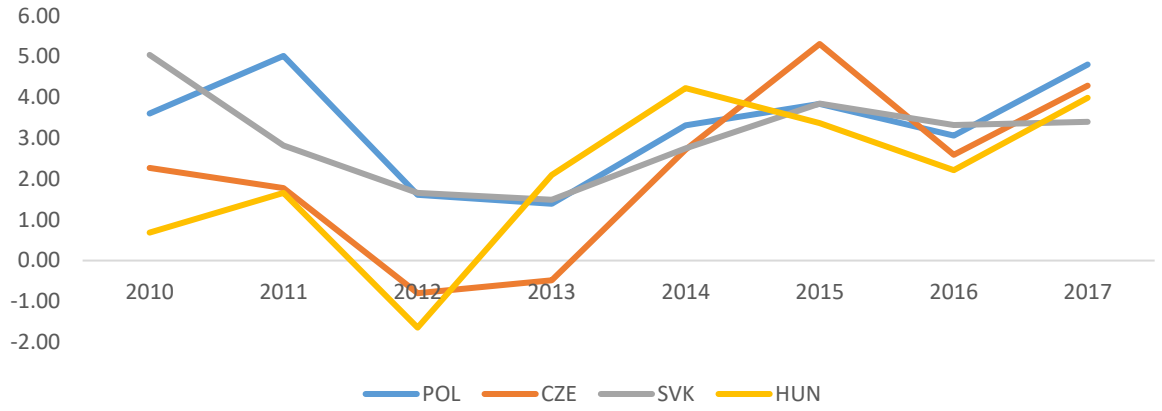
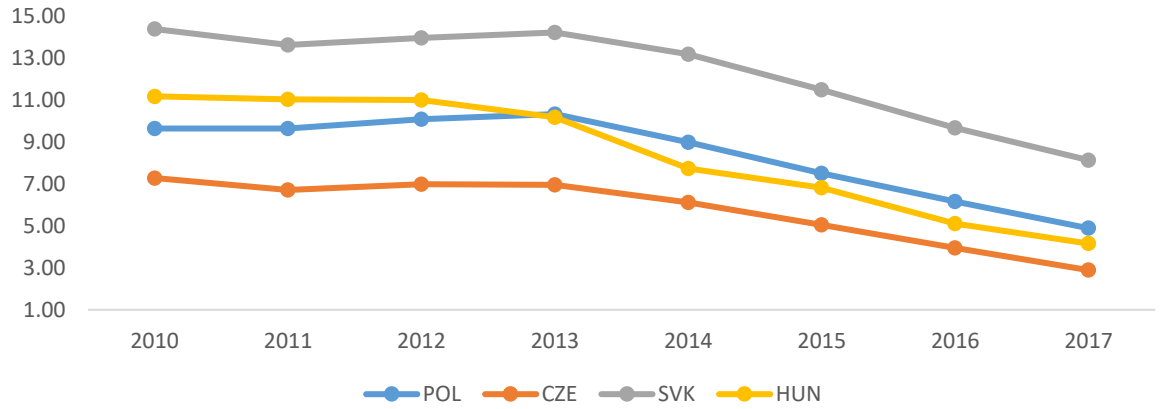
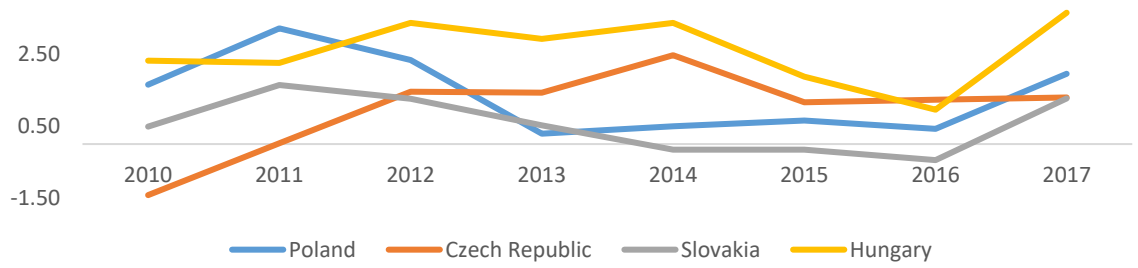


Figure 20: Unemployment, total percentage of labour force (World Bank, 2019)



Not without importance are implications of an inflationary environment. Rapid growth of CEE countries might have consequence of prices rising at the pace that is faster than the target assumed by local Central Banks (for Eurozone 2%). Nevertheless, as shown on the graph below, inflation in the major countries for CCC operations have been within a reasonable band (inflation in Hungary is slightly higher than in other CEE countries, but still it does not exceed a level that would cause concern).

Figure 21: Inflation rate in major CEE countries (in percentage; World Bank, 2019)

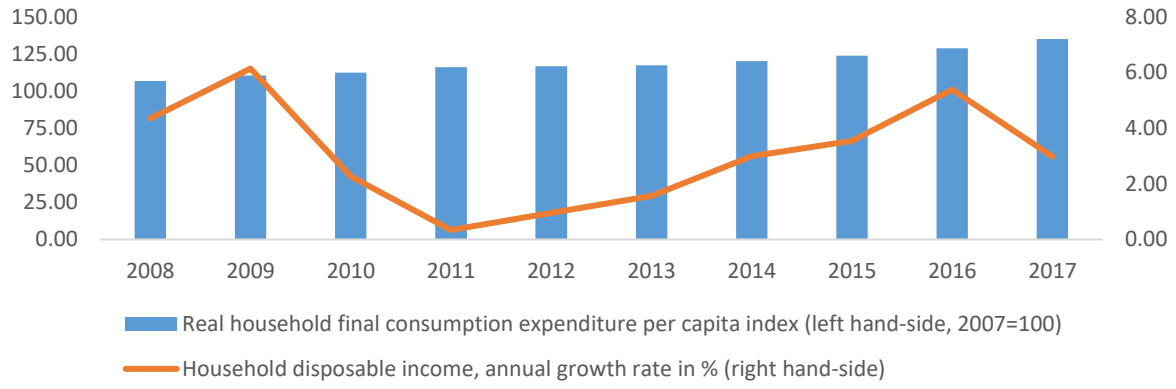


4.1.2 Macro: Poland

Particular attention should be given to Poland, as CCC is not only headquartered there but also generates over 50% of its sales. Polish economy has greatly benefited from the EU funds and access to the Union's common market, resulting in a very high GDP growth rate, that was even resistant to the Great Recession of the late 2000s. Since the beginning of 2019, Poland has been reclassified by FTSE and as the first economy from the former Soviet Bloc to obtain a "developed market" status (Financial Times, 2018).

Perspectives for retail market and consumption growth are optimistic not only due to strong fundamentals, but also as the result of social programs implemented by the government. A special payment for children, increase in the minimum wage and benefits for retired employees are expected to give a strong incentive for consumption and as such create conditions for the CCC that will strongly favour company's sales.

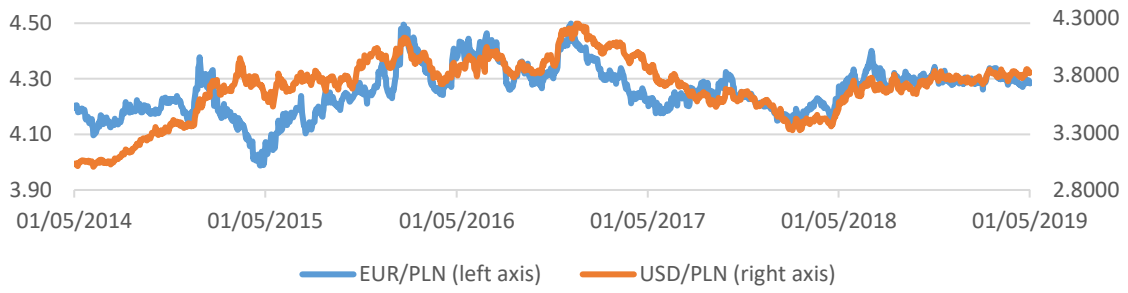
Figure 22: Macroeconomic data for Polish households (OECD database, 2019)



Since CCC operates in multiple countries, it is exposed to the risk of changes in foreign currency exchange rate. The company has not used any derivative instruments to hedge this risk, mostly relying on the strategy of natural hedging (sales and operating costs denominated in the same currency). Nevertheless, most of the supply is bought from producers located in South-East Asia and paid in US dollars. Moreover, the cost of leases is mainly denominated in Euros. Therefore, the FX rate between PLN, USD and EUR is of great importance and under constant monitoring of the management.

As presented on the graph below, the exchange rate has been subject to some fluctuations in the past but over last years it has stabilized. Given that Polish economy is catching up with the economies of Western Europe and long-term goal of the government is to introduce Euro, we should expect this trend to continue.

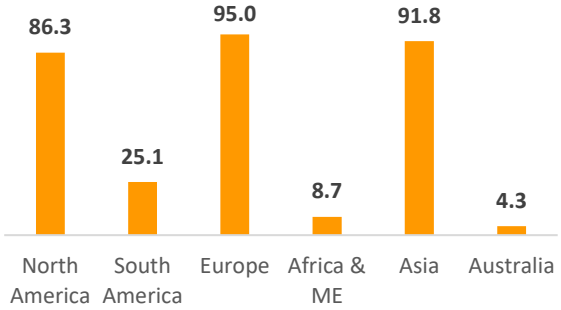
Figure 23: FX Exchange rate for PLN, USD and EUR for 2014-2019 (Thomson Reuters EIKON)

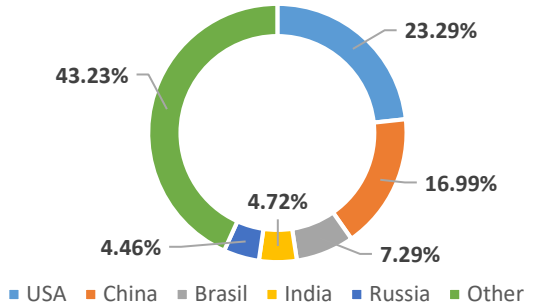


4.2 Footwear: worldwide market overview

In 2017, the footwear market generated €311,2 B in sales worldwide (Statista, 2018). Although the single country with the highest amount of sales is the United States, the biggest geographical market is Europe.

Figure 24 & 25: Footwear worldwide, sales in B EUR (left) and footwear worldwide: biggest markets (right)



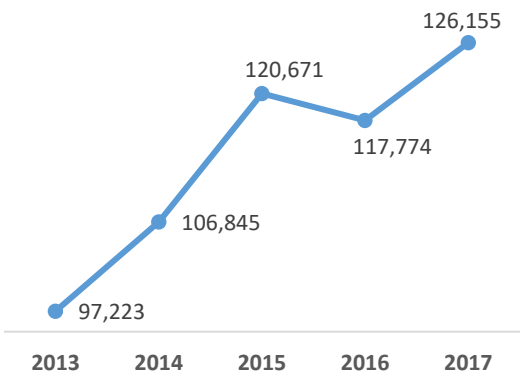


By far the biggest segment of the footwear market is leather shoes, that in 2017 generated €166,8 B of sales and constituted 53% of the overall market. Nevertheless, in 2016 the average price per unit for athletic (sport) footwear exceeded leather shoes and this tendency is expected to prevail in coming years.

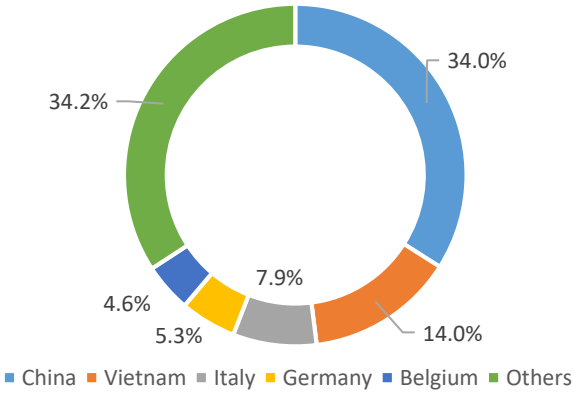
Although the biggest retailers in the world have European or American origin, they heavily rely on external suppliers. The supply side is dominated by Asian countries that constitute over 50% of the world footwear export (presented in the figures on the subsequent page).

Additional analysis of the footwear industry (Porter 5-Forces) is presented in the appendix 6.

Figure 25 & 27: footwear export worldwide (m EUR, left) and main world footwear exporters (right)



(Statista, 2018)

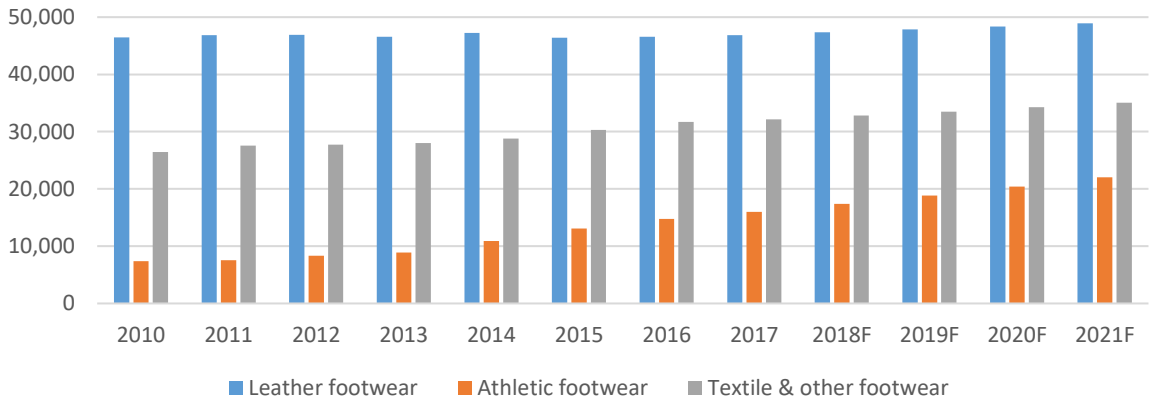


(Statista, 2018)

4.2.1 European footwear market

The footwear market generated sales of €95 B in 2017. As such, this is the second most important fashion market, surpassed only to clothing. By far, the biggest sector is leather shoes (characterized by a low growth rate however). The athletic footwear segment has been growing rapidly over past years and is expected to maintain this momentum in the future.

Figure 26: European footwear market by segment, sales in B EUR (Statista, 2018)



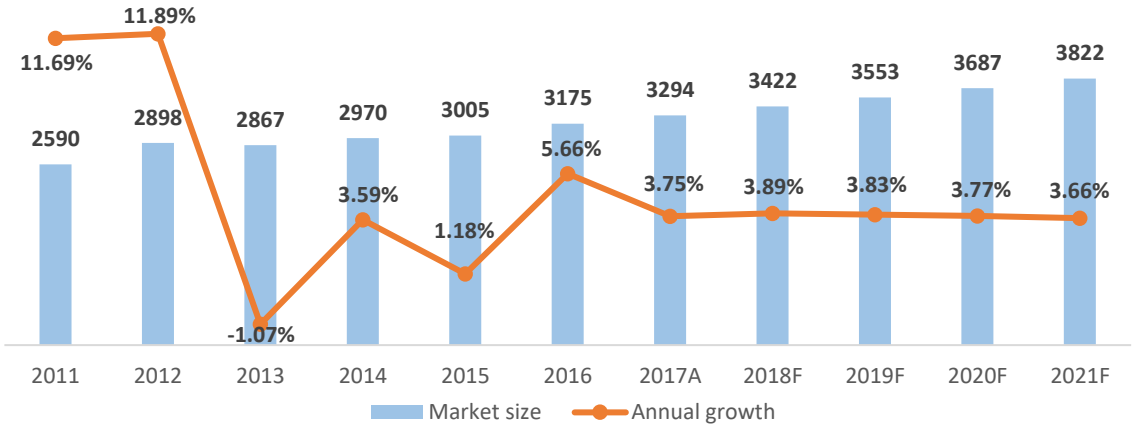
Most of sales are generated through stationary shops. However, they are expected to lose on importance for the benefit of online channel, that by 2021 should account for 25% of the market size. Over the past years, the average price per unit has been growing; by 2021 average price for athletic footwear is expected to converge with leather shoes, but not exceed it.

4.2.2 Polish footwear market

The Polish footwear market generated sales of €3,3 B in 2017 and is expected to grow at CAGR of 4,6% until 2021. A significant part of sales is generated through the offline channel, with only 12% of revenue coming from online sales. Nevertheless, this structure is expected to

significantly change in the upcoming years. Similar to the world trend, the highest average revenue per unit comes from athletic footwear, with leather footwear still remaining the biggest sector. The market is becoming increasingly consolidated, with 10 largest footwear companies generating over 50% of sales in the industry. Large players are expected to strengthen their position at the expense of smaller brands (PMR Overview of the clothing and footwear market in Poland, 2018).

Figure 27: Footwear market in Poland, sales in m EUR (Statista, 2018)



4.2.3 Fashion market

In the next 5-10 years, retail trade is expected to go through some significant changes that will reshape the industry (CCC Investor Day Presentation). In order to determine which changes are going to be most influential, I conducted thorough research and conclusions are presented in this section.

Facing the possibility of global economic slowdown by 2020, the companies will turn more prudent and start to look more aggressively into opportunities to boost productivity compared to previous years (McKinsey: the State of Fashion, 2019).

The main catalyst for changes in the fashion industry is digitalization. Currently, digital media has surpassed TV to become the single largest media form among customers. Consumers are increasingly spending more time online, engaging with brands directly as well as following influencers and trendsetters. Going forward, digitalisation will become central not just to the way brands are marketed and sold, but also product design, plan merchandising and customer engagement (BCG Fashion Forward, 2017). The new trend emerges on the fashion market, where products are "pulled" into market, based on actual demand rather than "pushed" based on best-guesses and forecasts. Due to social media, trends are no longer established by retailers and producers but rather by consumers themselves. The companies are expected to develop

their IT systems and data analytics in order to be able to forecast future trends and respond to them quickly. As such, they should squeeze development and production timelines.

We can observe a significant change in the customer characteristics. They tend to be brand loyal and back their beliefs with their shopping habits, favouring brands that are aligned with their values and avoiding those that do not. With rising concern about environmental issues among young people, companies that have active stance on social issues and exhibit transparency and sustainability should be in favour in the competition for a customer (McKinsey: the State of Fashion, 2019).

Young customers, who grew up in the era of fast developing technology are impatient and desire to immediately purchase products they discover. Players will address this problem through shortening delivery time and improved availability of advertised products.

High rental costs and limited access to attractive retail space, as well as favourable online shopping conditions for the customer (possibility of return, complaints) should lead to a shift in the distribution channel and eventually to closures of significant number of stationary stores. Remaining physical stores are expected to evolve towards omnichannel facilities.

5. Valuation of CCC S.A.

Previous chapters provided a deep understanding of the target company, its competitive environment and prevailing macroeconomic trends. Upon this knowledge, we can approach now the task of valuation.

In the first step, an analyst should select appropriate valuation methods. Given that CCC is going concern (i.e. it is assumed that it will continue its operations in the foreseeable future), any asset-based valuation method should be discarded. Furthermore, the company is not engaged in the contracts that are subject to significant modification and optionality and as such, the real option valuation method is inappropriate as well.

I order to estimate the value of CCC, I decided to use both intrinsic value approach and relative valuation method.

Given that the target company is not highly levered and that the capital structure is not expected to undergo significant changes (and therefore can serve as the proxy for long-term), I decided not to use Adjusted Present Value method. Intrinsic Value has been estimated based on the DCF model, while using Free Cash Flow to the Firm.

Relative valuation has been performed based on the trading comparables method. This was built upon the premise that valuation is a forward-looking process and precedent transaction analysis would not be appropriate in this case (it would be useful for the M&A process to fully reflect the control premium paid).

All methods mentioned above have been presented in detail in Chapter 1 of this report.

5.1 Discounted Cash Flow Valuation

DCF valuation method is based on the projection of future cash flows for an explicit period, followed by the calculation of Terminal Value for the company in its stable, mature state. Therefore, by its very nature this method requires an analyst to define an appropriate forecast time period.

For the purpose of CCC valuation, FCFF have been projected for the explicit period of 7 years, assuming that the company will reach the steady state by 2025. This assumption rests on company's previous pace of growth, analysts' consensus regarding forecast period and management's assumptions for future development. In particular, a lot of attention was given to CAPEX levels and timing (by 2025 the company should complete its investment cycle), Working Capital management and long-term view on sales growth.

All projections have been made in April and May 2019, based on the latest available market data. As such, current official accounting data published by CCC referred to FY2018 closure that happened 31st December 2018. Long-term assumptions were supported with the information available to investors in form of presentations published by the company throughout FY2018.

Given that the forecast should reflect regular performance of the company, adjusted for non-recurring, one-time items or events, several adjustments to the accounts have been made. Data referring to discontinued activity has been adjusted backwards and excluded[1]. Furthermore, the entire impact of several acquisitions made in FY2018 has been removed from consolidated financial statements and added back in the EV-Equity bridge. Justification for this approach is the fact, that price paid for these acquisitions is stated as fair value and purchased companies could not be fully integrated until the financial year closure. All recent acquisitions are presented in the Appendix 7.

5.1.1 Revenue projection

Projection of revenue is of major importance in the DCF valuation, as very often subsequent lines are heavily dependent upon sales. For the purpose of CCC valuation, bottom-up approach has been used, while projecting sales separately from each business segment. As described in details in Chapter 3, CCC has three revenue streams: retail sales from stationary stores, e-commerce and wholesale.

Figure 28: Revenue forecast for CCC S.A. by business segment

Revenue	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Total	**1 963,10**	**2 183,00**	**2 969,80**	**3 938,10**	**4 236,83**	**5 942,72**	**7 217,60**	**8 608,81**	**9 965,88**	**11 126,37**	**12 049,44**	**12 762,95**
Reported (with discontinued activity)	*2 009,10*	*2 307,00*	*3 185,40*	*4 194,00*	*4 943,63*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Retail activity	**1 884,10**	**2 062,20**	**2 522,40**	**3 140,90**	**3 150,03**	**4 577,88**	**5 511,84**	**6 544,26**	**7 488,42**	**8 277,30**	**8 915,46**	**9 472,27**
Poland	*1 398,80*	*1 438,40*	*1 689,10*	*2 026,50*	*2 060,10*	*2 450,09*	*2 781,39*	*3 086,87*	*3 356,71*	*3 573,37*	*3 750,67*	*3 928,10*
CEE	*431,20*	*538,50*	*707,70*	*880,90*	*1 035,40*	*1 388,02*	*1 736,20*	*2 140,99*	*2 505,74*	*2 814,69*	*3 073,63*	*3 288,08*
Western Europe	*94,80*	*201,30*	*325,90*	*412,50*	*648,60*	*556,46*	*689,67*	*842,67*	*986,18*	*1 108,09*	*1 197,52*	*1 261,57*
Other countries	*5,30*	*8,00*	*15,30*	*76,90*	*112,73*	*183,30*	*304,58*	*473,74*	*639,80*	*781,15*	*893,65*	*994,52*
E-commerce	**0,00**	**0,00**	**286,80**	**605,70**	**977,30**	**1 270,49**	**1 651,64**	**2 064,55**	**2 477,46**	**2 849,07**	**3 133,98**	**3 290,68**
Wholesale	**78,20**	**118,30**	**158,70**	**190,80**	**108,90**	**94,35**	**54,12**	**0,00**	**0,00**	**0,00**	**0,00**	**0,00**

The wholesale segment is of minor importance (2,6% of total sales), has been shrinking over past years and management plans to completely shut it down in foreseeable future. Therefore, revenue from this segment has been forecasted to slow down and eventually vanish.

The e-commerce segment is a relatively new business division (full operating performance was reached in FY2016), however it has been growing at a rapid pace (84,6% CAGR). To project

[1] For this reason, numbers presented for FY2018 might differ from these presented in Chapter 3: Company Overview

future sales from this segment, a declining growth rate has been applied. In the steady state, revenue from this segment should reach 25% of total sales and 35% in relation to retail activity (management expectations).

Most attention was dedicated to stationary stores, as they currently constitute almost 80% of sales. For the projection of revenue from this channel, the multi-step process has been used.

First, the information about density of stores per 1 million inhabitants in the saturated markets (CCC Investor Day Presentation) has been obtained. Upon this knowledge and management's plan regarding future direction of international expansion, year-to-year increase in stationary stores number has been projected for each country where CCC is operating (or plans to operate). Relying on the average area per store and its expected long-term increase, the forecast for each year's growth in the commercial floor area has been made until year 2025 (presented in the Appendix 8).

Figure 29: Projection of new stores openings

Country	Inhabitants (in m)	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Note: In the right side of the table, number of stores in the past (2014 - 2018) and projection for the future have been presented (2019 - 2025).													
Poland	**38,43**	**405**	**410**	**436**	**448**	**466**	**476**	**487**	**497**	**506**	**514**	**521**	**527**
Ratio: stores per 1m of inabitants		*11*	*11*	*11*	*12*	*12*	*12*	*13*	*13*	*13*	*13*	*14*	*14*
Czech Republic	**10,68**	**79**	**79**	**82**	**88**	**93**	**97**	**100**	**103**	**105**	**106**	**107**	**107**
Ratio: stores per 1m of inabitants		*7*	*7*	*8*	*8*	*9*	*9*	*9*	*10*	*10*	*10*	*10*	*10*
Hungary	**9,77**	**57**	**61**	**69**	**73**	**76**	**81**	**85**	**89**	**92**	**95**	**97**	**98**
Ratio: stores per 1m of inabitants		*6*	*6*	*7*	*7*	*8*	*8*	*9*	*9*	*9*	*10*	*10*	*10*
Romania	**19,52**	**0**	**0**	**0**	**0**	**62**	**81**	**101**	**116**	**126**	**131**	**134**	**135**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*0*	*3*	*4*	*5*	*6*	*6*	*7*	*7*	*7*
Slovakia	**5,45**	**30**	**37**	**42**	**50**	**51**	**54**	**57**	**60**	**62**	**63**	**64**	**65**
Ratio: stores per 1m of inabitants		*6*	*7*	*8*	*9*	*9*	*10*	*10*	*11*	*11*	*12*	*12*	*12*
Austria	**8,86**	**17**	**27**	**39**	**45**	**49**	**55**	**62**	**70**	**77**	**83**	**87**	**89**
Ratio: stores per 1m of inabitants		*2*	*3*	*4*	*5*	*6*	*6*	*7*	*8*	*9*	*9*	*10*	*10*
Croatia	**4,1**	**8**	**13**	**20**	**23**	**25**	**30**	**35**	**39**	**43**	**46**	**48**	**49**
Ratio: stores per 1m of inabitants		*2*	*3*	*5*	*6*	*6*	*7*	*9*	*10*	*10*	*11*	*12*	*12*
Russia	**146,87**	**0**	**0**	**11**	**19**	**35**	**67**	**87**	**107**	**122**	**132**	**137**	**140**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*
Slovenia	**2,07**	**6**	**8**	**11**	**13**	**14**	**17**	**19**	**21**	**22**	**23**	**24**	**25**
Ratio: stores per 1m of inabitants		*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*11*	*12*	*12*
Bulgaria	**7,05**	**0**	**6**	**9**	**10**	**11**	**20**	**30**	**42**	**52**	**60**	**66**	**71**
Ratio: stores per 1m of inabitants		*0*	*1*	*1*	*1*	*2*	*3*	*4*	*6*	*7*	*9*	*9*	*10*
Serbia	**7,01**	**0**	**0**	**2**	**6**	**11**	**19**	**29**	**41**	**51**	**59**	**65**	**71**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*1*	*2*	*3*	*4*	*6*	*7*	*8*	*9*	*10*
Ukraine	**42,22**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**31**	**51**	**66**	**76**	**81**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*2*	*2*	*2*
Latvia	**1,92**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**12**	**16**	**20**	**23**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*4*	*6*	*8*	*10*	*12*
Lithuania	**2,79**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**10**	**20**	**28**	**33**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*4*	*7*	*10*	*12*
Estonia	**1,32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**12**	**15**	**16**
Ratio: stores per 1m of inabitants		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*2*	*6*	*9*	*11*	*12*
Total		**605**	**644**	**721**	**775**	**893**	**996**	**1 102**	**1 229**	**1 338**	**1 425**	**1 488**	**1 529**

Note: The number of new openings for Russia and Ukraine was estimated based on the openings in other countries from the region.
Explanation: population in these countries is significantly bigger than in the average country from the sample.

In the next step, average past revenue per one square meter has been calculated. This was performed separately for each geographical segment (Poland, CEE, WE, and other countries) to control for different target customer (high-end in more developed countries, low-end in developing countries). Looking forward, revenue per square meter is expected to growth in relation to growth in the real GDP, adjusted for inflation. In order to find exact relation, the correlation between the growth in retail sales volume and real GDP over last five years has been

calculated, while using data for 28 EU countries as proxy (Eurostat). This calculation yielded result of 0,75 and was used as the multiplying factor for the forecasted growth in sales (more details are presented in Figures 30 and 31)[2].

Figure 30: Projection for revenue generated per 1 square meter of commercial space

	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Average revenue per 1 square meter of commercial floor space								
Poland	7,21	7,55	7,83	8,11	8,41	8,73	9,04	9,36
CEE	5,14	5,37	5,58	5,80	6,02	6,26	6,50	6,76
Western Europe	21,35	14,85	15,26	15,73	16,24	16,76	17,28	17,80
Other countries	3,11	3,15	3,33	3,53	3,75	3,97	4,21	4,46
Projected growth in revenue per 1 squared meter of commercial floor space								
Poland	***5,43%***	***4,79%***	***3,70%***	***3,57%***	***3,70%***	***3,76%***	***3,55%***	***3,54%***
Real GDP growth rate	*5,10%*	*3,77%*	*2,38%*	*2,12%*	*2,08%*	*2,08%*	*2,06%*	*2,05%*
Adjusted for retail	*3,83%*	*2,83%*	*1,79%*	*1,59%*	*1,57%*	*1,56%*	*1,55%*	*1,54%*
Inflation	*1,60%*	*1,96%*	*1,91%*	*1,98%*	*2,13%*	*2,20%*	*2,00%*	*2,00%*
CEE (Czech Republic as proxy)	***4,35%***	***4,50%***	***4,02%***	***3,89%***	***3,88%***	***3,90%***	***3,89%***	***3,88%***
Real GDP growth rate	*2,91%*	*2,90%*	*2,69%*	*2,51%*	*2,50%*	*2,53%*	*2,52%*	*2,50%*
Adjusted for retail	*2,19%*	*2,18%*	*2,02%*	*1,89%*	*1,88%*	*1,90%*	*1,89%*	*1,88%*
Inflation	*2,16%*	*2,32%*	*2,00%*	*2,00%*	*2,00%*	*2,00%*	*2,00%*	*2,00%*
Western Europe (Germany as proxy)	***3,02%***	***1,90%***	***2,75%***	***3,07%***	***3,29%***	***3,21%***	***3,10%***	***2,98%***
Real GDP growth rate	*1,45%*	*0,75%*	*1,44%*	*1,50%*	*1,44%*	*1,30%*	*1,16%*	*1,00%*
Adjusted for retail	*1,09%*	*0,56%*	*1,08%*	*1,13%*	*1,08%*	*0,98%*	*0,87%*	*0,75%*
Inflation	1,93%	1,34%	1,67%	1,94%	2,21%	2,23%	2,23%	2,23%
Other countries (Serbia as proxy)	***5,09%***	***4,98%***	***5,97%***	***6,01%***	***6,01%***	***6,01%***	***6,01%***	***6,01%***
Real GDP growth rate	*4,00%*	*3,50%*	*4,00%*	*4,00%*	*4,00%*	*4,00%*	*4,00%*	*4,00%*
Adjusted for retail	*3,01%*	*2,63%*	*3,01%*	*3,01%*	*3,01%*	*3,01%*	*3,01%*	*3,01%*
Inflation	*2,08%*	*2,35%*	*2,96%*	*3,00%*	*3,00%*	*3,00%*	*3,00%*	*3,00%*

Figure 31: Correlation between growth in the Retail Sales Trade Volume and Real GDP (Eurostat, 2019)

Relation: Retail Sales - Real GDP growth	**2014**	**2015**	**2016**	**2017**	**2018**
Growth in the Retail Sales Trade Volume (28 EU countries)	1,90%	3,41%	2,60%	2,63%	2,09%
Growth in the Real GDP (28 EU countries)	1,80%	2,30%	2,00%	2,40%	2,00%
Correlation: 75,17%					

In the last step, the growth in sales has been controlled for the time lag needed for new stores to reach full operating performance. Revenue per square meter generated in the first year of new stores' activity has been compared with old stores (this was based on the number of closures and openings of new stores, like-for-like sales of existing stores and attributable revenue to new stores). Based on this procedure, it turned out that new stores generate on average at least the same revenue per square meter as the old stores and as such the projection does not require further adjustments.

5.1.2 Operating expenses: COGS and SG&A

In line with the business model, by far the biggest part of COGS is composed of purchase of goods sold. Forecast for this line has been made based on its percentage share in revenue, decreasing by 2 percentage points when CCC reaches steady state (management assumption

[2] Proxies for forecast: CEE – Czech Republic, WE – Austria, Other countries - Serbia

from CCC Investor Day Presentation). Such a decrease should be feasible due to investments in the new IT and logistics systems, which should yield significant improvements in sales projections and orders placement and processing. Remaining components of COGS are costs of manufacturing and inventory write-downs; however, their share is rather minor and their forecasts were also made as percentage of revenue.

Figure 32: Projection of Cost of sales (COGS)

Cost of sales (COGS)	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Total	**-883,58**	**-989,12**	**-1 414,65**	**-1 934,30**	**-2 135,40**	**-3 082,42**	**-3 700,09**	**-4 361,29**	**-4 998,57**	**-5 524,55**	**-5 982,40**	**-6 336,14**
Cost of purchase of goods sold	-672,80	-848,50	-1 245,60	-1 744,90	-2 007,60	-2 793,08	-3 356,18	-3 960,05	-4 534,48	-5 006,87	-5 422,25	-5 743,33
adjusting for discontinued activity	*19,32*	*52,08*	*90,55*	*109,80*	*90,10*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*
Cost of manufacturing goods sold	*-230,10*	*-186,30*	*-253,50*	*-299,50*	*-209,00*	*-279,31*	*-332,01*	*-387,40*	*-448,46*	*-500,69*	*-542,22*	*-574,33*
Write-down on inventories	0,00	-6,40	-6,10	0,30	-8,90	-10,04	-11,90	-13,85	-15,63	-17,00	-17,93	-18,47
In % of sales	**-45,01%**	**-45,31%**	**-47,63%**	**-49,12%**	**-50,40%**	**-51,87%**	**-51,26%**	**-50,66%**	**-50,16%**	**-49,65%**	**-49,65%**	**-49,64%**
Adjusted Cost of purchase of goods sold	-34,27%	-38,87%	-41,94%	-44,31%	-47,38%	-47,00%	-46,50%	-46,00%	-45,50%	-45,00%	-45,00%	-45,00%
Cost of manufacturing goods sold	-11,72%	-8,53%	-8,54%	-7,61%	-4,93%	-4,70%	-4,60%	-4,50%	-4,50%	-4,50%	-4,50%	-4,50%
Write-down on inventories	0,00%	-0,94%	-0,60%	0,02%	-0,49%	-0,40%	-0,40%	-0,40%	-0,40%	-0,40%	-0,40%	-0,40%

The company has reported each year average SG&A expenses per 1 square meter, with attributable share to cost of operating stores, other cost of sale, administrative and e-commerce expenses. Using this data and projections regarding future increase in the commercial floor area, forecast for future SG&A expenses has been performed.

Figure 33: Projection of SG&A expenses

SG&A	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Total	**-816,34**	**-917,30**	**-1 169,42**	**-1 522,30**	**-1 986,70**	**-2 577,72**	**-3 099,31**	**-3 647,54**	**-4 173,57**	**-4 579,24**	**-4 851,08**	**-5 024,26**
In % of sales	*-41,58%*	*-42,02%*	*-39,38%*	*-38,66%*	*-46,89%*	*-43,38%*	*-42,94%*	*-42,37%*	*-41,88%*	*-41,16%*	*-40,26%*	*-39,37%*
Cost of operating stores	-631,90	-731,10	-931,30	-1 158,60	-1 446,10	-1 375,77	-1 654,15	-1 946,75	-2 227,50	-2 444,01	-2 589,10	-2 681,53
adjusting for discontinued activity	*26,07*	*65,56*	*114,45*	*188,70*	*182,40*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*
Other costs of sales	-144,90	-164,70	-292,70	-464,10	-694,80	-782,19	-940,47	-1 106,82	-1 266,44	-1 389,54	-1 472,03	-1 524,58
adjusting for discontinued activity	*8,11*	*20,39*	*35,59*	*10,70*	*31,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*
Administrative expenses	-76,80	-115,20	-109,00	-109,30	-196,10	-155,33	-186,76	-219,79	-251,49	-275,94	-292,32	-302,75
adjusting for discontinued activity	*3,08*	*7,76*	*13,54*	*10,30*	*7,90*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*
Adjusting for M&A	*0,00*	*0,00*	*0,00*	*0,00*	*129,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*
Adjusting for ecommerce	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*-264,43*	*-317,94*	*-374,17*	*-428,14*	*-469,75*	*-497,64*	*-515,40*
Total area of stores (in m2)	**258 076**	**302 673**	**367 588**	**435 227**	**554 059**	**678 712**	**803 503**	**940 899**	**1 055 071**	**1 134 905**	**1 185 077**	**1 217 728**
Average area of stores throughout the year	n/a	280 375	335 131	401 408	494 643	616 386	741 107	872 201	997 985	1 094 988	1 159 991	1 201 402
SG&A costs per 1 square meter												
Costs of operating stores	*n/a*	*n/a*	*205,00*	*203,75*	*186,00*	*186,00*	*186,00*	*186,00*	*186,00*	*186,00*	*186,00*	*186,00*
Other cost of sale	*n/a*	*n/a*	*63,75*	*94,50*	*105,75*	*105,75*	*105,75*	*105,75*	*105,75*	*105,75*	*105,75*	*105,75*
Administrative expenses	*n/a*	*n/a*	*24,25*	*21,00*	*21,00*	*21,00*	*21,00*	*21,00*	*21,00*	*21,00*	*21,00*	*21,00*

5.1.3 Other costs and revenue

This line of the IS was in the past composed mainly of one-time items: gains or losses on disposal of assets, impairment charges or accounting gain from bargain acquisition of another company. Furthermore, in the long-run other costs and revenue have balanced each other. Given this information any by their very nature of non-recurring events, this line has been projected looking forward as zero.

5.1.4 Tax liability: taxes paid and tax rate

In the past, tax paid was subject to significant variation as the result of the creation and subsequently utilization of significant-size deferred tax asset. However, since FY2017 this line

has been stabilizing and starts to reflect the current, truly operating-related tax liability. The company provides investors with the weighted average tax rate used, which did not change much in the last few years and should serve as a good proxy for forward-looking operations.

Figure 34: Weighted average income tax rate – past data and projections

Income Tax	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Poland	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%
Czech republic	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%
Hungary	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%	10,00%
Slovakia	23,00%	23,00%	22,00%	22,00%	22,00%	22,00%	22,00%	22,00%	22,00%	22,00%	22,00%	22,00%
Other countries	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%	8,4%-25%
Weighted average income tax rate	**16,77%**	**18,56%**	**14,54%**	**17,99%**	**18,68%**	**18,68%**	**18,68%**	**18,68%**	**18,68%**	**18,68%**	**18,68%**	**18,68%**

5.1.5 Depreciation and Amortization (D&A)

D&A refers to intangibles, fixed assets and amortization of right to use stores resulting from implementation of IFRS16. Amortization of intangibles has minor value and has been assumed to be constant over the forecast period (reflecting renewal of licenses and patents owned by the company). Depreciation rate for fixed assets was calculated based on the average depreciation rate over the last five years, which in turn reflects the ratio of reported amortization expense in the Income Statement related to the value of the asset in the Balance Sheet. Detailed calculations are presented below. Impact of IFRS16 has been presented in the subsequent paragraph.

Figure 35: Forecast for D&A expense

Amortization & Depreciation	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
FCFF component	**-54,70**	**-69,60**	**-75,40**	**-97,10**	**-533,60**	**-536,93**	**-603,96**	**-668,93**	**-748,03**	**-789,92**	**-776,33**	**-751,14**
Intangibles	-2,00	-2,90	-3,10	-8,20	-8,50	-8,50	-8,50	-8,50	-8,50	-8,50	-8,50	-8,50
Fixed assets	-52,70	-66,70	-72,30	-88,90	-124,90	-146,31	-170,42	-197,84	-222,43	-242,07	-236,59	-246,01
MSSF16	0,00	0,00	0,00	0,00	-400,20	-382,13	-425,04	-462,58	-517,10	-539,35	-531,24	-496,62

Figure 36: Structure of D&A expenses by category of fixed assets

Fixed Assets: depreciation by category	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Investment in stores	*-19,50*	*-27,30*	*-43,80*	*-56,10*	*-83,00*	*-87,36*	*-104,06*	*-124,07*	*-141,24*	*-154,95*	*-164,88*	*-171,34*
Factory and distribution	*-17,30*	*-23,00*	*-17,30*	*-20,30*	*-24,40*	*-39,09*	*-46,50*	*-53,92*	*-61,33*	*-67,26*	*-71,71*	*-74,68*
Other tangible fixed assets	*-15,90*	*-16,40*	*-11,20*	*-12,50*	*-17,50*	*-19,86*	*-19,86*	*-19,86*	*-19,86*	*-19,86*	*0,00*	*0,00*
Total	**-52,70**	**-66,70**	**-72,30**	**-88,90**	**-124,90**	**-146,31**	**-170,42**	**-197,84**	**-222,43**	**-242,07**	**-236,59**	**-246,01**
In % terms (related to book value of given asset class)						**Average**						
Investment in stores	8,91%	8,89%	12,21%	14,27%	13,49%	11,56%						
Factory and distribution	8,11%	10,12%	6,87%	6,27%	5,71%	7,41%						
Other tangible fixed assets	17,93%	28,47%	16,21%	17,81%	17,21%	19,52%						

5.1.6 IFRS16 (leases)

IFRS 16 specifies how a company will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value (IAS plus). Although mandatory from 1st January 2019, CCC decided to implement it in FY2018, which had a significant impact on the cost of reported amortization.

In order to predict future amortization of the right to use the stores (previously reported as part of the rent cost), the value of new lease agreements from FY2018 has been compared with the number of new stores opened in that year to calculate the average cost of lease per new store. Also based upon data for FY2018, the amortization rate of 20% has been defined. Using previously estimated number of new stores, amortization for the explicit forecast period has been calculated. In order to control for the increase in the asset value resulting from the right to use, also change in the offsetting BS item in form of lease liability has been estimated. To do so, year-to-year change in the value of the right to use with explicit period of 7 years and implied effective rate of 1,71% (cost of lease) have been used to come up with the incremental change of the lease liability of 318,02m PLN. All calculations for this item are presented below.

Figure 37: IFRS16 implications and projections of lease liability (related to stores)

IFRS16: lease of stores	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
New contracts	677,70	592,13	608,78	729,39	626,01	499,66	361,82	235,47
New stores	118,00	103,10	106,00	127,00	109,00	87,00	63,00	41,00
Lease per store	**5,74**	**5,74**	**5,74**	**5,74**	**5,74**	**5,74**	**5,74**	**5,74**
Value of the right to use	**1 870,10**	**2 080,10**	**2 263,85**	**2 530,65**	**2 639,57**	**2 599,87**	**2 430,45**	**2 169,30**
% rate for amortization	*20,43%*	*20,43%*	*20,43%*	*20,43%*	*20,43%*	*20,43%*	*20,43%*	*20,43%*
Amortization		*-382,13*	*-425,04*	*-462,58*	*-517,10*	*-539,35*	*-531,24*	*-496,62*

Note: Rate of amortization calculated as amortization expense (463,9) over the value of right to use at the beginning of the year (2270,3)

*Amortization: year-end value of right to use * depreciation rate*

Value of right to use = previous year value + new contracts - amortization

NPV of the new lease liabilities (added to the value of company's debt): 318,02 PLN
Inputs for NPV calculation: N = 7 years, I/Y = 1,71%, FV = 0, CFs - changes in the value of right to use

5.1.7 FCFF Projection: CAPEX

Capital Expenditures comprise investments in stores (referring to the equipment of stationary stores) and fixed assets used in the production and logistics process (factory, warehouse, IT systems). The former has been forecasted based on the historical average CAPEX needed for one store and expected number of openings of new stores. The latter is based on the management investment schedule, presented in the investor presentation.

CAPEX has been adjusted for one-time expense related to acquisition of 30% stake in the HR Reno Group (German shoe retailer that will sell CCC products through its stores in place of discontinued activity in Germany). This acquisition will total 110m PLN and will take place in 2019.

Upon these projections, from 2023 amortization should start exceeding CAPEX. To control for this, adjustment converging these two lines has been made. Details of CAPEX and amortization schedule are presented below.

Figure 38: CAPEX projections

Amortization & Depreciation	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Fixed assets investments	**520,90**	**591,90**	**679,60**	**787,10**	**1 144,30**	**1 384,86**	**1 629,38**	**1 902,53**	**2 151,13**	**2 349,75**	**2 495,64**	**2 591,54**
Change	*n/a*	*71,00*	*87,70*	*107,50*	*357,20*	*240,56*	*244,52*	*273,15*	*248,61*	*198,61*	*145,89*	*95,90*
Investment in stores	**218,80**	**307,00**	**358,60**	**393,00**	**615,40**	**755,96**	**900,48**	**1 073,63**	**1 222,23**	**1 340,85**	**1 426,74**	**1 482,64**
Land, buildings and constructions	*95,20*	*155,10*	*182,00*	*219,50*	*311,00*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Machines and equipment	*60,60*	*69,80*	*67,40*	*68,60*	*103,60*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Tangible fixed assets in progress	*57,60*	*2,40*	*2,50*	*35,80*	*12,60*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
Factory and distribution	**213,40**	**227,30**	**251,90**	**323,90**	**427,20**	**527,20**	**627,20**	**727,20**	**827,20**	**907,20**	**967,20**	**1 007,20**
Other	**88,70**	**57,60**	**69,10**	**70,20**	**101,70**	**101,70**	**101,70**	**101,70**	**101,70**	**101,70**	**101,70**	**101,70**
Increase in intangibles	n/a	-0,60	175,20	-152,90	22,30	2,00	2,00	2,00	2,00	2,00	2,00	2,00
Capital expenditures on stores	n/a	88,20	51,60	34,40	222,40	140,56	144,52	173,15	148,61	118,61	85,89	55,90
Increase in fixed assets in production and logistics	n/a	13,90	24,60	72,00	103,30	100,00	100,00	100,00	100,00	80,00	60,00	40,00
Increase in other fixed assets	n/a	-31,10	11,50	1,10	31,50	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Total	**n/a**	**102,10**	**76,20**	**106,40**	**325,70**	**242,56**	**246,52**	**275,15**	**250,61**	**200,61**	**147,89**	**97,90**
Purchse of HR Reno Group	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*110,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*
CAPEX	***n/a***	***102,10***	***76,20***	***106,40***	***325,70***	***352,56***	***246,52***	***275,15***	***250,61***	***200,61***	***147,89***	***97,90***
Adjustment for Amortization	*0,00*	*0,00*	*0,00*	*0,00*	*0,00*	*87,76*	*67,60*	*68,80*	*19,67*	*-49,96*	*-97,20*	*-156,62*
Adjusted CAPEX	**n/a**	**102,10**	**76,20**	**106,40**	**325,70**	**242,56**	**246,52**	**275,15**	**250,61**	**250,57**	**245,09**	**254,51**

Note: average cost per 1 new store: 1,36m PLN

5.1.8 Changes in Net Working Capital

Working Capital Level has significant impact on the performance of any company operating in the retail industry. Long-term aim of CCC management is to significantly reduce it, mainly through significant stretching of trade liabilities and reduction of inventory levels (as compared to level of sales).

Figure 39: Projection of changes in Net Working Capital

Working Capital	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Total NWC	**898,80**	**913,90**	**921,30**	**1 296,60**	**1 139,00**	**1 394,89**	**1 520,99**	**1 628,87**	**1 664,95**	**1 629,43**	**1 519,99**	**1 342,74**
Trade receivables	35,90	51,30	89,30	95,70	124,40	165,87	201,45	240,28	278,15	310,54	336,31	356,22
Other receivables	42,10	54,50	98,20	155,40	306,40	415,99	469,14	516,53	548,12	556,32	602,47	638,15
Inventory	741,30	680,50	1 019,70	1 417,70	1 806,10	2 495,94	2 959,22	3 443,52	3 886,69	4 228,02	4 458,29	4 594,66
Trade liabilities	99,80	78,10	174,30	235,80	864,20	1 309,83	1 650,92	2 043,23	2 458,88	2 853,51	3 244,49	3 608,15
Other liabilities	81,50	100,40	137,60	166,60	274,30	386,28	451,10	516,53	573,04	611,95	632,60	638,15
Deferred tax asset (liability)	260,80	306,10	26,00	30,20	40,60	13,20	-6,80	-11,70	-16,10	0,00	0,00	0,00
Change in Net Working Capital	n/a	**15,10**	**7,40**	**375,30**	**-157,60**	**255,89**	**126,10**	**107,88**	**36,08**	**-35,52**	**-109,44**	**-177,25**

Trade receivables have been projected based on the past average Days Sales Outstanding. In order to keep conservative approach, DSO is projected to remain constant over the explicit forecast period. This relies on the fact that this number is already low and most of the sales are paid at the moment of the purchase.

Inventory level has been calculated as the percentage of revenue. It is expected to drop by 1 percentage point per year until the steady state as the result of significant improvements in the inventory management systems, such as implementation of the Artificial Intelligence, which should help to better match customers' preferences and reduce average inventory levels.

Trade Payables have significantly increased in FY2018 (+267%). This is result of the management's strategy aiming to improve the Working Capital Management. CCC is able to stretch their trade payables as most of their suppliers are located in the low-cost Asian countries and heavily dependent on company's orders. The ultimate goal of the management is to fully finance inventory with trade payables. Although theoretically feasible, it is a very aggressive

assumption. Therefore, the projection for this line assumed that in the steady state trade payables will finance roughly 80% of the inventory, leaving space for a potential divergence from the plan (e.g. as the result of increasing labour costs or unexpected FX rate changes).

Other receivables and liabilities have been projected looking-forward as the percentage of the revenue, based on their past share (7,23% and 6,47%) and expected to slightly decrease as the result of improved efficiency. Nevertheless, their impact on the FCFF is not significant as they mostly balance each other, thus resulting in net change equal to zero.

Figure 40: NWC – supplementary information

NWC: supplementary information	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Days Sales Outstanding (DSO)	6,67	8,58	10,98	8,87	10,72	10,19	10,19	10,19	10,19	10,19	10,19	10,19
Receivables turnover	*54,68*	*42,55*	*33,26*	*41,15*	*34,06*	*35,83*	*35,83*	*35,83*	*35,83*	*35,83*	*35,83*	*35,83*
Days Inventory on Hand (DIH)	306,23	251,11	263,10	267,52	308,71	295,55	291,92	288,19	283,81	279,34	272,01	264,68
Inventory turnovoer	*2,65*	*3,21*	*2,91*	*2,78*	*2,35*	*2,38*	*2,44*	*2,50*	*2,56*	*2,63*	*2,70*	*2,78*
Days Payables Outstaning (DPO)	-41,23	-28,82	-44,97	-44,50	-147,72	-155,10	-162,86	-171,00	-179,55	-188,53	-197,95	-207,85
Payables turnover	*6,55*	*10,20*	*6,63*	*6,93*	*2,22*	*2,13*	*2,03*	*1,94*	*1,84*	*1,75*	*1,67*	*1,59*
Cash Conversion Cycle (CCC)	**271,67**	**230,87**	**229,10**	**231,89**	**171,71**	**150,64**	**139,25**	**127,38**	**114,45**	**101,00**	**84,24**	**67,02**
Inventory/revenue	*37,76%*	*31,17%*	*34,34%*	*36,00%*	*42,63%*	*42,00%*	*41,00%*	*40,00%*	*39,00%*	*38,00%*	*37,00%*	*36,00%*
Other receivables/other liabilities	*0,52*	*0,54*	*0,71*	*0,93*	*1,12*	*1,08*	*1,04*	*1,00*	*0,96*	*0,91*	*0,95*	*1,00*
Other receivables/revenue	*2,14%*	*2,50%*	*3,31%*	*3,95%*	*7,23%*	*7,00%*	*6,50%*	*6,00%*	*5,50%*	*5,00%*	*5,00%*	*5,00%*
Other liabilities/revenue	*4,15%*	*4,60%*	*4,63%*	*4,23%*	*6,47%*	*6,50%*	*6,25%*	*6,00%*	*5,75%*	*5,50%*	*5,25%*	*5,00%*
Deferred tax assets/liability	**260,80**	**306,10**	**26,00**	**30,20**	**40,60**	**13,20**	**-6,80**	**-11,70**	**-16,10**	**0,00**	**0,00**	**0,00**
Deferred tax asset	267,30	312,50	60,10	63,40	74,80	41,80	19,80	12,90	4,50	0,00	0,00	0,00
Deferred tax liability	6,50	6,40	34,10	33,20	34,20	28,60	26,60	24,60	20,60	0,00	0,00	0,00

5.1.9 Cost of capital

As described in Chapter 1, FCFF should be discounted with Weighted Average Cost of Capital in order to reflect the risk of both equity investors as well as debt providers.

5.1.9.1 Cost of equity

Cost of equity for CCC has been derived based on the Capital Asset Pricing Model (CAPM). Computation of all composites of the model are described in detail below.

5.1.9.1.1 Risk-free rate

As the proxy for risk-free rate, yield on long-term (10-year maturity) Polish government bond has been used. Although rating of Poland (A-) implies a slight risk of possible default it is still investment-grade, government-backed security and as such can be perceived as risk-free. Moreover, over 50% of target's revenue is generated in Poland, its headquarters and most of the assets are located in this country and the use of other country's bond would not be coherent. Further, Polish debt is denominated in PLN and no other country in the world issues its sovereign debt in this currency.

Yield on 10-year Polish Government Bond: 3.036% (Bloomberg).

5.1.9.1.2 Beta

CCC is listed on the Warsaw Stock Exchange, which is developed, regulated and highly liquid equity market. Therefore, backwards-looking beta has been calculated as the regression on the monthly returns on CCC stock and WIG (broad index of WSE) for the period of recent five years. Obtained value equals 1,520, meaning that return on the CCC stock is relatively more volatile than the market, which is coherent with the breadth of standard deviation of returns (Appendices 9 and 10).

5.1.9.1.3 Market Risk Premium

Market Risk Premium (also sometimes denoted as Equity Risk Premium) should reflect the implied return on the market over the risk-free rate. In the first step, annualized return on the WIG index for the past years has been calculated and adjusted by the yield on the government risk-free security matching this period. Obtained value equalled 6.015%. Nevertheless, valuation is a forward-looking process, and therefore this value is rather meaningless in this context and can only serve as the sanity check for the forward-looking MRP. For the purpose of valuation, MRP from A. Damodaran's database for Poland has been used, that is equal to 7,14%. This value is in line with Ibbotson suggested MRP of 7,11%, StarMine ERP of 6,93% and slightly exceeds backwards-looking MRP, assuring that there is no significant divergence in its usage.

5.1.9.1.4 Market Value of Equity

Given that accounting data used for the purpose of valuation refer to the closure of FY2018 on the 31st December 2018, closing share price on that day (193,3 PLN) and number of shares outstanding (41,168m) have been used to calculate market value of Equity. Derived MV of CCC stock was equal to 7957m PLN.

5.1.9.2 Cost of debt

Cost of debt for CCC has been calculated as the weighted average of costs for single composites of company's indebtedness. All details are presented in separate sections below.

5.1.9.2.1 Structure of debt and market value of debt

CCC debt structure is composed of bank debt, bonds and lease liabilities (resulting from IFRS16). Over the last years, the company has successfully extinguished its long-term bank debt, and as of 31st December 2018 had only short-term and current account bank loans. Therefore, it can be assumed that interest paid on these borrowings reflects its current cost.

Furthermore, in 2018 the company repurchased and reissued all of its bonds, which implies that book value of bonds as of the end of FY2018 should also reflect its market value. Current yield on the bonds (3,09%) is very close to the interest paid recorded in the IS and is subsequently treated as cost of this form of borrowing.

Structure, value and cost of leases have been described in a separate section before. The value of lease liabilities has been estimated to 2227m PLN with the cost of 1,71%.

Obtained MV of debt equalled to 3244m PLN, with weighted cost of debt equal to 3,48%. All details are presented in the table below.

Figure 41: Cost of debt by category

Cost of debt	2014	2015	2016	2017	2018
Structure of debt by category					
Bank debt liabilities	**368,00**	**508,80**	**585,50**	**707,10**	**800,00**
Non-current	*6,00*	*86,00*	*156,00*	*226,00*	*0,00*
Current	*252,00*	*60,00*	*42,90*	*0,00*	*176,00*
In current account	*110,00*	*362,80*	*386,60*	*481,10*	*624,00*
Bonds payable	**210,00**	**210,00**	**210,00**	**210,00**	**216,80**
Total	**578,00**	**718,80**	**795,50**	**917,10**	**1 016,80**
Plus: IFRS16 Lease liabilities	*0,00*	*0,00*	*0,00*	*0,00*	*1 909,20*
Plus: NPV of new leases	*0,00*	*0,00*	*0,00*	*0,00*	*318,02*
Total	**578,00**	**718,80**	**795,50**	**917,10**	**3 244,02**
Weighted structure of debt					
Non-current debt liabilities	1,04%	11,96%	19,61%	24,64%	0,00%
Current debt liabilities	43,60%	8,35%	5,39%	0,00%	17,31%
Debt liabilities in current account	19,03%	50,47%	48,60%	52,46%	61,37%
Bonds	36,33%	29,22%	26,40%	22,90%	21,32%
Total	**100,00%**	**100,00%**	**100,00%**	**100,00%**	**100,00%**
Cost of debt by category					
Non-current bank debt liabilities	n/a	-2,83%	-2,40%	-2,88%	0,00%
Current bank debt liabilities	n/a	-3,08%	-0,97%	-11,66%	-5,91%
In current account bank debt liabilitie	n/a	-1,52%	-2,91%	-3,73%	-2,90%
Bonds payable	n/a	-3,38%	-3,24%	-3,29%	-3,09%
Weighted cost of debt					
Non-current debt liabilities	n/a	-0,34%	-0,47%	-0,71%	0,00%
Current debt liabilities	n/a	-0,26%	-0,05%	0,00%	-1,02%
Debt liabilities in current account	n/a	-0,77%	-1,41%	-1,96%	-1,78%
Bonds	n/a	-0,99%	-0,85%	-0,75%	-0,68%
Total	**n/a**	**-2,35%**	**-2,79%**	**-3,42%**	**-3,48%**

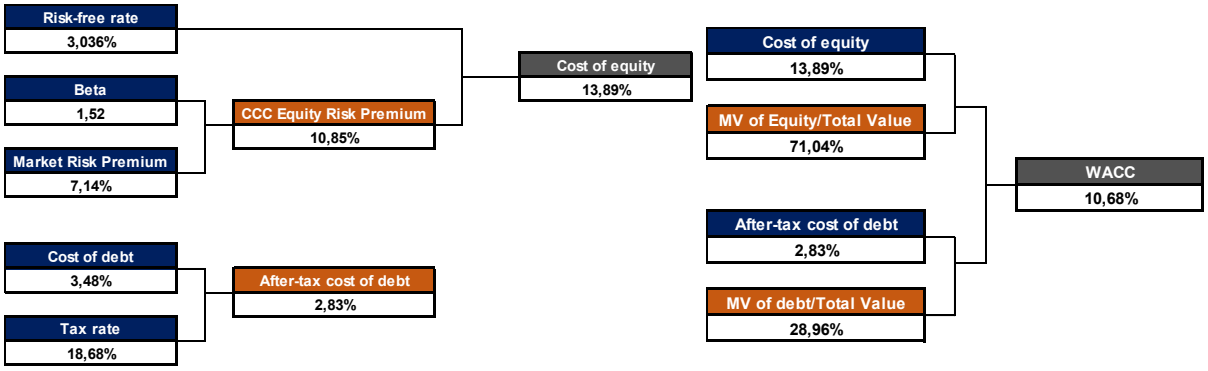
5.1.9.3 Calculation of WACC

Based on the process described above, MV and cost of equity as well as MV of debt and its cost were calculated. They were used as inputs to calculate Weighted Average Cost of Capital for CCC.

Tax rate used to calculate after-tax cost of debt was equal to 18,68% and obtained from the Management's report as the weighted average tax rate from the countries of Group's operations.

Obtained WACC value is equal to: **10,68%**.

Figure 42: Detailed derivation of WACC



5.1.10 Terminal Value

In the DCF model, most of the value is assigned to Terminal Value, which should reflect the performance of target in the steady state. TV for CCC resulting from implemented valuation model is equal to 11812m PLN, which constitutes 72,32% of the entire EV value and was calculated based on the assumptions presented below.

Figure 43: Terminal Value calculation

Real GDP long-term growth rate (OECD data):	1,22%
Expected inflation rate (ECB estimates)	2,00%
Nominal long-term GDP growth rate	3,22%
Retail adjusted Long-term growth rate	**2,92%**
Terminal FCFF	**1 814,44**
Perpetual growth rate	**2,92%**
WACC	**10,68%**
r - g	**7,77%**
Estimated Terminal Value	**24 039,77**
PV of Terminal Value	**11 812,73**

5.1.10.1 Perpetual growth rate

In order to reflect long-term perspective, estimated real GDP value for Poland covering period of 2019 to 2060 has been retrieved from OECD database. Following, CAGR has been calculated (1,22%) and adjusted for the correlation with change in retail trade volume (0,75 calculated before). Finally, the long-term estimation of inflation (European Central Bank) equal to 2% has been added. This gave the result of adjusted long-term growth rate equal to 2,92%.

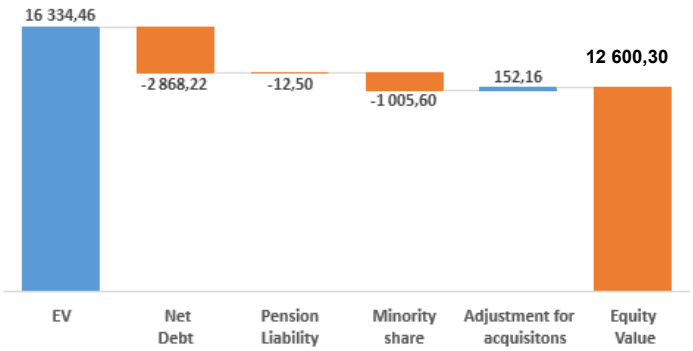
5.1.11 DCF Value

Based on the projection of FCFF, discounted with WACC of 10,68% and TV of 11812m PLN, estimated Enterprise Value for CCC is equal to: 16334m PLN. This has been adjusted in the EV – Equity bridge to control for the Fair Value of recent acquisitions (152m PLN), net debt

(2868mPLN), non-controlling interest liabilities (1005m PLN) and underfunded pension plans (12m PLN). All these steps are presented on the graph below.

Figure 44: Enterprise Value – Equity bridge

Enterprise Value	**16 334,46**
(-) Net Debt	**2 868,22**
Market Value of Debt	3 244,02
Cash	375,80
(-) Pension Plan Liability	**12,50**
(-) Minority share adjustments	**1 005,60**
Obligation: purchase of non-controlling	878,70
Non-controlling interest	126,90
(+) Adjustment for acquisitons	**152,16**
Adler International Sp. Z o.o. Sp. K.	77,00
Karl Voegle AG	37,13
DeZee Sp. Z o.o.	13,00
HR Reno Group	25,03
(=) Equity Value	**12 600,30**
# of shares outstanding (in million)	41,17
Value per share	**306,07**



Ultimately, Equity Value was equal to 12600m PLN and divided by the number of shares outstanding resulted in the share price of 306,07 PLN.

Figure 45: FCFF historical values and projections for CCC S.A.

FCFF Calculation	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Revenue	**1 963,1**	**2 183,0**	**2 969,8**	**3 938,1**	**4 236,8**	**5 942,7**	**7 217,6**	**8 608,8**	**9 965,9**	**11 126,4**	**12 049,4**	**12 763,0**
COGS	-883,6	-989,1	-1 414,6	-1 934,3	-2 135,4	-3 082,4	-3 700,1	-4 361,3	-4 998,6	-5 524,6	-5 982,4	-6 336,1
Gross Profit	**1 079,5**	**1 193,9**	**1 555,2**	**2 003,8**	**2 101,4**	**2 860,3**	**3 517,5**	**4 247,5**	**4 967,3**	**5 601,8**	**6 067,0**	**6 426,8**
SG&A	-816,3	-917,3	-1 169,4	-1 522,3	-1 986,7	-2 577,7	-3 099,3	-3 647,5	-4 173,6	-4 579,2	-4 851,1	-5 024,3
Other Cost & Revenue	-9,4	1,9	26,2	-18,7	118,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0
EBIT	**253,8**	**278,5**	**411,9**	**462,8**	**233,0**	**282,6**	**418,2**	**600,0**	**793,7**	**1 022,6**	**1 216,0**	**1 402,6**
Tax rate	*16,77%*	*18,56%*	*14,54%*	*17,99%*	*18,68%*	*18,68%*	*18,68%*	*18,68%*	*18,68%*	*18,68%*	*18,68%*	*18,68%*
Tax on EBIT	*42,6*	*51,7*	*59,9*	*83,3*	*43,5*	*52,8*	*78,1*	*112,1*	*148,3*	*191,0*	*227,1*	*262,0*
NOPAT (EBIAT)	**211,2**	**226,8**	**352,0**	**379,5**	**189,5**	**229,8**	**340,1**	**487,9**	**645,5**	**831,6**	**988,8**	**1 140,6**
in % of Revenue	*10,8%*	*10,4%*	*11,9%*	*9,6%*	*4,5%*	*3,9%*	*4,7%*	*5,7%*	*6,5%*	*7,5%*	*8,2%*	*8,9%*
Depreciation & Amortization	-54,7	-69,6	-75,4	-97,1	-533,6	-536,9	-604,0	-668,9	-748,0	-789,9	-776,3	-751,1
CAPEX	n/a	102,1	76,2	106,4	325,7	352,6	246,5	275,1	250,6	250,6	245,1	254,5
Changes in Net Working Capital	n/a	15,1	7,4	375,3	-157,6	255,9	126,1	107,9	36,1	-35,5	-109,4	-177,3
FCFF	**265,9**	**179,2**	**343,8**	**-5,1**	**555,0**	**158,3**	**571,4**	**773,8**	**1 106,8**	**1 406,4**	**1 629,5**	**1 814,4**
Discounting factor	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*1,11*	*1,23*	*1,36*	*1,50*	*1,66*	*1,84*	*2,04*
Discounted FCFF	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**143,0**	**466,4**	**570,7**	**737,5**	**846,7**	**886,3**	**891,6**

5.1.12 Sensitivity analysis

Keeping in mind that FCFF valuation is subject to a wide range of subjective assumptions, value obtained in the DCF model has been tested for sensitivity to change in the key inputs. Two factors that influence valuation at most are WACC and perpetual growth rate. They have been tested for the incremental changes of 0,25 percentage point, ranging from -1 to +1 percentage point. Result of the sensitivity analysis is presented below.

Figure 46: Sensitivity analysis for changes in WACC and long-term growth rate (g)

	Weighted Average Cost of Capital (WACC)								
g	**9,68%**	**9,93%**	**10,18%**	**10,43%**	**10,68%**	**10,93%**	**11,18%**	**11,43%**	**11,68%**
1,92%	327,17	311,83	297,43	283,91	271,18	259,17	247,84	237,12	226,97
2,17%	338,03	321,87	306,74	292,55	279,22	266,67	254,83	243,66	233,09
2,42%	349,64	332,58	316,65	301,73	287,75	274,60	262,22	250,56	239,54
2,67%	362,08	344,04	327,22	311,51	296,80	283,01	270,05	257,85	246,34
2,92%	375,43	356,30	338,51	321,94	**306,07**	291,95	278,35	265,57	253,54
3,17%	389,82	369,48	350,62	333,08	316,73	301,46	287,17	273,76	261,16
3,42%	405,35	383,67	363,61	345,02	327,73	311,61	296,55	282,46	269,24
3,67%	422,17	398,99	377,61	357,84	339,50	322,45	306,56	291,72	277,82
3,92%	440,46	415,58	392,72	371,64	352,15	334,07	317,26	301,59	286,95

5.2 Relative valuation: comparable companies

For the purpose of relative valuation, proper peer group reflecting characteristics of the target company should be created. This task proved to be challenging for CCC, as company's main competitors are not listed (e.g. Deichmann, ECCO, ANWR Group or Vivarte) and hence valuation using trading multiples is by definition not possible for them. Nevertheless, after thorough research, a core and broad peer group for CCC has been created and details for the process of their selection are presented in the subsequent sections.

5.2.1 Selected Peer Group

In order to identify companies that closest reflect characteristics of CCC, several metrics have been used. A key factor was business model, i.e. retail sales of shoes (or possibly clothes and apparel) through chain of stationary stores, e-commerce platform or both of them. Furthermore, the geographical footprint was taken into consideration: a prime focus was given to companies whose revenue is mostly generated in Poland, preferably with international presence focused on the Central-Eastern Europe. As such, these companies should be exposed to the same key operating risks and revenue drivers as CCC.

Given limited amount of listed companies with characteristics described above, financial and profitability metrics were of secondary importance. To control for difference in size, obtained multiples were weighted by companies' market capitalization.

Nevertheless, the Warsaw Stock Exchange is relatively small and therefore there is only limited number of close comparables to CCC. To overcome these limitations, the analysis has been extended to broad group of peers, including companies that have the same business model as

CCC but operate in different markets (e.g. North America, Western Europe) or have wider range of products. A list containing pre-selected comparable companies is presented below.

Figure 47: Broad list of comparable companies before final selection

	Name	Ticker	Country	Clothing retail industry	Footwear subsector	Main focus on Poland (or CEE)	Forward-looking data available	Selected for peer group
Target	**CCC**	**CCC**	**Poland**	✓	✓	✓	✓	✓
1	Vistula	VST	Poland	✓	✗	✓	✓	✓
2	LPP	LPP	Poland	✓	✗	✓	✓	✓
3	Monnari	MON	Poland	✓	✗	✓	✓	✓
4	Wojas	WOJ	Poland	✓	✓	✓	✗	✗
5	Prima Moda	PMA	Poland	✓	✗	✓	✗	✗
6	Wittchen	WTN	Poland	✓	✗	✓	✗	✗
7	Protektor	PRT	Poland	✓	✓	✓	✗	✗
8	Steven Madden Ltd	SHOO	USA	✓	✓	✗	✓	✓
9	Shoe Zone PLC	SHOE	UK	✓	✓	✗	✓	✓
10	Foot Locker Inc	FL	USA	✓	✓	✗	✓	✓
11	Genesco Inc	GCO	USA	✓	✓	✗	✓	✓
12	Wolverine World Wide Inc	WWW	USA	✓	✓	✗	✓	✓
13	Basic Net SpA	BAN	Italy	✓	✓	✗	✓	✓
14	Shoe Carnival Inc	SCVL	USA	✓	✓	✗	✓	✓
15	Skechers USA	SKX	USA	✓	✓	✗	✓	✓
16	Superdry PLC	SDRY	UK	✓	✗	✗	✓	✓
17	Zalando	ZAL	Germany	✓	✓/✗	✗	✓	✗
18	NEXT PLC	NXT	UK	✓	✓	✗	✓	✗
19	Adidas AG	ADS	Germany	✓	✓/✗	✗	✓	✗
20	Puma AG	PUM	Germany	✓	✓/✗	✗	✓	✗
21	Nike Inc	NKE	USA	✓	✓/✗	✗	✓	✗

This list has been subject to further adjustments. Since valuation is a forward-looking process, critical was the availability of future expected multiples. For some companies they turned to be unavailable and discarded them from further analysis. Furthermore, companies whose main revenue stream does not come from shoes retail have been excluded as well. Finally, selected peers were divided into 2 groups: Tier 1, including only comparable companies listed in Poland, Tier 2 representing only companies from the same industry but operating worldwide (without focus given to Poland or CEE) and overall group combining both. This selection is presented in the appendices 11, 12 and 13.

5.2.2 Multiples chosen

For the purpose of valuation, following multiples have been chosen: EV/Sales, EV/EBITDA and P/E.

The first one (EV/Sales) has significant relevance in the retail industry, as it reflects company's ability to generate sales. Underlying motivation is the fact that companies from this sector operate on average at lower margins than industrial or technological companies and their costs are strongly dependent upon level of sales.

The second multiple (EV/EBITDA) is widely used standard for companies' valuation. It is independent from company's capital structure and is a rough proxy for operating cash-flow. Moreover, it is particularly useful in retail industry, as it removes effect of depreciation and amortization and as such allows to compare companies that already have introduced IFRS16 and those who have not.

The last one (P/E) is vulnerable to accounting policies and capital structure. Nevertheless, it has been used for two reasons: to compare its results with valuation using EV multiples and to control for market's expectations regarding future growth potential (companies with better expectations should trade at higher P/E multiple).

5.2.3 Valuation

Obtained multiples have been weighted by the market capitalization of the company used. As presented in the tables below, they differed significantly between the Tiers. By far, the most representative is Tier 1, that fully reflects conditions of the Polish market. Implied valuation for this group of peers ranged from 169 PLN to 220 PLN per share and was very close to the current market price of CCC share. Valuation based on the Tier 2 gave significantly lower values; however we should keep in mind that these companies are international conglomerates, usually operating in developed markets and will probably not reflect growth potential offered by fast-developing countries of CEE.

Figure 48: Relative valuation: multiples for selected peer group

	Metric	EV/EBITDA			EV/Sales			Price/Earnings		
	Year	2018A	2019F	2020F	2018A	2019F	2020F	2018A	2019F	2020F
Tier I	Weighted average	12,17	11,14	9,50	1,83	1,50	1,32	29,36	20,89	17,37
	Median	8,00	9,99	8,28	0,84	1,25	1,07	12,38	16,10	12,62
Tier II	Weighted average	9,79	9,36	8,87	1,44	1,35	1,29	15,74	13,51	12,26
	Median	7,15	6,58	6,11	0,84	0,78	0,72	13,55	12,81	12,00
Overall	Weighted average	10,08	9,55	8,96	1,47	1,36	1,29	17,10	14,44	12,99
	Median	9,10	7,65	6,73	1,05	0,89	0,76	14,23	12,70	11,93

Figure 49: Relative valuation: implied EV value

	Metric	EV/EBITDA			EV/Sales			Price/Earnings		
	Year	2018A	2019F	2020F	2018A	2019F	2020F	2018A	2019F	2020F
	Forecast for CCC	856,60	918,37	1 128,58	4 725,80	6 556,74	7 604,01	5,49	9,57	12,03
Tier I	Weighted average	10 428,24	10 226,20	10 723,09	8 649,59	9 810,16	10 024,22	161,19	199,93	208,91
	Median	6 852,80	9 169,87	9 338,97	3 969,67	8 163,15	8 098,27	67,97	154,03	151,76
Tier II	Weighted average	8 382,26	8 593,68	10 015,25	6 808,88	8 851,29	9 823,82	86,42	129,28	147,44
	Median	6 124,69	6 042,84	6 895,61	3 969,67	5 114,26	5 474,89	74,39	122,59	144,36
Overall	Weighted average	8 631,78	8 772,70	10 115,81	6 934,08	8 927,06	9 828,91	93,89	138,15	156,31
	Median	7 790,78	7 025,49	7 589,68	4 962,09	5 835,50	5 741,03	78,12	121,54	143,52

Figure 50: Price per share derived based on relative valuation

	Metric	EV/EBITDA			EV/Sales			Price/Earnings		
	Year	2018A	2019F	2020F	2018A	2019F	2020F	2018A	2019F	2020F
	Forecast for CCC	856,60	918,37	1 128,58	4 725,80	6 556,74	7 604,01	5,49	9,57	12,03
Tier I	Weighted average	213,01	208,10	220,17	169,80	198,00	203,19	161,19	199,93	208,91
	Median	126,16	182,44	186,55	56,13	157,99	156,41	67,97	154,03	151,76
Tier II	Weighted average	163,31	168,45	202,98	125,09	174,70	198,33	86,42	129,28	147,44
	Median	108,47	106,48	127,20	56,13	83,93	92,69	74,39	122,59	144,36
Overall	Weighted average	169,37	172,79	205,42	128,13	176,54	198,45	93,89	138,15	156,31
	Median	148,94	130,35	144,06	80,23	101,45	99,15	78,12	121,54	143,52

6. Comparison with Investment Bank

In this section comparison with an equity research report has been performed. Report used was issued by J.P. Morgan on the 25th of April 2019 and is based on reported data for FY2018. J.P. Morgan has issued an "overweight" recommendation (which is equal to a "buy" recommendation) with a target price of 274 PLN. This is an increase as compared to previous report issued on the 18th March 2019 with the target price of 250 PLN (+9,6%), resulting in the same recommendation (overweight). At the moment the latest report was issued, CCC shares traded at 230,20 PLN.

Although implication of this report is in line with valuation conducted in this thesis, i.e. it suggests that the stock of CCC S.A. is currently undervalued, target share price differs quite substantially (274 PLN vs 306,07 PLN). In order to identify reasons for this divergence, main assumptions between both valuations have been compared.

Figure 51: Comparison of assumptions with J.P. Morgan equity research report for CCC S.A.

	Valuation by J.P. Morgan	Valuation in this report
Estimated share price (PLN)	274.00	306.07
Recommendation	Overweight (Buy)	Buy
Explicit forecast period	Until 2028	Until 2025
Main valuation method	DCF	DCF
Complementary valuation method	Relative (Trading multiples)	Relative (Trading multiples)
WACC used	9.00%	10.68%
Assumed perpetual growth rate	3.50%	2.92%

The key 2 differences that have significant influence on valuation refer to WACC and perpetual growth rate used. At first glance it is a little striking that value obtained by the research team of J.P. Morgan is lower, while lower WACC (9,00% vs 10,68%) and higher perpetual growth rate (3,50%) would indicate contrary conclusion. In order to explain these differences, projections for FCF have been analyzed.

While projections for revenue and corresponding costs are also more optimistic in the report of J.P. Morgan, which in turn leads to higher NOPAT, main source of differences in valuation is located in the adjustments for D&A, CAPEX and NWC.

Figure 52: J.P. Morgan equity research report: projections for CCC

FCFF Calculation	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Revenue	6 666,00	8 238,00	9 709,00	11 068,00	12 175,00	13 271,00	14 332,00
EBIT	574,00	741,00	885,00	1 041,00	1 145,00	1 248,00	1 348,00
NOPAT	462,45	597,00	714,00	840,00	928,00	1 011,00	1 092,00
D&A	*170,00*	*190,00*	*210,00*	*230,00*	*234,00*	*238,00*	*242,00*
Change in NWC	*-59,00*	*166,00*	*-182,00*	*-169,00*	*-186,00*	*-202,00*	*-218,00*
CAPEX	*-229,00*	*-95,00*	*-110,00*	*-807,00*	*-234,00*	*-238,00*	*-242,00*
FCFF	**344,50**	**858,00**	**631,00**	**94,00**	**742,00**	**809,00**	**873,00**

Figure 53: FCFF components for CCC from performed analysis (for comparison purpose)

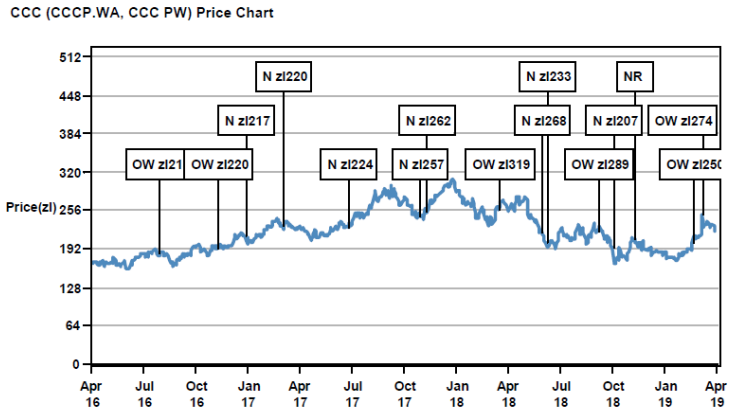
FCFF Calculation	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Revenue	5 942,72	7 217,60	8 608,81	9 965,88	11 126,37	12 049,44	12 762,95
EBIT	282,57	418,20	599,97	793,74	1 022,58	1 215,96	1 402,55
NOPAT	229,79	340,08	487,90	645,47	831,56	988,82	1 140,56
D&A	*536,93*	*603,96*	*668,93*	*748,03*	*789,92*	*776,33*	*751,14*
Change in NWC	*-255,89*	*-126,10*	*-107,88*	*-36,08*	*35,52*	*109,44*	*177,25*
CAPEX	*-352,56*	*-246,52*	*-275,15*	*-250,61*	*-250,57*	*-245,09*	*-254,51*
FCFF	**158,27**	**571,42**	**773,80**	**1 106,81**	**1 406,44**	**1 629,50**	**1 814,44**

The most important factor is difference in the treatment of D&A adjustment. J.P. Morgan did not consider in their report implementation of IFRS16 and resulting higher amortization. Treated as a non-cash expense that is added to NOPAT, its lack significantly decreases FCFF. Furthermore, projected CAPEX has a one-time leap in FY2022. This might reflect an investment in the warehouse, distribution center or a new factory; nevertheless, this information was not provided in the available investor presentations and annual reports and might have been obtained directly from the CCC management by the J.P. Morgan research team.

For relative valuation, J.P. Morgan uses solely P/E multiple in its report. There, they treat separately offline and online business of the company. Nevertheless, both of them are assigned very close multiple: 20,0x for the online platform and 19,7x for the offline channel. Although the peer group for this valuation has not been exposed, it is in line with P/E multiple calculated for the Tier 1 (core peer group) in the section dedicated to Comparable Companies Analysis for CCC. Value obtained there equaled 20,89x P/E for the FY2019.

Additionally, in order to present J.P. Morgan opinion on the CCC stock, the history of their coverage is presented below (excerpt from the equity report).

Figure 54: J.P. Morgan continuous coverage of CCC stock



Date	Rating	Share Price (zl)	Price Target (zl)
25-Aug-16	OW	183.50	215.00
05-Dec-16	OW	191.80	220.00
23-Jan-17	N	213.10	217.00
28-Mar-17	N	229.40	220.00
21-Jul-17	N	227.50	224.00
23-Nov-17	N	247.00	257.00
05-Dec-17	N	254.00	262.00
12-Apr-18	OW	256.20	319.00
26-Jun-18	N	220.00	268.00
03-Jul-18	N	204.00	233.00
04-Oct-18	OW	223.00	289.00
29-Oct-18	N	194.40	207.00
06-Dec-18	NR	208.60	--
18-Mar-19	OW	203.20	250.00
03-Apr-19	OW	248.00	274.00

Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Jul 07, 2015. All share prices are as of market close on the previous business day.

The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.
J.P. Morgan ratings or designations: OW = Overweight, N= Neutral, UW = Underweight, NR = Not Rated

7. Conclusion

The aim of this section is to summarize the valuation process of CCC S.A. and to present obtained results. Furthermore, an appropriate investment recommendation will be given, supplemented with possible limitations of conducted process of company's valuation.

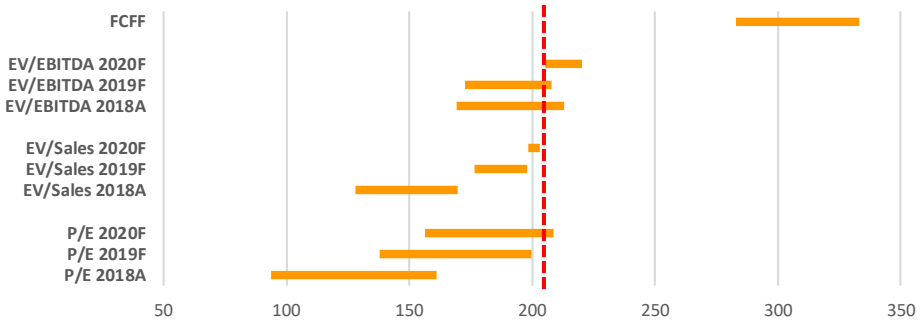
In this thesis two methods have been used to obtain price per share of CCC S.A. as of 15.03.2019. The first one, DCF model yielded result of 306,07 PLN per share and was tested in the sensitivity analysis. Range from 283,01 PLN to 333,08 PLN per share implies deviations of -7.5% to +8.8%.

This valuation was complemented with the relative method, while utilizing 3 different, forward-looking multiples: EV/EBITDA, EV/Sales and P/E. Here, the most important are results of valuation for the core peer group (Tier 1). This method indicated a range of 169,80 to 220,17 PLN per share, being very close to current market share price.

Nevertheless, it is believed that the DCF model should be perceived as the most indicative one, as it is independent of market moods and should reflect the true intrinsic value of the company.

On 15th March 2019 (publication date of Financial Statements for FY2018), CCC stock closed at 203,20 PLN. Therefore, based on the performed valuation process, the **BUY** recommendation is given, implying that the stock is undervalued. This recommendation is in line with the equity research report issued by J.P. Morgan on the 25th April 2019 and exceed their target price (274 PLN) by 11.7%. All the results have been presented on the graph below.

Figure 55: Valuation range for CCC S.A. based on method used (red line – share price as of 15th March 2019)



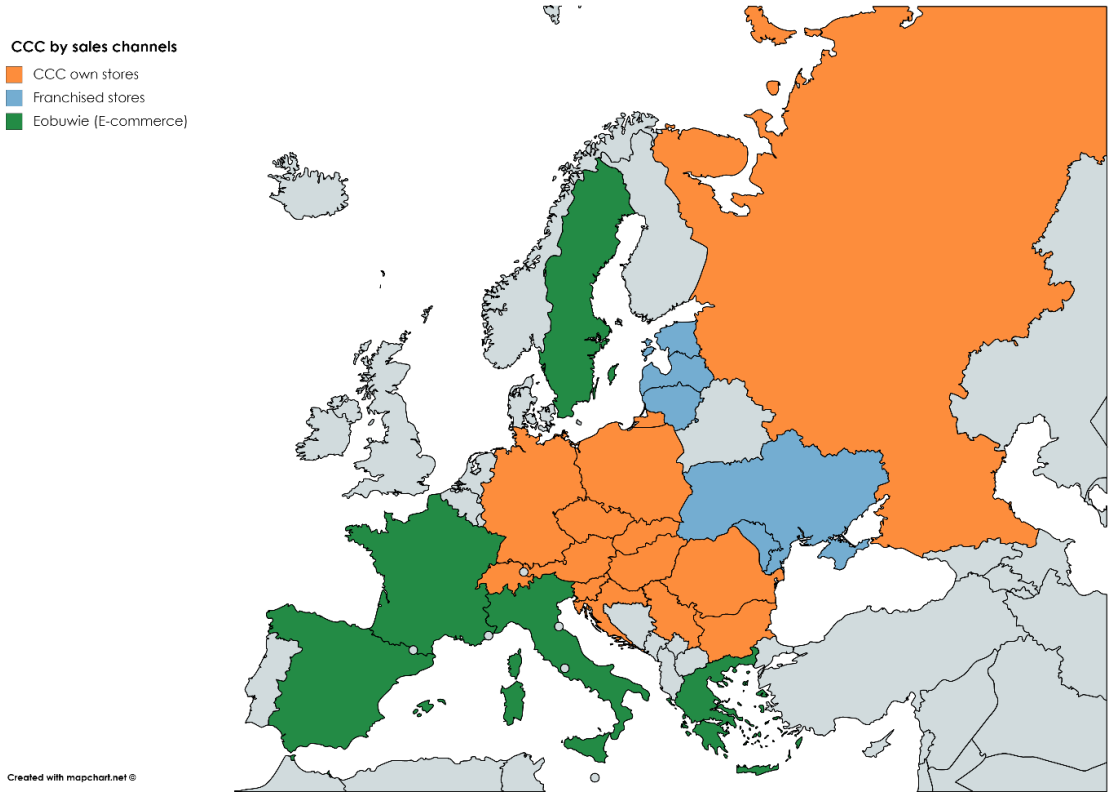
As the final word, some of the limitations of performed valuation should be mentioned. The major method used (DCF) relies on the range of assumptions and predictions that by definition will contain error. Hence, even tested for sensitivity analysis, it is possible that obtained value is not be correct. Conversely, relative valuation used as the complementary method is subject to market moods and momentum, as well is highly dependent on selected peer sample.

8. Appendix

Appendix 1: CCC S.A. SWOT analysis (author's own elaboration)

Strengths: • Established position in the CEE market with strong brand recognition • Significant economies of scale; control over manufacturing, logistics and pricing policy • Experienced and well-educated management team and Board of Directors	**Weaknesses:** • Significant employee turnover and restricted access to qualified administrative and operations employees due to competition with other huge industrial players in the region (Volkswagen factory, KGHM Mining Group)
Opportunities: • Low penetration of markets in Western Europe • Development of the online platform • Increased efficiency thanks to new IT systems and better inventory management • Entering new market niches (fashion shoes for young women, athletic footwear)	**Threats:** • Possible increase in COGS due to rapid development of Asian countries (increase in wages) • Emergence of competitors from low-cost countries • Competition from huge e-commerce platforms (Amazon, Alibaba) • Rise of new highly-specialized start-ups, focused on particular type of customer

Appendix 2: Geographical footprint of CCC Group S.A. by sales channels (Annual report for FY2018)



Appendix 3: Leverage metrics for CCC S.A. (data in million PLN; Annual reports for FY2014-2018)

Leverage metrics	2014	2015	2016	2017	2018
Total debt	578,00	718,80	795,50	917,10	2 926,00
less: cash & cash equivalents	*161,90*	*340,60*	*143,40*	*511,60*	*375,8*
Net debt	416,10	378,20	652,10	405,50	2 550,20
EBITDA	295,9	323,5	446,1	497,2	337,6
Interest paid	-18,8	-16,8	-21,1	-31,1	-60,60

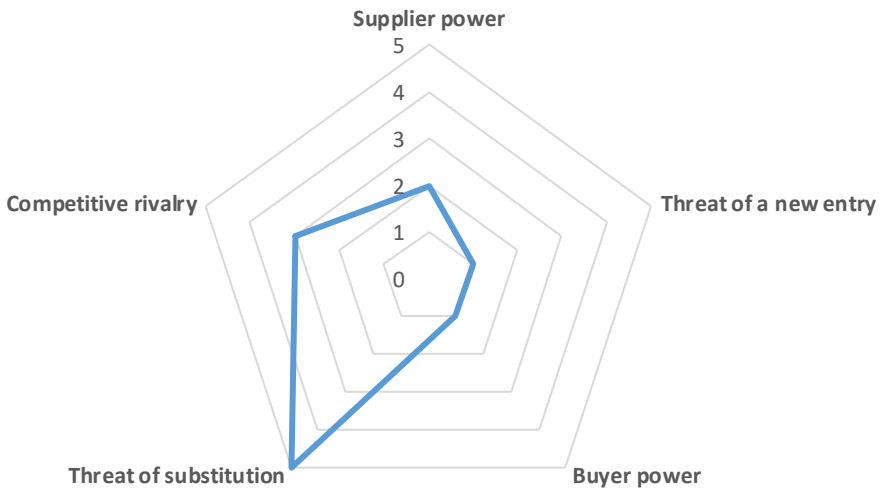
Appendix 4: Solvency metrics for CCC S.A. (Annual reports for FY2014-2018)

Solvency metrics	2014	2015	2016	2017	2018
EBITDA/net debt	0,71	0,86	0,68	1,23	0,13
Net debt/Total Assets	0,23	0,18	0,27	0,12	0,38
without IFRS16	*0,32*	*0,35*	*0,33*	*0,27*	*0,21*
Net debt/Total Equity	0,44	0,34	0,67	0,35	2,22
without IFRS16	*0,61*	*0,65*	*0,82*	*0,78*	*0,85*
EBITDA Interest coverage ratio	15,74	19,26	21,14	15,99	5,57
only for interest on bank debt	*15,74*	*19,26*	*21,14*	*15,99*	*12,06*

Appendix 5: Main operating and liquidity metrics for CCC S.A. (Annual reports for FY2014-2018)

Metric	2014	2015	2016	2017	2018
Days Sales Outstanding (DSO)	6,67	8,58	10,98	8,87	10,72
Receivables turnover	*54,68*	*42,55*	*33,26*	*41,15*	*34,06*
Days Inventory on Hand (DIH)	306,23	251,11	263,10	267,52	308,71
Inventory turnovoer	*2,65*	*3,21*	*2,91*	*2,78*	*2,35*
Days Payables Outstaning (DPO)	-41,23	-28,82	-44,97	-44,50	-147,72
Payables turnover	*6,55*	*10,20*	*6,63*	*6,93*	*2,22*
Cash Conversion Cycle (CCC)	**271,67**	**230,87**	**229,10**	**231,89**	**171,71**
Current Ratio	**1,68**	**1,85**	**1,79**	**2,40**	**1,08**
Cash Ratio	**0,28**	**0,55**	**0,19**	**0,55**	**0,15**
Net Working Capital	**898,80**	**913,90**	**921,30**	**1 296,60**	**1 139,00**

Appendix 6: Porter 5-Forces analysis of the shoe retail market in Poland (author's own elaboration)



Supplier power Risk level: **moderate**	Most of the footwear retailers have outsourced production to cheap-labour countries of South-East Asia (China, Vietnam, Indonesia). Often the supplier is producing footwear for one, particular retailer, creating an interdependency between them. However, since the qualified labour force is widely available, the company can relatively easily switch to another supplier, while such a move would mean an almost immediate bankruptcy for current supplier.
Threat of a new entry Risk level: **low**	The retail industry is subject to consolidation, ruled by several huge players. They rely on economies of scale that allow them to implement operating leverage and increase margins through high volume and resulting lower unit costs. The entry barriers are high, as retail requires recognized brand, highly developed inventory management and chain of stores supported by online channel. The only possible threat, although remote, is development of start-ups addressing a particular group of customers.
Buyer power Risk level: **low**	Although there is no concentration between customers on the market (the product is sold directly to a single customer), their fast changing preferences, price sensitivity and low cost of switching gives them a lot of power. As such, companies have to compete with prices, while squeezing their profitability.
Threat of substitution Risk level: **high**	Products offered do not significantly differ between the players on the market. If the brand loyalty is disregarded, there is very low cost of switching for customers.
Competitive rivalry Risk level: **moderate**	While on the domestic market, the competitive rivalry is rather moderate, as there are several huge players with established market share and position, the competition on the international market is significant. Due to low switching costs and lack of dominant player in some geographical markets, the companies are competing to obtain the market leader position. However, as the footwear market is subject to consolidation, this risk should weaken.

Appendix 7: CCC S.A. - recent acquisitions (CCC Q4 2018 Presentation)

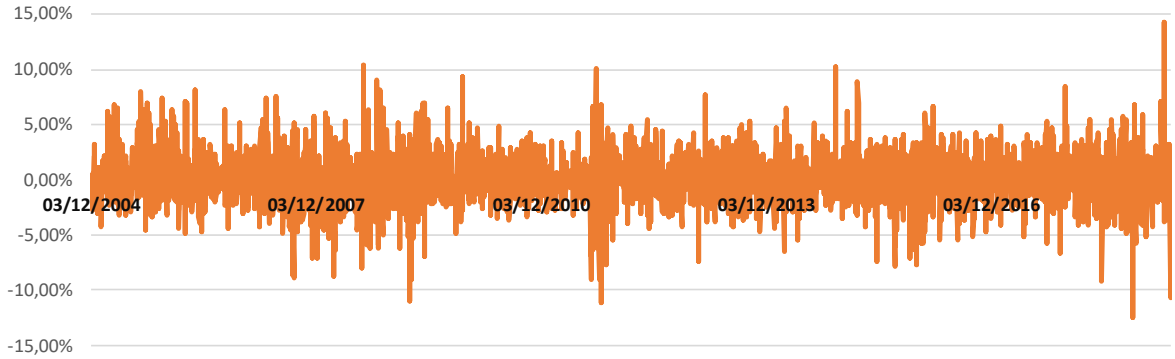
Acquired company	Motivation	Date	Stake	Price paid	Status of integration
Adler International	Consolidation of the Polish market	April 2018	100%	77m PLN	Completed
Shoe Express	Transition to own stores in Romania	April 2018	100%	33m EUR	Completed
Voegle Shoes	Business Development in Western Europe	May 2018	70%	10m CHF	In process, according to the schedule
DeeZee	Widening of customer base	July 2018	51%	13m PLN	In process, according to the schedule
HR Group	New business approach in German market	November 2018	31%	25,9m EUR	In process, according to the schedule
Gino Rossi	Product diversification	February 2019	66%	58m PLN	In process, according to the schedule

Appendix 8: Growth in the CCC commercial floor area (Annual reports for FY2014-2018)

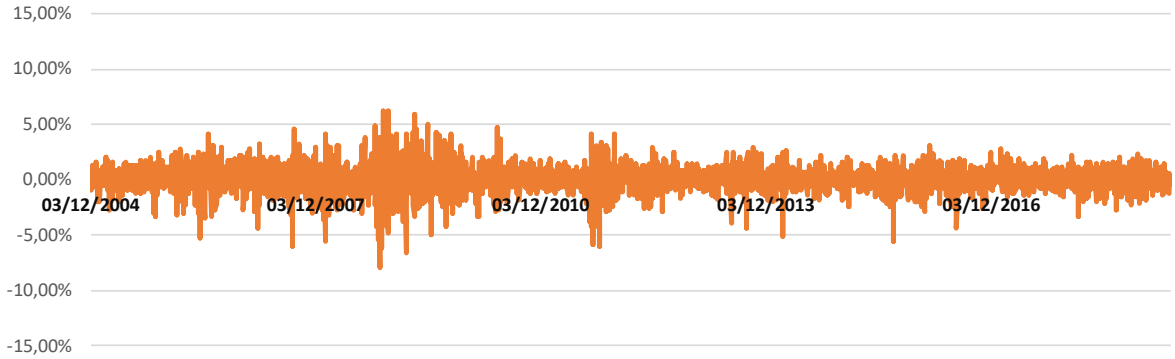
	2014	2015	2016	2017	2018	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Own stores: commercial floor area by country (in square meters)												
Poland	166 946	186 782	212 242	243 839	285 782	324 332	355 055	380 463	398 973	409 334	414 908	419 686
Czech Republic	32 309	36 104	39 415	44 701	51 497	66 093	72 907	78 848	82 791	84 415	85 211	85 211
Hungary	27 689	30 462	38 040	45 247	51 843	55 191	61 971	68 131	72 541	75 655	77 248	78 044
Romania	0	0	0	0	34 762	54 918	73 344	88 494	99 034	104 006	106 395	107 191
Slovakia	13 866	18 852	23 104	28 198	31 500	36 794	41 557	45 931	48 886	50 171	50 968	51 764
Austria	9 184	14 681	23 580	27 431	30 378	37 475	45 202	53 586	60 713	66 099	69 284	70 877
Croatia	4 436	7 314	11 842	13 561	16 061	20 441	25 517	29 855	33 905	36 633	38 226	39 022
Russia	0	0	6 339	13 923	28 041	45 311	63 064	81 528	95 801	104 723	108 704	111 093
Slovenia	3 646	4 603	6 272	7 687	8 528	11 583	13 852	16 076	17 347	18 316	19 113	19 909
Bulgaria	0	3 875	5 665	6 562	7 430	13 627	21 872	32 152	41 001	47 782	52 560	56 542
Serbia	0	0	1 089	4 078	8 237	12 946	21 143	31 386	40 213	46 986	51 764	56 542
Ukraine	0	0	0	0	0	0	7 147	21 122	34 750	44 970	51 784	55 191
Latvia	0	0	0	0	0	0	0	4 409	8 176	10 902	13 627	15 671
Lithuania	0	0	0	0	0	0	0	2 657	6 814	13 627	19 078	22 485
Estonia	0	0	0	0	0	0	0	2 629	5 451	8 176	10 221	10 902
Total	**258 076**	**302 673**	**367 588**	**435 227**	**554 059**	**678 712**	**802 630**	**937 268**	**1 046 394**	**1 121 795**	**1 169 092**	**1 200 133**

As presented on the graphs below, returns on CCC stock are characterized by significantly higher volatility than the market (proxy used: broad WIG Index). This implies that CCC should have beta higher than one, reflecting stock's relative higher risk.

Appendix 9: Daily returns on CCC S.A. stock (stooq.pl)



Appendix 10: Daily returns on WIG Index (stooq.pl)



Appendix 11: Relative Valuation, Tier 1 peer group (author's own elaboration)

For the purpose of relative valuation, Tier 1 of comparable companies is composed of 3 firms: LPP, Vistula and Monnari. These companies are major Polish firms operating in the clothes retail industry. Although none of them is retailer of footwear, they are dependent on the same operating risk as well economic factors as CCC. Moreover, they share the same key revenue drivers, as they address the same customers in the same markets and their size allows to control for economies of scale. Further, forward-looking multiples were available for them.

Tier 1: Polish clothes retailer			Market cap			EV/EBITDA			EV/Sales			Price/Earnings		
Name	Industry	Subindustry	m PLN	m USD	% share	2018A	2019F	2020F	2018A	2019F	2020F	2018A	2019F	2020F
CCC	**Retail of clothes**	**Shoes and accessories**	**7 826,4**	**2 014,4**	**33,03%**	**12,14**	**11,32**	**9,21**	**2,20**	**1,59**	**1,36**	**34,17**	**19,60**	**14,79**
Vistula	Retail of clothes	Men's clothing and accessories	944,9	246,6	4,04%	11,04	8,72	7,34	1,26	1,00	0,79	14,91	12,59	10,18
LPP	Retail of clothes	Apparel and accessories	14 930,5	3 794,8	62,22%	12,47	11,25	9,84	1,71	1,49	1,34	28,54	22,23	19,28
Monnari	Retail of clothes	Women's apparel	164,4	43,7	0,72%	5,18	6,28	5,73	0,51	0,51	0,49	9,11	10,96	10,44
Total			**23 866,2**	**6 099,4**	**100,00%**									
Weighted average						**12,25**	**11,14**	**9,50**	**1,85**	**1,50**	**1,32**	**29,71**	**20,89**	**17,37**
Median						**11,59**	**9,99**	**8,28**	**1,49**	**1,25**	**1,07**	**21,73**	**16,10**	**12,62**

Appendix 12: Relative Valuation, Tier 2 peer group (author's own elaboration)

Tier 2: International clothes retailers			Market cap			EV/EBITDA			EV/Sales			Price/Earnings		
	Industry	Subindustry	m PLN	m USD	% share	2018A	2019F	2020F	2018A	2019F	2020F	2018A	2019F	2020F
CCC	**Retail of clothes**	**Shoes and accessories**	**7 826,41**	**2 014,35**	**6,44%**	**12,14**	**11,32**	**9,21**	**2,2**	**1,59**	**1,36**	**34,17**	**19,6**	**14,79**
Steven Madden Ltd	Retail of clothes	Footwear and accessories	n/a	2 869,67	9,18%	12,91	11,99	11,00	1,57	1,50	1,43	20,92	17,79	15,91
Shoe Zone PLC	Retail of clothes	Footwear	n/a	136,50	0,44%	6,11	6,15	6,11	0,56	0,54	0,53	11,03	11,93	11,86
Foot Locker Inc	Retail of clothes	Shoes and apparel	n/a	6 387,10	20,43%	6,28	5,99	5,74	0,72	0,69	0,67	13,04	11,10	10,18
Genesco Inc	Retail of clothes	Footwear, apparel & accessories	n/a	837,44	2,68%	4,60	5,11	5,18	0,34	0,34	0,33	17,01	12,81	11,84
Wolverine World Wide Inc	Retail of clothes	Footwear and apparel	n/a	2 857,70	9,14%	12,86	11,08	10,40	1,58	1,53	1,47	15,65	13,67	12,50
Basic Net SpA	Retail of clothes	Footwear and accessories	n/a	366,12	1,17%	11,44	10,22	8,59	2,43	1,66	1,55	12,91	13,72	12,44
Shoe Carnival Inc	Retail of clothes	Footwear	n/a	520,13	1,66%	6,15	5,94	5,59	0,43	0,42	0,41	13,55	12,38	11,37
Skechers USA	Retail of clothes	Footwear	n/a	4 627,28	14,80%	7,15	6,58	6,04	0,84	0,78	0,72	15,91	14,42	12,78
NEXT PLC	Retail of clothes	Clothing & Footwear	n/a	10 156,42	32,49%	11,92	11,94	11,83	2,11	2,06	2,01	12,92	12,49	12,00
Superdry PLC	Retail of clothes	Clothes and accessories	n/a	485,49	1,55%	2,66	3,51	3,23	0,40	0,40	0,38	5,81	8,99	8,03
				31 258,22	**100,00%**									
Weighted average						**9,79**	**9,36**	**8,87**	**1,44**	**1,35**	**1,29**	**15,74**	**13,51**	**12,26**
Median						**7,15**	**6,58**	**6,11**	**0,84**	**0,78**	**0,72**	**13,55**	**12,81**	**12,00**

Appendix 13: Relative Valuation, broad group of Comparable Companies (author's own elaboration)

Overall: Broad peer group			Market cap			EV/EBITDA			EV/Sales			Price/Earnings		
	Industry	Subindustry	m PLN	m USD	% share	2018A	2019F	2020F	2018A	2019F	2020F	2018A	2019F	2020F
CCC	**Retail of clothes**	**Shoes and accessories**	**7 826,41**	**2 014,35**	**5,70%**	**12,14**	**11,32**	**9,21**	**2,20**	**1,59**	**1,36**	**34,17**	**19,60**	**14,79**
Vistula	Retail of clothes	Men's clothing and accessories	944,86	246,57	0,70%	11,04	8,72	7,34	1,26	1,00	0,79	14,91	12,59	10,18
LPP	Retail of clothes	Apparel and accessories	14 930,53	3 794,76	10,74%	12,47	11,25	9,84	1,71	1,49	1,34	28,54	22,23	19,28
Monnari	Retail of clothes	Women's apparel	164,43	43,71	0,12%	5,18	6,28	5,73	0,51	0,51	0,49	9,11	10,96	10,44
Steven Madden Ltd	Retail of clothes	Footwear and accessories	n/a	2 869,67	8,12%	12,91	11,99	11,00	1,57	1,50	1,43	20,92	17,79	15,91
Shoe Zone PLC	Retail of clothes	Footwear	n/a	136,50	0,39%	6,11	6,15	6,11	0,56	0,54	0,53	11,03	11,93	11,86
Foot Locker Inc	Retail of clothes	Shoes and apparel	n/a	6 387,10	18,07%	6,28	5,99	5,74	0,72	0,69	0,67	13,04	11,10	10,18
Genesco Inc	Retail of clothes	Footwear, apparel & accessories	n/a	837,44	2,37%	4,60	5,11	5,18	0,34	0,34	0,33	17,01	12,81	11,84
Wolverine World Wide Inc	Retail of clothes	Footwear and apparel	n/a	2 857,70	8,09%	12,86	11,08	10,40	1,58	1,53	1,47	15,65	13,67	12,50
Basic Net spa	Retail of clothes	Footwear and accessories	n/a	366,12	1,04%	11,44	10,22	8,59	2,43	1,66	1,55	12,91	13,72	12,44
Shoe Carnival Inc	Retail of clothes	Footwear	n/a	520,13	1,47%	6,15	5,94	5,59	0,43	0,42	0,41	13,55	12,38	11,37
Skechers USA	Retail of clothes	Footwear	n/a	4 627,28	13,09%	7,15	6,58	6,04	0,84	0,78	0,72	15,91	14,42	12,78
NEXT PLC	Retail of clothes	Clothing & Footwear	n/a	10 156,42	28,74%	11,92	11,94	11,83	2,11	2,06	2,01	12,92	12,49	12,00
Superdry PLC	Retail of clothes	Clothes and accessories	n/a	485,49	1,37%	2,66	3,51	3,23	0,40	0,40	0,38	5,81	8,99	8,03
Total				**35 343,26**	**100,00%**									
Weighted average						**10,08**	**9,55**	**8,96**	**1,47**	**1,36**	**1,29**	**17,10**	**14,44**	**12,99**
Median						**9,10**	**7,65**	**6,73**	**1,05**	**0,89**	**0,76**	**14,23**	**12,70**	**11,93**

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- Annual GDP growth in %
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- Results Presentations for FY2014 – 2018
- Official website: https://firma.ccc.eu/en