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Faculty of Business and Economics

Valuation of Selected Company

Diploma thesis

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Abstract

Čapoš, G. Valuation of Selected Company. Diploma thesis. Brno: Mendel University, 2016.
This thesis deals with valuation of Arsenal Holdings Plc using income methods of valuation. Thesis consists of two parts. In first part is reviewed literature dealing with different valuation methods. In second part are these methods applied to set the value of company. Second part further consists of characteristics of the company, strategic analysis, financial analysis, analysis and prediction of value generators, and the valuation itself by using DCF entity method and EVA entity method. As a result, value of the company to the date 1st January 2016 is determined.

Keywords

Diploma thesis, business valuation, Discounted Cash Flow method, Economic Value Added Method.

Abstrakt

Čapoš, G. Stanovení hodnoty vybraného podniku. Diplomová práce. Brno: Mendelova Univerzita, 2016.
Tato diplomová práce se zabývá stanovením hodnoty podniku Arsenal Holdings Plc za pomoci výnosových metod ocenění. Práce se skladá ze dvou částí. V první části je rozebrána literatura zabývající se různými metodami ocenění. Druhá část se zabývá využitím těchto metod na stanovení hodnoty podniku. Skládá se z charakteristiky společnosti, strategické analýzy, finanční analýzy, analýzy a predikce generátorů hodnoty a samotného ocenění za pomoci metod diskontovaných peněžných toků DCF a ekonomické přidané hodnoty EVA. Výsledkem je stanovení hodnoty společnosti k datu ocenění 01.01.2016.

Klíčová slova

Diplomová práce, ocenění podniku, diskontované peněžné toky DCF, ekonomická přidaná hodnota EVA.

Table of content

1 Introduction

Football is the most popular sport in the world in numbers of both participants and spectators. In recent decades it achieved increased commercial success, which resulted into significant growth of revenues of football clubs around the world. This trend is mostly notable in Europe. Football clubs therefore started to represent investment opportunity worth considering. In recent years there is a growing trend of changes in the ownership structures among many European football clubs and especially in England. The value of football clubs is relevant not only for current owner, but also for potential investors.

Arsenal is one of the biggest football clubs in the world in terms of revenue, which is currently seventh highest, global fan base, represented by 34.5 million likes on Facebook and 6.8 million followers on twitter, and also the sporting success when the clubs every season reaches the knock out stages of the main European competition Champions League.

Topic of valuation of a football club was chosen due to author's interest in both finance and football. The reason for the selection of Arsenal Football club as an object of valuation is the availability of annual Statements of Accounts and Annual Reports of the club, which is often with football clubs a problem.

2 Goal and Methodology

The goal of the thesis is to determine the value of company Arsenal Holdings plc, by using selected valuation methods. The company is valued to the date of 01.01.2016, for the purpose of potential entry of investor. Company valuation is based on the data from publicly available sources, mainly from the club's annual Statements of Accounts and Annual Reports of the club, Deloitte's Football Money League annual reports, and other publicly available data and statistics. For valuation of the company will be used income methods, mainly the discounted cash flow method. To achieve main objective of the thesis, following partial goals need to be fulfilled:

- Work up the theoretical backgrounds of the master thesis elaboration using current literature and other informational sources.
- Elaborate the strategic analysis of the industry.
- Assess current situation of the market.
- Work up a prediction of possible future development of the branch.
- Assess the current situation of company with a stress on its financial position and performance and make a prediction of its possible development in future.
- Determine the factors influencing the company's value and define their effects.
- By application of proper methods calculate the value of selected company and based on the results of the employed methods formulate recommendations.

Thesis is divided into theoretical and practical part. Theoretical part deals with literature review, which consists of Czech and foreign literature dealing mainly with topic of valuation of a company. In this part are at first described basic concepts dealing with this topic. Later are described principles of valuation and necessary processes and analyses, preceding the valuation itself. Sources used for this literature review are listed in the references.

Based on the findings in the theoretical part is then processed the second part dealing with the necessary analyses and valuation itself. To process this part was necessary to assemble the secondary data. Their sources were mainly the annual Statements of Accounts and Annual Reports of the club, Deloitte Football Money League reports, and online public statistic databases.

At the beginning of practical part is described the Arsenal Football Club, which is followed by strategic analysis of macro environment and development of football industry including prediction of its future development, which aims to describe the overall income potential of the company. For analysis of macro environment is used PESTE analysis. Afterwards is described the development of football industry, with main focus on the Premier League, in which the club operates. The prediction of the future development of the industry is mainly based on the past development and also already known agreed contracts for the next few seasons. For the closer description of the industry and the position of the club in it, is at first described the development of the Premier League, and identified are main competitors of the club. Afterwards is done market attractiveness analysis

and the competitive position of the company analysis. Outputs of these analyses are then used for SWOT analyses describing the strengths and weaknesses of the company and the opportunities and threats arising from the outside environment. Last step of the strategic analysis is the summarized prediction of the industry and the position of the company in it.

Following chapter of the thesis deals with financial analysis of the company, which is used for evaluation of current financial health of the valued company. Financial analysis will be performed using ratios, which include profitability, debt, activity and liquidity ratios. This is followed by prediction of the financial distress, for this purpose is used Z-score bankruptcy model.

Another stedp needed to execute valuation is distribution of company's assets into operationally necessary and unnecessary. Within this will be quantified operational necessary invested capital and adjusted operating profit.

The final part of the data analysis consists of analysis and prognosis of value generators, which include sales, profit margin, investments into operationally necessary working capital and operationally necessary fixed assets. Sales and their prediction are divided into three main areas – match day, broadcasting and commercial revenues. Each area is then predicted based on past development and mainly from contracts for following seasons, which are already in place. Operating profit margin is calculated from predicted available data and its forecast is calculated by method "from the top". Forecasts of investment in working capital are forecasted using estimates of turnovers of individual items of working capital, based on the past development. Investments into operationally necessary fixed assets, individual parts are predicted based on past development of each individual item and with taking into account predicted growth of revenues.

Next chapter of thesis is dedicated to calculation of interest rate, which is set on the level of weighted average cost of capital WACC. WACC include cost of equity and foreign capital. The cost of equity is calculated using CAPM method, cost of foreign capital is calculated as ratio of total interest payable and similar charges and interest bearing foreign capital.

Results of analyses will be used in the following valuation. Valuation will be executed using selected income methods. Firstly will be analysed and predicted generators of value, which will result into preliminary valuation of the company. In the following chapters will be used two phased discounted cash flow method, and two phased economic value added method. Afterwards is done overview of achieved values by using selected methods. At the end will be summarised and discussed achieved results.

3 Literature review

3.1 Value of the company

Value of the company can be understood as a relationship between selected subject and object, while expecting rational behaviour. Value has two faces, and that is utility value and transfer value. Ability of good to satisfy human needs creates the utility value, which is for different owners always different. Transfer value is subject of transfer and is expressed in money (Mařík, 2007).

Value of the company is possible to be expressed in two different levels, which are referred to as (Mařík, 2007):

- **Gross value -** express value of company as a unit, both for owners and creditors.
- **Net value -** valuation for owners of company, when valuated is equity.

3.2 Categories of value

According to Mařík (2011), is value of the company divided in four groups, which have been formed as an answer to following questions:

- How much is willing to pay for the company average buyer?
- What value has the company from perspective of particular buyer?
- What value can be regarded as generally acceptable?

Based on these questions, the following four approaches to company valuation have been accepted (Mařík, 2011):

1. Market value,
2. Subjective value,
3. Objectivised value,
4. Complex approach based on Cologne school.

3.2.1 Market value

Market value Mařík (2011) defines as the estimated amount for which should be the assets exchanged at the date of valuation between a willing seller and a willing buyer in transaction between separate and independent partners after a proper marketing, in which stakeholders negotiated without any pressure and have been properly informed and reasonable.

3.2.2 Subjective value

Next type of value is subjective or investment value. According to Risius (2007): „Investment Value represents the value to particular investor based on individual investment requirements and expectations. As such, synergies available to a potential buyer of a company would be appropriate to factor into the value under

this standard, unlike what would be appropriate under Fair Market Value standard."

Subjective value represents valuation of company from the perspective of particular subject. It is value of the property for particular investor or group of investors for set investment targets. Subjective value may differ from market value (Mařík, 2011).

Among the characteristic signs of subjective value belongs mainly the fact, that future cash flows are estimated based on ideas of managers, which may be eventually lowered, and discount rate is set based on alternative possibilities of investment (Kislingerová, 2001).

3.2.3 Objectivised value

Objectivised value is able to set only professional. It is standardized and by other entities verifiable value, which is set from the view of the owner, who is subject of unlimited taxation, and assuming company will continue with same concept (Mařík, 2011).

With this method, the most important is its verifiability. Its use is therefore suitable in case of (Sabolovič, 2011):

- provision of credit,
- determining of the real creditworthiness of a company,
- valuing company in crisis,
- transformation,
- looking for substantial value of company.

3.2.4 Cologne school

For valuation of majority of subjects is being used subjective valuation. The basis of cologne school is subjective value of particular seller and particular buyer. This method takes the view that valuation should not be modified based on individual stimuli, but on general functions. The basic functions of valuation include (Mařík, 2011):

- Consulting function - this function is considered the most important. Its purpose is to provide documentation and information about maximum and minimum price, to which may buyer or seller agree without making loss. In this context is spoken about borderline values of participants.
- Referee function - it is an activity of independent valuator, the essence of which is to estimate borderline values of buyer and seller and to find fair value within the estimated range.
- Argumentation function - the essence of this function is finding the arguments, so that subject of transaction reaches improved position in negotiation.
- Communication function - the purpose is to provide basis for communication with public, investors and banks.
- Tax function - the aim is to bring documents for taxation purposes.

3.3 Basic process of business valuation

Before the process of valuation, it is necessary to understand the reason for valuation, and what value should be the result of valuation. Based on function of valuation is chosen the approach and method of valuation (Kislingerová, 2001).

According to Mařík (2011) and Sabolovič (2011) the following process of valuation can be used:

- Collection of input data
- Analysis of data
    - Strategic analysis
    - Financial analysis to estimate the financial health of business
    - Distribution of assets to operatively necessary and unnecessary
    - Analysis and prediction of the generators of value
    - Preliminary valuation based on generators of value
- Financial plan
- Valuation methods
    - Selection of method,
    - Valuation based on selected method,
    - Aggregate valuation.

3.4 Strategic analysis

Strategic analysis is the key point of valuation process. Its main function is to define overall revenue potential of valued company. This potential is heavily influenced by external potential. External potential are the opportunities and risks represented by outside environment. Furthermore, it is influenced by inside potential, which is represented by strengths and weaknesses of company. Strengths and weaknesses answer the question whether the company possess any substantial competitive advantage (Mařík, 2011).

According to Mařík (2011), process of strategic analysis can be divided into following steps:

- Analysis and forecast of the relevant market,
- Analysis of competition and internal potential,
- Sales forecast of valuated company.

3.4.1 External factor analysis

Analysis of external potential consists of several steps, which include defining relevant market, market attractiveness analysis, and prognosis of development of relative market. The relevant market is necessary to be defined in terms of product, territories, customers and competition. The relevant market should be selected so that it is possible to obtain basic data and afterwards to assess its attractiveness and to prepare the forecast of future developments (Mařík, 2011).

Generally it is possible to speak about this as an analysis of the macro environment. Therefore the environment, in which businesses operate, carry out

their activity, and which has significant impact on the company. It focuses on the development of conditions in the past, present, and also deals with prediction of their future developments (Kislingerová, 2001).

For the analysis of external environment, it is possible to use so called PESTE analysis. Name of the analysis consists of factors, which influence the company from external environment. According to Sedláčková (2006), the factors are:

- Political and legal - law, state regulation, stability of political environment, labour, law, taxes, etc.,
- Economic - GDP, unemployment rate, interest rates, purchasing power, exchange rates and others,
- Social - demographic trends, average wage, unemployment benefits,
- Technological - research and development, information systems, technology level, inventions and patents,
- Ecological - raw material resources, environment protection, energy, etc.

Focal point of this analysis is the definition of the relevant market in terms of product, territory, customers and competitors. Selection of this market should help to obtain basic data about this market. These include - market size, demand size, price development, market segmentation and others. Afterwards it is suitable to assess the attractiveness of the market, in order to predict its future development. The aim of the market attractiveness analysis, is to contribute to better recognition of opportunities and risks in the market. Criteria of the market attractiveness (Mařík, 2011):

- Market growth,
- Market size,
- Intensity of competition,
- Average profitability, substitution and entry barriers,
- Sensitivity for booms,
- Structure of customers.

Last step of the analysis of external environment is forecast of market development. Its starting point should be the analysis of those factors, which affect development of selected market the most. These are mainly economic factors (GDP, manufacturing sectors and consumption), general demand factors (income per capita, prices, population and its structure) and specific factors (habits, trends). When forecasting market trends, it is appropriate to use different methods and techniques such as: time series techniques and their extrapolation, simple and multiple regression analysis, or estimate of future development based on comparison with foreign markets. Results of the analysis of the external environment should be setting of two of four elements forming the SWOT analysis. From analysis of macro environment should identify set of opportunities (O) and threats (T) (Mařík, 2007).

3.4.2 Analysis of internal potential

Second part of strategic analysis consists in evaluating the potential of company, ie an assessment of strengths and weaknesses, especially in areas, which significantly affect the competitive position of company and help to create long-term value of the company (Neumaierová, 2005).

According to Kislingerová (2001) another part of this analysis is to identify the main competitors. In addition to basic identifying information, it is necessary to collect data on their economic performance.

In this step of strategic analysis, it is necessary to determine the market share of the valued company. If it is not possible to determine the market size, used can be qualified estimate, which will be based on knowledge of production of main competitors. Market share is then estimated as a portion from sum of sales of main competitors (Mařík, 2011).

To analyse market environment in which company operates is being used the Porter's five forces analysis. The purpose of this model is to identify the five main forces, which influence the position of company on the market, possibilities of future growth, and long term profitability of market segment. These five forces consist of competition, potential new competitors, existence of substitutes, power of suppliers and customers (Hill, 2000), (Porter, 1998).

Result of the external potential analysis is identification of strengths (S) and weaknesses (W) of selected company. Using the outcomes of this analysis can be completed the SWOT analysis, which is the mean to summarize many analyses and to combine them with key results of analyses of the company environment and its capabilities (Jakubíková, 2008).

3.4.3 Sales forecast of valuated company

Sales forecast depends on the results of analysis and prognosis of relevant market, analysis of competitive forces and internal potential of company. Sales growth forecast can be obtained by multiplying the market growth resulting from market analyses and forecast with growth of market share obtained from analysis of internal potential and competitive strength of company. At the same time should be performed the analysis of the existing pace of company sales growth (Mařík, 2011).

3.5 Financial analysis

Financial analysis is understood as usage of analytical tools for purposes of financial statements and other related data, in order to support managerial decision-making. Financial analysis helps to decrease dependence on estimates and guesses which also decreases uncertainty in decision-making process (Wild, 2005).

In principle, financial analysis is a systematic analysis of the obtained data, which are included in the financial statements. Financial analysis involves

evaluation of the company's past, present and it predicts the future financial conditions. Its main purpose is to prepare the groundwork for quality decision-making about company operations. There is very close link between accounting and decision-making of the company. Accounting provides documents for exact values of monetary data, which are related to one point in time (Růčková, 2010).

Financial analysis consists of analysing the company's financial statements with aim to extract information that can help with decision-making. An analysis of the financial statement can reveal whether the company (Marinič, 2006):

- is be able to meet its long-term debt commitment,
- has financial problems,
- uses its physical assets efficiently,
- has optimal financing mix,
- generates adequate return for its shareholders,
- can sustain its competitive advantage and many others.

Essential sources for financial analysis are internal financial statements (balance sheet, income statement, cash flow statement), annual reports, statistical reports etc. Important sources are also external data on other companies, which are used mostly for comparison with competing companies (Kislingerová, 2010).

Methods of financial analysis

Documents such as balance sheet, income statement and cash flow statement help to provide insights into firm's operations, profitability and overall financial condition. However, by studying relationships among them even more insight into firm's financial condition and performance can be obtained. Company's financial statements are commonly analysed by a variety of analytical methods. Two such methods are **percentage analysis** and **financial ratio analysis** (Gitman, McDaniel, 2009).

3.5.1 Percentage analysis

Percentage analysis provides information about certain state or information in a period of time. Two types of analyses, which use percentage relationships, are called horizontal analysis and vertical analysis. **Horizontal analysis** compares selected items in time, in other words provides information about basic movements of individual items of financial statements, including their intensity. **Vertical analysis** can be seen as analysis where individual components of assets and capital are analysed, i.e. the structure of assets and liabilities of the company (Kislingerová, 2001).

3.5.2 Ratio analysis

Computing financial ratios is the most common way to analyse the financial statements. The financial ratios are representing relationship between two variables from financial statements. Among the basic financial ratios belong liquidity ratios, profitability ratios, activity ratios and debt ratios (Růčková, 2010).

Liquidity ratios

Liquidity ratios reflect an entity's ability to pay its liabilities when they are due. Business entity should be highly liquid, which means they should have a certain portion of their assets quickly convertible into cash (Kislingerová, 2001).

Cash position ratio

Cash position ratio considers only the most liquid assets, which cover cash, cash on current accounts or cash equivalents such as short term stocks, bonds, checks, etc. This conservative ratio cannot be used to determine the value of a company (because the significant portion of other current assets in the company), but it can be useful tool for short-term creditors in order to measure how fast is the company able to pay its short-term liabilities. Desired value of cash position ratio varies in opinions of different authors, but they agree that the bottom border value should be at least 0.2 (Růčková, 2010).

Quick asset ratio

Quick asset ratio expresses the ratio of current assets, from which are deducted inventories and current liabilities. Recommended values of this indicator are in the range between 1 - 1,5. Ideal state is when the numerator is the same value as the denominator (Růčková, 2010).

Current ratio

Current ratio is ratio of current assets (cash, inventory, receivables) and current liabilities (debt and payables). The higher the ratio, the more liquid is the company. Commonly acceptable current ratio is 2. It's a financial position comfortable for most of the enterprises. Acceptable current ratios vary from industry to industry, but for most of the companies, 1,5 may be an acceptable current ratio (Gitman, McDaniel, 2009).

Profitability ratios

Profitability ratios are the most closely watched, they reflect the ratio of final effect achieved by business activities related to a particular entry, either to a total assets, equity or sales (Kislingerová, 2001). The basic ratios of profitability are:

Return on Assets (ROA)

Measures performance of the company in usage of assets to generate net income, independent on how was the acquisition of assets financed (Kislingerová, 2001).

Return on Equity (ROE)

ROE measures return, which owners receive on their investment in the company. It is preferred that this indicator is higher than the paid interests, because otherwise the investor may lose his investment (Kislingerová, 2001).

Return on Sales (ROS)

Return on sales, otherwise called profit margin. It expresses the ratio of company's profit to total sales. Return on sales indicates how many crowns of profit have brought one crown in sales (Kislingerová, 2001).

Debt ratios

Indebtedness means that company uses to finance its assets also foreign sources. It is not possible for company to finance its assets solely by its own equity or solely from the foreign capital. The essence of debt ratios is to find optimal relationship between equity and foreign sources (Rúčková, 2010).

Debt ratio

Debt ratio expresses indebtedness of the company. It is calculated as a total debts divided by total assets. Generally the higher is the ratio, the higher is the risk of creditors (Sedláček, 2011).

Equity ratio

Equity ratio shows the proportion of company's assets, which are financed by the money of shareholders. It is one of the most important ratios for evaluation of financial situation of company (Sedláček, 2011).

Long-term equity ratio

This ratio examines the balance between long-term debt and total assets. It shows what portion of the assets is financed by long-term debt (Sedláček, 2011).

Times Interest Earned Ratio (TIE)

Value of this indicator represents how many times a total effect of production covers the interest costs.
TIE= EBIT/ Total interest costs
In general, value of this indicator should not fall under value 3 (Baker, Powell, 2005).

Activity ratios

Activity ratios measure the efficiency of company's usage of assets to generate revenue, or how much cash is tied up in inventory and receivables. Each sector of industry has typical different values, and therefore it is necessary to consider their conditions and development in relation to industry in which selected company operates (Kislingerová, 2010).

Among the activity ratios belong:

Total assets turnover

Total assets turnover measures the efficiency of utilization of total assets and indicates how many times are total assets turned around over one year. In ideal case the assets turnover should have minimal value of 1 (Kislingerová, 2010).

Inventory turnover
Inventory turnover compares the sales with inventories and measures number of sales during reporting period and their re-acquisition (Kislingerová, 2010).

Day's sales in inventory
It is also possible to divide inventory turnover ratio into 360 days to get the day's sales in inventory. This measure indicates the number of days required to sell the inventory (Spiceland, 2001).

Day's sales receivables
This measure can be computed by dividing 360 days by the receivables turnover ratio. The result represents the approximate number of days, the average accounts receivable balance is outstanding (Spiceland, 2001).

Creditor payment period
This measure indicates how long does it take for the company to pay supplier's invoices. Creditors payment period should always be bigger value than day's sales receivables, because otherwise the financial equilibrium of the company could be disrupted (Růčková, 2011).

Outside basic tools of financial analysis, there are also more complex methods called financial distress analyses, which are evaluating financial health of a company. These analyses are aiming to complement the partial analyses and to confirm their conclusions. There is countless existing methods of evaluating the company's financial distress, including Altman Z-score, index of financial credibility IN, or scoring method (Mařík, 2007, Neumaierová, Neumaier, 2002).

3.6 Distribution of assets to operating and non-operating

Another important part of the process of company's valuation is the distribution of assets to operating and non-operating. If the company is focused on more than one core business focus, it should be valued as a sum of the business units. Operating assets are the assets, which are essential for company to continue in its core business, or those which contribute to the value creation of the company. All other assets are referred to as unnecessary, or non-operating. They represent part of the property, which is not used and does not bring any, or only small revenue. It is also necessary to earmark income not connected with core business activity, and the profit and loss statement should be adjusted by revenues and costs connected with the non-operating assets. The result of these changes is adjusted profit and loss statement, which is generated by the invested operating capital (Mařík, 2011).

Operating assets are valued by income method, while non-operating assets should be valued separately. Among the non-operating assets in most of the cases belong (Mařík, 2007):

- Short term financial assets - cash, securities, shares,

- Long term financial assets - securities, shares, credits, loans,
- Others - receivables not connected with core business activity, redundant inventories, unused buildings etc.

3.6.1 Analysis and prognosis of value generators

Value generators are set of certain basic economic variables, which determine the value of company. They are derived in response to chosen approach to valuation of the company, while the most common approach is discounted cash flow method. Among the most common value generators belong (Mařík, 2007):

- Sales and their growth,
- Operating profit margin,
- Working capital investment,
- Investment in long term operating assets,
- Discount rate,
- Method of financing,
- Period for which the positive cash flow is anticipated.

Sales

Prediction of future sales is obtained from the results of strategic analysis. This should answer the question of what sales can company have in regard to the probable market development. It is also necessary to consider enterprise capacities (Mařík, 2011).

Operating profit margin

Another essential generator of value is operating profit margin, it can be expressed by formula (Sabolovič, 2011):

Operating profit margin = Adjusted earnings before interests and taxes / Sales

From the practical reasons, two independent prognoses should be executed, called also prognosis from the top, and prognosis from the bottom. If the two prognoses have different values, the estimated values should be corrected until the results are identical (Mařík, 2007).

Working capital investment

It is the working capital adjusted to the form of necessary operating working capital, which contains only items, which are operationally necessary. From the short term financial assets is deducted only foreign short-term capital bearing no interest (Sabolovič, 2011).

The calculation of adjusted working capital (Mařík, 2007):

Tab. 1 The calculation of adjusted working capital

Short term financial assets
inventory receivables non interested liabilities accruals (assets) accruals (liabilities)
= working capital

Source: Mařík (2007)

For the purposes of valuation of company, it is necessary to determine the rate of the turnover main items of working capital, which include inventory, receivables and current liabilities (Kislingerová, 2010).

Investment in the long term operating assets

This part of analysis of value generators belong to the most demanding, since investment does not develop so smoothly in time and it is difficult to predict its development. Investments are also understood as an investment in research and development and human capital (Kislingerová, 2010). There are three approaches to investment planning (Mařík, 2007):

- **Global approach** - is used when investments in fixed assets have continuous character. This approach is based on relationship between additions to necessary operating fixed assets and sales over previous years.
- **Approach based on main items** - is used generally for the coming years, and only if specific business investment plans are available.
- **Approach based on depreciation** - are based on the assumption, that investments under the level of depreciation (which is recalculated from the historical prices) are generally not enough for company to survive or grow in long term.

3.6.2 Preliminary valuation based on generators of value

In case the generators of value are justified by financial analysis, it is possible to use them to estimate value of company based on cash flows. Free cash flows (FCF) for particular years is possible to express (Mařík, 2007):

$$FCFt = X_{t-1} * (1 + g) * r_{ZPx} * (1 - d) - X_{t-1} * g * (k_{WC} + k_{DMx})$$

Where particular shortcuts mean:
FCF_t - Free cash flow after tax,
X - the size of sales of goods and own products,
g - sales growth,

r_{ZPx} - Profit margin after tax and depreciation,
d - tax rate from adjusted income statement,
k_{WC} - coefficient of sales growth intensity needed for growth of working capital,
k_{DMx} - coefficient of sales growth intensity needed for growth of long term assets,
t - year.

To estimate value of company as a whole is being used following formula (Mařík, 2007):

$$H_b = \frac{X_{t-1} * (1+g) * r_{ZPx} * (1-d) - X_{t-1} * g * (k_{WC} + k_{DMx})}{i_k - g}$$

H_b - gross income value.

3.7 Financial plan

Financial plan is the base for ensuring financial health and long-term stability of enterprise. It consists of balance sheet, income statement and statement of cash flows. Financial plan is part of company's business plan and should be based on vision and strategy of the company. It is the base for the valuation of company when income based methods are used (Mařík, 2007).

Financial plan usually consists of following parts: revenues from the sale of main products, profit margin and operating profit, planned values of inventories, receivables and payables, prognosis of costs, prognosis of investment into long term assets (Mařík, 2007).

3.8 Business valuation methods

Aim of the business valuation is to express the value of company in monetary amounts, or equivalent. For this purposes are being used business valuation methods which include income methods, market methods and asset methods. Selection of correct method depends on the goal which should particular valuation meet. Valuation methods can be divided into following categories (Mařík, 2007):

- **Income methods**
  - Discounted cash flow method,
  - Capitalization of earnings method,
  - Economic value added method,
- **Combined methods**
- **Market methods**
  - Market capitalization method,
  - Comparable companies method,
  - Companies valued at stock market,
  - Comparable transactions method,
  - Sectoral multipliers method.

- **Asset methods**
    - Liquidation method,
    - Market value method,
    - Substantial value - principle of reproductive prices,
    - Substantial value - principle of saving costs,
    - Accounting value of equity - principle of historical prices.

3.8.1 Income methods

Discounted cash flow method DCF

Models of discounted cash flow method are currently the most commonly used. The basis of this method is that value of assets is derived from present value of future cash flows. The usage of these models is based on these simplifying assumptions (Kislingerová, 2001):

- Capital markets are efficient,
- Capital structure of the company is made up only from equity and debt,
- There is only income tax,
- Enterprise from a going concern principle must continuously invest the amount of depreciation.

This method can occur in multiple variants, the three basic techniques include (Mařík, 2007):

- Method DCF entity - refers to company as a whole,
- Method DCF equity - refers to own capital,
- Method DCF APV - refers to adjusted present value.

Kislingerová (2001) distinguishes the techniques in terms of cash flow, ie. for whom is the cash flow intended:

- FCFE Free cash flows to the equity,
- FCFF Free cash flows to the firm,
- Dividend discount model DDM.

Free cash flow (FCF) is used for the business valuation, where FCF represents the amount of money, which can be taken out of a company without threatening its future existence. FCF is the cash flow available to investors and the company's value is dependent on it. It is calculated as follows (Mařík, 2007):

$$FCF = NOPAT + \text{Depreciation expense} - \Delta WC - CAPEX$$

FCF - Free cash flows,
NOPAT - Net operating profit after taxes,
ΔWC - change in working capital,
CAPEX - capital expenses.

Free cash flow is important because it allows company to utilize market opportunities for expanding, developing new products, merging with other companies, etc. FCF should be used to maximize the shareholder value. If the FCF is negative, it does not necessarily mean bad situation for company. However, if

negative FCF is caused by a negative NOPAT, it is highly probable that company suffers with operating problems. On the other hand, many high-growth companies have positive NOPAT, but their FCF is negative because of large investments in operating assets. There is nothing wrong with profitable growth, even if it produces negative cash flows (Brigham, Ehrhardt, 2011).

It is possible to use single-stage (constant growth), two-stage, or three-stage methods for business valuation. The selection of particular method will be based on expected growth pattern over next five years. FCF can be expected to grow at its constant rate (single stage), or FCF can be expected to grow in two or three stages. Two-stage model is most commonly used (Mayes, Shank, 2010).

Method DCF entity

Business valuation using this method consists of two parts. Firstly, the cash flows intended for owners and creditors are discounted to present value, which determines value of the company as a whole. This value of company is also called gross value. Afterwards, the value of debts to the day of valuation is deducted and calculated is value of equity, also called net value. Sometimes are also used free cash flows to the firm FCFF, which means cash flows for owners and creditors (Mařík, 2007).

The formula for calculation of firm value according to single stage (constant growth) model (Mařík, 2007):

$$H_b = \sum_{T=1}^{n} \frac{FCFF_T}{(1+i_k)^t}$$

According to two-stage model (Mařík, 2007):

$$H_b = \sum_{T=1}^{n} \frac{FCFF_T}{(1+i_k)^t} + \frac{PH}{(1+i_k)^T}$$

Where:
H_b - firm gross value
T - time period of 1st stage, number of years
FCFF - free cash flows to the firm
i_k - WACC - weighted average cost of capital
PH (CV) - continuous value (constant growth)

Usage of two-stage method brings the issue regarding the length of particular stages. Mařík (2011) recommends using length of first stage from five to seven years, however the length of first stage can also take from four to fourteen years. On the other hand, Kislingerová (2001) says that there is no rule for determining the correct length of forecast period.

For the calculation of continuous value, it is possible to use either Gordon formula or parametric formula. G**ordon's formula** assumes stable and continuous growth of FCFF in the second stage. In case the Gordon's formula is applied to free cash flows, created is going concern (Sabolovič, 2011).

$$PH\ in\ time\ T = \frac{FCFF_{T+1}}{i_k - g}$$

Where:
T - is the last year of forecasted period,
i_k - average cost of capital (calculated interest rate),
g - projected FCFF growth rate during the second stage,
FCFF - free cash flow to the firm.

Condition for usage of this formula is that i_k>g. When using Gordon's formula, it is necessary to estimate free cash flow for year T+1, for the first year in which is no longer available the financial plan. The estimate can be determined as (Mařík, 2007):

$$FCFF_{T+1} = FCFF_T * (1 + g)$$

Discount rate for DCF method
Determination of discount rate is dependent on selected valuation method and capital structure of company. For method DCF entity, the discount rate is set on level of weighted average cost of capital (WACC) (Mařík, 2007).

Cost of capital is reflecting the expected revenue for investors from their investments and the corresponding risk. The formula for WACC calculation is following (Kislingerová, 2010):

$$WACC = r_d * (1 - t) * \frac{D}{C} + r_e * \frac{E}{C}$$

Where:
r_d - cost of foreign capital
r_e - cost of own capital
D - debt
E - equity (own capital invested)
C - total capital invested (E+D)
t - corporate income tax

Calculation of weighted average cost of capital consists of determining (Neumaierová, Neumaier, 2002):

- Cost of own capital (equity),
- Cost of foreign capital (debt),
- Weight of particular capital elements on overall invested capital.

Economic value added method

Economic value added EVA represents the incremental rate of return in excess of total cost of capital of a company, or in other words, this is the surplus value created on initial investment.

This method of business valuation consists of two parts. First reflects the value of invested capital of shareholders and creditors in accounting statements and the other is represented by the present value of future economic value added (Kislingerová, 2010).

$$\mathrm{EVA} = \mathrm{NOPAT} - \mathrm{WACC} * \mathrm{C}$$

, where:
NOPAT – net operational profit after taxes (EBIT*(1-t))
EBIT – earnings before interest and taxes
WACC – weighted average cost of capital
t – corporate tax rate

Value of the company using EVA entity method can be defined as:

$$H_n = NOA_0 + \sum_{t=1}^{T} \frac{EVA_t}{(1+WACC)^t} + \frac{EVA_{T+1}}{WACC * (1+WACC)^T} - D_0 + A_0$$

H_n – enterprise value of equity (net value)
EVA_t – EVA in a year t
NOA_0 – net operating asset to the date of valuation
T- number of years explicitly planned EVA
WACC – weighted average cost of capital
D_0 – value of interest-bearing debts to the date of valuation
A_0 – non-operating assets to the date of valuation

3.9 Specifics of economics of football clubs

Professional football clubs are in many aspects similar to companies in classic view. For explanation of their behaviour can be used economic models, while respecting some specifics. In professional sport exists both perfect competition and imperfect competition (Novotný, 2011).

Professionalization of sport at the end of the last millennium has brought the growth of financial funds, which flew into sport. In terms of turnover and number of employees have professional clubs today the character of SMEs. However, considering the general familiarity of football clubs, and how closely their customers monitor them, football clubs can not be compared with any other common businesses. Likewise, the financial management of football clubs as a

result of specific conditions differs from common economic sphere. These differences are then reflected in approach to valuation and it is important to pay attention to them (Novotný, 2011).

If we go deep into nature of football clubs as a business entities in sport environment, and compare them to classic companies from non-sporting environment, observed can be a few differences, mainly in following areas (Novotný, 2011):

- Functioning of the club,
- Financial flows,
- Accounting,
- Common cooperation and stimulation of support in areas of: labour market of players, division of broadcasting rights, mutual support in terms of given economic area, for example empiric evidence of competitive equality of league or empirical evidence of effects of support strategies.

It is necessary to have knowledge of following specifics of football clubs (Novotný, 2011):

3.9.1 Goals of the owners

There is on-going debate in terms of primary goals of football clubs. The club can be oriented in maximizing of profits, or to be successful in sporting performance. However, these two goals may not exclude each other.

Usually the main purpose of doing business is the economic performance of company. However, the owners of football clubs have often different goals, such as sporting achievements, which are more important than economic performance. The reality that owners may have different priorities than economic profit is important for valuation of company. According to Mařík (2007), regardless of the approach and valuation method, in strategic analysis it is important to assess the ability of company to survive in long term and to create value. In case of some football clubs, the result could be that they are not able to survive in long term, and they should be valued by liquidation value.

3.9.2 Product

Product is in this case the football match. The football matches are organized in form of long-term competition, while its equality is important factor of attractiveness and generating revenue. Football match as a product is unique because is intangible, used immediately, and not repeatable in same form. By its nature, quantification and valuation of football match is difficult. It is the mean to achieve different kinds of income. Some of it directly connected to the match, like ticket sales, sales of broadcasting rights, and prize money for European cup matches. Others are more indirect, and connected more with brand of football club, for example advertising, sponsorship, merchandise sales and others.

3.9.3 Structure of the assets

Football clubs have very unique asset structure. The most important asset for any football club is represented by the players. In the western European football leagues is the purchase price of player recognized as long term intangible asset and is normally depreciated over the duration of the contract. Every football club needs the stadium for playing the matches, which is another of its core assets. The club can either own one, or rent it most typically from city where it operates. Another important asset of football clubs is their brand - business name, which is determined by history, tradition, sporting philosophy, performances and others. The problem is that this intangible asset is not in any way included in the property of football club and its quantification is very difficult.

3.9.4 Structure of revenues and costs

Structure of revenues and costs of football clubs is different from those used in standard accounting. For better understanding of football clubs functioning, and to execute strategic and financial analyses, needed are specific subdivisions of revenues and costs. Recognized can be revenues from ticket sales, sales of broadcasting rights, from sale of players, advertising, sponsorship and merchandise. In terms of costs, recognized are salaries of players and coaches, cost of players purchase, costs connected with operation of stadium and other facilities, cost of overall functioning of club including salaries of whole range of employees (Novotný, 2011).

3.9.5 Competition and market regulation

Specific nature of the product of football clubs is followed by different form of competition. Football clubs are part of the competitions (football leagues) in which they compete but also cooperate among themselves. Each football league is subject to specific rules and regulations of the national football association. Above stands Union of European Football Associations UEFA, and main governing body of world football in FIFA.

In case of Arsenal Football Club, it is regulated by the rules of the FA, Premier League, UEFA and FIFA. Any change to FA, Premier League, UEFA and FIFA regulations in future will have an impact on Arsenal, as the regulations cover following areas: the format of competitions, financial fair play, the division of broadcasting income, the eligibility of players and the operation of the transfer market (Arsenal Football Club, Statement of accounts and annual report 2014/15).

In terms of football market regulation, it is important to mention The Financial Fair play. It is a set of rules established by UEFA in year 2010. Its main purpose is to improve the overall financial health of European club football (UEFA, 2015).

In recent seasons, many clubs have reported repeated the financial losses. The economic situation has created difficult market conditions for clubs in Europe, and this can have a negative impact on revenue generation and creates additional

challenges for clubs in respect of the availability of financing and day-to-day operations. Many clubs have experienced liquidity shortfalls, leading to delayed payments to other clubs, employees and social/tax authorities etc. (UEFA, 2015).

The FFP include an obligation for clubs, over a certain period of time, to balance their books or to be break-even. By the rules of this concept, clubs cannot constantly spend more than they generated in revenues. The clubs will be also obliged to meet all their transfer and employee payment commitments at all times. Clubs with higher risk, which will fail certain indicators, will be required to provide budgets detailing their strategic plans (UEFA, 2015).

3.9.6 Valuation of sport clubs

The techniques used for valuation of football clubs are the same as those used in valuing any other enterprises. Two main approaches are being generally used: the income approach and the market approach. Whether the valuation is done through the income approach, market approach, or both, the valuation of football club will require adjustments to be made in order to reflect specific features of the team being valued (Grant Thornton, 2010).

When using the market approach, multiple adjustments will need to be made, so that all factors are reflected. These include the extent and profitability of commercial operations, sponsorship income, stadium ownership, need for capacity increase, need for new stadium, size of catchment area, the presence of other teams nearby, and of course recent success. Recent success is important as it impacts not only football revenue but also the ability to attract and boost the sponsorship income and media rights income (Grant Thornton, 2010).

In case the income approach is used, it considers the effect of these factors in the forecasted cash flows, and often allows for more exact valuation adjustments than the simple usage of a multiple. However, the need for detailed forecasts and deep understanding of the club's cash flows is necessary. This could make it difficult to be done by an outsider who is seeking to value a sports team (Grant Thornton, 2010).

4 Valuation of company Arsenal Holdings plc

In this part of the thesis is firstly described company Arsenal Holdings plc which formally represents Arsenal Football Club. In following chapters are executed strategic analysis and financial analysis of the company. Afterwards are analysed and predicted generators of value, and the company's value is calculated using income methods.

4.1 Characteristics of company

Business name: Arsenal Holdings plc
Address: Highbury House 75, Drayton Park, London N5 1BU, United Kingdom
Legal form: Public limited company
Established: 1886
Share capital: 62,217
Stadium: Emirates stadium (capacity of 60,432 people)
Employees:

- Playing staff - 66
- Training staff - 95
- Administrative staff - 345
- Ground staff - 99
- Total - 605

Directors:
Sir Chips Keswick
K.J. Friar OBE
I.E. Gazidis
Lord Harris of Peckham
E.S. Kroenke
J.W. Kroenke

Manager: Arséne Wenger

Arsenal Football Club is a professional football club based in London, which currently plays in Barclays Premier League, the top division of English football. It is one of the most successful football clubs in England, which won 13 First division and later Premier League titles and 12 FA cups.

One of the milestones in modern history of Arsenal is the appointment of manager Arsène Wenger, who arrived at Highbury in October 1996 after notable success at Monaco. He was the Club's first manager from outside of the UK, and helped to establish the club consistently among the top teams in the league. Since season 1997-98, the club continuously finished in top four places in the Premier

League, which guarantee Champions league qualification, and the club has won the Premier League in seasons 1997-98, 200-02 and 2003-04.

In year 2006 an important milestone in the club's history happened when moved to new built home Emirates Stadium (known as Ashburton Grove before the sponsorship deal) with capacity of 60,260 people.

4.1.1 Shareholder structure

Arsenal football club is owned by a parent company, Arsenal Holdings plc, which has a total of 62,219 shares in issue. Following entities own shares of Arsenal Holdings plc (Arsenal, 2015):

- KSE UK Inc. owns 41,698 shares, which represents 67.02% stake in company. KSE UK Inc. is wholly owned by Stan Kroenke.
- RED and WHITE SECURITIES LTD owns 18, 695 shares, which represent 30.04% stake in company. Red and White Securities Ltd is a wholly owned subsidiary of Red and White Holdings Ltd, where 50% of company owns Alisher Burkhanovich Usmanov and the other 50% holds Ardavan Farhad Moshiri.
- Other shareholders hold only minority of shares and include former players, Arsenal Supporters Trust, etc.

4.1.2 Subsidiary companies

The company has following subsidiary companies, which help with organization of football club and connected activities (Statement of accounts and annual report, 2015):

- Arsenal (AFC Holdings) Limited
- The Arsenal Football Club plc - professional football club,
- Arsenal (Emirates Stadium) Limited - property development,
- Arsenal Overseas Holdings Limited - share holding,
- AOH-USA, LLC - data management,
- Arsenal Overseas Limited - retail operations,
- Arsenal Securities plc - financing,
- Arsenal Stadium Management Company Limited - stadium operations,
- ATL (Holdings) Limited - share holding ,
- Ashburton Trading Limited - property development,
- HHL Holding Company Limited - share holding,
- Highbury Holdings Limited - property holding,
- Arsenal Ladies Limited - ladies football,
- Arsenal Football Club Asia PTE Limited - commercial operations,
- Ashburton Properties (Northern Triangle) Limited - dormant,
- Drayton Park Trading Limited - dormant,
- Queensland Road Trading Limited - dormant,
- Ashburton Properties Holdings Limited - dormant,

- Arsenal Stadium Management Holdings Limited - dormant.

4.1.3 Strategy

The long term strategy is to continue to develop Arsenal as a leading football club both on domestic and global stage. Board is committed to self-sustainable business model, where the funds generated by the football club are invested into Club with aim to achieve increased on-field success, which helps to generate bigger fan base, and ultimately helps to further increase revenues and value of the club.

4.1.4 Sport performance

In the table below are shown sport performances of Arsenal in the past five seasons. The most important competition for the club is domestic Barclays Premier League. In the past seasons Arsenal has floated around 3rd-4th position, which guarantees the spot in Champions League (four top league teams are qualified). In the Champions League, the club has very consistent performances. In each of the past five seasons it finished in the 1st knockout round, best 16 teams in Europe. In the FA cup (The Football Association Challenge Cup), which is annual knockout cup competition in English football and also the oldest association football competition in the world, the Arsenal has been successful in recent seasons as it won it in the last two seasons.

Tab. 2 History of sporting performance

Year	Premier League	Champions League	FA cup
2011	4th	1st k/o round Champions League	6th round
2012	3rd	1st k/o round Champions League	5th round
2013	4th	1st k/o round Champions League	5th round
2014	4th	1st k/o round Champions League	Winners
2015	3rd	1st k/o round Champions League	Winners

Source: Arsenal Football Club (2016)

4.2 Strategic analysis

In this chapter will be performed PESTE analysis, then will be assessed current situation of the market and afterwards will be predicted possible development of the branch.

4.2.1 PESTE analysis

Political factors
Arsenal operates in United Kingdom, therefore it belongs under belong to UK tax system. The current corporation tax rate for company profits is 20% as of 1 April 2015.

All of England's professional football teams are members of the Football Association. The Football Association, English football's governing body, was formed in 1863. Even though The FA is not running the day-to-day operations of the Premier League, it can veto the appointment of the League Chairman and Chief Executive, or any changes to league rules. The FA is a member of UEFA and FIFA. On top of that every professional club in Europe falls under the rules of Financial Fair Play, which are closer described in the chapter 3.9.5.

Economic factors
Arsenal is based in the UK, and even though it is a football club with global appeal and fan base, the state of UK's economy is important for the development of the club, and it is necessary to analyse it. The main economic indicators are expressed in the table below.

Tab. 3 Economic factors

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GDP (millions of pounds)	1,645,808	1,665,213	1,701,180	1,751,198	1,794,978	1,834,468	1,876,660	1,919,823	1,963,979	2,009,151
GDP (change in %)	1.6	0.7	1.7	2.6	2.5	2.2	2.3	2.3	2.3	2.3
Inflation rate (CPI) (in %)	4.6	2.7	2.1	0.9	0.1	1.2	1.9	2	2	2
Unemployment (in %)	7.8	7.8	7.2	5.7	5.3	5.1	5.0	5.1	5.3	5.3
GBP/EUR	1.2	1.23	1.2	1.29	1.36					
Tax rate	26	24	23	21	20	20	20	20	20	20

Source: PWC, Inflation.eu, Gov.uk,Poundsterlingfive.com,Bank of England (2016)

In terms of GDP, economy of the UK is one of the biggest and most developed in the world. It is the second biggest in the EU after Germany, and fifth in the world. In the last five years the economy has been constantly growing, after it recovered from the financial crisis which hit in the year 2008. In the next year it is expected that the economy will grow with similar tempo as in recent years, which is around 2.3%.

As a consequence of economic growth in recent years, the rate of unemployment has been decreasing to the recent value of 5.3 % and it is expected that this rate will decrease further to 5.1 % next year. This number is one of the lowest in the EU.

Development of the inflation rate had the same trend. The values of inflation in the last years have been continuously decreasing. For the year 2016 there is predicted growth of the inflation on the level of 1.2% and in the following years it should increase to 2%.

The pound to euro rate (GBP/EUR) is very important for the football clubs in the UK, because they often transfer players with other football clubs from Europe. During the years 2011-2013 has been the pound to euro rate stable and floated around the value of 1.2. However, in year 2014 started rising, at the date of valuation it reached 1.36 and is expected to rise further in year 2016 because of the Bank of England's policy of rising the interest rate.

The corporate tax rate has been decreasing each year and in 2016 it reached the value 20% (in year 2011 it was 26%). It is expected that the corporate tax will remain at this level for the following years.

Social factors

Social factors are affecting the demand for company's products and the operation of company. Sports are one of the key elements of culture, it affects almost all aspects of life, and football is the world's most followed sport. World Cup 2014 was viewed by 3.2 billion people, which represents almost half of the planet. This is valid even more in England, the place where football began, and is part of everyday life.

Technology factors

The technologies affect the football currently mainly in terms of broadcasting. It is available to watch matches via television, however in the future, the usage of new channels such as internet and mobile can be expected. Commentators are speculating on whether technology companies such as Netflix, Apple, and Google will emerge as competitors for live rights using the new technologies for watching football.

Environmental factors

These factors are including weather, climate, and climate change. The football is affected mainly by weather factors, especially in winter. The UK has a temperate oceanic climate, which allows to play football without winter break, as opposed to all other top European leagues. Football clubs must be ready to face the specifics, which brings this aspect, especially to the requirements to the size of playing squad, which should be naturally bigger. The clubs also needs to take into account the adaptation of newly purchased players from other parts of the world, which will need time to adapt to these conditions.

4.2.2 Industry analysis

Definition of relevant market

Football market in Europe has reached the €20 billion mark in season 2013/14. Cumulative revenues of the five biggest European leagues has reached €11.3 billion, 15% rise compared to previous year. All five leagues reported record revenues for the third successive year (Deloitte, 2015).

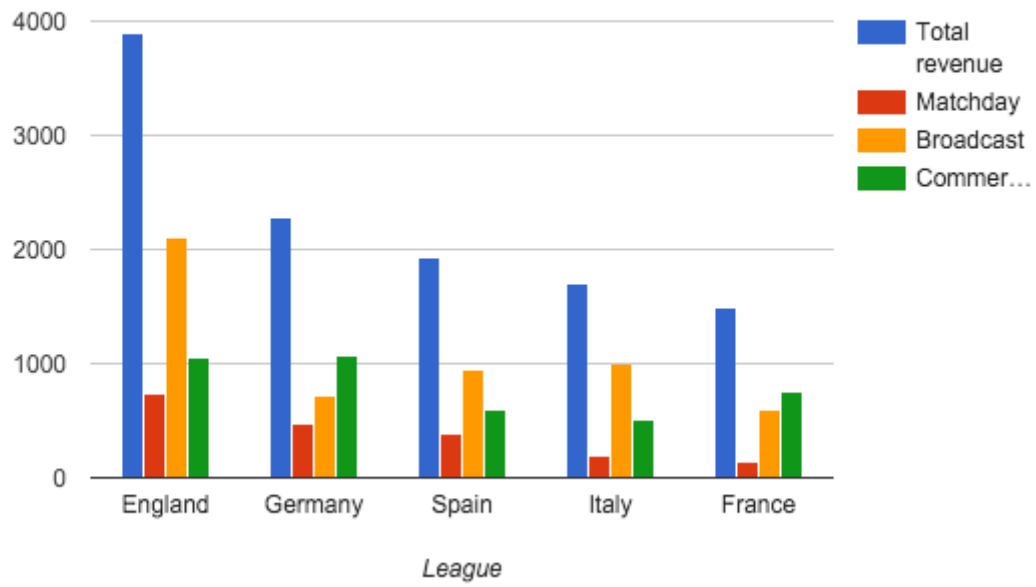

Fig. 1 Football leagues by revenue 2013/14 (millions of €) (Deloitte, 2016)

Arsenal competes in the English Premier League, which is the competition that currently generates the biggest revenues in football world. In the season 2013/14 the English Premier League has extended its lead as highest revenue generating football league in the world, as its revenues rose by 29% and reached £3.3m.

In the table below, the revenues of first five seasons are based on real data, the next five seasons are predicted. Three main sources of revenue in football industry are the match day revenue, broadcasting revenue and commercial revenue. Match day revenue includes sales of tickets and other hospitality income, broadcast revenue includes the income from sales of TV rights, and the prize money gained from participation in different competitions and commercial revenue includes sponsorship deals, sales of merchandise and others. As these three categories have significantly different growth rates and are influenced by completely different factors, prediction of development of each of them is calculated in different way.

Tab. 4 Revenue development in Premier League

Revenue					Revenue growth in %			
Season	**Total revenue**	**Match day**	**Broadcast**	**Commercial**	**Total revenue**	**Match day**	**Broadcast**	**Commercial**
09/10	2,030	531	1,040	459	-	-	-	-
10/11	2,271	542	1,178	551	11.87	2.07	13.27	20.04
11/12	2,361	547	1,189	625	3.96	0.92	0.93	13.43
12/13	2,525	585	1,191	749	6.95	6.95	0.17	19.84
13/14	3,260	616	1,760	884	29.11	5.30	47.77	18.02
14/15	3,441	639	1,760	1,041	5.54	3.78	0.00	17.80
15/16	3,650	663	1,760	1,227	6.09	3.78	0.00	17.80
16/17	5,143	689	3,010	1,445	40.90	3.78	71.00	17.80
17/18	5,426	715	3,010	1,702	5.51	3.78	0.00	17.80
18/19	5,756	742	3,010	2,005	6.08	3.78	0.00	17.80

(Deloitte, 2011-2015)

Match day

The match day revenue is determined by the capacity of the stadiums, their respective attendance, and the price of tickets. In Season 2013/14, match day revenue increased by 5% to £616m, and for the first time in the history of the league represented less than 20% of total revenue. The average attendance rose by 2%, which is caused by change of composition of clubs in Premier League. Average match day revenue per attendee slightly increased, from £35 to £36 (Deloitte, 2015).

Broadcasting

The broadcasting revenue is dependent on the deals signed with broadcasting companies. The value of these deals is already known in four years advance. Therefore the prediction of broadcasting revenue is relatively easy, when assumed the distribution of money does not change (Deloitte, 2015).

The rise in broadcasting is mainly due new domestic broadcast deals, largely related to companies BSkyB and new entrants to market in BT, which generates over three seasons from 2013/14 £3.4 billion, which is about 60% rise on previous deal. The Premier League has already agreed new domestic broadcasting deal over next three seasons starting from 2016/17, which will generate over £5.3 billion. This means the domestic broadcasting revenue will grow by another 71% rise on the current deal (Deloitte, 2015).

Tab. 5 2014/15 Premier League Prize Money Table

No.	Club	Equal share	Merit based	Facility fee	Total
1	Chelsea	£54.1m	£24.7m	£19.98m	£98.99m
2	Man City	£54.1m	£23.5m	£20.72m	£98.5m
3	Arsenal	£54.1m	£22.2m	£19.98m	£96.5m
4	Manchester United	£54.1m	£21m	£21.47m	£96.75m
5	Tottenham	£54.1m	£19.8m	£14.75m	£88.7m
6	Liverpool	£54.1m	£18.5m	£19.98m	£92.7m
7	Southampton	£54.1m	£17.3m	£11m	£82.5m
8	Swansea City	£54.1m	£16.1m	£10.2m	£80.5m
9	Stoke City	£54.1m	£14.8m	£8.75m	£77.8m
10	Crystal Palace	£54.1m	£13.6m	£9.5m	£77.35m
11	Everton	£54.1m	£12.4m	£14m	£77.65m
12	West Ham	£54.1m	£11.1m	£11m	£76.33m
13	West Brom	£54.1m	£9.9m	£8.75m	£72.8m
14	Leicester City	£54.1m	£8.7m	£8.75m	£71.6m
15	Newcastle United	£54.1m	£7.4m	£16.2m	£77.8m
16	Sunderland	£54.1m	£6.2m	£9.52m	£69.8m
17	Aston Villa	£54.1m	£4.9m	£9.52m	£68.6m
18	Hull City	£54.1m	£3.7m	£8.75m	£66.6m
19	Burnley	£54.1m	£2.5m	£8.75m	£65.3m
20	QPR	£54.1m	£1.236m	£9.52m	£64.8m

Source: (Total Sportek, 2015)

Overseas broadcast rights, cover more than 200 countries. They generate over the three seasons from 2013/14 over £2.2 billion (up 50% from the previous deal). The deal for three seasons from 2016/2017 has not been agreed yet. For the purpose of this diploma thesis, it is estimated that the foreign broadcasting rights will rise at same pace as domestic rights at level of 71%.

Based on the Premier League's revenue distribution mechanism, the broadcasting incomes are ranging between £60 and £100 million a season. After the new deals come in place, these will probably rise by another 71%, assuming the distribution is not changed (Deloitte, 2015).

Commercial

Commercial revenue is affected by the prestige of the Premier League and individual clubs around the world. As the teams achieve more success, fans and followers, their negotiation position is stronger, and they are able to gain more lucrative deals and sponsorships from all over the world. The Premier League is the football league with biggest global reach, and is getting still more popular. This is reflected in the growth of broadcasting deals with television companies from all over the world, therefore it can be also expected that commercial revenues will grow significantly.

In season 2013/14, the commercial revenue has increased by £135m to £884m, which represents 18% of the total increase. The commercial revenue can be mainly assigned to the four UEFA Champions League clubs plus Liverpool and Tottenham Hotspur, which are responsible for 78% of the Premier League's commercial revenue (Deloitte, 2015).

Operating profits

Operating profits in Premier League increased by £532m (649%) to £614m, which is huge improvement on previous record by nearly £430m. As a result, 19 of the 20 clubs recorded an operating profit, and also 13 clubs recorded their record breaking operating profit (Deloitte, 2015).

European Cup Competitions

Two main Cup competitions in Europe are Champions League and UEFA Europa League. Champions League is very prestigious and lucrative and it is the aim of every European football club to be part of this competition. Champions League brings much higher income that the competition number two UEFA Europa League. In 2014/15 the Champions League clubs shared almost €988 million (UEFA, 2015).

Each club is entitled to a minimum payment of €8.6 for participation in the competition. Additionally, performance bonuses are paid for every win (€1m) or draw (€0.5m) in the group stage, as well as for each knockout round, while money from the market pool are divided according to the proportional value of the national television market allocated to each individual club, among other factors. The performance bonuses for reaching each knockout round are €3.5m for the last 16, an additional €3.9m for the quarter-finals and €4.9m more for the semi-finals. The winner collects €10.5m, and runner-up receives €6.5m (UEFA, 2015).

The teams that participated in the 2014/15 UEFA Europa League received payments worth €168.75 million as a result of UEFA's revenue distribution system. Compared to €988 million in Champions League it is evident why the clubs are more attracted to participation in this competition (UEFA, 2015).

4.2.3 Main competitors

English Premier League is a football league, which is played by 20 clubs. Each season these clubs compete to achieve the highest places in the league. The

primary target of most of them is to stay in this competition and not to be relegated. The participation it this league brings considerable income which is every year higher. Also, the higher club finishes, the bigger portion of broadcasting payments it receives. Moreover, the top 4 teams in the table are qualified to Champions League, which brings additional significant income, and 3 teams from England are qualified to UEFA Europa League. The financial consequences of playing European competitions are discussed in previous chapter.

In football industry, the biggest competitors are not only other football clubs with big market share and revenues as in other industries. The sporting success in the competitions is equally important. Revenue helps football clubs to buy better players and therefore be more competitive, and the sport success brings bigger revenue from match day income, broadcasting, sponsorships and other commercial income. However, some clubs can in short term compete with richer cubs by clever scouting of players and development of youth. So these two factors are influenced by each other.

In the graph below are shown revenues of 6 biggest clubs in Premier League. The revenues from the sale of players and other not-football revenues are not included in this comparison, only revenues from match day, broadcasting and commercial income.

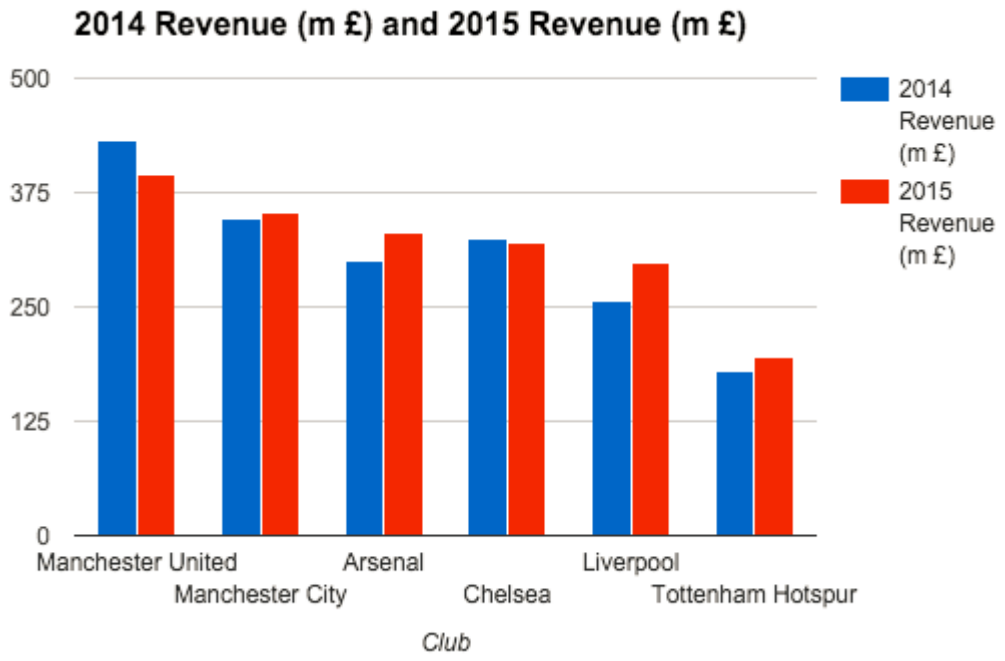

Fig. 2 Revenues of PL clubs (Deloitte, 2015, 2016)

Manchester United

Manchester United with the revenue of £395.2m is the highest earning club in England and third in the world. This is despite the fact that the revenue decreased in the last season due the absence of European football. The big factor playing its role in club's high revenues is football success in the past two decades. The club has built huge fan base around the world, which is the reason to very high commercial income from sponsorships. United's commercial policy is very impressive. They have big global partner portfolio and continue in adding multiple regional partners. In the last season they signed new 7-year shirt sponsorship with General Motors, plus they added five global, four regional and two financial services and telecom partnerships. They also have the biggest average attendance in England of 75,203 people per match, which is due to big stadium capacity and leads to high match day income (Deloitte, 2016).

Manchester City

With record revenue of £352.6m, second place is occupied by Manchester City, club owned by Abu Dhabi based Sheikh Mansour, one of football's wealthiest owners. He bought the club in 2008, which was at the time when the club occupied mid-table positions in the League. However, with financial backing of new owner, the club invested heavily in the playing squad. This translated also into on-field success, they have won the Premier League in years 2012 and 2014. This helped them to improve their commercial income, and also they enjoy bigger share of broadcasting rights than before (Deloitte, 2016).

Arsenal FC

Revenue growth of 10% to £328.5m in 2014/15 has helped Arsenal to leapfrog local rivals Chelsea into the position of third highest revenue generating club in the Premier League.

The vast majority of this revenue growth is extra commercial revenue, which rose by £26.2m (34%). This significant increase in commercial revenue has been driven by the announcement of the club's new kit sponsorship deal with Puma. This added with the recently renewed shirt and stadium sponsorship agreement with Emirates and a number of new regional partnerships around the world, this has helped boost Arsenal's commercial revenue to over £100m for the first time, which represents a 66% increase over the last two seasons. This significant growth demonstrates the considerable global commercial appeal of the biggest Premier League clubs, while Arsenal is getting closer in commercial revenue to both Manchester clubs, Chelsea and Liverpool.

At £100.4m Arsenal recorded the highest match day revenue of any European football clubs, while no other club has as high a proportion of its revenue (30%) derived from match day sources. Broadcast revenue rose slightly by 4% to £127.6m, and remained the club's primary revenue stream and comprising 39% of the total revenue. Arsenal received distributions of €36.4m from UEFA for participation in European competitions, which is included in broadcasting revenue.

Chelsea FC

Chelsea is club from London, owned by Russian billionaire Roman Abramovich. Chelsea has won the Premier League 5 times in history, while the last time was in year 2015.

Chelsea's revenue from commercial sources increased significantly in season 2013/14 by 35% to £113.5m, which was caused by a ten year extension of the club's partnership with kit supplier Adidas, and also from increase in the value of the Samsung shirt sponsorship, the addition of a number of other commercial partners. However the total revenue marginally fell in 2014/15 from £324.4m to £319.5m (2%). This was mainly due to a fall in broadcast revenue, caused by exit from the UEFA Champions League in the Round of 16. Chelsea has recently submitted a planning application to build a new 60,000-seater stadium at Stamford Bridge. This would deliver a significant boost to match day revenues in the medium term (Chelsea FC, Deloitte, 2016).

Liverpool FC

Liverpool is club owned by American based Fenway Sports Group. It is one of the most successful clubs in English history, having won the English Title 18 times, and 5 times the Champions League. However, the last time they won Premier League in year 1990, and the Champions League in year 2005. Even football-wise they are not as successful right now, they still have very big global fan base, which helps them to gain lucrative commercial partnerships. Liverpool has increased its revenues in season 2014/15 by a significant 17% (£42.3m) to a total £298.1m. Increase in revenue came mainly from return to the UEFA Champions League and healthy increases in match day revenue.

Liverpool remains focused on maximising commercial revenues. In the past two seasons club announced several new deals including the US fast-food chains Subway and Dunkin' Donuts, Indonesian airline Garuda, Indian mobile phone company Xolo and Vauxhall as well as three year extension with main shirt sponsor Standard Chartered, who have appeared as Liverpool's shirt sponsor since the 2010/11 season. Liverpool is also currently redeveloping the stadium. The development will be finished before start of the season 2016/2017 and will bring additional 8,500 seats, therefore the match day revenue should increase significantly in the medium term (Liverpool FC, Deloitte, 2016).

Tottenham Hotspur

Tottenham Hotspur is London based football club owned by UK based investment company ENIC Group. Historically, they are the biggest rivals of Arsenal FC as the clubs are close neighbours, and their head-to-head fixtures are known as North London derby.

The club grew total revenue by 9% to £195.9m. Tottenham's chances to increase revenue depend on qualification for the Champions League. This along with the completion of the planned new stadium development would give

Tottenham the chance to get closer to the clubs mentioned above. Without success in those two areas, the chance of the club moving up is limited (Deloitte, 2016).

4.2.4 Market attractiveness analysis

Analysis of market attractiveness reflects the attractiveness through 9 selected criterions. First of all will need to be defined the criterions which influence the market and then assigned weights based on intensity of influence. The weights are assigned numbers 1-3, 1 the least important criterions, 3 the most important ones. Afterwards is each criterion assigned points from 0 (the most negative) to 6 (the most positive).

Tab. 6 Market attractiveness analysis

		Evaluation							
		Negative		Average			Positive		
Criterion	Weight	0	1	2	3	4	5	6	Total
Market size	3					x			12
Market growth	3						x		15
Competition	2			x					4
Industry profitability	3				x				9
Entrance barriers	2					x			8
Possibility of substitution	1					x			4
Sensibility to economic growth	1					x			4
Global opportunities	2					x			8
Customer loyalty	2						x		10
Total	19								74

Maximal number of points: 114
Result: 74/114 = 65%

The market of Premier League football has achieved the level of attractiveness of 65%. Based on the result, it is fair to say that this market is currently attractive. Biggest positive is market growth, which is due to new signed broadcasting deals and increasing revenues from commercial rights. These factors should help to raise the overall revenues significantly. Another strong side is customer loyalty, as the fans of particular teams are pretty loyal, they are deeply connected with the club,

its philosophy and tradition and it is hard to imagine for customers to switch the clubs easily.

4.2.5 Competitive position of company

As a part of competitive position of company analysis are chosen factors which influence the ability of company to keep or improve its performance and market share. The principle is similar to the market attractiveness analysis in previous chapter. Analysis includes factors, which are assigned weights and points.

Tab. 7 Competitive position of company

		Evaluation							
		Negative		Average			Positive		
Criterion	Weight	0	1	2	3	4	5	6	Total
Quality of product	3						x		15
Fan base	3						x		15
Advertising	1					x			4
Youth development	2					x			8
Scouting	2					x			8
Brand image	2					x			8
Price level	1		x						1
Customer relations	2				x				6
Financial situation	2					x			8
Quality of football management	2						x		10
Quality of playing squad	2						x		10
Total	22								93

Maximal number of points: 132
Result: 93/123=70.5%
The company has achieved 70.5%, which means that its competitive position is relatively strong.

4.2.6 SWOT analysis

Strengths

- Club is financially self-sustainable - club generates enough funds to cover all needs to invest in playing squad and compete with its rivals.
- Stabilized squad and long term conception in football matters - the club manager Arséne Wenger is the longest serving manager in Premier League, he is at the club for 20 years, he has since stabilized squad for his playing style and implemented his philosophy in terms of playing style.
- Youth development - clubs has high quality youth academy, and is famous of promoting youth players into first team and making them stars.
- Club is constantly qualified to Champions League - the club is consistently qualifying for Champions League, this season is the 18th in a row when the club is not missing in the most prestigious club competition.
- Global fan base - the club is popular all around the world, which is demonstrated by stats on the social media. Club has more than 34.5 million fans on Facebook, which ranks him 5th in the world, and 3rd in England.
- Relatively big and modern stadium.

Weaknesses

- Owner not willing to support excessive spending on new players, which may prove hard to compete with clubs like Man City and Chelsea.
- Dependency on sporting performances - because the club is financed only with own resources, it is strongly dependent on on-field performances. The clubs with billionaire owners like Chelsea or Man City are not.

Opportunities

- Win of the Premier League title - winning of Premier League would increase the prestige of the club, it would the global fan base, new sponsorships etc., which would bring higher revenue.
- Win of the Champions League - this would have similar impacts as the win of the Premier League
- Growth in commercial revenues - the club could utilize its big global fan base to attract deals with partners from local partners all around the world, similar to Liverpool or Man United.

Threats

- Competition of other clubs in Premier League - with growing broadcasting revenues, almost every club in Premier League can afford to buy quality players, which means the competition may rise.
- Sale of key players - few years back Arsenal had problem that every season the best players were leaving to closest rivals like Man City, or Man United. If the big financial offer for one of the key players, they may be tempted to leave.
- Economic crisis.

4.2.7 Prediction of future development

Revenues of clubs in the Premier League are expected to grow in next four years at a steady rate. This is due to already agreed new broadcasting deals, which are in place for the next four seasons. The match day income will not grow rapidly because they are restricted by capacity of stadiums, and there is pressure from local fans to keep the ticket prices at current rate rather than increasing them. However, in the medium term the match day income may slightly grow due to announced stadium expansion of Liverpool and planning applications to build new stadiums of Tottenham Hotspur and Chelsea, which is included in the predicted match day revenue growth. The commercial revenue growth is expected to continue at the similar rate to past seasons in the next few years. However, afterwards it can be expected that this growth will slowly decrease as the companies, which fund these sponsorships have only limited economic power and must respect the constraints of economic growth in the world.

4.3 Financial analysis

Financial analysis is one of the most important parts of the financial management, with aim to assess the financial health of a company. Financial analysis is performed on the basis of balance sheet and income statements of the company from the last five years.

4.3.1 Ratio analysis

Ratio analysis compares individual items in the income statement and balance sheet and the ratio between them. Distinguished are several groups of ratio analysis related to certain financial area of analysed company.

Profitability ratios
Profitability ratios are one of the most important indicators in financial analysis. They provide information about the profit generated on invested units (assets, equity, sales etc.). Values of profitability ratios are in the table below.

Tab. 8 Profitability ratios

Profitability ratios	2011	2012	2013	2014	2015
ROA (Ebit/A)	4.06%	6.54%	2.49%	2.12%	4.08%
ROE (Eat/Equity)	4.71%	9.95%	1.91%	2.34%	6.06%
ROS (Eat/sales)	4.90%	12.06%	2.05%	2.39%	6.09%

The development of all three key profitability indicators (ROA, ROE, ROS) is very similar. Positive thing is that all three indicators remain constantly above zero, which means that the company is in profit. In the year 2012 the value of indicators

is higher than in other years, which is mainly caused by increased profit on disposal of player registrations, which basically means sales of players. In the year 2015 are the profitability ratios again starting to grow, this due to multiple factors. Broadcasting revenues (which are significantly higher from year 2014), combined with significant increase in commercial revenue, and higher income from property development all contribute to this increase.

Debt ratios

Analysis of debt ratios reflects the fact that the company does not use only own equity but also foreign capital, while the essence is to find the optimal capital structure. Selected indicators of indebtedness are reflected in the table below.

Tab. 9 Debt ratios

Debt ratios	2011	2012	2013	2014	2015
Current debt ratio	62.43%	61.14%	61.52%	62.78%	64.03%
Equity ratio	37.57%	38.86%	38.48%	37.21%	35.97%
Debt to equity ratio	166.18%	157.31%	159.90%	168.70%	178.03%
Times Interest Earned EBIT / Total Interested Costs	1.96	3.47	1.39	1.27	2.76

Current debt ratio is maintained at relatively high level of more than 60%. Majority of the debt is due the loans connected with building of new stadium, which was completed in year 2006 and company is still repaying this debt. However, this investment helps to increase match day income, and it is clear that company will not require major investment in fixed assets in both short and medium term. Moreover, part of the debts is due to purchased players, the payments for which are distributed into more instalments.

Equity ratio is basically the opposite of current debt ratio, it expresses the portion of own equity on total equity of company. The coefficient reaches relatively low values, which means that the company is quite dependent on financing from foreign capital. However, this capital is cheaper than own equity, so from this point of view low values of this indicator are positive.

Times interest earned is indicator, which measures the ability of company to pay its debts. Usually the value lower than 2.5 is considered as a warning sign. It can be seen that three times in last five years this value has been lower. However, the ratio has always been higher than 1, which means that company generated sufficient revenue to cover the interests and company also holds huge cash reserves worth around £228 million.

Activity ratios

Activity ratios provide the information on how effective is the company in utilising its assets, therefore for how long are the finances tied in the assets. Basic activity ratios are expressed in table below.

Tab. 10 Activity ratios

Activity ratios	2011	2012	2013	2014	2015
Asset turnover ratio	36.15%	32.06%	35.87%	36.45%	35.82%
Inventory turnover ratio	7.46	6.25	18.70	20.58	23.08
Inventory turnover ratio - retail merchandise	229.53	144.56	131.57	61.17	76.05
Average collection period	41.40	84.37	123.20	83.42	88.36
Creditor date ratio	183.05	212.88	190.88	240.22	299.22

Asset turnover ratio has been pretty stable and remained in interval 32- 36%. Turnover of company has been constantly growing, but the main part of this growth has been invested back into the club, so the asset turnover ratio remains relatively stable.

Inventory turnover ratio is quite low number because of inventories in form of property development, which club creates with aim of their sale. Every year part of the properties is sold, the stock of development properties decreases and the therefore the inventory turnover ratio has gradually increased from 7.46 to 23.08. The only other inventories of football clubs are retail merchandise.

The value of average collection rose to number 88.36. This is despite constant growth of turnover. This growth has been offset by even higher growth of receivables from debtors.

Creditor date ratio grew to the value of 299.22, again despite the growth of turnover. The short-term liabilities have experienced more steady growth than the turnover.

Liquidity ratios

The liquidity ratios are used to describe the ability of companies to meet its financial obligations. The values of current ratio, quick ratio and cash position ratio are calculated in the table below.

Tab. 11 Liquidity ratios

Liquidity ratios	2011	2012	2013	2014	2015
Current ratio	1.71	1.73	1.77	1.44	1.18
Quick ratio	1.45	1.45	1.67	1.37	1.13
Cash ratio	1.22	1.06	1.02	1.02	0.83

The current liquidity in the years 2011-2013 was in the range of average strategy of working capital control. However, in the last two years the value of current ratio has decreased and the strategy of the company can be described as aggressive one, as the values has moved in the range of 1.0 -1.6.

The values of quick asset ratio, also called acid test were during the duration of reported period in the range, which is described as conservative strategy, as the values have not decreased below the 1.0 value.

The optimal value of cash ratio is described in the range 0.2 - 0.5. As can be seen in the table above, the values of cash ratio has exceeded these amounts greatly in every of the reported year. This has been caused by significant cash reserves, which are held by the club.

4.3.2 Prediction of financial distress

For prediction of financial distress are used different models. Because football club is type of non-manufacturing company, for prediction of financial distress is used revised Z-score for non-manufacturing business. The individual parts of the model are computed in the table below.

Tab. 12 Prediction of financial distress

Z-score bankruptcy model	Weight	2011	2012	2013	2014	2015
NWC/Assets	6.56	0.13	0.14	0.15	0.11	0.05
EAT/Assets	3.26	0.02	0.04	0.01	0.01	0.02
EBIT/Assets	6.72	0.04	0.07	0.02	0.02	0.04
Equity/Total liabilities	1.05	0.60	0.64	0.63	0.59	0.56
Total		**1.82**	**2.14**	**1.81**	**1.50**	**1.29**

As can be seen in the graph below, the values of the Z-score bankruptcy model lie in the so-called grey zone. It means that even though company is not in immediate threat of bankruptcy, it remains in the zone of uncertainty.

However, the economy of football clubs is so specific, that even the clubs with worse values of Z-score might not be under immediate bankruptcy threat.

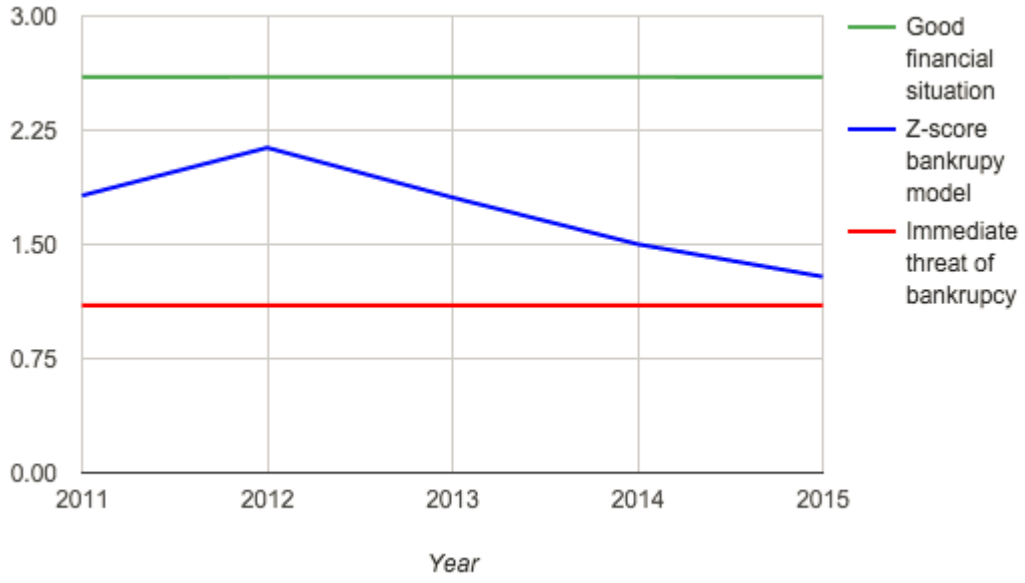

Fig. 3 Prediction of financial distress

4.4 Operational necessary and unnecessary assets

In this chapter will be assets divided into operationally necessary and unnecessary. The operationally unnecessary assets should be excluded, as they do not participate in core business of the company.

Operational necessary assets are calculated as the sum of operational necessary fixed assets and operational necessary working capital.

Firstly has been calculated the value of operationally necessary fixed assets. From the tangible fixed assets were removed the leasehold properties, which are not connected with core business activities of the company as they are a consequence of rebuilding of the old Highbury stadium into luxury apartments and their subsequent lease.

Afterwards is calculated value of operational necessary working capital. The value of operational necessary financial assets is calculated on the basis of operationally necessary liquidity. According to experts, should be the operational necessary amount of cash equal to 20% from current liabilities. However, proper consideration of the Company's cash balance must be taken into account. The cash balance include allowance for the payments for the transfers of player registrations, and the season end bank balance of the company also includes advance receipts, of sponsorship and season ticket sales, which represent working capital for next seasons. The operational necessary amount of cash is therefore set to 80% from current liabilities. In the stock are not included items for the development properties as they are connected with property business of the club, as they are not the part of core business activities of the company.

Tab. 13 Operational assets

Item	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Goodwill	0	0	1,924	1,498	1,082
Tangible fixed assets	427,700	423,636	418,320	418,633	413,520
Intangible fixed assets	55,717	85,708	96,570	114,986	171,658
Investments	1,648	2,326	3,031	3,571	4,174
Operationally necessary fixed assets	**485,065**	**511,670**	**519,845**	**538,688**	**590,434**
plus stock	1,114	1,681	2,131	4,935	4,530
plus short term receivables (debtors)	27,435	52,332	88,484	65,642	74,175
plus accrued revenues	0	0	0	0	0
minus short term payables (creditors)	131,104	145,159	149,931	203,032	273,733
minus accrued expenses	0	0	0	0	0
Cash	160,229	153,625	153,457	207,878	228,167
Liquidity	1.222	1.058	1.024	1.024	0.834
Operationally necessary liquidity	0.8	0.8	0.8	0.8	0.8
plus operationally necessary cash	104,883	116,127	119,945	162,426	218,986
Working capital operationally necessary	**2,328**	**24,981**	**60,629**	**29,971**	**23,958**
Invested capital operationally necessary	**487,393**	**536,651**	**580,474**	**568,659**	**614,392**

In connection to the modification of the assets, it is necessary to adjust the profit (EBIT). The adjusted EBIT is calculated as the sum of original EBIT and costs from sale of properties reduced by the revenue from the sale of these properties. Also the share of joint venture operating result is deducted, as it is not connected with core business activities of company.

Tab. 14 Adjusted EBIT

Item	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
EBIT Profit on ordinary activities before finance income	28,984	50,084	19,650	17,686	37,465
Revenues from sale of long term assets	-30,282	-7,684	-37,549	-3,214	-15,187
Costs from sale of long term assets	25,484	5,463	33,078	2,703	2,044
Share of joint venture operating result	-822	-952	-945	-710	-762
Adjusted EBIT	**23,364**	**46,911**	**14,234**	**16,465**	**23,560**

4.5 Value generators analysis and prognosis

In this chapter are analysed and estimated the value generators, which include sales, operating profit margin, working capital and investments into necessary long term assets.

4.5.1 Sales

Analysis and prognosis of sales are done based on strategic analysis, historical development, information from statements of accounts and annual reports from past five years, and expected future development.

Because sales of football clubs are very specific, they are predicted as the sum of the individual types of revenues, which will be forecasted individually. When predicting individual sources of revenue, expected sporting performances are on the current level, which has been more or less stable for past years, and regular qualification into champions league is expected.

Tab. 15 Sales prediction

Item	Reality					Prediction			
	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019
Gate and other match day revenues	93,108	95,212	92,780	100,229	100,401	100,401	102,309	104,355	106,442
Broadcasting	85,244	84,701	86,025	120,762	124,844	138,348	208,482	208,482	208,482
Retail and licensing	17,702	18,303	18,057	17,938	24,685	24,981	25,456	25,965	26,484
Commercial	28,621	34,212	44,365	59,216	78,602	86,462	95,108	104,619	115,081
Property development	30,282	7,684	37,549	3,214	15,187	0	0	0	0
Player trading - loan of players	735	2,901	1,598	513	805	972	972	972	972
Group turnover	255,692	243,013	280,374	301,872	344,524	351,164	432,327	444,393	457,461
Annual growth rate	-	-4.96%	15.37%	7.67%	14.13%	1.93%	23.11%	2.79%	2.94%
Average growth rate					7.74%				7.35%

Gate and other match day revenues are influenced by number of home games per season, average attendance and prices of tickets. Based on expected stable sporting performance, the number of home games played should remain on the same level. Average ticket sales of 59,930 per match in year 2015 (2014 – 59,790) represent more than 99% of capacity. Therefore the number of sold tickets is expected to be on same level. Looking ahead, ticket prices were held flat for the 2015/16 season and afterwards the price growth is expected only on the level of forecasted inflation rate. Whilst the match day revenue is now ranked behind both

broadcasting and commercial as a source of income, it remains very important to the Club and is regarded as a key differentiator to competitor clubs with smaller, less modern venues.

Broadcasting revenues in year 2015 were only slightly increased at £124.8 million (2014 - £120.8 million) as was to be expected due to the second season of three for the current Premier League broadcasting contracts and the final year of a UEFA contract cycle. The broadcasting contracts for the following three year cycles of both Premier League and UEFA contract has already been signed, and with expected unchanged distribution of those rights, and stable sporting performances of the club, significant growth in this area of revenue is expected for following seasons.

Retail and licensing revenues increased significantly to £24.7 million (2014 - £17.9 million) compared to previous years when this year revenues have been relatively stable. The main driver of this growth was the new partnership contract with PUMA, which started in July 2014. PUMA have put significant effort into promoting the partnership globally through innovative and effective marketing campaigns and prominent presentation of Arsenal products in their stores all around the world. In addition to this, the club benefited from major refit of the flagship Armoury store, which was completed to coincide with the launch of the PUMA kits. Because the kit sponsorship contract with PUMA runs until year 2019, the revenues are expected to remain similar to the level from last year, only increased by the forecasted inflation rates.

Commercial revenue represents a significant amount of revenue from sponsorship and other commercial relationships. Currently the club's most important commercial contracts are its naming rights and shirt sponsorship contracts with Emirates Airline, which run until 2028 and 2019 respectively, and the kit sponsorship contract with PUMA, which runs until 2019. Commercial revenues rose significantly in the last few years, in 2015 by 32.7% (2014 - 33.5%, 2013 - 29.7%). The main driver for this growth was the new kit partnership contract with PUMA. PUMA contract signals the end of a period where the commercial revenues lagged behind a number of the Club's competitors as a consequence of the long-term deals that were in place as part of the funding of the Emirates move. The club has also made strong progress with secondary partnerships adding brands such as Cooper Tires, Vitality and Europcar, which helped to bring the Club's total number of partnerships to 24 at the end of the 2014/15 season. During the year 2015 the club opened first commercial office outside the UK, in Singapore, and have already secured a number of new contracts from this location. The club also has in the pipeline other potential partner deals and commercial opportunities, and therefore commercial revenues are expected to continue grow. However, the growth rate will now probably slow down as the key partnerships with Emirates and PUMA are in place for the medium term. The predicted growth of commercial revenues is at the level of 10% for the following years.

Property development revenues are not part of core business activities, therefore resulting revenues are not included into projected revenues.

Player trading - loan of players, values of which are changing every year, therefore future revenues from loan of players are set as average from the past five years.

The average annual growth rate of revenues for the past five years has been 7.74%. Projected revenue growth for next four years is estimated at the value of 7.35%.

Second phase growth – After the period of predicted four years is over, it is very difficult to predict the development of sales. However, it is necessary to take into consideration that the companies, which fund broadcasting rights and sponsorships have only limited economic power the constraints of economic growth in the world must be respected. Also in terms of match day revenue, the physical capacities of stadiums must be respected. Therefore to be in line with precautionary principle, the predicted growth rate in second phase is adjusted to 5%.

4.5.2 Operating profit margin

Second value generator is operating profit margin, for its determination and projection are being used methods from the top and from the bottom. Method from the top is considered primary and is based on calculation of the adjusted EBITDA. Afterwards is calculated operating profit margin as EBITDA divided by turnover.

Tab. 16 Operating profit margin

Item		Group turnover	EBITDA	Operating profit margin (from adjusted EBITDA)	Average growth rate
	2010/2011	225,410	57,520	25.52%	
	2011/2012	235,329	100,621	42.76%	
	2012/2013	242,825	73,762	30.38%	
	2013/2014	298,658	69,381	23.23%	
Reality	2014/2015	329,337	93,959	28.53%	13.05%
	2015/2016	351,164	86,192	24.54%	
	2016/2017	432,327	178,545	41.30%	
	2017/2018	444,393	172,352	38.78%	
Prediction	2018/2019	457,461	165,884	36.26%	15.27%

Lowest value of operating profit margin occurred in year 2014 when it reached value 23.23%, on the other hand the highest profit margin was achieved in year

2012, when it reached value 42.76%, this was caused mainly due unusual profit made by disposal of player registrations, i.e. the sale of players.

The predicted development of operating profit margin is expected on the similar level to the values for the past five years. Expectation is that the turnover will grow at slightly higher rate to the past seasons, and along with this the absolute values of adjusted EBITDA will grow at similar rate too.

Tab. 17 Net operating profit margin

	Reality					**Prediction**			
Item	**2010/ 2011**	**2011/ 2012**	**2012/ 2013**	**2013/ 2014**	**2014/ 2015**	**2015/ 2016**	**2016/ 2017**	**2017/ 2018**	**2018/ 2019**
Adjusted EBITDA	25.52 %	42.76 %	30.38 %	23.23 %	28.53 %	24.54 %	41.30 %	38.78 %	36.26 %
Depreciation on sales	13.21 %	21.98 %	21.05 %	17.45 %	20.32 %	21.26 %	18.54 %	19.34 %	20.16 %
EBIT	12.31 %	20.78 %	9.33%	5.78%	8.21%	3.28%	22.76 %	19.44 %	16.10 %
Tax rate	27.67 %	25.67 %	23.83 %	22.67 %	20.83 %	20.00 %	20.00 %	20.00 %	20.00 %
Net operating profit margin	8.90%	15.45 %	7.11%	4.47%	6.50%	2.63%	18.21 %	15.55 %	12.88 %
Average net operating profit margin					8.48%				12.32%

Depreciation on sales is expected to remain at a similar level compared to the past seasons. Club is expected to invest majority of the sales growth back into playing squad and other tangible assets.

Standard UK corporation tax rate has been decreasing in each of the past five years, as has been described in PESTE analysis. The tax rates used in the statements of accounts are calculated as weighted average of valid tax rates through duration of accounting period. The expected tax rate for following four years are expected at the 20% rate.

The average net operating profit margin is expected to increase in the predicted period to 12.32% compared to 8.48% in the past five years.

4.5.3 Working capital

In this chapter will be analysed and predicted the intensity of revenue growth on working capital. Calculated are therefore turnover times of inventories, short-term receivables and payables. Inventory includes only retail merchandise, which is independent on turnover, and the turnover coefficient changed during the reported period. The predicted values of inventory are therefore set on the same absolute level as in the last year.

The value of short-term receivables is set on the value of 77.11, which is the average value of past five years and individual values in past five years floated around this value.

Turnover time of short time payables has been growing each year, however with the expected sharper revenue growth, the value of turnover is predicted on the same value of 286.03 of the past year.

Tab. 18 Working capital

Turnover in days	2011	2012	2013	2014	2015	2016	2017	2018	2019
Inventory - retail merchandise	1.57	2.49	2.74	5.89	4.73	4.64	3.77	3.67	3.56
Short term receivables	38.63	77.52	113.61	78.28	77.51	77.11	77.11	77.11	77.11
Short term payables	184.59	215.04	192.51	242.13	286.03	286.03	286.03	286.03	286.03

In the table below are expressed absolute values of the calculated turnover times. Afterwards was calculated operational necessary capital as sum of inventory, short-term receivables and accrued revenues minus short-term payables and accrued expenses. Afterwards was predicted cash and short-term deposits based operational necessary liquidity, which is set at 80% from the value of short-term payables. The last step was to calculate the working capital intensity coefficient. For the past five years was calculated at level 24.35% and for the predicted period reached value 5.19%.

Tab. 19 Turnover

Turnover in days	2011	2012	2013	2014	2015	2016	2017	2018	2019
Inventory – retail merch.	1,114	1,681	2,131	4,935	4,530	4,530	4,530	4,530	4,530
ST receivables	27,435	52,332	88,484	65,642	74,175	75,218	92,603	95,187	97,987
ST payables	131,104	145,159	149,931	203,032	273,733	279,009	343,494	353,081	363,464
Accrued expenses	0	0	0	0	0	0	0	0	0
Accrued revenues	0	0	0	0	0	0	0	0	0
Op. nec. capital (without cash)	-102,555	-91,146	-59,316	-132,455	-195,028	-199,261	-246,362	-253,364	-260,948
Op. nec. cash and ST deposits	104,883	116,127	119,945	162,426	218,986	223,207	274,796	282,465	290,772
Adjusted WC (cash included)	2,328	24,981	60,629	29,971	23,958	23,946	28,434	29,101	29,824
Kwc					24.35%				5.19%

4.5.4 Fixed assets investment

Last value generator is investments into fixed assets. The values of fixed assets are taken from chapter distribution of assets into operational necessary and unnecessary assets. Afterwards are expressed depreciation and amortization, which are adjusted minus depreciation of short leasehold properties. The next step is calculation of net investments, which are given as difference of operational necessary assets in individual years. Gross investments are calculated as sum of net investments and depreciation. When predicting future development, individual parts of operational necessary fixed assets and depreciation were predicted based on past development of each individual item and with taking into account predicted growth of revenues.

Value of goodwill is expected to decrease each year by amounts of amortisation until reaches zero value.

Largest part of tangible fixed assets is represented by stadium, which is being depreciated by 2% per annum. However, the total value of tangible fixed assets is expected to remain at the same value of the last season. The depreciation of stadium value will be offset by other smaller investments in tangible assets. The club expects capital expenditure to remain at an elevated level over the short term, as the club is committed to a major development project at its first team training ground at London Colney, a further phase of works at Hale End and a programme of upgrades at Emirates Stadium, which commenced with the new LED floodlights and perimeter boards installed this summer and the refit of the Royal Oak area in Club Tier. Depreciation of tangible assets in predicted period is expected to be at the same rate as in the past year, which represents 3.44% from value of fixed tangible assets.

Intangible fixed assets are represented by player registrations. The amount of player registration in season 2015/16 is based on already realised transfers during the summer transfer windows. In seasons afterwards, the value of intangible assets will grow on the average level of growth in the past 5 seasons, which represents 9.27%. This will lead to increase in transfer spending on players in future seasons. It is expected that with arrival of new Premier League broadcasting deal, the other clubs in the league will invest in new players, and in order for the club to keep its place among the top of the table, it will be required to invest more money into playing squad. Amortisation of intangible assets is expected to remain on the same level as in the season 2015/16, which represented 31.71% of the value of intangible fixed assets. The impairment of player registration is expected to be on the average value of the past five seasons.

Investments represent an interest in Arsenal Broadband Limited, a company incorporated in Great Britain and engaged in running the official Arsenal Football Club internet portal. The value of investments has been growing each of the past five years, with average growth of 26.15%, and it is expected to grow in the same speed in predicted period.

The last step was the calculation of intensity of sales growth to fixed assets coefficient, which decreased from 101.39% to 59.86%.

Tab. 20 Fixed asset investment

Item	2011	2012	2013	2014	2015	2016	2017	2018	2019
Goodwill	0	0	1,924	1,498	1,082	666	250	0	0
Tangible fixed assets	427,700	423,636	418,320	418,633	413,520	413,520	413,520	413,520	413,520
Intangible fixed assets	55,717	85,708	96,570	114,986	171,658	186,288	203,553	222,419	243,033
Investments	1,648	2,326	3,031	3,571	4,174	5,266	6,643	8,380	10,572
Operationaly necessary fixed assets	485,065	511,670	519,845	538,688	590,434	605,740	623,966	644,319	667,125
Amortisation of intangible assets	21,658	36,802	41,349	40,072	54,430	59,068	64,543	70,525	77,061
Depreciation of tangible assets	12,116	11,085	11,781	12,174	14,241	14,241	14,241	14,241	14,241
Impairment of player registrations	0	5,517	5,672	0	935	935	935	935	935
Amortisation of goodwill	0	0	213	426	416	416	416	250	0
Total depreciation	33,774	53,404	59,015	52,672	70,022	74,660	80,135	85,951	92,237
Investment net		26,605	8,175	18,843	51,746	15,306	18,227	20,353	22,806
Investiment gross		80,009	67,190	71,515	121,768	89,966	98,361	106,303	115,043
Cfa(Kdm)					101.39%				59.86%

4.6 Discount rate

Calculated discount rate will be used for preliminary valuation using generators of value, and for subsequent valuation using DCF entity method and EVA entity method. Discount rate will be equal to average weighted cost of capital. For WACC calculation is firstly necessary to quantify cost of equity and liabilities. For

determination of the cost of equity capital was used Capital Asset Pricing Model CAPM.

Tab. 21 Equity cost

CAPM	2015
Risk free interest rate (rf)	2.269
Beta unlevered	0.8125
RPM = risk premium of capital market (USA)	4.54
Rating of UK	Aa1
Country default risk	0.44
Risk premium for equities versus bonds (estimate)	2
Risk premium of UK (RPC)	0.88
Liquidity of ownership premium (estimate)	1.5
Tax rate	20
Beta levered	1.246118362
Equity cost	**10.30638**

Source: Damodaran (2016)

The data for calculation of equity cost were inherited mainly from the website of professor Damodaran. Unlevered beta coefficient is calculated as a weighted average of industries Entertainment, Broadcasting, and Advertising. The calculated value is 0.8125 and exact calculation can be found in table below.

Tab. 22 Beta Unlevered calculation

Industry name	Unlevered beta	Weight	Weighted average
Broadcasting	0.96	0.25	0.24
Entertainment	0.81	0.5	0.405
Advertising	0.67	0.25	0.1675
Total			**0.8125**

Source: Damodaran (2016)

The risk free interest rate is set on the same level as value of US 10 year bonds, the rate of which at the date of valuation was 2.269%. Risk premium of capital market in the USA for the year 2015 represents 4.54%. Value of risk premium of UK in year 2015 was 0.88. The liquidity of ownership premium is estimated at 1.5% as the shares of the club as traded less frequently and in limited quantity.

Beta levered is calculated based on following formula:

Beta levered= Beta unlevered x (1+ Liabilities/Total capital)x(1-taxation)

Equity costs are then calculated as follows:

Equity costs = rf+ B lev x RPT USA + RPC adj + R1 + R2

Equity costs = 2.269% + 1.246 x 4.54% + 0.88% + 1.5%

Equity costs = **10.306%**

Cost of foreign capital is calculated as ratio of total interest payable and similar charges on total sum of interest bearing loans in season 2014/15. The average interest rate of foreign capital is **6.16%**.

As the costs of equity and foreign capital are known, weighted average cost of capital can be calculated as follows:

$$WACC = r_e * \frac{E}{C} + \frac{D}{C} * r_d * (1 - t)$$

WACC = 0.1030638 x (330,669/551,260) + 0.0615574 x (220,591/551,260) x (1-0.20)

WACC = **8.15%**

4.7 Preliminary valuation

Based on the calculations, analyses and forecasts above can be done preliminary valuation based on value generators. Input data for determination of gross value of company and its calculation are presented in the table below.

Tab. 23 Preliminary valuation

Value generator	Value
Sales in last real year	329,337
Growth rate of sales	7.35
Profit margin after tax and depreciation	12.32
Working capital intensity coefficient	5.19
Investment intensity coefficient	59.86
Tax rate	0.20
WACC	8.15
Gross value	**1,636,084**

Gross value of the company based on the value generators is **£1,636,084** thousands. This is approximate value, which may serve as the basic idea about value of the company for subsequent valuation using income methods. After the deduction of interested foreign capital and addition of non operating capital final value of the company reached **£1,424,674 thousands**.

4.8 Discounted cash flow method

DCF method is one of the basic income methods. The primary output of this method is gross value of the company, which after the deduction of foreign capital gives net value of company. The valuation is divided into two phases. In the first phase is estimated value of company for period in which it is possible to build a forecast of free cash flows (seasons 2015-2019). In the second phase is estimated value of company, from the end of first phase until infinity, i.e. the going concern value.

First necessary step is to calculate the operationally necessary invested capital for the forecasted period. Operationally necessary invested capital is the sum of operationally necessary fixed assets and adjusted working capital. Forecast of the particular items is done in previous chapter.

Tab. 24 Operational necessary invested capital

Item	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
Operationally necessary fixed assets	538,688	590,434	605,740	649,758	657,646	666,770
Adjusted working capital (cash included)	29,971	23,958	23,946	28,434	29,101	29,824
Operationally necessary invested capital	**568,659**	**614,392**	**629,686**	**678,192**	**686,747**	**696,594**

Afterwards is in the table below described the calculation of free cash flows FCFF. The calculation of free cash flows is based on adjusted earnings before interest and tax. This is then adjusted by due taxes and depreciation and the value obtained is operating cash flow.

Then are added the value of investment in operationally necessary fixed assets and the value of working capital and that provides the value of free cash flow (FCFF).

Values of FCFF for particular years are then discounted by weighted average cost of capital. The sum of discounted FCFF for particular seasons gives the value for the first phase of valuation, which is **£103,976 thousands**.

Tab. 25 DCF Method first phase

Item	2015/2016	2016/2017	2017/2018	2018/2019
EBIT adjusted	11,532	98,410	86,401	73,647
Due tax	2,306	19,682	17,280	14,729
EAT adjusted	9,226	78,728	69,121	58,918
Depreciation	74,660	80,135	85,951	92,237
Operating CF	83,886	158,863	155,071	151,155
Invested WC operating	12	-4,488	-667	-723
Invested FA operating	-89,966	-124,153	-93,839	-101,361
FCFF	-6,068	30,222	60,565	49,071
Discount rate	1.0815	1.16964225	1.264968093	1.368062993
Discounted FCFF	-5,611	25,839	47,879	35,869
1st phase value				**103,976**

In the second phase is calculated the continuous value, for this purpose is used Gordon's formula. The interest rate is set on the level of WACC. Growth rate (g) in the second phase is projected on the level of 5%, as described in chapter 4.5.1. This reflects the probable company growth while reflecting the limitations of sector and economy growth under the prudence principle.

After using the Gordon's formula, continuous value of **£1,635,700 thousands** is obtained. Continuous value is then discounted using weighted average cost of capital and the present value of second phase is **£1,195,632 thousands**.

Tab. 26 DCF Method second phase

Item	Value
WACC	8.15%
Growth rate of sales	5.00%
FCFF in season 2019/2020	51,525
Continuous value	1,635,700
PV of second phase	**1,195,632**

Sum of values of first and second phase is the gross value of the company. Gross value is then lowered by interest bearing foreign capital and net value. Final value of company is obtained from the sum of net value and non-operating assets from the date of valuation. The final amount is **£1,088,197 thousands**.

Tab. 27 DCF Method calculation

Item	Value
PV of first phase	103,976
PV of second phase	1,195,632
Gross value	1,299,608
Interested foreign capital	220,591
Net value	1,079,017
Non-operating assets	9,181
Final value	**1,088,197**

4.9 Economic value added - EVA

Another valuation method used is Economic value added method. The first stage value of the company is derived as the sum of EVA for particular years discounted to its present value. The EVA value is calculated as a difference between the NOPAT, which is equal to adjusted operating profit after taxes and net operating assets NOA (same as operationally necessary invested capital) times weighted average cost of capital WACC. Final EVA value is then discounted to the present value and value of first stage is equal to the sum of discounted values of EVA for particular years.

Tab. 28 EVA calculation first phase

Item	Prediction			
	2015/2016	2016/2017	2017/2018	2018/2019
NOPAT (EAT adjusted)	9,226	78,728	69,121	58,918
NOA	629,686	678,192	686,747	696,594
WACC*NOA(t-1)	50,073	51,319	55,273	55,970
EVA	-40,847	27,409	13,848	2,948
Discount	0.92	0.85	0.79	0.73
Discounted EVA	-37,769	25,343	11,840	2,330
PV of first phase				1,744

Afterwards is calculated value of second phase of EVA. Present value of second phase after discounting is **£118,145 thousands**, which together with first phase makes total of **£119,889 thousands**.

Tab. 29 EVA calculation second phase

Item	Year
	2019/2020
NOPAT (EAT adjusted)	61,864
WACC*NOA(t-1)	56,772
EVA	5,091
Continuous value	161,629
PV of Continuous value	118,145
EVA	119,889

In the table is calculated overall value of EVA entity valuation method. After adding the value of net operating assets, deducting interested debt and adding the value of non-operating assets, final value of **£538,165 thousands** is obtained.

Tab. 30 EVA calculation

Item	Value
EVA	119,889
Net Operating assets	629,686
MVA	749,575
Interested debt	220,591
Non-operating assets	9,181
Total	538,165

4.10 Overview of the valuation methods

The aim of the thesis was to determine the value of the company for potential investor. When looking for investment value of prosperous businesses, in Anglo-Saxon countries are preffered income methods of valuation. Therefore for the valuation of Arsenal Football club has been used different income methods, first was calculated preliminary value using value generators. Afterwards was done valuation using two-phased method DCF entity method and two-phased EVA entity method. Results of all valuation methods used in the thesis are summarized in the table below.

Tab. 31 Overview of the valuation methods of Arsenal Football Club

Valuation method	Value (£ thousands)	
	Gross	Net
Preliminary valuation	1,636,084	1,424,674
DCF entity	1,299,608	1,088,197
EVA entity	749,575	538,165

The company was at first valued using value generators. The value of the company using preliminary valuation was determined at **£1,636,084 thousands**. After deducting interested debt, and adding value of non-operating assets, the value was **£1,424,674 thousands**. Two phased DCF entity valuation method determined the gross value of the company at **£1,299,608 thousands** and net at **£1,088,197 thousands**. When the two phased EVA entity method of valuation was used, gross value of the company was set at **£749,575 thousands** and the net value was **£538,165 thousands**.

5 Conclusion

Main goal of this thesis was to determine the value of company Arsenal Holdings plc for potential investor to the date of 01.01.2016. Based on the main goal, partial goals were set. The results of the thesis will provide potential investor necessary information about the market environment, position of the company on the market, the company's financial position, information about the value generators, which are influencing the value and development of the company. These analyses will provide the necessary information for the final valuation of the company and could be used for the potential investor in decision-making process about the investment into the company.

For valuation of the company were selected two-phased method DCF entity method and two-phased EVA entity method. The whole process of valuation consists of several successive partial steps and analyses described in both theoretical and practical part.

First part of the thesis deals with working up a theoretical backround for the following valuation of the company. It consists of the general knowledge about valuation of business, in which are further described basic terms, procedures and analyses, which precede the valuation itself. Afterwards are in more detail described valuation methods DCF entity and EVA entity.

In the second part of the thesis is firstly executed strategic analysis, which evaluates both external and internal environment of the company. For the analysis of external environment has been used PESTE analysis, which described the influence of the political, economic, social, technical and ecologic factors on the performance of company. Industry analysis described the development of the football market in the top European leagues and afterwards focused in detail to the English Barclays Premier League. Analysed was mainly development and prediction of three main sources of revenue of football clubs, which include match day, broadcasting and commercial income.

The sharpest growth is expected in the broadcasting rights sales, where has already been agreed record breaking new deal which should bring 71% growth for the three seasons beginning in season 2017/18. In overall the revenues of relevant market has been growing in the past five years by 12.6% and in the next four seasonsare predicted at the level of 15.3%, mainly due to the already discussed sharp increase in sales of broadcasting rights.

The growth in revenues of the relevant market has translated also in the revenues of the Arsenal FC. However, the growth of revenues of the club is slower than the revenue growth of relevant market. This is caused mainly by two parts of revenue. Match day revenue is not expected to grow much because the growth is restricted by capacity of quite recently built stadium and one of the highest ticket prices in the market. The other part is represented by gorwth of commercial revenues, where the club signed in recent seasons long-term contracts with main sponsors – naming rights and shirt sponsorships with Emirates and kit sponsorhip with PUMA. Commercial revenue of the club will in next seasons therefore increase

only by signing of minor sponsorhip deals. In the past five season the revenue has been growing by 7.74%, and in the next four seasons is expected to grow at the rate of 7.35%.

In the analysis of market attractiveness, the Premier League has achieved the level of attractiveness of 65%, which means that the market is currently fairly attractive and there are good possibilities for revenue growth. In the analysis of competitive position of company, Arsenal has achieved 70.5%, which means that its competitive position is relatively strong and company has good perspective for the future. The main factors in which has the company strong position are quality of football management, playing squad, product and fan base.

Based on the both external and internal analyses has been created the SWOT analysis. Among the main strengths of the company belong financial stability - club generates enough funds to cover all needs required to invest in playing squad and compete with its closest rivals, long-term conception in football matters, modern facilities – both stadium and training facilites, and global fan base.

The biggest weakness of the club is the dependency on the sport performance and its financial consequences, while many of the closest competitors have backing of billionaire owners willing to invest excessive resources.

Opportunity for the club is to win one of the major trophies, which would help to generate additional income and bigger global prestige.

When considering threats, the major one is growing competition in English Premier League, where increased broadcasting rights, and other growing types of revenue will bring additional revenue for every competitor of the club, therefore it will be more difficult to compete at the top of the league each season.

In evaluation of financial health of the company, found were several trends, which occur during the whole period. All three key profitability ratios (ROA, ROE, ROS) had similar develovpemnt, the positive thing is that all of them remained above zero for the whole period and in the last year started to grow because of higher values of both broadcasting and commercial revenues.

Debt ratios stay at high values during the whole period. This is caused mainly by building of a new stadium completed in 2006, and consequent investments into both tangible and intangible assets. However, these represent investment into future, which will help the club with growth of revenue.

Afterwards follows analysis of activity ratios. Asset turnover remains at the same level around 35-36% for the whole period. The revenue of company has been constantly growing, but majority of the growth has been invested back into the club, therefore asset turnover ratio remains at the same level. Inventory turnover ratio has increased from 7.46 to 23.08. This is caused by the inventories in form of property development, which club creates with aim of their sale. Each year part of the properties is sold, the stock of development properties decreases and the therefore the inventory turnover ratio has gradually increased. Values of both average collection period and creditor date ratio has grown during the past five years, which was despite the continuous growth of turnover. Positive sign is that

the creditor date ratio is more than three times higher value than the average collection period.

Values of the liquidity ratios were decreasing during the reported five years. Current ratio value ended up at 1.18, which is considered as aggressive strategy. Quick ratio, also called acid test ended up at value 1.13, which belongs to the interval described as conservative strategy. Cash ratio exceeded conservative interval in each year of reported period with achieving value 0.83 in 2015. This was caused by significant cash reserves held by club.

Prediction of financial distress was done using revised Z-score for non-manufacturing business. The values of the Z-score bankruptcy model lie in the so-called grey zone, which means that even though company is not in immediate threat of bankruptcy, it remains in the zone of uncertainty. However, the economy of football clubs is so specific, that even the clubs with worse values of Z-score might not be under immediate bankruptcy threat.

In the next chapter has been divided the assets of the company into operationaly necessary and unnecessary. From the tangible fixed assets were removed the leasehold properties, which are not connected with core business activities. The operational necessary amount of cash is set to 80% from current liabilities, because the cash balance include allowance for the payments for the transfers of player registrations, and the season end bank balance of the club also includes advance receipts of sponsorship and season ticket sales, which represent working capital for next seasons.

Afterwards follows the chapter describing analysis and prognosis of value generators, which include sales, operating profit margin, working capital and investments into necessary long term assets. The described value generators were predicted based on strategic analysis, historical development, information from statements of accounts and annual reports from past five years, and expected future development. These value generators are then used for preliminary valuation of the company.

Before proceeding with valuation of the company, it was needed to determine the discount rate, which was set at the level of weighted average cost of capital. For its calculation was necessary to calculate cost of foreign capital and cost of equity, which has been calculated using CAPM model. Calculated discount rate was equal to 8.15%.

The company was at first valued using value generators. The value of the company using preliminary valuation was determined at £1,636,084 thousands. After deducting interested debt, and adding value of non-operating assets, the value was £1,424,674 thousands. Two phased DCF entity valuation method determined the gross value of the company at £1,299,608 thousands and net value at £1,088,197 thousands. When the two phased EVA entity method of valuation was used, gross value of the company was set at £749,575 thousands and the net value was £538,165 thousands.

Based on the findings from this thesis and performed analyses, it can be said that the company is overally in good condition, it generates economic value for the

owners. It operates on a market with significant growth potential, therefore company would represent investment worth considering given the right price.

One of the biggest challenges of the thesis was to cope with specific nautre of football clubs, particulary with financial flows and structure of accounting, which is different from majortiy of other types businesses. On the other hand the prediction of future development of revenues has not been very difficult, since majority of future revenues can be expected based on already signed contracts for future seasons and the other types of revenues like match day revenue and sale are quite stable. However, majority of these revenues is performance based. Therefore, it is essential that the club maintains current level of performances to fullfill predicted amounts of revenues.

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Appendix

A Balance sheet

Assets (thousands £)	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Total assets	**713,245**	**765,625**	**788,410**	**834,662**	**919,365**
Fixed assets	**488,793**	**515,191**	**523,064**	**541,457**	**596,094**
Goodwill	0	0	1,924	1,498	1,082
Tangible fixed assets	431,428	427,157	421,539	421,402	419,180
Intangible fixed assets	55,717	85,708	96,570	114,986	171,658
Investments	1,648	2,326	3,031	3,571	4,174
Current assets	224,452	250,434	265,346	293,165	323,271
Stock - development properties	33,460	37,595	12,987	9,849	9,741
Stock - retail merchandise	1,114	1,681	2,131	4,935	4,530
Debtors - due within one year	27,435	52,332	88,484	65,642	74,175
Debtors - due after one year	2,214	5,201	8,287	4,861	6,658
Cash and short-term deposits	160,229	153,625	153,457	207,878	228,167
Liabilities (thousands £)					
Equity and Liabilities	**713,245**	**765,625**	**788,410**	**834,662**	**919,365**
Equity shareholders' funds	**267,955**	**297,548**	**303,355**	**310,618**	**330,669**
Called up share capital	62	62	62	62	62
Share premium	29,997	29,997	29,997	29,997	29,997
Merger reserve	26,699	26,699	26,699	26,699	26,699
Profit and loss account	211,197	240,790	246,597	253,860	273,911
Liabilities	**445,290**	**468,077**	**485,055**	**524,004**	**588,696**
Creditors - within one year	131,104	145,159	149,931	203,032	273,733
Creditors - after more than one year	275,912	268,066	274,721	266,478	264,362
Provisions for liabilities	38,274	54,852	60,403	54,494	50,601

and charges					

B Income statement

Income statement (thousands of GBP)	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
Turnover - including its share of joint ventures	257842	245,478	282,774	304,267	346,498
Share of turnover of joint venture	-2150	-2,465	-2,400	-2,395	-2,779
Group turnover	**255692**	**243,013**	**280,374**	**301,872**	**344,524**
Gate and other match day revenues	93108	95,212	92,780	100,229	100,401
Broadcasting	85244	84,701	86,025	120,762	124,844
Retail and licensing	17,702	18,303	18,057	17,938	24,685
Commercial	28,621	34,212	44,365	59,216	78,602
Property development	30282	7,684	37,549	3,214	15,187
Player trading - loan of players	735	2,901	1,598	513	805
Operating expenses	**233786**	**259,337**	**308,655**	**291,808**	**336,765**
Amortisation of goodwill	0	0	213	426	416
Amortisation of player registrations	21658	36,802	41,349	40,072	54,430
Impairment of player registrations	0	5,517	5,672	0	935
Depreciation	12498	11,391	12,294	12,418	14,618
Staff costs	124401	143,448	154,490	166,403	192,213
Cost of property sales	25484	5,463	33,078	2,703	2,044
Other operating charges	54528	56,716	61,559	69,786	72,109
Operating profit	**21906**	**-16,324**	**-28,281**	**10,064**	**7,759**
Share of joint venture operating result	822	952	945	710	762
Profit on disposal of player registrations	6256	65,456	46,986	6,912	28,944
Profit on ordinary activities before finance income	**28984**	**50,084**	**19,650**	**17,686**	**37,465**
Net finance income	**-14208**	**-13,496**	**-12,996**	**-13,018**	**-12,751**

(charges)					
Total interest payable and similar Charges	14774	14,451	14,120	13,905	13,579
Interest receivable	566	955	1,124	887	828
Profit on ordinary activities before taxation	**14776**	**36,588**	**6,654**	**4,668**	**24,714**
Taxation	-2143	6,995	849	-2,603	4,670
Profit after taxation	**12633**	**29,593**	**5,805**	**7,271**	**20,044**