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Kofola ČeskoSlovensko, a.s., Fundamental Analysis

Diploma Thesis

Thesis supervisor:

Ing. Martin Širůček, Ph.D.   Bc. Jiří Jahoda

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Acknowledgement

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Abstrakt

Jahoda, J. Kofola ČeskoSlovensko, a.s., fundamentální analýza. Diplomová práce. Mendelova univerzita v Brně, 2017.

Diplomová práce se zabývá buy-side fundamentální analýzou veřejně obchodované společnosti. K analýze je přistoupeno top-down postupem, čili nejprve jsou rozebrány makroekonomické faktory ovlivňující vnitřní hodnotu akcie, poté se přistupuje k odvětvovým faktorům a na závěr je zkoumaná samotná společnost. Výsledkem práce je determinace vnitřní hodnoty akcie společnosti a její porovnání s aktuální tržní cenou na burze, dále ověření underpricingu, který vznikl při primární emisi akcií a následně je stanoveno investiční doporučení s ročním horizontem.

Klíčová slova

Fundamentální analýza, akcie, vnitřní hodnota, IPO, investiční doporučení, Kofola ČeskoSlovensko.

Abstract

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Diploma thesis deals with the buy-side fundamental analysis of the publicly traded company. The analysis is followed by a top-down approach. First, macroeconomic factors that affect the intrinsic value of the stock are analyzed. Then industry and company factors are analyzed. The result of the thesis is the determination of the intrinsic value of the stock and its comparison with the current market price on the stock exchange. Further, the verification of the underpricing that occurred at the primary issue of the stocks on the stock market. Subsequently, there is made the investment recommendation with an annual horizon.

Keywords

Fundamental analysis, stock, intrinsic value, IPO, investment recommendation, KofolaČeskoslovensko.

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1 Introduction and purpose

1.1 Introduction

Investing in stocks is undoubtelly one of the most widespred forms of asset appreciation on capital markets. The stockholders can be split between speculators and investors in its simplest form. The speculator tries to earn only on price movememnts. On the other hand, the investor holds the stocks as a *value investment* in order to receive a regular dividend as well. The diploma thesis deals with the idea of long-term holding of the stock. Thus, by holding the underlying asset that is appreciated over time, along with how the company itself grows. Many investors, when choosing a company as the long-term investment target, choose a variety of methods that have the common purpose of estimating the future price movement. Each investor strategy assumes different analytical approaches. A fundamental approach to stock investment aims to estimate the fair stock price that the company will have in the future horizon.

The fundamental approach can be seen from two different views – sell-side and buy-side. Most brokers, bankers and analysts predominantly deal with the sell-side view. This approach usually "slightly overestimates" the stock. The *unwritten rule* of this analyse is to support the volume of investment by various clients in order to realize larger volume of trades. Because the sell-side analysts do not earn primarily from underlying assets, buf from trade fees. Sell-side outputs often do not provide a true view about the company to existing or potential investor.

On the other hand, the buy-side approach has a much clearer view of the intrinsic value of the stock. The Buy-side analyses in most cases are the outputs of internal processing of interest groups that are willing to invest in stocks. This approach considers a more critical attitude of the current or future possible development of the company itself. The same buy-side view is taken to this diploma thesis, which assumes to give a revelant sight of the intrinsic value of the stock and its possible future development.

1.2 Purpose

The main purpose of the diploma thesis is to determine the intrinsic value of the stock and to verify the underpricing, which was generated at the primary issue of the stock. Based on these findigs is established the investment recommendation.

The first partial objective is to evaluate the current situation in the company based on historical data to adduce the admission for compiling a forecast of future development.

The second partital objective is to determinate the intrinsic value of the stock based on the predicted forecast and verification of the underpricing that arose during the primary stock issue.

The last partial objective is to compare the determined intrinsic value with the current market price on the stock exchange and propose the investment recommendation for existing or potential investors.

2 Theoretical background

This part of the diploma thesis deals with theoretical overview. A given part is to acquaint readers with problems of the fundamental analysis. The aim of the literature overview is to discuss the general approaches and solutions in fundamental analysis. The reader will know that finding the right fundamental analysis for a particular company is a very difficult issue and the correct result is often not achieved. Some chapters in this section are summarized in very general terms, because of the fundamental analysis is needed to be seen as a tool by which analyst wants to examine the company not only evaluate it.

The theoretical part deals with fundamental analysis of buy-side view. The analysis aims to acquaint the reader with the possibility of finding the real intrinsic value of stock. On the basis of the intrinsic value it can make a real investment decision.

2.1 Introduction to investing in stocks

Investing in stocks is one of many investment disciplines. It can be exciting or very boring discipline. Someone looks at stocks as an opportunity to get rich quick. Others look at stocks as a way to save up to retirement. The stocks are purchased by households, companies, institutions and equity funds. Each investment is viewed differently.

2.1.1 Approaches to investing in stocks

Approaches to investing in stocks based on the investment philosophy. Respectively, from what we want to achieve and the tools we use to the desired goal. There is an almost unlimited amount of investment philosophy, which implies that investment approaches in large numbers. Approaches are inherently very heterogeneous. For best known investment approaches consider: value approach, fundamental approach, speculative approach, growth approach and contrarian approach (Gladiš, 2015; Henning, 2010).

The value approach is sometimes known as "the Warren Buffett approach". This approach assumes that the investor will hold the stock for a very long period. Period is not specified in detail, but the experience is a few years. Value type of investor is not acting as a trader, the investor does not speculate on short-term price fluctuations. Investor is interested in the actual value of the company (stock). The investor knows the intrinsic values of their stocks held in his portfolio. The investor buys stocks in corporations, and holding them for many years, the company known for its brand, history and tradition. Value investing is characterized by a bullish trend. These investors rarely sell overvalued stocks (not implemented bearish trades). Subjects are companies that are able to survive and withstand crisis. Value investing is associated with regular dividends. A typical value of an in-

vestment may be, for example, investments in stocks of Coca-Cola Company. The company pays a regular dividends and its characteristic of "traditional and established" society (Henning, 2010).

The fundamental approach is based on the finding of the intrinsic value of the stock. When calculating the intrinsic value of the stock to use economic and mathematical models. The observed intrinsic value is then compared with the actual market price of the stock for which they are traded on an exchange. If the observed intrinsic value is higher than the market price, then it is a signal to buy stock. Conversely, if the observed intrinsic value is lower than the actual market price, then it is a signal to sell stock. The fundamental approach is based on fundamental analysis, which is complied based on the historical development of stock and predicting future trends. Between the value and the fundamental approach is often a very close relationship. The fundamental approach is based on a comprehensive analysis of the company. The analysis includes hard facts and soft facts. The hard facts in the form of an analysis of annual reports and the soft facts based on evaluation of quality management, products, brand, processes and so on. The fundamental approach seeks to predict the development of the stocks for more than one year in the future (Weigand, 2013).

The Speculative approach (trading) is characterized by very short holding of stock. Tenure may proceed for several seconds (stock scalping). Investors do not hold stock for the purpose of payment of dividend or long-term growth. The aim is to capitalize on short-term price movements. Trading is characterized by high yield, but its high risk in the form of big losses. Trading is a counterpart investment. In addition to the stock trading it is also very popular currency, commodity and option trading as well (Turek, 2008).

The growth approach is associated with investments in start-up ventures. Starting potential new business can bring attractive profits in the future. In the new millennium the growth approach is associated mainly with investments in technology companies, such as Amazon, Apple, Facebook and Google. The risk here is if the company will miss its growth potential or becomes unsuccessful. Otherwise, the investor can enjoy high profits. The disadvantage of the analysis of these companies is the lack of history and historical data for analysis. Although the company operates in the market for some time, but in the growth stage (phase) decides to go public (via IPO). Investors may be interested in, but nobody knows if the company id succeeding company after the IPO. For the growth approach is typical that the investor buys stocks in IPO. It is the stage where nobody trusts and company stocks on the exchange are so "cheap". After the expiry of the start-up stage company can become highly established business that generates high dividend. The investor also earns the growth of the market value of stocks in the future (Henning, 2010; Weigand, 2013).

The contrarian approach (sometimes called the "upstream approach") is based on the idea that everyone buys stocks, so it is a good opportunity to sell stocks, and vice versa. The idea is to "go upstream" and earn money on the reverse thinking investors. This approach requires significantly higher capital, unlike other approaches. The Contrarian approach promote strong and significant market players (Weigand, 2013; Gladiš, 2015).

From the above it follows that there are a number of approaches that can be variously combined with each other. This thesis also examines the fundamental approach, which is typical for determining the intrinsic value of the stock and the subsequent recommendation of whether it is appropriate to stock, to buy or not.

2.1.2   Approaches to analysing stocks

Shareholding is associated with two forms of revenues. The first is based on the dividend flows. The second is based on revenues derives from price movements of stock (Veselá, 2013). The first form of revenues is typical for long-term tenure. The second form is typical for short-term (mainly in the form of trading) and long-term too. In practice distinguish between three approaches to analysing stocks: fundamental approach, technical approach and the psychological approach. The fundamental analysis is many respect, it is considered as the only method which is suitable for assembly equity portfolio. The aim is to search for stocks that are undervalued in the long-term. Search for undervalued stocks is referred to as "stock-picking" (Burstein, 1999; Thomsett, 2006).

The aim of the fundamental approach is to identify stocks that are undervalued or overvalued. Undervalued stocks tent to reach its intrinsic value, so investors buy. Securities that are classified as undervalued, investors will sell. We can say if the stocks are undervalued, should be bullish trend. Conversely, if the stocks are overvalued, the trend should be broken and followed the bearish trend (Thomsett, 2006).

The second pillar is the assessment of the industry (sector). Here we evaluate the performance of the industry, competition, future sales development in the industry, the development of future sales in the industry, changing regulation and barriers to entry. This part is sometimes skipped. In principle, if the industry is monopolistic structure, then the industry analysis to easier to process. Otherwise, if the industry is monopolistic competition, then the analysis is more difficult (Thomestt, 2006; Weigand, 2013).

The fundamental analysis consists of three pillars. The first pillar is macroeconomic analysis. Macroeconomic analysis aims to evaluate the global environment in which the company (stock) is located. The goal of macroeconomic analysis is the evaluation of past, present and future development of major economic indica-

tors and indices. Data are mostly drawn from external sources such as credit rating agencies, statistical offices, central banks, governments and so on (Weigand, 2013).
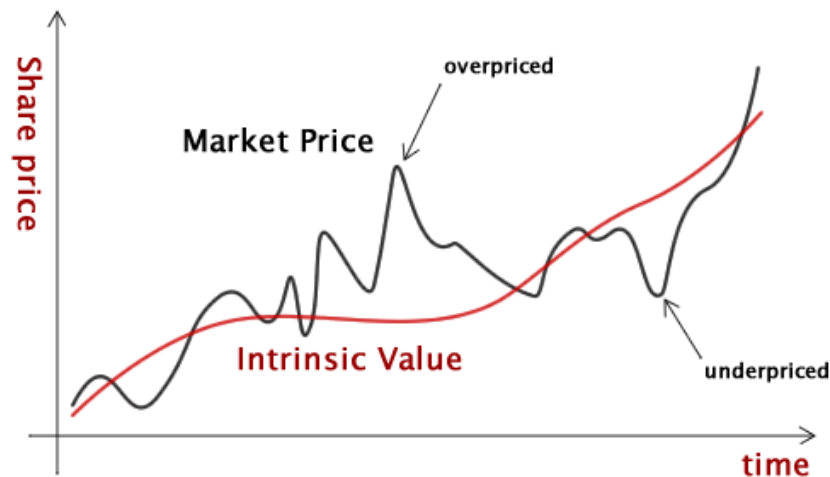
Img. 1   Comparing market stock price and its intrinsic value
     Source: www.vintagevalueinvesting.com, 2016.

Third and final pillar is the analysis of the company. This part of the analysis is the most important because it deals with the firm itself. The outcome of this part is determined intrinsic value, which is based on the evaluation of investment rec-ommendations. This part of the analysis has the greatest weight when making in-vestment decisions. This is often the greatest emphasis. Company analysis is based on two types of data. The first type is quantitative (hard) data that serves as input to calculate the intrinsic value. The data is also based upon forecast of revenues, expenses, cash flow, profit and other values. The second type are qualitative (soft) data. These data are evaluated verbally and include, for example, evaluation of management, products, strategy, risk and another values that cannot be numerical-ly quantified (Burstein, 1999; Weigand, 2013; Veselá, 2011).

The fundamental analysis is processed by downward or upward order. Downward begins macroeconomic analysis and proceed to the analysis of the company itself. Upward method begins with an analysis of a company and proceed to macroeco-nomic analysis. More frequently uses the downward access (Thomsett, 2006).

The second approach is technical analysis. Technical analysis is based on the use of graphs and econometric indicators. This is used as a visual tool, where the subject is examined a chart that shows the development in the stock price. Technical anal-ysis is used mainly for trading, fundamental analysis has a limited use here. Fun-damental analysis complements technical analysis about events and situations that occur in the market, but technical indicators of these factors fail to identify (Turek, 2008).

Technical analysis is popular not only on speculation in stock, but also commodities, options and currencies. Speculators trying to earn money on price movements. The asset is held from a few seconds to several days or months. Technical analysis began to grow in importance since the 70s with the increasing development of econometrics. Further development was then in the 21st century thanks to the Internet. Basic indicators are divided on trend and oscillators (Khan and Zuberi, 1999; Turek, 2008).

The last approach is referred to as complementary to the fundamental and technical analysis. Psychological approach examines how investors and speculators behave in the stock market. The subjects of research are the emotions and behaviour of the crowd. Behaviour of participants is constantly repeated, leading to investment opportunities. Most of the subjects, not just small speculators, but also large professional investors face a lot of pressure when emotions can crowd rational behaviour (Bulkowski, 2013; Thomsett, 1998).

The psychological analysis is useful in times of crisis or political events. A good example is Brexit. Decision about leaving the UK from the EU in 2016 causing panic, followed by the British pound depreciated strongly and British stocks began to fall sharply into the red numbers (Krause et al., 2016). At the end of 2016 again everything returned to normal. The same example is the victory of US President Donald Trump in 2016. American technology companies saw a sharp decline, but the banking and energy stocks saw strengthening. Also, there was a short-term depreciation of the Mexican peso against US dollar. After a few weeks, the situation got back to a normal state (Kiersz, 2016).

2.1.3   Introduction to fundamental analysis

Fundamental analysis is highly complex tool which is used for evaluation of company. Fundamental analysis may not only be used for evaluation of the company. Analysis has two meaning. They are narrower and broader concepts (Bulkowski, 2013).

Broader concept of fundamental analysis is not based purely on the valuation. The company do not have its stocks quoted on the stock exchange, even this may not be a public lmited company. The main objective of this analysis is not to evaluate the company only or find out its intrinsic value only. This value is understood for a whole company, not the value of company per share (as is the case in the narrower sense). If we evaluate the company which is not a public limited company, so it was the share accounted for by one money unit of capital (Bulkowski, 2013; Weigand, 2013).

This approach to analysis is used primarily by direct investors who buy companies to private equity funds or sometimes hedge funds. Private equity fund buys com-

panies in which first determines its fair price. Purchased companies are not usually listed on the stock exchange, even that might not be a public limited company, but private equity fund uses fundamental analysis. This principle is used by holding company (group of companies) as well. They want to determinate the fair values of its holdings of companies. If holding (group of companies), wanted to extend its "portfolio of companies" it will use fundamental analysis in the broader sense as well, because it allows the holding company to determinate the price of the newly acquired company into the group. This way of fundamental analysis is often used by sole-proprietors (physical entrepreneurs) as well. The want to sell their business for various reasons. These sole-proprietors want to know the actual fair value. So they use fundamental analysis to determinate its fair value. Broader concept can be used by banks to examine their clients. Banks in the context of risk management for corporate clients use methods of the broader sense (Bulkowski, 2013; Thomsett, 2006).

Narrower concept of fundamental analysis is based on the finding out the intristic value of the stocks which are traded on the stock exchange. Narrower concept allows to determine the intrinsic value of the stock or the value of the underlying assets attributable to a particular part of the capital. This intrinsic value, then an investor can compare with the market price on stock exchange and make a decision whether to buy or sell stock. Fundamental analysis in the narrower sense is used by those who trade on the exchange. Not those who choose to dominate or take over the entire company. Private equity funds that want to own the entire company, also do not use this type of analysis. They want to own a whole company not only content. Banks are interested in this type of analysis only for companies that have listed stocks on the stock exchange. The emphasis on this fact is placed primarily in the US, where the value of stock on the stock exchange plays an important role. In Czech Republic the stock market is not widespread, so there does not cause a large number of enterprises such as the USA or UK (Bulkowski, 2013; Burstein, 1999; Veselá, 2013).

Now we can conclude that the difference between broad and narrow concept of fundamental analysis is whether the company is publicly traded or not. Methods (broader and narrower concept) have a common premise, which is to determine the intrinsic value of the share, per unit of capital. Narrower concept has one offal advantage that determined the outcome of intrinsic value can be compared with other stock exchange titles and accordingly make a decision to buy or sell share. Several authors have this option, compared secured the intrinsic value of the market is taken as a "bonus". The paradox is that both methods lead to the same goal, which is to observe intrinsic value, but many investors viewed the two approaches differently.

This thesis deals with fundamental analysis in the narrower sense. This means that the subject of examination is the company, which has its stock traded on stock ex-

change. The aim is to determinate the intrinsic value (fair value) of stock and then compare it with the market price at which the title is traded.

2.1.4   Limitations of fundamental analysis

Every fundamental analysis has its limits. Probably the highest problem is determinate the fair value of the stock. Intrinsic value is observed on the basic of the future "numbers" that are predicted. The prediction is largely based on previous years. The forecast analyst tries to reflect expectations of future revenues, expenses, cash flow and earnings. A large part of these values ("numbers") are the result of subjective analysts' expectations. Objective analysis is very difficult (Weigand, 2013; Gladiš, 2015).

For the analyst, it is important whether the prediction is based only on external sources (annual reports, website statements, media, etc.) or has some inside information from the company. Internal information that is available to the analyst may significantly affect the subjective expectations of analyst. Every effort fundamental analysis is "lean" result obtained by the fair value of the relevant business processes. If from external sources implies that the company plans expansion of investment, but from internal sources, we have information that it is only investment in maintenance, so the analyst has to reflect this change in his model predicted with appropriate justification.

Major problems are the cyclicality of the stocks and the cyclicality of entire economy. In times of economic growth predictions are more "aggressive" than in times of economic recession. It is due to variable optimistic and pessimistic mood, which affects the subjective decisions analyst (Weigand, 2013; Thomsett, 2006).

Huge limitation is the inability to quantify qualitative indicators (soft data). In the analysis, we can conclude that we have found undervalued stock. Quantitative data show us that is preferable to buy the stock, but qualitative data are so bad. These indicia can the entire intrinsic value "overshadow". Example of bad soft data are bad management quality, disputed between management or companies, court settlement, fragmented concept of corporate strategy, expected deterioration in the quality of products etc. These are all things that cannot be quantified, and the resulting intrinsic value, we are not reflected (Thomsett, 1998).

From the above it follows that the analyst is not decided only on the basis of the detected intrinsic value by the quantitative way. Conclusion output and fundamental analysis should be based simultaneously on the qualitative evaluation of the company. The result should also include the prediction of the qualitative data (soft data).

Another problem can occur when the market price of stock in the long-term does not come close to its fair price. All indicators suggest that stock should follow yours

fair value, but it is not happening. The problem may be on the side of investor's interest in a particular stock. Country where the stock is traded may have a problem with a lack of liquidity too. This is another issue that fundamental analysis cannot identify (Weigand, 2013; Khan and Zuberi, 1999).

2.2 Macroeconomic analysis

Macroeconomic or sometimes global fundamental analysis is very heterogeneous. Among experts, academics and professional investors are not completely unified view, especially how to proceed with treatment and subsequent assessment of the macro environment as a whole. However, the sort of procedures, which would each analyst or investor should address when mapping the now highly turbulent macro environment.

The aim of a macro analysis is to assess the conditions and environment of the country or region of countries in which the company operates. Macro analysis examines the possible impacts of land development, the development of the stock price. The subject of investigation is a country (region counties), where the company has its core business and where it operates. Simultaneously, also the country where they are traded on the stock exchange share of the company itself (there is a risk of economic and political shocks that may cost stock strongly negative impact, regardless of the positive development of the company itself).

Currently, it is common that companies usually have their own stocks traded on an entirely different market than on his home. This approach is typical for big international corporations. The Table below lists some well-known companies whose stocks are traded in a country other than the company itself operates or where to concentrate their production. Such undertakings are faced with the fact that their stock prices can also be influenced by their economic and political shocks of the country in which stocks are traded (Thomsett, 2006; Gladiš, 2015).

Tab. 1   Selected companies and where they are traded

Company	Domestic Country	Stock Exchange
Ferrari N. V.	Italy	NYSE (USA)
Deutsche Bank AG	Germany	NYSE (USA)
Honda Motor Co. Ltd.	Japan	NYSE (USA)
LG Display Co., Ltd.	South Korea	NYSE (USA)
Vodafone Group Plc	United Kingdom	Nasdaq (USA)

Source: Owning processing.

If we wanted to analyse some of these companies, such as Ferrari, we must first deal with its own domestic market (where the company has core business). For Ferrari it was the Italian market and at the same time then the country where the stocks are listed, for which Ferrari is the US (NYSE), because local economic-

political and especially legal fundamentals have to share influence. Finally, we need to incorporate into the analysis as well as those countries that are most important for exports, on the grounds that these countries can for the future development of the stock price have a significant effect (Thomsett, 2006; Gladiš, 2015; Burstein, 1999).

From the above it follows that in the case of Czech companies that are listed on the Prague Stock Exchange (PSE), must analyse the Czech market. Furthermore, the markets where the company operates, or the EU market as a whole. Individual macroeconomic fundamentals across countries may spill over effects. Developments in the EU will affect the Czech market. In certain areas, it may be only the development of neighboring countries, for which the company is strongly oriented (Thomsett, 2006).

From the managerial approach it is appropriate to use the so-called PESTE model, or a similar formulation (PEST, STEP). PESTE model divided into various environmental analysis for each category: P – political, E – economic, S – social, T – technology (sometimes T - technical) and E – ecological (Analoui and Karami, 2003).

In practice, this approach usually is included in the evaluation of various macroeconomic indicators. The following list shows the areas that are most often in the context of macroeconomic analysis identified and subsequently evaluated. The final list of areas that represent the object of interest, depending on the country, market and industry expectations analyst himself. The main common areas include: GDP, inflation, interest rate, economic and political shocks, money supply, the rate of taxation, government spending and the deficit in public spending, international capital movements, the amount of loans and mortgages, unemployment, the legal system, bureaucracy, corruption, price regulation, sentiment a further (Thomsett, 2006; Veselá, 2011).

2.2.1   GDP as a main economic indicator

GDP is among the basic and primary indicators in assessing the performance of the economy of any country. The indicator belongs to the so-called Market Moving Indicator category, which means that it reflects the performance of the economy, since it bears all the expenses of all economic entities in the economy. GDP development has a significant impact on the expectations of various economic entities, who then reflected in his future decisions (Hoag, A. and Hoag, J., 2002).

Macroeconomic analysis is useful GDP compared with the respective underlying asset (or group of assets) that we want to analyse. In the case of stock fundamental analysis here is appropriate to use a specific stock of company or relevant stock market index. Between GDP and the stock index always exists a significant correlation (Burstein, 1999).

The relationship between GDP and the market price of the stock (or stock index) can be divided into two periods – short and long run. In the long run, the market stocks (or stock index) and GDP are positively correlated, and one can argue that economic development is followed by the development of the stock price. In the short run it is the opposite, there exists a negative correlation (Burstein, 1999). Musílek (2011) adds that short period is typically defined by 3-9 months. In the short run, the market price of a stock (or stock index) behaves as if preceded GDP and "determined" him. These phenomena, when the market price of stocks (or stock index) is preceded by a change in trend GDP in the short run, are a good indicator for trend reversal whole economy (Burstein, 1999).

Stock indexes in the short term are able to change the economic development more responsive. When the negative expectations of the economy, investors will start to get rid of the stocks, this leads to the expansion of supply and a decline in their market price. At the same time decrease the value and stock index. Negative expectations and a decline in optimism leads to a reduction in investment and consumption, economic entities, leading to a decline in economic performance – GDP decline in the long term. Stock indexes are also of high quality and good indicators for predicting changes in the economic cycle (Alexander, 2000).
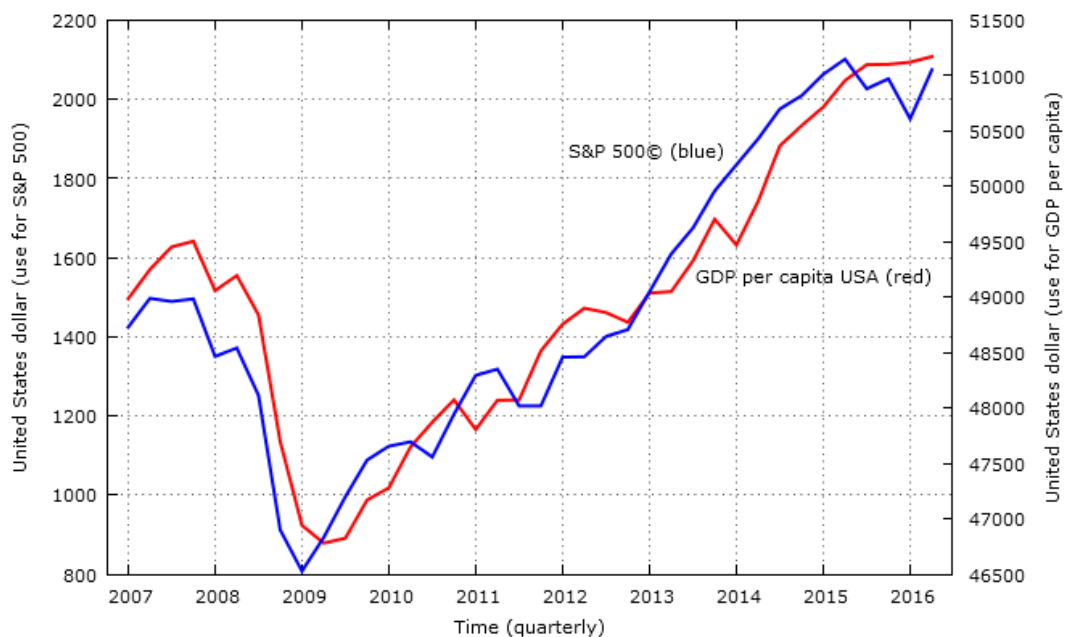
Img. 2   Comparation of S&P 500 Index with GDP per capita in the USA in US dollar
Source: Owning processing.

Correlation as an important connection between GDP and the market price of the stocks (or stock index) shows the image above. The image compares the quarterly value of the stock index S&P 500 and GDP per capita in the US, measured in USD. The image shows a graph of the 38 quarterly observations with a signifi-

cant positive correlation of over 95%. The graph also shows the stock index before overtaking GDP in the short term.

2.2.2 Inflation and its consequences

Inflation is a phenomenon, there is an increase in the price level. Many economists, investors and stock market experts attach to the idea that inflation is the fair price (real price) of the stocks in a stable economic environment neutral. Stocks are assets. The market price of the stocks is based on the fair value of the assets. Inflation in developed countries should be in the range of 2-3% per annum (Belke, 2009; Frankel, 1995). At present, this condition cannot be considered entirely as a true dogma. But in the contemporary economic cycle, many countries are facing zero inflation or even deflation (ECB, 2016).

Inflation can be measured in two basic ways, through CPI and PPI. It is worth mentioning exceptional phenomenon when PPI begins to decline and on the other hand CPI begins to grow. In this case, increases the margins of producers (Khan, 1999; Cox, 2012).
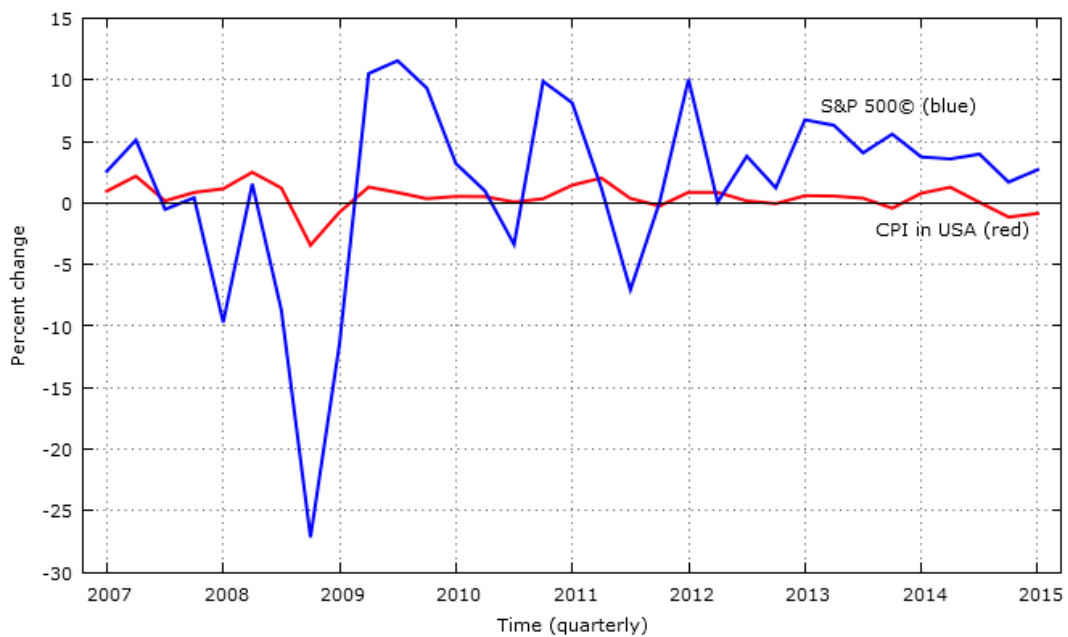
Img. 3   Comparation of S&P 500 Index with CPI in the USA
Source: Owning processing.

Inflation in the long run may trigger distrust in the capital market. Long-term distrust may lead to a decline in demand for stocks, which ultimately leads to a reduction in their market prices (Frankel, 1995; Belke, 2009). In developed economies, the central (national) banks are trying to reach a predetermined inflation target. Central banks to use monetary tools to achieve goals (Frankel, 1995). Sample

the relationship between inflation and the US stock index S&P 500 captures the image above.

In the period of expected higher inflation the stock investments are good opportunity to preserve the real value of money. Stocks in itself reflects the change in the price level in the market, which is transferred through higher nominal earning and the higher market price of the stock itself (Frankel, 1995).

2.2.3 Interest rate and expectation

Interest rates are a very important investment indicator that can predict the possible change in the stock price. Changes in the interest rate is one of the widely watched indicators by almost all stakeholders across the entire capital market. This behaviour of monetary policy often leads to a change in demand for the stock, which has an impact just on their market price (Belke, 2009).

Interest is generally the price of money (Holman, 2010). Setting interest rates are the responsibility of the central banks (Belke, 2009). Central banks use tool within monetary policy. Monetary policy tools are very powerful and are used mainly for meeting the inflation target. The fulfilment of the inflation target consisted in the launch of monetary expansion, or reduction of interest rates, which led to the effect of "cheaper money". In the current economy, where interest rates are almost zero, this tool gets some kind of new "dimension" and comes back to the importance of implementation in the form of negative interest rates (Holman, 2010; Randow and Kenndedy, 2017).

Central banks can conduct monetary expansion, which is accompanied by a reduction in interest rates or monetary restriction, resulting in the increase in interest rates (Holman, 2010).

Changing interest rates in the very short term, in response to the application of the monetary policy of the state, can provide very interesting speculative opportunities, not only in equities but also in national currencies or commodities linked to USD.

For long-term equity investment is an important inverse correlation. Increase in interest rates can be expected to decline in stock market prices. Conversely, when interest rate cuts can be expected to rise in stock market prices (Belke, 2009).

The aforementioned facts can be explained through the actual interest rate and competitive bond market. When interest rates decline in the money "cheaper", it stimulates demand for equities and increased demand "screwed" stock price upside. At the same time the decline in interest rates many investors cease to concen-

trate their portfolios in bonds, as well as begin to seek new investment opportunities, precisely in the form of stocks (Burstein, 1999; Khan, 1999).
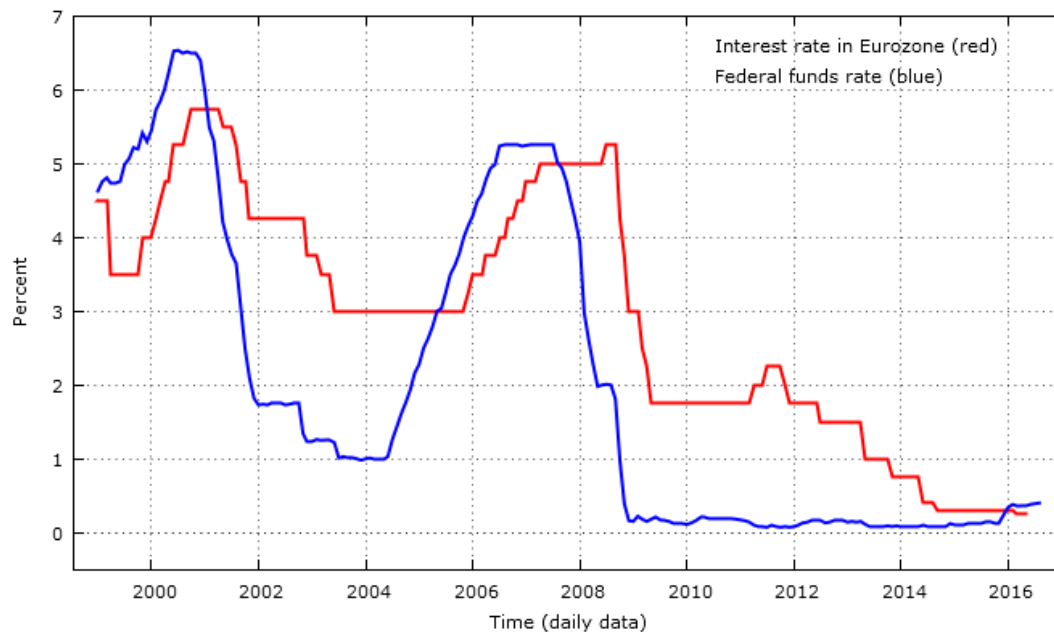
Img. 4   Comparation of federal interest rate in the US with the interest rate in the Euro Area
Source: Owning processing.

The image above compares the federal interest rate in the US and the interest rate in the Euro Area. The image also shows a slight correlation, which is between the monetary policies across the continents.

2.2.4   Economic and political shocks

This is very general topic, which includes a variety of determinants that may influence the stock investments. The economic and political shocks, we can include all sorts of crises, riots, wars and terrorism. These include issues relating to the political and electoral cycle, the problems associated with the public sector and its finances, as well as price bubbles and much more.

The increased threat of these often unforeseen shocks leads to limited investments in stocks, which are then reflected in their demand and a decline in their market price. Conversely, increased confidence in stable political and economic environment provides "some assurance" that it is a positive reflection of the growth equity investments (Xiaokun, 2010).

In times of economic and political shocks opens up opportunities mainly speculators and traders who are on the current shocks trying to earn money. Trading does not fall into the so-called "value of investments", or investments that are primarily

intended for the purpose of medium- or long-term holdings of assets (Gladiš, 2015).

The problem arises, what tools the shocks and quantify the environmental and evaluated. Often such risks to incorporate fundamental analysis cannot, because this kind of risk is not predictable (Xiaokun, 2010).
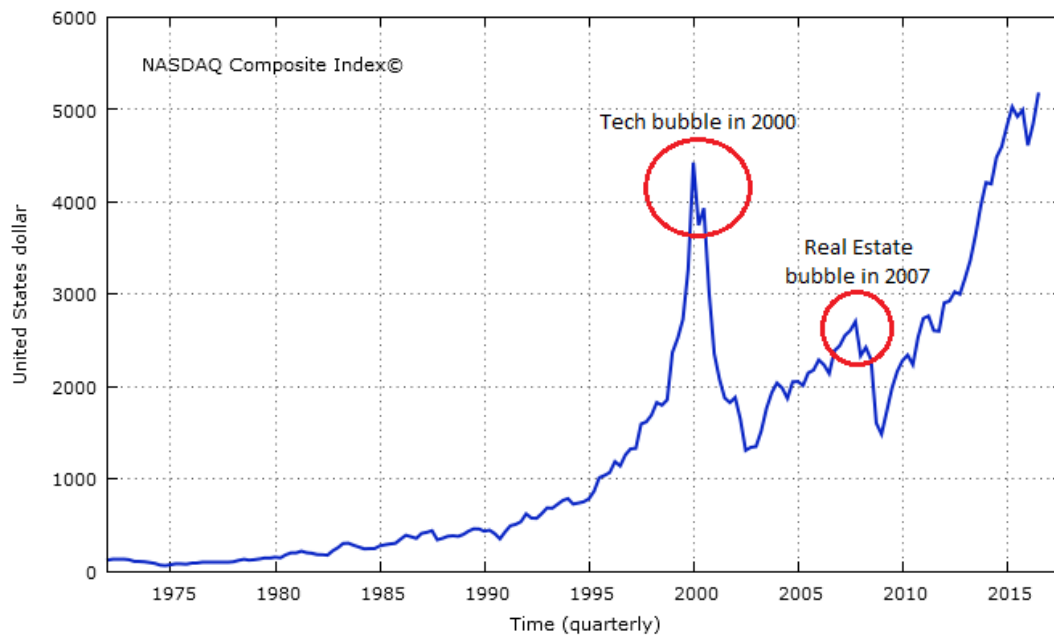
Img. 5   Viewing bubbles on the Nasdaq Composite Index
Source: Owning processing.

The image above shows the two events, each with a different character. The first shock is the technology bubble (the dot-com bubble) in 2000. The second shock of the mortgage bubble in the USA in 2007. In both cases it is the shock of an economic nature, but each has a different focus of origin (Dent, 2009). Both situations are shown on the Nasdaq Composite Index.

2.2.5   Market sentiment

Sentiment analysis is concerned with the mood on the capital market. The mood of individual economic entities in itself suppresses certain expectations, which in turn has an impact on the stock price development. When the stock market liquidity, the more mood may be quantifiable. It is due to the fact the market has more entities that can respond more flexibly to market changes. Quantification of sentiment and its subsequent application in the development of share prices is more suitable when using the US stock market. It is due to the fact the USA has a bigger number of companies that deal with quantifying mood and published various indices that measure sentiment. Among the known website we include Stocktrader.com, Marketwatch.com and Bloomberg.com (Hanno, 2009; Lee et al., 1990).

2.2.6   Output and evaluation of macroeconomic analysis

The outcome of macroeconomic fundamental analysis is the evaluation of the environment on a global level. Macroeconomic analysis is less detailed in the context of industry analysis and analysis of the company. It is due to the fact that the macro indicators in many cases may not even have a significant impact on the share price. In the case of a downward analysis, macroeconomic analysis is too often the only kind of "introduction" into the analysis of the company itself (Gladiš, 2016, Thomsett, 2006).

There are many macro indicators that can stock based on the development of the global environment assessed as high risk. That type of fundamentals to the price of stocks may not occur at all. An interesting example is the financial crisis in the USA in 2007 and stocks of retail companies Wal-Mart. Wal-Mart is one of the few retailers who have managed to exchange at the time of unfavourable development in US consumption to maintain its profitability and financial stability. Financial stability Wal-Mart is shown in the image below. For fact worth innovation and election of a new approach and strategy of the company (Gladiš, 2015). It is seen that the macro (global) fundamentals of the US economy, hence the financial crisis had essentially no effect on Wal-Mart. Adverse effects of the economy in the intrinsic value of the shares failed to demonstrate (Bulkowski, 2013; Gladiš, 2015).
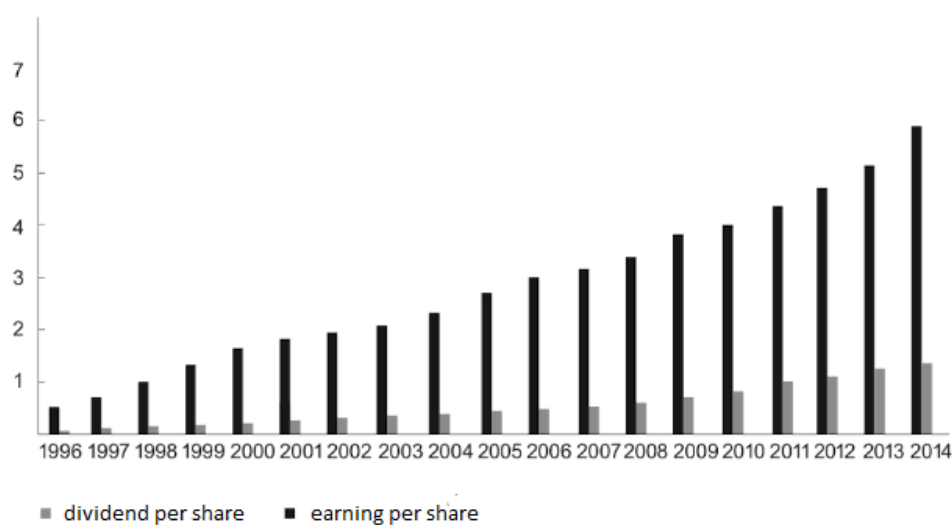
Img. 6   Earnings and dividends of Wal-Mart
Source: Akciové investice, 2015.

Another way to assess the country's macroeconomic situation as a whole, the credit ratings of leading reputable rating agencies. External credit ratings of countries are a good guide for assessing the confidence of the capital market in a particular

country (Langohr et al., 2008). The table below shows the rating of V4 countries according to S&P, Moody's and Fitch.

Tab. 2   The ratings of the V4 countries in 2016

Country	Rating Agency					
	S&P		Moody's		Fitch	
Czech Republic	AA-	Stable	A1	Stable	A+	Stable
Poland	BBB+	Negative	A2	Negative	A-	Stable
Slovakia	A+	Stable	A2	Stable	A+	Stable
Hungary	BBB-	Stable	Ba1	Positive	BBB-	Stable

Source: Owning processing, data from tradingeconomics.com

To capture the stability and development of the political environment is utilized Political Stability Index, which is compiled by The World Bank. The index has a range from -2.5 to +2.5, when the number is negative, the country is assessed as weak. When the number is positive, the country is assessed as strong (TheGlobalEconomy.com, 2016). The table below shows a group of V4 countries and their evaluation and appropriate index for the year 2014.

Tab. 3   V4 countries and their Political Stability Index in 2014

Country	Rank	Index Value
Slovakia	28.	1.02
Czech Republic	32.	0.97
Poland	42.	0.87
Hungary	55.	0.70

Source: Owning processing, data from theglobaleconomy.com

In conclusion, the output fundamental analysis of macroeconomic (global) environment is very individual. It depends on what the expectations are, what we want to know and what we want to achieve. On such indicators need to be addressed.

The economy is very patchy organism, where a number of indicator on stocks and their development operates neutrally. Conversely, the number of stocks that react to any change in the external environment is very flexible – either cyclically or in a counter-cyclical macroeconomic (global) environment (Thomsett, 2006; Bulkowski, 2013).

2.3 Industry analysis

This section examines how the industry or sector can influence the behavior of the company, and its revenues, costs, competition and the market price of the stock. The industry analysis is in the context of both the downlink and the uplink is always shifting between macroeconomic analysis and company analysis (Thomsett, 2006)

The big mistake in the processing of fundamental analysis often neglect this part. This part is sometimes omitted professional financial companies too. The reason is the fact that the industry as a whole is very difficult to assess or has a different effect on the market stock prices for companies in the sector. However, many authors have stated that the sector is extremely important to deal with, because this section is just sort of an intermediate behaviour of the entire economy to the conduct of the company. The cornerstones of this section was to be at least an assessment of stability sector and any specifies (Thomsett, 2006; Thomsett, 1998).

2.3.1   The types of industry structure

The market structure of the industry is given attributes such as the number of firms in the sector, barriers to entry into the industry, the number of manufactured products and products diversity. Many authors have stated 3-4 types of sectoral structures. Let us start from the premise absence of perfect competition, because it is almost non-existent and will consider only the existence of monopoly, oligopoly and monopolistic competition (Veselá, 2011; Samuelson, 2005).

Monopolistic structure is known to designate a single entity in the industry. This entity has total control over the entire production sector. The company is only offering and therefore also has a significant impact on the selling price of the product. Barriers to entry are referred to as almost insurmountable. For the company, it is typical to have stable revenues and profits. For the monopoly it is also typical that is present in strategic sectors such as energy, military, transportation and the public sector.

Oligopoly has a very small number of companies. Entry of news firms is not described as insurmountable, but very difficult. Oligopolistic company is able to significantly influence the price of a product on the market. There are several types of oligopoly structures, which can in synergy significantly affect the price of the product in the sector. Oligopolistic behaviour of companies tends to be less predictable than the behaviour of a monopoly. Oligopolistic example are companies operating in the telecommunications industry, chemical industry and production of oil or natural gas (Samuelson, 2005).

Monopolistic competition is then characterized by a large number of companies that have a significant differentiating your product. Companies have little effect on the price unlike oligopoly or monopoly. Barriers to entry for new firms to the industry are minimal and the sector is also typical that there alternates large number of new companies, which due to economic growth retrying to return to the market. The forecast for sales and earnings in this sector structure is complicated and often impossible to predict. Typical examples are food and consumer goods (Samuelson, 2005; Mankiw and Taylor, 2015).

2.3.2 Life cycle of the industry

Every industry has its "vital" development. Over time, new industries emerge and old disappear. According to economic theory, for each sector are typically 4 stages (phases). After these stages, should follow the "innovation sector", if this does not work, are threatened with extinction sector and the companies operating in it. Most developing industry in the 21st century are technologies and technological advances in the field of smart phones, smart watches, smart TVs and newly smart cars. The future is to get the "smart" technology into healthcare and other medical services (Tidd and Bessant, 2014)

The first stage referred to as "introduction" is characterized as an enormous growth in the demand for the product. These can either be entirely new products, or even products devised where industry continued in its final development stage "decline". For the introduction stage is characterized by weak fluctuations in revenues. High profits also enticing new coming producers in the industry. As an example, introduction stage may be development of the internet to households or before also developing LED TVs (Westland, 2007; Tidd and Bessant, 2014)

The second stage is "growth". At this stage the sector stabilized as a whole. Revenues and profits continue to grow, but the pace has been less that it was at the stage of introduction. Revenues and profits are beginning to have more of a tendency to fluctuate around its origin value growth. At this stage, usually decides whether the industry moves upward toward its stabilization or conversely slows down, causing his descent into the introduction stage.

The third stage is the "maturity", where it operates a strong and well-established companies which can have a strong influence on development of the sector and these companies also tend to further determinate the direction of development of the whole industry. For maturity is typically higher cost growth (connected both with the maintenance company positions itself in the market and increase the cost of any innovation) and lower profits. The lower profit is also associated with lower revenue because companies in the industry is a great deal and the market begins to be saturated with that product.

The last stage is referred to as "decline". This stage has come innovation. Because, as mentioned in the beginning, threatens to bankrupt the entire industry and along with it the collapse or "exit" of companies in other industries (Westland, 2007; Veselá 2011).

2.3.3 The sensitivity of the industry to the economic cycle

Industries that constitute the economy unresponsive to the economic cycle is always same. There are those sectors that are strongly correlated with the economic cycle, and vice versa. The economic cycle is not fully reflected in the development

of the sector. Or we can also say that industry cannot fully absorb changes (moves) the economic cycle. There are basically 3 types of industry in the context of the economic cycle – cyclical industry, counter-cyclical industry and neutral industry.

Cyclical industries are significant positive correlation with the economic cycle. This means that if the economy occurred in the boom phase (expansion), we can assume that the positive impact of the economy was also reflected in sales and subsequently profits by an industry. This effect is then accompanied by a rise in market prices of stocks of companies in a particular industry. An opposite example is the decline in economic performance when the economy enters the recession (crisis, depression). Even in this case the stock price positively correlated. Decline in market prices of stocks of companies in the context of the particular industry downturn of the economic cycle. Among the cyclical industries we can include, for example, automotive, financial services, consumer goods or construction industry.

Counter-cyclical industries are always negatively correlated with the economic cycle. We can say that if there is an expansion of the business cycle and the market price of company stock of a particular industry decline. If there is a recession, while the market price of stocks recorded price increases. In the we could include, for example, the production of cheap and basic foods, as well as the arms industry.

Neutral industry recorded slight movements in market price for stocks in the context of the economic cycle. Many authors have stated that there are companies which are implemented in the so-called "vital production". The most common example is pharmaceutical, food and tabacco companies (Westland, 2007; Tidd and Bessant, 2014).

2.3.4 Impact of regulations and supervision of the industry

Each industry of the economy is facing a specific regulation and supervision. Regulations and supervision are often governed by international standards too. In the case of the Czech Republic we can consider EU regulations. Regulation can further distinguish only a certain segment, for example, banks and insurance companies or energy industry.

Regulations may cause additional cost growth companies, which leads to lower profits. Regulation are often formed in order to protect consumers and increase the transparency of enterprises. Increases regulatory measures can also lead to so-called "cleansing" of market from "excessive" competition, as the remaining companies is viewed positively.

The state can regulate different kinds of activities, the most common include regulating the entry of companies on the whole market or a specific industry. The state

can adjust the price of final products in a way that provides a fixed price or minimum and maximum price limits (Westland, 2007; Veselá 2014).

2.4   Fundamental analysis of the company

Fundamental analysis of company, sometimes known as microeconomic analysis deals with finding the intrinsic value of the stock. We can say that the main objective of this pillar of the analysis is to calculate the intrinsic value of the stock. The intrinsic value is then compared to the market price of the stock, which it trades on the exchange. As mentioned, if the intrinsic value is higher than the market price, it is a signal to buy. When the intrinsic value is less than the market price, it is a signal to sell. For the long-term, the market price of stock is heading to its intrinsic value (fair value). The relationship between the intrinsic value and the market price of stock is illustrated in a following table (Demodarana, 2002).

Tab. 4   Relationship between intrinsic value and market price of stock

Intrinsic value > market price	BUY
Intrinsic value < market price	SELL
Intrinsic value = market price	WAIT (HOLD)

Source: Fundamental analysis, 2006.

The primary objective of microeconomic analysis can be considered to determinate the fair value of the stock. Fundamental analysis has other objectives as well. For secondary (other) objectives can be considered a comprehensive evaluation of the company. In this part of the analysis examines other factors that also have a significant impact on the fair value of the stock. However major problem is that these factors sometimes cannot be integrated into the calculation (Demodara, 2002; Mařík, 2011).

On the basis of the intrinsic value of the stock, we declare that this example significantly undervalued stocks, it would mean that it is the buy signal. But investors are not interested in the stock. It is just due to other factors that intrinsic value in itself does not. The situation can also be reserved. It may be a strongly overvalued stock, where the predominant signal to sell, but investors decide to buy the stock. The intrinsic value could not absorb all factors. Investors are decided on the basis of other factor than the intrinsic value only (Demodara, 2002; Thomsett, 2006).

From the above it follows that the final decision should not be made only on the basis of the findings themselves intrinsic value and its comparison with the market price at which the stock is traded. The observed intrinsic value should be "supported" by justifiable assumptions. When calculations are based on quantitative data (hard data) that originate from annual reports, financial statements, audit reports and the like. There are basically two groups of models that can be used to determinate the intrinsic value of the stocks (Westland, 2007; Mařík, 2011).

2.4.1   Determination of intrinsic value

There are two categories of valuation methods – absolute and relative valuation methods. Absolute valuation method tries to find intrinsic value per stock (market price). These methods examine fundamental values such as dividends, cash flow, revenues, expenses etc. These methods do not work with variables further companies. The most common absolute valuation methods include dividend discount model, discounted cash flow model, residual income models and asset-based models (Nguyen, 2016).

The second category is the relative valuation models. These are the ratios where the result is compared with other companies in the industry. These indicators are sometimes referred to as "profitable indicators". The advantage of these indicators is that these indicators are very simple to use. The disadvantage may be the result if we do not have the opportunity to compare with the investigated industry. We must not forget that this type of analysis is very simplified and for deeper analysis is rather used as a supplement (Nguyen, 2016).

Dividend discount model (DDM)
It is a model that is based on discounting the future expected dividends that accrue to the owner of the stocks back to present value. It is important to note that this model is suitable only for companies that regularly pays dividends. If the company does not have enough long-term dividend history, it makes no sense to apply this model. When the dividend history is longer, then it is better to the future payment of dividends. The dividend history is very important, because if a company regularly pays dividends, we can assume that this will continue into the future. This model is widely used especially in the US, UK and Japan. For this reason, this model is widely used in the world. Shareholders create pressure on companies to pay out dividends. Shareholders and the company are accustomed to regular dividend payment occurs. From companies also expect regular pay out dividends. Period of dividends payment and the amount of payment is clearly predicable (Thomsett, 2006; Mařík, 2011).

We can meet the case of companies where dividends are pay out, but there is no periodicity. The amounts of the dividend payments are often different and not to be paid at regular intervals. In this case, this model is not suitable to determine the intrinsic value of the stock. For Czech stocks and other stocks from CEE countries this model is not recommended for use very much. The model has a weak explanatory power due to different dividend policy, unlike the countries such as USA, UK and Japan (Demodara, 2002; Nguyen, 2016).

$$Value\ of\ stock = \frac{Dividend\ per\ share}{Discount\ rate - Dividend\ growth\ rate}$$

DDMs have various modifications. The most common types of models include: model with zero growth, single-stage DDM and multi-stage DDM. The models are characterized mainly by its simple calculation and applications. Intrinsic value is obtained as the discounted expected future revenues in the form of dividends (Mařík, 2011).

Model of discounted cash flow (DCF)
It is a second way to determine the intrinsic value of the stock. Also, it is a very widespread and popular model. DCF model is historically younger than DDM. DCF has popularity mainly because this model can be applied to calculate the intrinsic value of each stock. DCF does not work with the requirement that the company paid out dividends. This is becoming a very popular DCF to analyse companies that are known to either not pay out dividends or dividend amount is hard to predict. The model is suitable for star-up companies as well. The model has great popularity among the companies that are making IPO and have no dividend history on the basis of which it would be possible to use the DDM (Demodara, 2011).

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \ldots + \frac{CF_n}{(1+r)^n}$$

$CF = Cash\ flow$

$r = discounted\ rate$

Methods for calculating the intrinsic value of a stock is based on the prediction of cash flow. The prediction of cash flow, unlike the predictions of future dividends is difficult. Cash flows, which flows into the firm, it is difficult to estimate. Most analysts and investors agree that the DCF model is better than the DDM. Because the dividend discounted models work only with the portion of profits that were paid out to shareholders and does not work with the rest of the profit, which was detained in the enterprise and outstanding. The most common methods include "Free-Cash-Flow-to-Equity" (FCFE) and "Free-Cash-Flow-to-Firm" (FCFF). Both methods FCF models differ in the method of calculating free cash flow (sometimes labelled only as cash flow), (Mařík, 2011).

FCFF model is suitable for more "traditional companies" where is the existence of the majority owner. At the same time the company is typical in that it is "less" indebted, it means that the company has a relatively higher share of equity in total assets. Typical for the company is zero or very low dividend payment. FCFE has several modifications, the most widely are used model include constant (steady) growth, two-stage FCFE and three-stage FCFE models (Mařík, 2011; Nguyen, 2016).

The second method is FCFF model. This model is better to use for the companies that have larger amount of other sources. The amount of other sources is relatively significant in the total amount of assets. We can say that the company uses relatively high financial leverage. This type of DCF takes into account not only the owners but also the lenders (because those due to relatively high financial leverage are more interested in the finance company). Disadvantage of FCFF model is the need to determine the weighted average cost of capital (WACC), which determine the discount rate. WACC formula in itself reflects the higher risk with higher debt. To determine the WACC is becoming very popular Demodarana's principle. More details on the calculation is described in the section on Methodology. Like FCFE model and FCFF model has several modifications. The most common models are model with stable (constant) growth, single-stage FCFF model and two-stage FCFF model (Demodarana, 2011; Mařík, 2011).

Models based on the ratios
Here are one of the so-called profitable model and a group of so-called historical models. Profitable model based on the price-earning-ratio (PE). When PE analysed company is lower than other companies in the industry, it means a signal that the analysing company is probably underestimated. In the case that PE analysed company is higher than other companies in industry, it is a signal that the company, which is analysing is probably overestimated. The paradox is that although this type of model is market sometimes as "profitable" it works with historical data. Thus we can say that is historical model as well (Nguyen, 2016).

Among the historical models is included price-sales-ratio (PS), price-dividend-ratio (PD), price-book-value-ratio (PBV) and price-cash-flow-ratio (PCF). For all these models is true that are compared with companies from the industry. When these values are lower smaller, so the company is better. When these values are lower than any company in industry has, it is a signal that the examined company is probably underestimated. When the value of the surveyed company is higher than other company in industry has, it is a signal that examined company is probably overestimated (Mařík, 2011; Nguyen, 2016).

Profitable and historical indicators tend to work on a historical basis. For more complex analysis, it is preferable to use absolute valuation methods. Most of absolute model works on the basis of the predicted estimate of future input indicators. This is the hardest problem when you build the model. Most estimates of future developments based on historical data, it is also logical. Estimating predictions are trying to put into context with indentified macro environment and sectoral environment from previous analyzes. Macroeconomic and industry environment should help us in predicting future developments (Nquyen, 2016).

2.4.2   Auxiliary tools of quantitative analysis

As mentioned above, the actual intrinsic value to conclude whether the stock to buy or sell is often not enough. After determining the intrinsic value, we can say the stock is undervalued, but indicators of financial analysis can help us identify whether the company has the potential to make these undervalued stocks actually reached its intrinsic value (Nguyen, 2016).

Support tools that are used to confirm the intrinsic value and are part of fundamental analysis are ratio analysis (analysis of profitability, leverage, liquidity and activity). Another are analysis of indicators of market value, vertical and horizontal analysis (analysis of balance sheet with profit and loss statement), analysis of distress company by the bankruptcy models (Altman Z-score or model IN), analysis of dynamic indicators (EVA or MVA), cash flow analysis and others. These tools of financial health can help reveal whether the company is doing a performance in line with the determined intrinsic value (Mařík, 2011)

The prediction of these indicators is made for each period. The aim is to get the most accurate view of the possible future development of the company. This analysis becomes more important when we buy a larger share of the company. If we are a small investor, most likely we will not have enough sources for preparation a quality supporting financial analysis. Otherwise, if we are a significant investor in the financial market and we will buy a larger share of the company then the financial analysis will be very important for us. This part of fundamental analysis will be essential for future decision. This part of analysis has a significant impact when we are deciding to buy or sell company stock.

2.4.3   Qualitative analysis of company

The existence of factors that cannot be quantified in the company, making analyst to submit verbal view of these factors. Examined company may be considerably undervalued and have high-quality growth potential. The company also may not be a suitable investment. What if the company will have bad management? It will not be enough to elaborate a strategic plan? The company may be hampered in their potential targets through these factors. Our intrinsic value can be misrepresented. There are cases the fundamental analysis was dropped by the quantitative (soft) data. A common argument is projecting soft factors to the financial forecast, the resulting intrinsic value is as truthful (Ngyuyen, 2016).

Often you can see short-term shocks to the stock exchange, whose origin is associated with soft factors. Origin is not associated to financial stability. Among the negative shocks may include, for example, when a company begins to face charges, the company is involved in the dispute, the company is a party to the court, the company will start producing low-quality products or provide poor service. These negative shocks should not "knock" the intrinsic value of the stock

in the short-term. Worse situation occurs when these shocks spill over into the long-term level. Short-term positive shocks can promote short-term growth in the market price of the stock. Short-term effects spill over into long-term effects and have positive impact on the market price of the stock.

Sometimes, in the context of fundamental analysis we can work with an analysis of interest groups (stakeholders) or GE matrix that relates the attractiveness of the industry and competitive edge. The last most popular method is called BCG matrix, which gives to the relationship between the market share of company in the industry and the anticipated growth rate of company in the industry (Analoui and Karami, 2003).

2.5   Initial public offering (IPO)

Initial public offering (or only IPO) is a process where a privately owned company becomes a publicly owned company. Stocks are offered to entities such as households, firms, institutions and funds via the IPO (Geddes, 2002).

2.5.1   Purpose of IPO

The most frequent motive of IPO is the issue of new stocks (primary shares), whose purpose is to obtain new financial resources. New financial resources mostly used to grow the company. Thanks to new financial resources from the IPO the company has grown organically or through mergers and acquisitions (M&A). For organic growth, we can consider the launch of new products, introduction of new manufacturing process, increasing production and improving corporate infrastructure. Growth by M&A is typical for mature firms, which grow in width by buying up their competitors. M&A concept primarily buys strong business. Organic growth can be seen mainly in the IT technology. M&A growth can be seen in the engineering industry, energy industry and food industry (Gregorious, 2006).

The second motive of IPO is emission of existing stocks (secondary shares). The company will not receive new financial sources from this emission. The main reason for this issue is the repayment acquisition loan or repayment of originally invested equity to investors. The shareholder in this way repays his earlier invested equity. This procedure is often applied by private equity investors, who sell off parts of businesses (Gregorious, 2006; Draho, 2004).

Companies that are in financial distress and need to increase their own resources, they can use the IPO to increase its own *equity* as a whole. Growth in equity reduces dependence on *other sources*, and reduces the risk of high *financial leverage*. We can say these are primary shares. This principle is very popular especially in the USA. In Europe, this way of managing risk capital is not particularly large (Geddes, 2002). A good example might be the German Deutsche Bank, which was forced to increase their own resources on the level of minimum capital require-

ments (MCR), (Deutsche Bank, 2017). The bank has been facing low capital base in late 2017 and 2017. As a way to new sources of finance, the bank decided to use the IPO and issued new stocks to investors, thus gaining new funding and increased equity (Arons et al., 2017). Similar actions were reported by Italian banks as well. A similar trend, where the primary aim is to increase the capital base (mainly by banks), we can also expect more for banking institutions (Grey, 2017). The reason may be the risk of a large number of systemically important banks. These banks in the context of the concept of Basel III will have to obtain a higher desired amount of resources (Laušmanová, 2010). The concept also builds on the principle of *bail-in*, where the commercial bank will not be able to rely on the state and its public finance in the event of bankruptcy. The absence of public finance, which could have rescue banks in the event of bankruptcy, will require a substantial increase in equity of commercial banks. In this form of fundraising is an important view of the company to the public. If the company's prevailing negative expectations, there is a great risk that the IPO will not be successful. The company does not obtain the required amount of capital required (Pigrum et al., 2016).

Among other motives of IPO can be considered increasing awareness of the company and increasing the attractiveness for key employees. Employees can gain stock options as a form of remuneration. This motive of IPO is sometimes referred to as a complementary and often is not identified as a primary aim for company. We can say this is rather a marketing play towards to public and employees (Gregoriou, 2006; Geddes, 2002).

2.5.2   From start-up to IPO

In the world, there are many ways for businesses to raise funds. Traditional methods include drawing of bank loans, bond issues and IPOs. Among the less traditional methods, we include mezzanine finance and M&A concept based on *strategic investor* or *private equity*. Ways of raising funds are different by the company is concentrated in the USA or in Europe. There are two different approaches to fundraising – continental and Anglo-Saxon. These two concepts are particularly true for large companies or multinationals (Lipman 2009, Draho, 2004).

Europe and general European approach is dominated by bank loans. Traditional banks and drawing of bank loans as a source for financing business activities lasts from the 13th century. Even today most companies, if need to obtain new sources of financing, so they choose the way through bank financing. European business owners prefer to choose debt financing, rather than to allow "a stranger" to join into their enterprise directly into the stockholder's position (owner). The concept can be summarized as, if a company needs money, instead demanded by *other sources*, and is willing to go into the debt. It is important not to lose control over ownership as a whole (Geddes, 2002).

Anglo-Saxon (or American) way of financing companies and their activities are mainly based on the IPOs. Banks, as well as with the European concept, play an important role too. In the American concept where the company needs to get a new (or additional) financial resources, so the firm decides to perform an issue of new stocks and list it on the stock exchange. Banks buy these newly issued stocks. Banks in this way "ingesting" a new (or additional) financial resources into the company. The concept has been known as *portfolio rebalancing.* Banks join into the company as a stockholder (owner) not as creditor, unlike European concept (Cuthberson et al., 2016; Curcuru et al., 2014).

Above distinction is typical mainly for mature firms with a longer time history. Newly established businesses do not have much change of getting a bank loan or not to doing IPO. The method of obtaining financial resources is dependent on the life-cycle of the company. Each stage of life-cycle requires a different funding source. We can assume there are four stages according to the needs of financial resources: *seed stage*, *early stage*, *later stage* and *"IPO" stage* (Gregorious, 2006; Geddes, 2002).
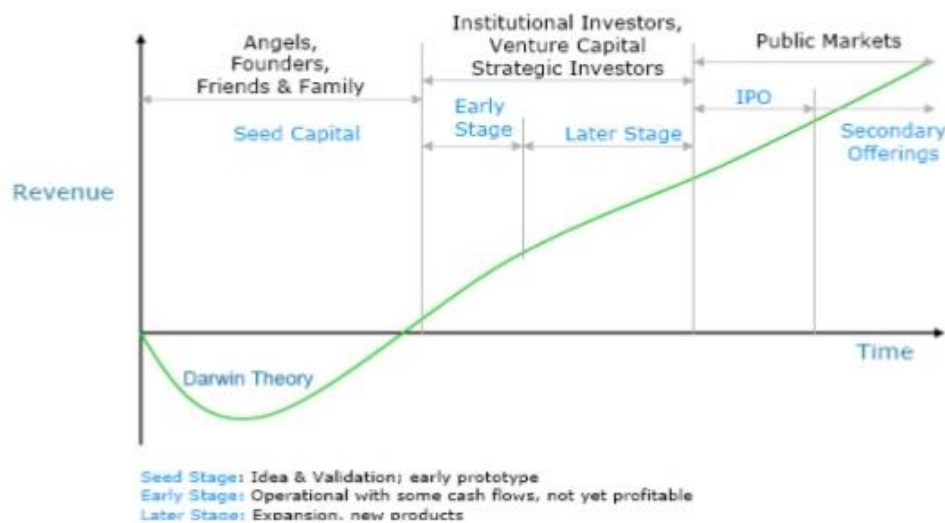
Img. 7   Financial life-cycle of company
Source: Venture capital and equity funding, 2014.

If the company survives its *seed stage*, it will move to the next stage of develop-ment, which is the *early* and *later stage*. Company begins to generate first cash flow here and can already begin to apply for bank loans. The company may also get a *strategic investor*, who can bring into the company *venture capital*. Venture capi-tal is typical that the provider carries excessive risk. Venture capital is a fund, which is made from the funds of other investors, who leave their capital to earn. The fund expects often in the future realization of exit from the company (Lipman, 2009; Gregorious, 2006).

Business angels fill the gap between equity and venture capital. Early and later stage are characterized mainly for private equity investors. These investors will concentrate on three types stages of company development – *start-up stage*, *venture stage* and *expansion stage* (Lipman, 2009; Draho, 2004).

The last stage is the entrance into publicly traded markets in the form of IPO. As mentioned earlier, there are two kinds of purposes IPO. The first purpose is to obtain new funding and the second purpose is to raise funds to repay the groovy activities. If the company enter into the stock market for the first time, most of this input is associated with the primary aim of emission, thus obtaining a completely new financial resource (Gregorious, 2006; Lipman, 2009).
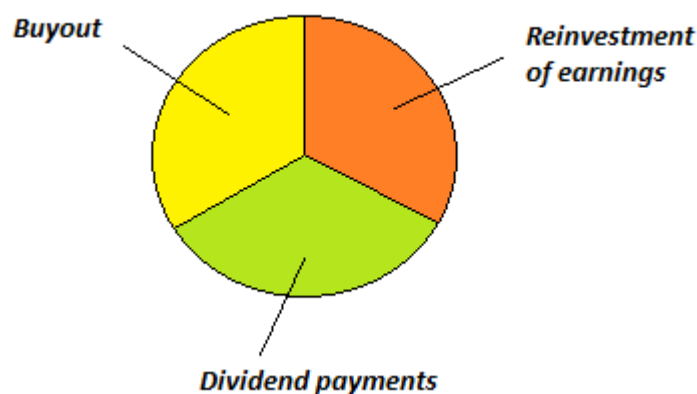
Img. 8   Snowball effect
Source: Owning processing

Snowball effect, the concept of strategy, used mainly by large US companies. The principle is based on the regularity of dividend payment, reinvestment of profits achieved and buy-out the stocks issued (Geddes, 2002). The company annually reaches a certain amount of net profit. The company have to deal with how to dispose of total profit. Let's say that the first third of profit falls on dividend payment, the second third falls on reinvestment (in the form of retained profits in the company) and the last third falls on buy-out of stocks from existing stockholders. This way is part of share returned back to the company. Very important is the last third. The aim of last third is to reduce the free float which is traded on the exchange. If company use this principle, it will lead to reduce free float on the exchange. Then company will be able to use again process of primary IPO in the future. If the company conducts buy-out, company will occur capitalization itself. This growth strategy will tend to be like a *snowball* (Gregorious, 2006).

2.5.3   Process of IPO

Every IPO can be divided into four stages (or individually parts) which follow one another. Every stage requires specific activities. The first stage is referred to as the *preparation*. The second stage is the *pre-listing* (the period before entering company on the exchange). The third stage is the *listing* (the period in which the company is going on the exchange). The fourth stage is the *post-listing* (the period after entering company on the exchange), (Geddes, 2002).

Preparation of the IPO
This initial stage is beginning, when the company starts to deal with the question about entrance on the exchange via IPO. This stage does not have specific horizon for suggestion about it. It is very individual way. For some companies, this decision is made within months and some within a few years (Geddes, 2002).

The company at this stage has to deal with *financial readiness*. Financial readiness is based on financial reporting. If the company wants go public, must comply in advance to specify how accounting and reporting. Because the company becomes publicly traded (Lipman, 2009). In the Czech Republic, the company must transfer from tradition Czech accounting standards (CAS) to regime of International financial reporting standards (IFRS). If the company with this regime has no accounting experiences, studies show that transfer reporting form CAS to IFRS takes approximately 6 months. In the case the company previously not carried out the audit, nowadays it must be done it (Kříž, 2009).

Another condition is the need for a *business plan* for the future, at least 5 years. Business plan is not included in the *prospectus*, but on its basis unfolds *bookbuilding* (the determination of the price spread). It is also required transparent organizational structure entire company and management. Special position here is occupied by CEO and CFO. These positions must be obviously transparent to public (Lipman, 2009; Draho, 2004).

The *prospectus* is a basis document of the entire emission. On the basis of the prospectus, the potential investor should be able to decide whether to buy company's stocks. Responsibility for drawing up the prospectus has the legal adviser of the emission. The prospectus has to contain all information which are required by emission law. The emission law requires the precision of a prospectus and it is not possible to change or skip individually parts. Prospectus character is not intended to encourage investors to buy stocks, but only realistically assess the situation in the company (Gregorious, 2006). The prospectus has to be approved by the supervisory authority in the Czech Republic – it is the Czech National Bank (CNB, 2016). The prospectus has to be published even before making a public offering. Data which are published in, they have a significant impact on the value of the stock. On the prospectus is placed significant emphasis, not to be confused with the marketing or another promotional material (Gregorious, 2006).

Pre-listing stage
Pre-listing is the second stage. At this stage the company is firmly decided to realize the IPO. The company is already publicly known its stocks will be publicly traded on the exchange. At this stage the company deals with the layout of events, which are not necessarily to realize before the IPO. The company is dedicated to the offering of stocks, choose the exchange, carries out due diligence and try to estimate the intrinsic value of stock. The company coordinates its activities with the Central bank and the exchange as well (Geddes, 2002; Draho, 2004).

Due diligence (DD) is marking for depth analysis of the company. Sometimes this term is often incorrectly confused with the audit. The audit compared with DD is more superficial. DD is usually the first process immediately after the kick-off meeting (it is meeting with company's management and emission's manager). Output of DD is part of the prospectus too. DD has three main parts – *business part*, *legal part* and *financial part*. DD is an internal document which identifies the major treats and risks for the company. The results of this analysis are not publicly published. If due diligence is deeper, it will be more expensive and more time consuming (Espinasse, 2014; Camp, 2002).

The aim of economic DD to understand operations and processes of company as a whole. The analysis also includes assessment of financial situation. For economic part is responsible the manager of emission. The aim of DD is to understand the legal law risks associated with the business of the company. For legal part is responsible a legal adviser of emission. The financial DD verify the result and the company's tax liability. For financial part is responsible an auditor (Espinasse, 2014; Camp, 2002).

Listing stage
Pre-listing and listing periods takes approximately about 4-5 months. In this part takes place a *pre-marketing*. The pre-marketing is the session of company's management with major investors (major investors is small group of selected institutional investors). Pre-marketing is important because there is estimated demand for total emission. There is estimated amount of stock which will be issued. Pre-marketing is essential for estimated prise spread for the bookbuilding as well (Gregorisou, 2006; Geddes, 2002).

After the pre-marketing stage follows a *roadshow*. The roadshow is official introduction of company to whole public. On roadshow the company's management official appeal to all potential investors. The roadshow can be likened to the workshop. During the roadshow there are all key company information full available to all investors (Draho, 2004; Geddes, 2002). On this occasion, there are also available *research notes* from various external analysts, for example in Czech Republic, from Cyrrus, Patria, Fio etc. The second important activity during the roadshow is

the *bookbuilding*, which takes place simultaneously at the same time. The final price at which the stocks will be primarily offered is estimated by an external company. External company is typically represented by an investment bank (Lipman, 2009; Gregorious, 2006). In the case of the Czech Republic external bank is often from foreign. Investment bank have to be experienced with the IPO but in Czech Republic there is no many banks with this specialization (Meluzín and Zinercek, 2015).

Bookbuilding is a method which determinates the price at which the stocks will be offered in the emission. The bookbuilding taking place in the context of the road-show. In this time investors served an order to buy stocks of the company. In non-private order is estimated the amount of issued stocks they want to buy. This data is recorded in the *order book*. Responsibility for the order book has the emission manager. Potential investors are divided into two groups – *"large"* and *retail investors*. The resulting price is defined mainly by "large" investors. Retail investors only help to define the amount of stocks they want to buy. Retail investor do not have adequate expertise to quantify the intrinsic value of issued stock. During the book-building all investors may submit their bids and change or cancel it. Demands from potential investors are not binding. The bookbuilding is only indicative information for company management. About the final price company is decided alone (Gregorious, 2006; Draho, 2004).

The second less used method is a *fixed price method*. This method is based on the fact that the issuer together witch investment bank sets the price (they reflected an idea of how much the price should be). This price will be fixed for potential investors. These investors reflected its interest in the amount of stock at the fixed price. In the last decade this method is leaved. Previously it has been more popular in Europe than in the USA (Gregorious, 2006; Draho, 2004).

Post-listing stage
The main task is to stabilize emission. Stabilization means preventing sudden drop in the stock price after the company's IPO. External company (investment bank) is trying to prevent a drop in stock price. Investment bank is threatened at the moment. Because investment bank does not have quantified the right intrinsic value. Preventing price slump can be done through option contracts, which is realized by investment bank. Investment bank have to start using these contract to stop declining the price (these option operations are not discussed further in the thesis) (Lipman, 2009).

2.5.4   Underpricing in IPO

Underpricing is a situation where the stock price at which the emission was carried out, was lower than the actual intrinsic value. When the offered price is lower in IPO than the actual market price than we can think about underpricing. Under-

pricing in most cases is only temporary, because the price that clears the market always manages to find its intrinsic value (Baker and Nofsinger, 2010).

About underpricing we can say if the subscription price was lower than its intrinsic value, so the company achieved higher costs. The company lose a portion of the money which was not gained in IPO. The company sold out its stocks at the price which was lower than the actual price (Baker and Nofsinger, 2010; Geddes, 2002).

Otherwise, if the company sold out its stocks at the price higher we can say the company realized negative underpricing. The disadvantage of this issue is a sudden drop in the market value of newly traded stocks (Baker and Nofsinger, 2010).

3 Methodology

This part of diploma thesis presents the methodology of determination the intrinsic value of the stock. Thus, the calculation procedure, which leads to the fair stock price. First there is described the method of finding Cosf of Equity and Cost of Debt. Determination of these costs serves as input values for calculation of the Weighted Average Cost of Capital (WACC) that is subsequently performed. After detection of WACC it could be approach to the Discounted Cash Flow (DCF) model and Enterprise Value (EV). The resulting EV determines the intrinsic value of the stock. This intrinsic value is then compared to the current market stock price on the exchange stock and subsequently it can be reached the investment recommendation. At the end of this part is mentioned methodology about underpricing.

The calculation of the Cost of Debt is made using by the following formula:

$$R_d = \frac{Interested\ Liabilities}{Interest\ Expanses}$$

Where:

  R_d is Cost of Debt
  Interested Liabilities are other sources subject to interst
  Interst Expanses are interests paid for obtaining sources (Kruschwitz et al., 2006)

The calculation of the Cost of Equity is made using by the CAPM formula:

$$R_e = R_f + \beta\left(R_m - R_f\right)$$

Where:

  R_e is Cost of Equity
  R_f is risk-free retun in the market
  R_m is the historical return of the stock in the market
  β is the sensitivity to market risk for the security (Kruschwitz et al., 2006))

After determination of these costs it can be acceded to calculation of WACC by using the following formula:

$$WACC = R_d\left(1-T\right)*\frac{D}{C} + R_e*\frac{E}{C}$$

Where:

  T is corporate tax
  D are interested liabilities
  E is equity
  C is total long-term invested capital (Kruschwitz et al., 2006))

The WACC formula serves as a discount factor for discounting predicted cash flow. For the next, it must be defined the free cash flow calculation and its components that are derived from the following formula:

$$Free\ Cash\ Flow\ To\ The\ Firm = EBIT(1-T) + Depreciation +$$
$$+ Change\ in\ NWC + CAPEX$$

Where:

EBIT(1-T) is net operating profit after tax achieved in predicted period
Depreciation achieved in predicted perod
Change in NWC is net working capital achieved in predicted period
CAPEX are capital expanses (Kruschwitz et al., 2006))

After determining all necessary components, it can be proceeded to tiscounted cash-flow using by the two-step model. The first step is based on predicted financial statements and the second step is based on continuing phase.

$$DCF = \frac{FCF_1}{(1+WACC)^1} + \frac{FCF_2}{(1+WACC)^2} + ... + \frac{FCF_n}{(1+WACC)^n} + \frac{FCF(1+g)}{(WACC-g)^n}$$

Where:

DCF is discounted free cash flow
g is choosing annual growth rate in continuing stage (Kruschwitz et al., 2006))

After detection the DCF it can be determinated the enterprise value, which is then divided by the number of issued stocks. Enterprise value is examined by subsequent formula:

$$EV = DCF + Debt - Cash$$

Where:

EV is enterprise value
Debt are current liabilities
Cash is quick cash and equivalences in hand (Kruschwitz et al., 2006))

For underpricing is used a comomn method that takes only the change between the issue price and the market price of the stock at the end of the first trading day:

$$U = \frac{P_1 - P_E}{P_E} * 100$$

Where:

U is underpricing in %
P_1 is close price of the stock at the end of the first trading day
P_E is emission price of stock (Meluzín, 2009)

The second approach to underpricing implies a time lag that arises between the determination of emission price and the beginning of trading. This approach takes into account the movement of the stock index in which the stock is included. The method is calculated using by the following formula:

$$U_M = \left[\frac{(P_1 - P_E)}{P_E} - \frac{M_1 - M_0}{M_0} \right] * 100$$

Where:

U_M is underpricing taking into account the movement of the market index

M_1 is closing price of the index at the end of the first trading day

M_0 is closing price of the index at the end of the day before the first trading day (Meluzín, 2009)

The last formula determinates the total costs assocated with the undervaluation of the emission in the IPO:

$$UC = (P_1 - P_E) * MC$$

Where:

UC are costs associated with the undervalition in the IPO

MC is size of the issue (Meluzín, 2009)

All data are taken from audited consolidated annual reports from company's website as an imput for review of the past period 2009-2016. The prediction is based only on publicly available information. Determination of the valuation method is perfomed on SW Microsoft Excel. For some graphs is used MS Gretl. All the results are presented in the Practical part and part of graphs are displayed in the Appendix.

4 Practical part

The subject of the investigation is Kofola ČeskoSlovensko, a.s. (Kofola) which is traded on the Prague Stock Exchange. Kofola is a traditional soft drink producer. The fundamental analysis of Kofola is divided into three parts. The first part deals with the analysis of the market from macroeconomic view. The second part analysis the industry in which the Kofola operates. The most important part is the determination of the intrinsic value of the Kofola's stock and to quantify the potential underpricing.

4.1 Macroeconomic layout and forecasting

Kofola operates mainly in the CEE countries. In these countries there is a production, distribution and sale of various products to end customers. Countries where the company operates can be divided into two categories. It is a similar distribution that uses the company Kofola. This division is used internally and externally in relation to investors (Investor presentation, 2017). The first category consists of countries where the holding has been carried out in some way. Here runs said production, distribution and sale. The second category consists of those which the company refers to as "countries for future expansion". The second category are countries that are common to come from Adriatic region. There are countries where the holding tries to operate and has an interest in the future expansion. Kofola would like to penetrate there (Kofola's Annual Report, 2017).

In macroeconomic analysis is needed to look at all these countries together with specific regard to the Czech Republic (because in Czech Republic stocks are traded on the PSE and all activities are governed by Czech legislation). These countries as a whole are the main location of subscribers for holding on where Kofola is dependent. If these countries will lead to positive macroeconomic shocks can be expected that holding in these countries will achieve higher sales. When these will be an increase in sales, the company will achieve a higher level of net profit (EAT). The higher level of EAT results in a greater market value of the Kofola and leads to the growth of stock market price.

The first category of countries includes Czech Republic, Slovakia, Poland, Slovenia and newly Croatia. Kofola is operating in this category of countries. The second category (countries for future expansion) is represented by Bosnia and Herzegovina, Serbia, Macedonia, Montenegro and Kosovo (Investor presentation, 2017). Macroeconomic analysis seeks to reflect the current status and attempts to predict future development in all the mentioned countries. Given locality affect to the intrinsic value of stock Kofola. Countries where Kofola operates or has an interest, it is will call "the country of interes".

4.1.1 GDP and economic growth

Since the financial crisis (2007-2008) and its subsequent spillover into European countries (2009-2010) passed for more than 6 years, the global economy recorded a global increase (Westra et al., 2015). Whole Europe together with the CEE counties observed slight return to pre-crisis economic state, which is accompanied by "stronger" economic growth. The claim can be confirmed GDP growth in these countries (Eichengreen et al., 2012). In developed economies this effect is confirmed by the actual stock indices, which are moved close their previous maximum value (Egan, 2016).

For the development of the Kofola is important to achieve economic growth in the countries of interest. Development of percentage changes in GDP is shown in the following image. The image shows the particular country from the first category and a comparison of the EU average.
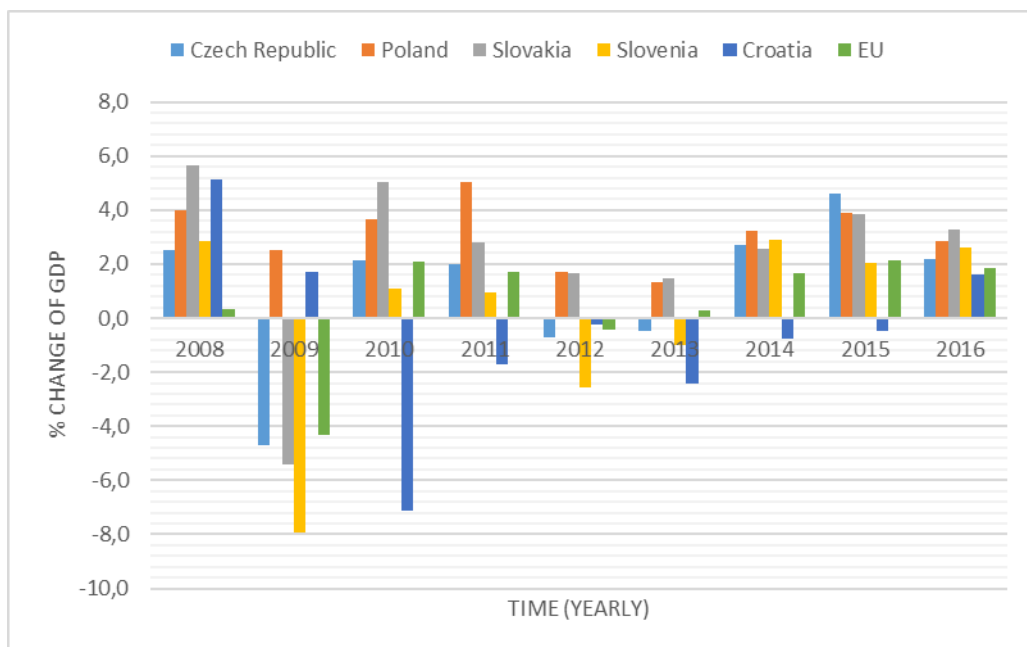
Img. 9   Comparison of the GDP in the countries of interest
Source: Owning processing, data from Federal Reserve Economic Data, 2017.

In 2009, we can see that most of the countries of interest faced strong challenges associated with the financial crisis. Conversely the year before 2009, when the financial crisis was fully underway in the USA, the countries of interest kept relatively good economic growth. For the period 2011-2013 is seen stagnation, when some countries of interest achieve economic growth and another negative economic growth. It can be say in period 2011-2013 was economic development of countries of interest correlated with the economic development of the EU average. For the period 2014-2016 it is seen the countries of interest recovered from the finan-

cial crisis and in the post-crisis period have experience economic growth (expect Croatia).

Dependence of development between the countries of interest and "rest" of European countries (represented by EU) shows the image in Appendix. The image shows that almost all countries have been affected by the global financial crisis. After that it occurs again to return to normal state when the counties of interest are beginning to achieve stable economic growth.

The analysis compares the development of the GDP of the Czech Republic and the development of revenues of the holding as well. Kofola belongs to the food industry, we can say that it is a neutral or sometimes cyclical industry. Development of the relative GDP (or development of the absolute GDP per capita) is insensitive in relation to the sensitivity of the Kofola's revenues development. The main problem is the small number of observations that would form an adequate time series for more detailed analysis. However, was an attempt to prove the correlation, the resulting image is given in Appendix (A/1).

Here is another problem, Kofola was previously traded on the Warsaw Stock Exchange since 2003. Traded stocks were withdrawn and Kofola issued the new IPO on the PSE in 2015 (see chapter dealing with the analysis of the company). The problem remains how to use GDP for the analysis (because Kofola is multinational company). The image which is part of the Appendix shows the development of revenues of Kofola and development of GDP from 2008 to 2015. As compared to the initial GDP is used as an alternative to Czech and then the EU GDP.

We can say it is meaningless to compare the GDP of the Czech Republic (or any other country) with the development of revenues Kofola. It is also meaningless to compare GDP EU with Kofola's revenues. Changes in the development of absolute or relative GDP are very insignificant as well. GDP indicator is also used in the context of the development of EBITDA or added value of the company. Kofola these values hold stable, so the comparison may be evaluated as invalid (see chapter about analysis of company for more details). Also it is insignificant compared PX index with total Kofola's revenues. Because Kofola is traded very short period on PSE. Based on the results of correlation analysis between GDP and revenues should be made to the following conclusion. Revenues are misleading, Kofola has had major acquisitions that significantly affect (overshoot) the consolidated revenues.

The image (see Appendix A/2) shows the relationship between development of quarterly GDP and the quarterly development of the PX index. The image shows 48 quarterly observations. Between Czech GDP and PX index is a very strong correlation dependence of 88%. The image shows the percentage changes. Absolute development between the variables is shown in the Appendix. Development of the

stock price and PX index is inadequate to give correlation context. The reason is a short time period again.

The second category of countries is represented by countries for future expansion. Kofola would like to penetrate into this category of countries in future ones. Kofola plans important acquisitions form which promises to strengthen its position in the CEE region. Future acquisitions will have an impact on the stock price of Kofola. Positive shocks in the countries for future expansion should significantly boost the overall results of Kofola and positively hit the intrinsic value of Kofola's stock.

GDP development shows the countries for future expansion shows the in the image bellow. We can see the development of GDP is not positive for these countries as the first category. Has. We can see the GDP is sometimes in black and red numbers, which is not good. Another problem for analyst is the data exist only to year 2015 for these countries (World Bank, 2017). Almost all countries for future expansion experienced the worst economic results, in the year 2015. Potential investors in stock of Kofola may negatively perceive this fact. Negative expectations can have a bad effect on the determination of the intrinsic value of the stock. This phenome has to be reflected in the Kofola's intrinsic value. Appendix shows the image of development of absolute GDP in the countries for future expansion.
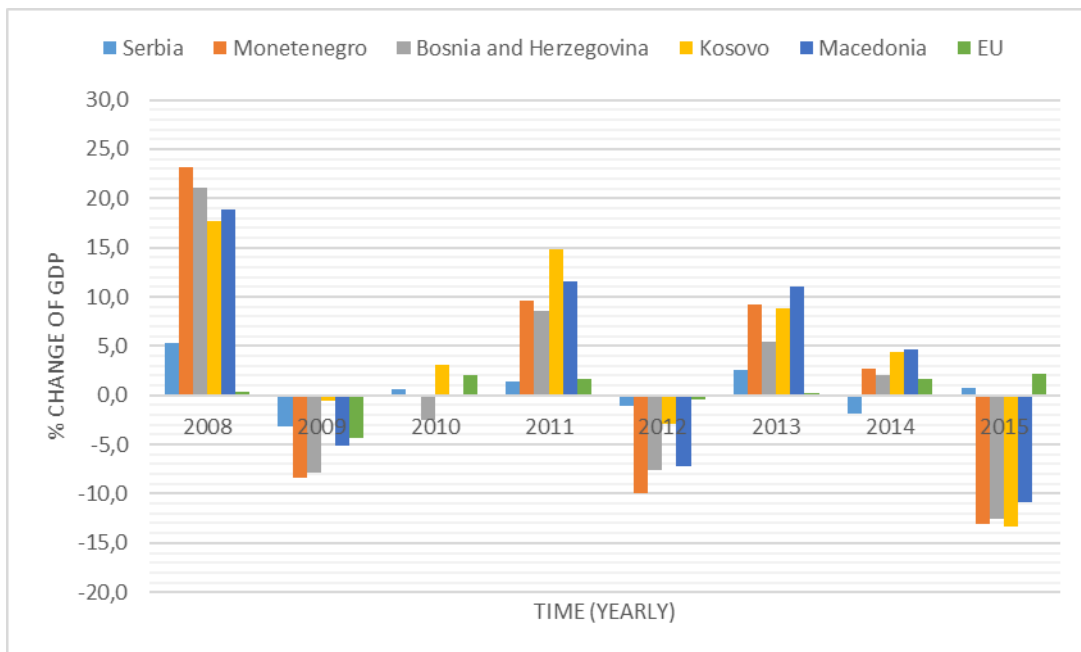
Img. 10   Comparison of the GDP in the countries for future expansion
Source: Owning processing, data from Federal Reserve Economic Data, 2017.

Aggregate demand in the countries of interest is being driven mainly by household consumption, which make up the largest share of total aggregate expenditures economies (Kučera, 2014). Newly-induced economic growth is made especially

household consumption expenditure in this countries. Most economists complaint that aggregate demand is not driven more by private capital expenditure, because it supports productivity. Like the Czech Republic, and other countries are considered as "assembly plants" to the rest of Europe. However, this phenomenon has very little effect to Kofola's stock (Horská, 2016). The greater consumption leads to more sell products of Kofola brand. Because as already mentioned, the food industry is considered as neutral or moderately cyclical.

Special attention should be paid to economic development in home country – the Czech Republic. Because here are traded stocks of itself and here occurs a significant part of the production. Prediction by individual institutions is shown in table below.

Tab. 5   Prediction of the GDP in the Czech Republic by credible institutions

GDP growth rate	2017	2018	2019	2020
Czech Ministry of Finance	+2.6	+2.4	-	-
Czech National Bank	+2.8	+2.8	-	-
European Commission	+2.6	+2.7	-	-
World Bank	+2.2	-	-	+1.9

Source: Owning processing, data from tradingeconomics.com, 2017.

We can show positive expectations of the future development of the Czech economy by credible institutions. The prediction for the period 2017-2018 predicts GDP growth of at least 2%. Stability of growth 2% should be according to the World Bank maintain until 2020. This continued steady growth is assessed as very positive for group Kofola.

Tab. 6   Prediction of the GDP in the countries of interest by the World Bank Group

GDP growth rate	2017	2018
Slovakia	+2.9	+3.6
Poland	+3.2	+3.1
Slovenia	+3.0	+3.0
Croatia	+3.1	+2.5

Source: Owning processing, data from The World Bank Group, 2017.

The table above shows the rest of the countries from the first category and their predicable GDP growth rate. Prediction from The World Bank Group we can deduced that growth is highly optimistic for the years 2017 and 2018. The growth in other countries from the first category is around 3%, which is even slightly more than the Czech Republic.

4.1.2   Current problems associated with inflation

For Kofola is important stable inflation policy from national central banks, because inflation affects production prices and nominal wages. The main problem of

the current situation may be inconsistent monetary authority, because the countries of interest do not have a single monetary authority. Another problem may be a situation where some countries of interest are actually members of the Euro Area (for those members is the risk that they cannot use monetary instruments because its monetary policy have yielded in the hands of the ECB), (Grauwe, 2016).

Stable inflation environment is especially important for the development of the price level and product prices of Kofola. If it is achieved a higher inflation rate (then is declared by inflation target by CNB) we can expect subsequent increase in the prices of final products. At first glance it might seem that this is a positive report. Higher prices of final products lead to higher revenues, but the price inflationary pressure spills over into wage inflation (there is an increase in nominal wages). The increase in nominal wages for Kofola would mean an increase in production costs. As a result, the Kofola due to higher inflation reached higher revenues, but it also would have increased higher costs. We can say that the real growth in earning would not likely.

Since the beginning of 2016, European countries are in non-inflation or low-inflation state. Central bankers, economists and analysts predetermine that "the society must get used to the status quo" (ECB, 2016). Even before 2016, a number of European countries (including the countries of interest) struggled with deflation (Iossifov and Podpiera, 2015). This phenomenon cannot be excluded in the future. Many economists see the problem that traditional monetary tools fail. Previously, if the central bank wanted to achieve a higher inflation rate and achieve its declared inflation target, the central bank only reduced interest rate. Lower interest rate caused "cheaper money", and it started inflation. The process in the economy generally showed about 18 months.

Currently, most countries faced with the problem that the interest rate cannot be decreased. Therefore, the central bank introduced a *negative interest rate*. Negative interest rates pose a risk because no one knows how the real economy will respond to a given instrument (Melolinna, 2015). This phenomenon has never been applied in the world. Negative interest rates introduced for example ECB, Danmark Nationbank, Swiss National Bank and others (Bech, 2016). The introduction of negative interest rate even considering the CNB. The CNB does not preclude the introduction of negative interest rates in the case that once again there was a non-fulfilment of the inflation target after the intervention exit (CNB, 2016).

Inflation across Europe have recently begins to rise slightly, but many bankers remain cautious (ECB, 2015). There are even suggestions within two years, due to low or negative interest rates could be achieved higher inflation rates across countries (Koranyi and Strupczewski, 2016).

The following image shows the development of inflation in the countries of interest from the financial crisis of 2008 to the year 2016. We can see almost all countries achieved higher inflation in 2008-2012. In this periods we can also talk about disinflation (i.e. slowing inflation). Between the years 2014-2016 it can be seen that countries have a problem with their inflation targets. Some countries had even a problem with deflation. For the previous periods, some economists say the inflation was more like "on a swing" (ECB, 2015). It would be doubtful about stable inflationary environment. This situation is not good for every companies even Kofola.
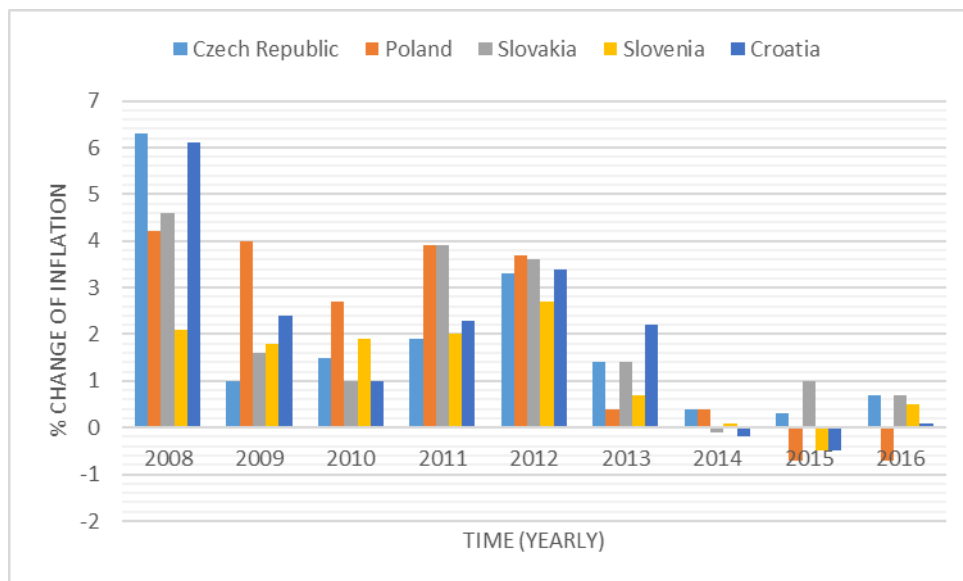
Img. 11   Inflation in the countries of interest from
Source: Owning processing, data from Federal Reserve Economic Data, 2017.

Within prediction we are interested in how inflation will develop in the countries of interest in the future. The table shows the possible development of expected inflation. In the analysis it was possible to select data from the relevant central banks, however, not uniform methodology for estimation often leads to different views and expectations across countries. Data are taken from the World Bank Group for comparison of future inflation. Data for estimating inflation in the EU are taken from IMF (The World Bank Group does not provide predictions for the EU).

Tab. 7   Prediction of inflation in the countries of interest by the World Bank Group and IMF

Countries of interest	2017	2018
Czech Republic	+2.8	+2.8
Poland	+1.7	+2.2
Slovakia	+0.7	+1.2
Slovenia	+1.9	+2.0
Croatia	+0.9	+1.4
European Union	+1.3	+1.6

Source: Owning processing, data from the World Bank Group and IMF, 2017.

The table shows the countries want to maintain theirs declared inflation targets. The increase in inflation is mostly reflected in the rising prices of food and fuel in those countries. For Kofola (as a food holding) is very important to monitor it. In the case of expected inflation, which would be in accordance with the prediction, it is expected that inflation will be reflected just in the food (and fuel), (CNB, 2017). It can be expected that there will be growth in prices of final production and rising prices of Kofola's inputs. It will be important to Kofola maintain a constant development of value added for the entire holding. This means Kofola must have a stable proportion between the development of final prices of products and the development of input prices. The value added it makes sense to monitor for the entire holding, not separately for each company. The value added for the entire holding therein absorbs price and wage inflation across countries. If we wanted to evaluate the value added for each company separately, or the development of value added in specific countries, we received a different valued added. To right determination the intrinsic value, it is important to look at Kofola as a whole, the entire holding.

It is worth noting the relationship between inflation and the PX index. The image (see in Appendix A/3) shows the quarterly development of the percentage CPI index (as a represent of inflation) and quarterly percentage development of PX index (as a representant of stock market). From the theoretical part, it is known the increase in inflation leads to an increase in stock prices. However, this theory in our case is not confirmed. Proven correlation is only 43%. The problem may be in the small number of observations or underdevelopment Czech stock market, which does not have sufficient liquidity.

Here it does not make sense to compare the development of CPI index and stock price of Kofola. As mentioned, Kofola is traded very short time period on the PSE. For deeper analysis is available for a very small number of observations. For the same reasons it makes no sense to compare CPI index and EBITDA or revenues.

4.1.3   Interest rates in the countries of interest

Interest rates are a hot topic not only in Europe but also in the USA or Japan. Generally, the cheaper money causes the growth of demand for them and increasing inflation. At present, when many countries face zero inflation, the interest rates have become a subject of interest. Interest rates currently stand at attention primarily due to their negative values.

The analysis compares the interest rate together with the amount of loans drawn by Kofola. The problem again arises the question of what interest rate to choose when Kofola is a multinational company. In addition, loans can be drawn even in other countries than in the countries of interest. If the analysis is based on consolidated financial statements, it is advisable to choose a "neutral rate of interest". This rate could be taken out of the country in which Kofola has most drawn loans. The problem is that the consolidated financial statements of Kofola gives no further segmentation of loans. Kofola does not indicate in which country or which currency holds a specific amount of loans.

As a starting point was chosen yearly development rate by the ECB (advantage could be that the monetary authorities of Slovakia and Slovenia subject ECB's interest rate). From consolidated financial statements of Kofola have been divided bank loans into short-term and long-term. Because they are state variables, they were taken from the end of the fiscal year at 31. 12. The resulting comparison is shown below.
The image (see in Appendix A/4) shows a positive correlation between interest rate and drawn short-term loans from 2018-2014. According to economic theory, the correlation should be negative. Declining interest rate is accompanied by lower borrowing. This fact was seen almost throughout Europe because economic entities have been scared by the crisis and postponed their planned investments. Further, predominated fear that low interest rate will be only temporary. In 2014 Kofola was a landmark and increased its operational (shor-term loans) funding. It may be due to very low interest rates. Operating funding temporarily increased financial leverage. Here financial leverage is the amount of short-term other sources drawn to the temporary period. These are mainly overdrafts and revolving loans, then drawn bank guarantee as well.

Long-term bank loans are primarily investment type. Here would come into consideration correlation with interest rate if the company strictly planned a long-term investment. Long-term planned investments many not be correlated with interest rate as well. It depends on the expectations and needs of Kofola. The certain correlation is seen in 2009, when Kofola due to lower interest rate increased investment loans. Conversely, an unexpected positive correlation is seen in 2014 (here is expected to see negative correlation between short-term loans). The explanation for this correlation may be such that the Kofola has made acquisitions,

particularly in Poland, Slovenia and Croatia. Kofola needed new investment financing, which drew regardless of the current interest rate.

It is also important to note if Kofola grows, it will be increased its total number of drawn other sources. When Kofola make acquisitions, it will lead to increase the consolidated financial statement. Kofola due to newly acquired companies hold more other sources, especially bank loans. Due to acquisitions Kofola gain new external loans from its newly acquired companies. Another cause of the break in 2014 may be a need for new resources related to the IPO. Significantly increased short-term bank loans, which could serve as just as administrative costs associated with the IPO on the PSE.

By economists and analysts will continue to be at low or negative development of interest rates. Although the inflation rate in Europe began to reach its inflation targets, thus central banks keep interest rates low again (Meredith, 2017).

4.1.4   Declining unemployment

Unemployment has been a hot topic across Europe, especially in 2012-2014 after the financial crisis. Unemployment reached high levels in Western Europe (eg. France, Spain and Italy), Eastern and Southern Europe (eg. Slovakia, Hungary and Croatia). Conversely, countries of Western Europe do not face these problems (eg. Germany, Austria, Switzerland and the Czech Repulic). The image shows the development of unemployment in the countries of interest (see in Appendix A/5).
The image shows that almost all countries of interest shrugged off the problems associated with high unemployment. At the same time these countries face low inflation, which with combination of low unemployment can cause serious inflation problem in the future. Low unemployment in the region is being caused by a shortage of skilled workers in various fields. Companies are forced to raise wage costs by to lure more jobs to new workers. Wage cost growth is also linked to "drag and drop" workers from competing companies. Companies are trying to get new employees mainly higher nominal wages. The higher nominal wages generate *wage inflation*, which spill over into *price inflation*. This way leads to higher expected inflation rate in the future then predict the central bankers themselves.

For Kofola low unemployment and pressure on nominal wage growth may lead to higher wage costs (due to wage inflation). Higher wage cost should be offset by higher revenues in the form of higher prices for final products on the market in the future (due to price inflation). It will be important to Kofola maintain a stable value added. Another problem for Kofola may be a general lack of workers, mainly blue-collar workers, which most of the population consider menial work in the countries of interest. For these professions can be observed an increase in wages in the labour market (Global Agenda Council on Europe, 2016).

4.1.5   Stagnation of real wages
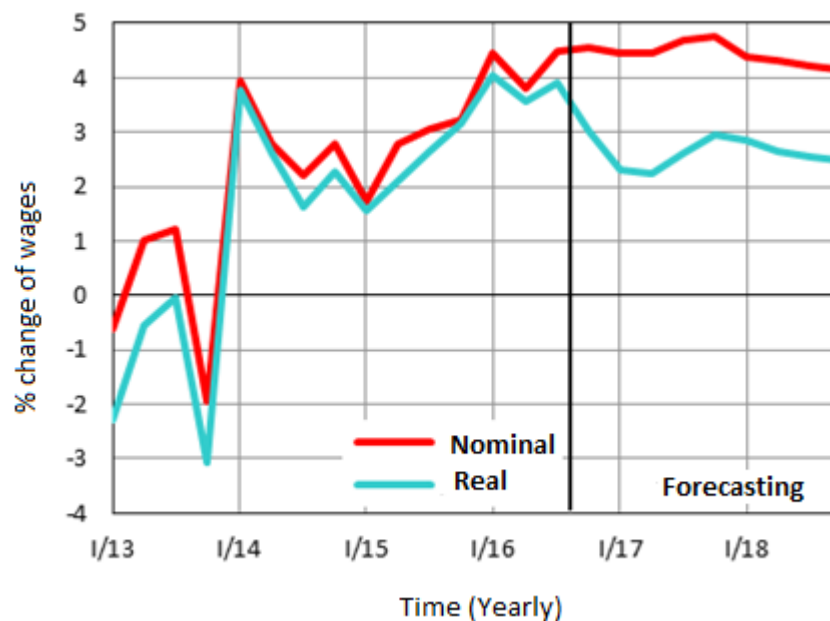
Img. 12   Developments in nominal and real wages in the Czech labour market
Source: Minisry of Finance of the Czech Republic, 2016.

The issue that Kofola itself points out in its investor presentation is development of nominal wages in the context of the development of real wages. The specific is always reference to the Czech labour market. Kofola mentions it in its investor presentation every quarter (Kofola's Investors Presentation, 2016). The following image shows the developments of nominal and real wages in the Czech Republic. The image shows the prediction for the years 2017 and 2018.

From the prediction is seen that in early 2017, the real wage will be slightly lower than in 2016. This may be due to rising inflation. Analysts predicts that "overshooding" the inflation target will be temporary and there is a possibility to return to the origin non-inflation state (CNB, 2016). It will be lead to increase the real wage in short-term again. The prediction shows that the nominal wages are held a stable level. Monitoring of nominal wages for Kofola is important because it decides on the final amount of wage costs.

4.1.6   The likely increase in sugar price

For Kofola and investors it is important to monitor the development of sugar price. Sugar is one of the main production material. This material is reflected in the final price of most products offered (Kofola's Annual Report, 2017). Kofola in their investor presentations occasionally reports significant movements on the commodity sugar market. Development of sugar price affects revenues and profit. Sugar acts primarily to increase or decrease cost items. If the decrease in sugar price

on the world market, it is expected that Kofola will increase profit margin (higher spread between revenues and costs). Increase in margin is positively perceived by stockholders. Otherwise, the increase in sugar prices on the world market, leading to higher production costs and lower margins, which the company has on their products (lower spread between revenues and costs). This fact is investors perceived negatively.

Kofola has not specified how hedge against possible fluctuations in sugar price. We can assume that Kofola like competing beverage holding (eg. Coca-Cola, PepsiCo) uses financial derivates as a hedging instrument (Kopeček, 2017). Kofola has "adequate" size and production volumes to ensure this type of risk in context of risk management. The most likely option will be closing commodity forwards by OTC with sugar producers or dealers, like other beverage companies (Kopeček, 2017). Development of sugar price is shown by following image.

It is important to deal with the issue of development of the sugar price on the world market. Because it may affect margin, earnings and intrinsic value of the stock. According to estimates by the US Department of Agriculture (USDA) should decrease the world supply of sugar from 37.98 to 30.78 million tons between 2016 and 2017. For world sugar supply would mean a drop to a five-year minimum (USDA, 2016). According to the Internal Sugar Organization (ISO) will also increase sugar production. The rise in production is estimated about 1.6 million tons, for a total amount of 170.9 million tons per year. However, the consumption (demand) in the long-term should significantly exceed supply. This should lead to an increase in the sugar price in the world market in the next two years (ISO, 2016). The following table shows the conclusions of the future development of prices in the sugar season 2017-2018.
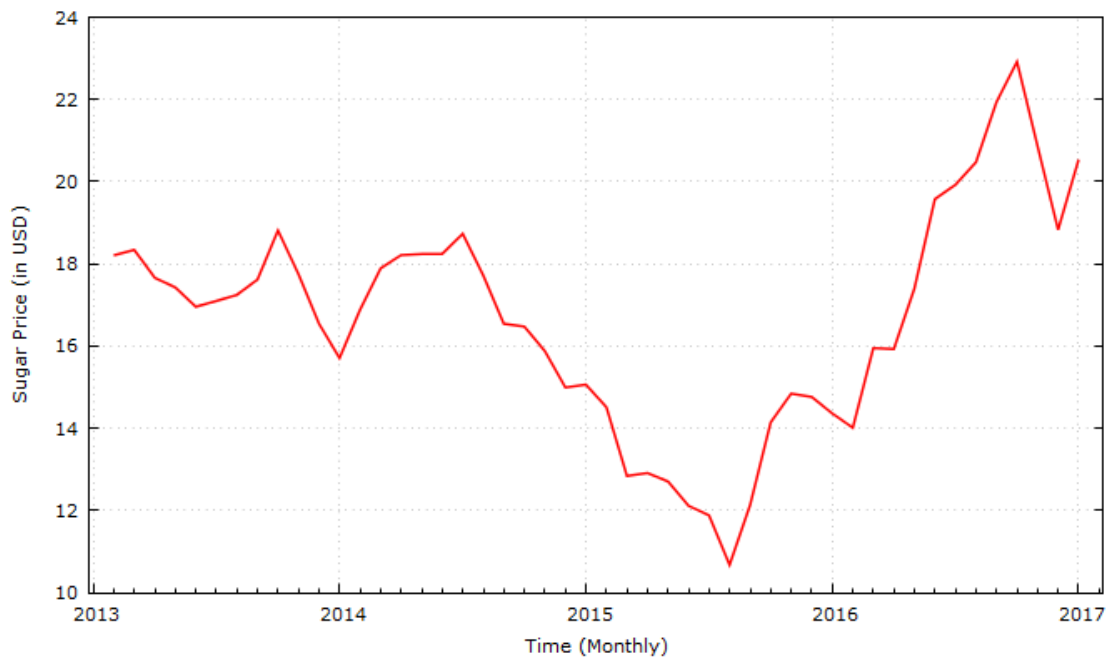
Img. 13   Development of sugar price
Source: Owning processing, data from Federal Reserve Economic Data, 2017.

The table clearly shows that we can observe rather increase the price of sugar. This phenomenon would mean lower margins and decline in profits. But the decline in margins and profits occurred in case that the Kofola would not raise their prices of final products for end customers. With the resulting of sugar price may mix "sugar liberalization"in the EU, which is scheduled in October 2017. This liberalization would lead to a slight decline in the price of sugar, but its ultimate consequences to take effect in the long-term (EC, 2017).

Tab. 8   Forecast of the sugar price for the season 2017-2018

Organisation	Viewpoint
Commerzbank	Increase
Societe Generale	Neutral
Marex Spectron	Increase
International Sugar Organisation	Neutral
Focus Economics	Increase
Cepea	Increase

Source: Owning processing, data from tradingeconomics.com, 2017.

In the CEE countries have been achieved the expected inflation target, as mentioned earlier. Inflation is reflected mainly into food according to information from central banks. Any further price increase of food would certainly lead to a price increase the Kofola's products as well. Kofola, like other beverage companies, will be projecting eventual price increase in final prices. This fact will make also other

companies which are dependent on the sugar price. With a slight increase in inflation can be expected that the Kofola will want to maintain a slightly higher profit margin, as a reaction to cover the expected future increase in the sugar price (as the main raw material). We could talk that there will be "double price increase" in one action from Kofola and other beverage companies (Kopeček, 2017).

4.1.7 Conclusion of macroeconomic analysis

Macroeconomic part deals with the main macro indicators and describes the current problems of the countries of interest. *The countries of interest* are the designation for countries where the company operates or intend to operate. All of these countries as a whole have an impact on the future development of the share price. Any important occasion can significantly affect the business of the holding in the country and effect the determination of the intrinsic value of the stock.

The most important fact is that the European countries "shook" from the financial crisis in 2007-2008 and have begun to achieve stable economic growth. Growth is weaker, but in the context of the global economy, the situation can be assessed as positive. The problem may pose countries for future expansion, where economic development and stability are uncertain. Almost of these countries achieved a long-term negative GDP. The main question is whether the new business will lead to new profits.

The biggest problem, not only in the countries of interest, but in the whole Europe is low inflation. Most countries succeeded in their full declared inflation targets in 2016 and the first quarter of 2017. The predictions indicate that the countries of interest would have to keep their inflation according to inflation target in the future. The disadvantage for the CEE countries is projecting inflation into food prices. Foods are becoming more expensive compared to other goods. End consumers are forced to think more for what specific foods spend their money.

The interest rate affects the amount of loans drawn entire holding and debt levels of households. In the CEE countries the low interest rate affects mainly durable good for households, eg. Purchases of real estates. Kofola was able to take advantage of the low interest rate to draw more investment (long-term) loans. It can be regarded as a positive phenomenon. Low interest rates should prevail in the future according to leading analyst organizations. This phenomenon can also lead to the postponement of future planned IPO by Kofola because other sources may be cheaper then equity (detailed in the chapter dealing with the analysis of the company).

Unemployment in the countries of interest decreases significantly, it puts pressure on wages. There is an increase in nominal wages, it creates wage inflation, which is spill over into price inflation. The company also has a problem with a lack of workers across the countries of interest and is forced to increase wages. Higher wage

costs lead to lower profits. The tense situation on the labour market is closely connected with the expected rise in inflation in the future.

The last main macro determinant is sugar price, which has an impact on the profit margin of Kofola. If the decrease in sugar price on the world market, it is expected that Kofola will increase profit margin. Increase in margin is positively perceived by stockholders. Otherwise, the increase in sugar prices on the world market, leading to higher production costs and lower margins, which the company has on their products. The current market situation is in favour of a price increase in the price of sugar season 2017-2018 due to the decrease in world stock of sugar. This issue can have significant impacts on Kofola's value added. In order to Kofola retail its stable profitability, it will have to raise prices of their final products in the future. The final decision on the conduct of Kofola itself can affect "sugar liberalization" in the EU, which is scheduled in October 2017.

Current macroeconomic situation in the countries of interest can be assessed as stable in accordance with development across Europe and the rest of analysts' expectations. The possible influence of the development of macroeconomic fundamentals decides Adriatic region, where the company intends to penetrate. It will depend on how investors decide about the future acquisition target. If investors agree with purchase of new business in Adriatic counties it will lead to increase the intrinsic value of stock. Otherwise, if investors do not prefer acquisitions in Adriatic counties, it will lead to decline in the intrinsic value of stock.

4.2   Competition analysis and industry layout

Kofola group is one of the largest and most important soft drinks producers in Central and Southeastern Europe. Currently the group owns about 35 high-value brands and produces drinks under licenses for other major brands (Kofola's Annual Report 2016).

It is very difficult to take the group and find a suitable competitive unit. At first sight it might seem that the greatest competitors are Coca-Cola and PepsiCo. In most countries, it is a fact, but the group is fragmented across Europe. The Group has in each country different competitors, including local and smaller brands. It needs to look at the market through the countries, eventually through the sales channels used by beverage producers. Kofola group achieves total revenues of roughly CZK 7 bn., owns seven production plants and employs nearly 2,100 employees. From these reasons it is very difficult to find an adequate competitive counterparty in the region.

4.2.1   Market trend

Kofola group produces products that can be divided into five categories – carbonated beverages, non-carbonated beverages, waters, syrups and other (this in-

cludes fresh bars, salateries and restaurants). Each of these categories has different development in consumer preference.

Not only in the Czech Republic but also in other countries there are two factors, which affect the consumption of purchased beverages. The first is a contemporary stance to the lifestyle of most people. An increasing number of the population begins to prefer healthier foods and beverages. A significant part of population reduces the consumption of cola products and other beverages with added sugar. People prefer a "healthy" drinks or plain water before sweetened beverages. This trend could be reflected in revenues of the entire industry in the future. Beverage producers are trying to satisfy consumers, therefore expanding its assortment of waters, mineral waters, spring waters and fresh juices. The second factor that influences consumption of purchased beverages is an increase preference of tap water over bottled water. In the Czech and Slovakia market (countries from which derives most revenues for Kofola group) begin expanding trend to drink tap water instead of bottled water.
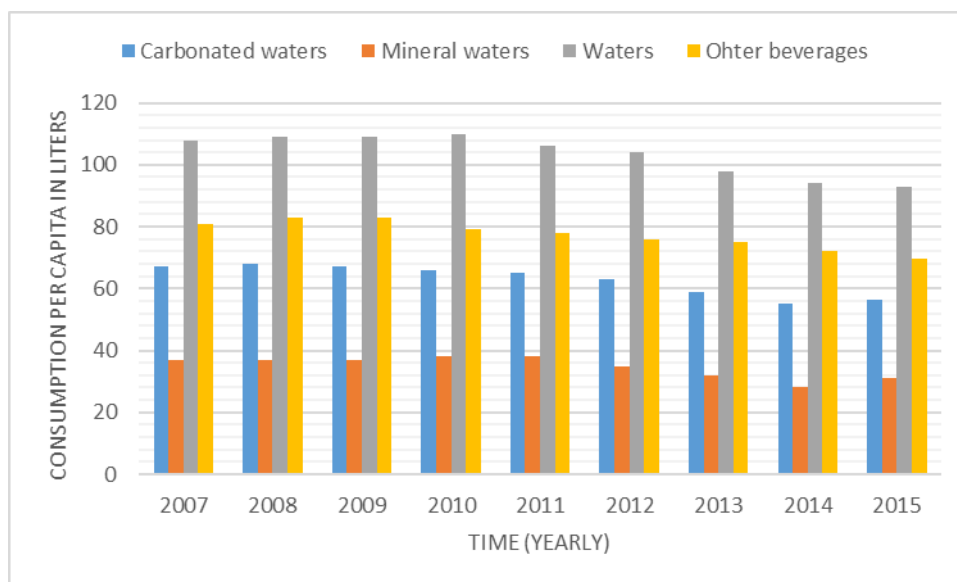
Img. 14   Development of beverage consumption in the Czech Republic
Source: Owning processing, data from Czech Statistical Office, 2017.

The first factor can be used by beverage companies that changed its product mix and more focus on the current preferences. But the second factor, when people has started to prefer tap water before bottled water is heavily changed. Beverage companies have to spend a larger amount of money for promotion in this regard (Kopeček, 2017). Currently Kofola group solves this problem by fresh juices, which targets for a change in people's lifestyles. This factor can be considered as a competitive advantage over other beverage producers that do not have any fresh bars.

The image above shows the trend of consumption of purchased beverages in the Czech Republic per capita per year. The image shows that the consumption of carbonated waters (where are included cola drinks) decreases. Year 2014 can be described as a turning point, where we can see a slight increase in the consumption of mineral waters. In absolute numbers we can talk about decreasing in consumption of bottled waters. On the other hand, the increase in popularity of consumption of drinking water from tap.

In Slovakia and Poland the situation is similar in the Czech Republic. Consumption of non-alcoholic beverages is decreasing (represented by consumption of non-carbonated waters in liters). From 2014 we can see a slight increase in consumption. For Kofola group and its competitors this modest recovery can be a positive signal of interest in bottled waters.
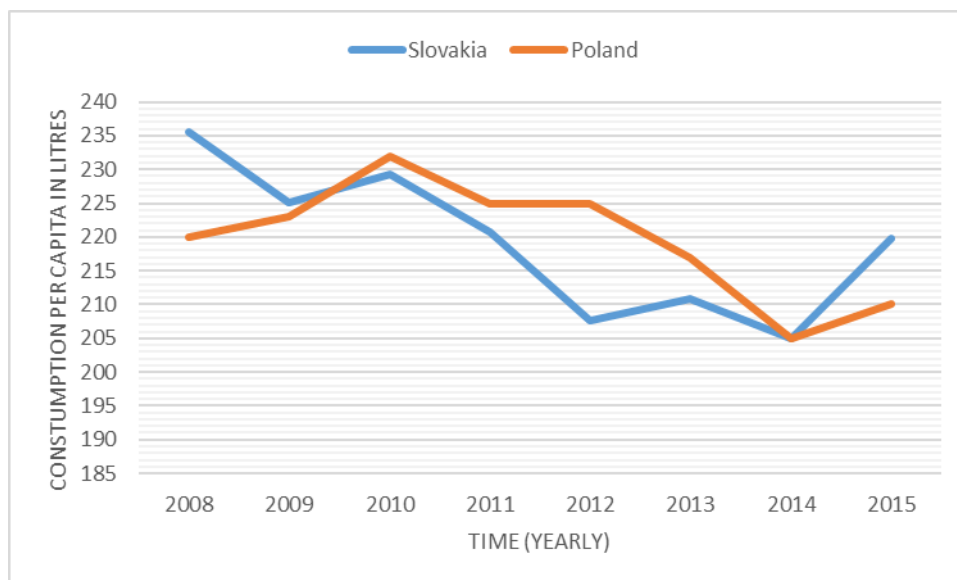
Img. 15   Development of beverage consumption in Slovakia and Poland
Source: Owning processing, data from Central Statistical Office of Poland and Statistical office of the Slovak Republic, 2017.

Beverage companies must try to use the situation about change of people lifestyle. They must take it as an advantage and must adapt their range of current market needs. Only this way it can be a healthy lifestyle reflect into revenues. By Kofola is seeing an active management approach to current customer needs. Kofola was able to increase revenues from sales of fresh juices and salads due to change in healthy lifestyle trend. Image shows the development of revenues (see Appendix B/1), which was achieved under brand Ugo. Ugo brand customers know due to fresh bars and salateries, which are concentrated mainly in shopping malls and busy squares.

Offer fresh juices is a great competitive advantage that the company has, unlike its competitors. Kofola group operates its own stores, thus increasing the added value, because products are produced and sells through its owned distribution network. In revenues with fresh juices and salads we can see a strong rise steeply. Analysts predict that the market for fresh food and beverages will continue to grow. Kofola group in this market becoming a strong player.

Image shows the development of newly opened stores (includes both own and franchise), (see in Appendix B/2). Stores as franchises are currently offered only the Czech and Slovak market. Ugo brand does not exclude a possible expansion to the countries of interest in the future. The Kofola group offers franchise in the price range of CZK 0.6 to 2.0 million. On the franchise there are requirements, primarily on the location of the site (franchising.cz, 2017).

4.2.2   Temperature development in the CEE countries

Beverage producers depend on the weather. If it is a successful season with high temperature degrees, industry will record higher sales of its products. The temperature degrees have a positive impact on the development of sales and stock price as well.
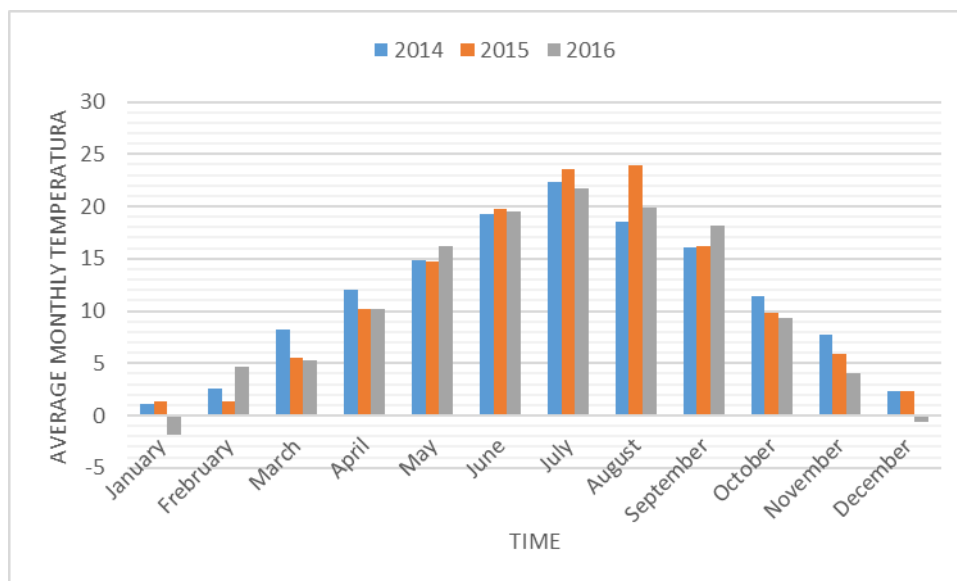
Img. 16   Development of average temperature in the CEE countries
Source: Owning processing, data from weather.com, 2017.

High temperatures have mostly summer and spring months, these months are for beverage companies tend to be the most interesting in terms of revenues. During these months the demand grows for beverages. Conversely, typically for beverage companies is to get short-term losses in the winter months. Kofola group during the winter months trying to stock up on strong sales in the summer and spring

months. This is why Kofola start to increase production costs significantly during this period. The following image shows the average development of temperature in the CEE countries in individual months for 2014-2016.

Kofola group has achieved due to bad weather, lower revenues in 2016 in the CEE countries. In 2015 it was better weather in the summer, thus company had more demand for its beverages. In 2016 Kofola had lower sales of -2.67%. Warm weather is important for the beverage industry.

4.2.3   Market segmentation and main competitive players

The countries of interest were discussed in macroeconomic part. For market segmentation is the best, these countries divided into three categories. The first is the Czechoslovakian market (represented by Czech Republic and Slovakia), the second category is Poland and the third category is Adriatic region (there are considered Slovenian and Croatia only – there are not included the countries for future expansion).

Additional market segmentation can be done through the distribution channels. All bigger beverage companies use the same distribution channels. The first channel is Retail. Retail has the most important position. Through Retail comes the greatest amount of production. The production is mainly delivered to retailers, such as hypermarkets, supermarkets, self-service shops and counter shops. The second distribution channel is HoReCa (from the acronym Hotel/Restaurant/Café). The beverage products are supplied to catering services through this channel. Essential differences between the first and second distribution channels are margins and sales. In principle, the Retail proceeds more sales, this channel is significant for sales volume on total sales volume. Through HoReCa channel is substantially lower sales volume, but delivered production has higher margin. HoReCa is more profitable.

Higher margin is the result of the type of packaging material as well. In Retail are supplied primarily PET bottles, whose production costs are relatively low. In HoReCa are supplied primarily glass bottles and cans, where the price of packaging is relatively higher. Another less frequent packaging material is barrel, from which the drink drafts into jars. Kofola delivers only cola drink into barrels from its range of production. Additionally, Kofola is the only alone user of barrels, unlike its main competitors. Its cola products might be bought as the drink on tap. Another influence on margin is the package size. In Retail are supplied pack sizes of 0.5 l, 1.0 l and 2.0 l, while in HoReCa are supplied pack sizes of 0.25 l and 0.33 l. This package trend is applied by all beverage companies. Customers are accustomed to this type of size.

Last but less known channel is the Impulse channel. Impulse includes the supply of products to gas stations. Kofola this distribution way has integrated into the Retail

channel. The following discussion focuses on individual markets according to the place of distribution.

First category – Czechoslovak market
Czechoslovak market is the so-called core market for Kofola. It is important for the group in terms of total sales volume realized. Kofola in Czechoslovakia reached 62.72% of total sales in 2016. For comparison this share was 58.67% in 2015. This fact means that the Czechoslovak market is increasingly important for Kofola in terms of revenues and analysis of local competitor players. In this market Kofola reached EBITDA 73.8% of total sales. For comparison this share on EBITDA was 68.4% in 2015. The following table summarizes the share of revenues between Retail and HoReCa differently in Czech and Slovak market. The table shows that the most significant part of revenues comes from Retail.

Tab. 9   Comparison of Retail and HoReCa channels differently in Czech and Slovak market

Market	Retail	HoReCa
Czech	70%	30%
Slovakia	63%	37%

Source: Kofola's Annual Report, 2016.

The images below provide further breakdown of the market structure and competition in the Czech and Slovak markets. The images depict shares separately on Czech and Slovak market for Retail and HoReCa channels. Coca-Cola and PepsiCo are seen as the biggest competitors to Kofola on the Czech market. Coca-Cola took first place in the Czech Republic in the sale of soft drinks for the year 2016. Kofola took second place and PepsiCo took third place.
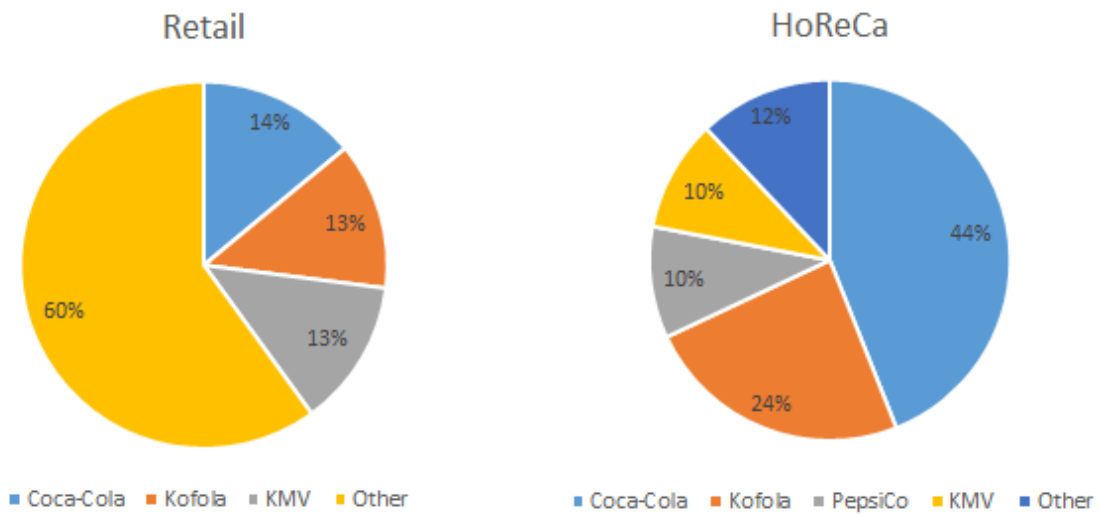
Img. 17   Market shares of the main players on the Czech market
Source: Owning processing.

The Slovak market is a little different, here Kofola is the number one plyer in the soft drinks market in both Retail and HoReCa. Kofola took first place with a market share (36%) in Retail in Slovakia for the year 2016. Coca-Cola took second place (32%) and PepsiCo took third place (10%). In HoReCa segment first place is taken by Kofola, which had the largest market share (19%) in the year 2016.
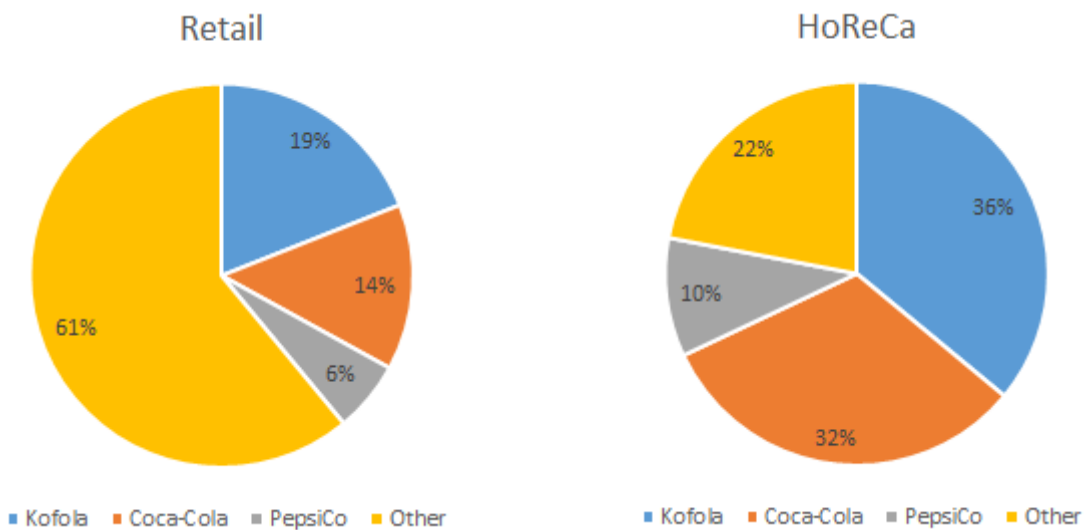
Img. 18   Market shares of the main players on the Slovak market
Source: Owning processing.

Kofola achieved numerous awards on Czech beverage market, last it was 3rd most admired company survey in 2016. Further Kofola and Jupí are the most trustful

brands in 2016 survey. Kofola brand belongs to Top 100 Czech Firms (Kofola's Annual Report, 2016). Kofola is regarded as the second best traditional Czech brand among consumers. Kofola also recorded an increase in sales of juices in response to a change in a healthy lifestyle on the Czechoslovakian market.

Second category – Polish market
Poland is the second largest market in terms of volume of sales. Kofola constitutes 24.81% of total sales here (this share was 32.12% in 2015). The share of Polish EBITDA is 12.50% of total group EBITDA (this share was 20.80% in 2015). Kofola is number two in syrup brand and number three in cola brand. On the other hand, Kofola is one of leading private label soft drinks producers on the Polish market. The group is currently engaged in the "New Strategy for Poland" (further discussed in the chapter about analysis of the company). The Polish market is a special because Kofola is involved here just in Retail. There are no deliveries into HoReCa from Kofola (Kofola's Annual Report, 2016).

Third category – Adriatic market
As mentioned above, this category includes only Slovenia and Croatia, because in these countries Kofola is currently realized. In Slovenia Kofola reached 80% in Retail and 20% in HoReCa. Kofola is the absolute leader in sales here. Penetration is currently in progress on the Croatian market. Kofola is number two with water and syrup brand here. It is worth noting that Kofola is providing production and distribution of PepsiCo products as well (Kofola's Annual Report, 2016).

4.2.4   Comparion of selected indicators with competitors

In comparison analysis should be limited to the most significant competitors with operations in a particular market, like the Kofola reports in their presentations. Specific market in this case is the Czechoslovakian market. As mentioned, Kofola realized the highest revenue share in the total volume (63%) in this market. The biggest competitors are Coca-Cola and PepsiCo in the Czech and Slovak markets. Part of comparison is also KMV. Although KMV does not act on the Slovak market, but it is a significant competitive player on the Czech market.

The following image shows the development of Kofola's value added and its three major competitors in the Czechoslovakian market. The value added for Kofola group is adjusted only for data relating to the Czechoslovak market. Comparison included revenues from Retail and HoReCa. The value added is for the period from the end of the financial crisis in 2009 to the present.

We can see that Kofola, Coca-Cola and KMV held approximately the same level of development of value added within the reporting period. Only PepsiCo achieved significantly higher value added with comparison to other competitors in 2012. The cause of higher value added was the preparation of parent company PepsiCo Inc. to sale of its subsidiaries in the CEE countries. KMV expressed a desire to pur-

chase subsidiaries of PepsiCo in the Czech and Slovak markets. Finally, the sale was not carried out. For higher PepsiCo's value added was the optimization of costs related to the reduction of wages and partial operating cost reduction in 2012 (CNA, 2012).
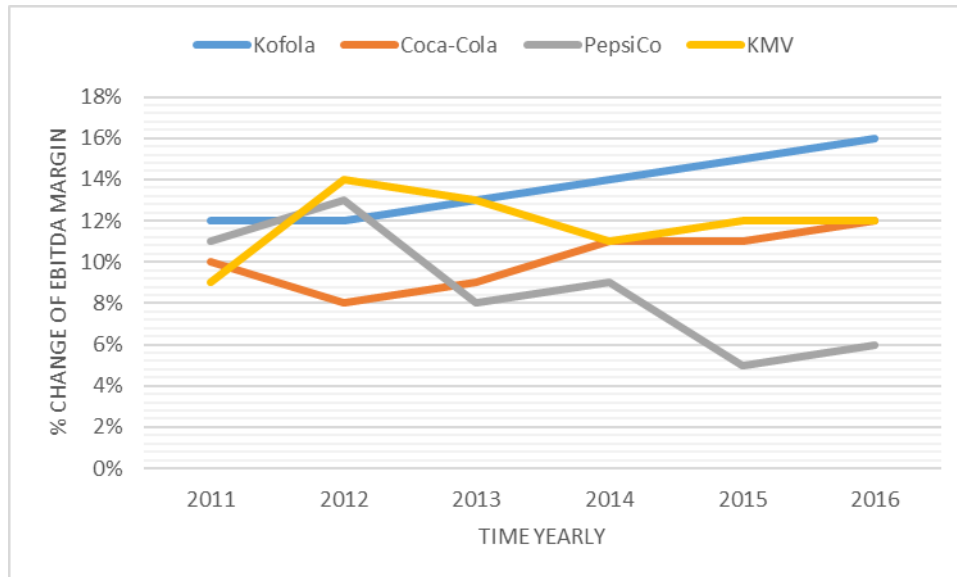
Img. 19   EBITDA of beverage companies in the Czechoslovak market
Source: Owning processing.

Clearer view of competition is given by comparison of EBITDA. Within the comparison of data, Kofola is doing best of all competitors in the Czechoslovak market. Kofola had almost constant year-on-year increase in EBITDA. EBITDA is greater due to stronger penetration into HoReCa segment and launching projects with the direct distribution of fresh juices and salads through the bars and salateries under Ugo brand. In this segment, Kofola holds a huge competitive advantage because Coca-Cola, PepsiCo and MKV are focused only on Retail and HoReCa. Kofola gained direct distribution channels and direct consumer contact through bars and salateries. Kofola is trying to penetrate new industry – a network of bars and salateries, which had increased EBITDA and provided new opportunities for the distribution of its products through its own points of sale.

4.2.5   Segment position

The following table summarizes Kofola's position in the countries of interest with a given range. In the case of occupation of first place we can talk about the absolute market leader. In the case of occupation of second place we can talk about market vice-leader.

The table shows that Kofola has a strong position mainly in the Czech and Slovak markets. The company appeals that its strong position was strengthened mainly

due to the acquisition and development of the brand Vinea in carbonated beverages on the Slovak market. Thanks to acquisitions Kofola occupied the leading position with spring waters in Slovakia and Slovenia. Jupí brand became the leading position in the Czech Republic and Slovakia. Paola syrup brand occupy an important second position in the Polish market. Kofola also breaks with the energy drinks. The company has acquired and strengthened in this segment due to Semtex brand, which was acquired in 2011. This brand is known only on Czechoslovak market (Investor presentation, 2016).

Tab. 10   Segment position

Range	Czech	Slovakia	Poland	Slovenia
Cola drinks	2	1	3	3
Carboned drinks	3	1	-	1
Waters	4	2	-	-
Syrups and concentrates	1	2	2	-
Drinks for kids	2	2	6	-
Energy drinks	4	5	-	-

Source: Kofola's Annual Report, 2016.

4.3   Analysis of the company

Kofola is a major manufacturer and distributor of non-alcoholic beverages in CEE. The most important markets for the compny are the Czech Republic, Slovakia, Poland, Slovenia and Croatia. The company publicly declares that it intends to penetrate into the Adriatic region. The company has not exluded penetration into the Eatern markets in the future. Kofola produces a total of seven production plants. Two are located in the Czech Republic, two in Poland, one in Slovakia, Slovenia and Croatia. The company employs around 2 000 employees in total. The current ownership structure is part of the Appndix.

The company manages a very strong portfolio of brands. The brand portfolio structure is outlined in the Appendix. Including the Appendix is also portfolio structure by countries. The company decided to issue the IPO on the PSE in December 2015, with a traded free float of 15%. The company's stock development is captured in the image below.

After emission, stocks fell slightly in longer run. The reason was little interest in the stock. At present, company is being criticizedfor offering too little free float to trading, and stock are so unattractive to foreign investors (Idnes.cz, 2016). At the beginning of 2017, the company's stocks recorded a slight increase, which was due to the announcement of new acquisition waves in the future. At present, stocks are in a stagnant stage, and it is of little importance to pay attention to fur-

ther future actions of the company, especially in the area of acquisitions, as they can decide on the future development of the stock.
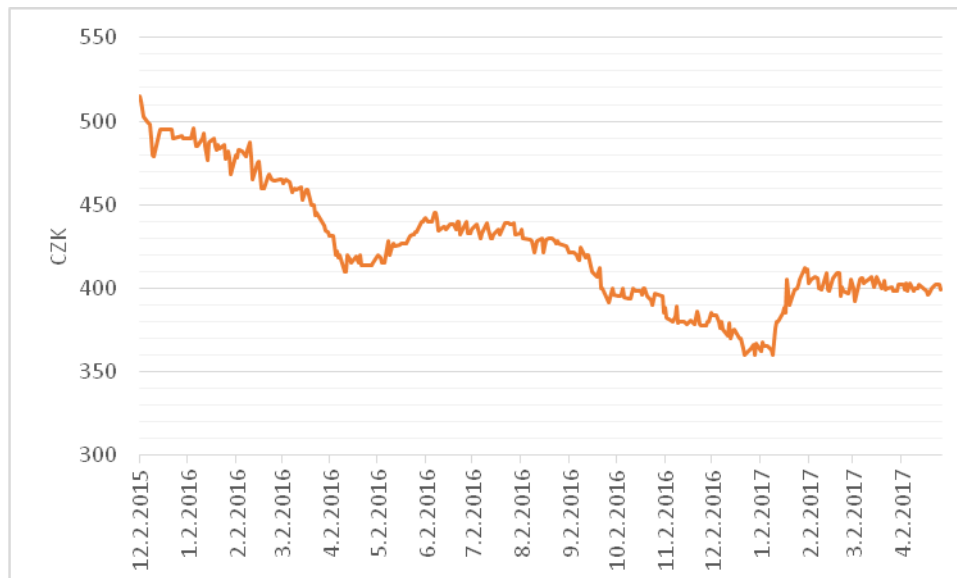
Img. 20   Developmemt of market price
Source: Prague Stock Exchange, 2017.

4.3.1   Brief historical and acquisition background

In the year 1948 national enterprise Galena Opava, which was focused on the production of pharmaceuticals and research in pharmacy, was given the task to invent a drink with cola flavour. This drink had a strategic importance at these times. Kofola has been a counterweight to *western* cola beverages.

After two years of development has been successful produced herbal syrup with cola flavour. The syrup was given the name KOFO and is composed of fourteen herbs, fruit substance and caffeine. Actually Kofola claims that the current cola beverage is absolutely identical to the original recipe. Kofola as a finished drink began to produce and got to shops in 1960. In the 60s is a huge demand for this cola drinks that Czechoslovakia run out of herbs for further production. Herbs had to be delivered from abroad. In the 70s Kofola had a record in consumption among Czechoslovakia consumers. Annually was consumed about 180 million liters of Kofola (Kofola.cz, 2016).

After the change of regime in 1989, Kofola got into troubles. The problems were caused mainly due to the decline in demand. Kofola was forced out of *western* brands from Czechoslovak market. Kofola even changed owners several times and came to trademark disputes in the 90s. In 1998 the recipe of KOFO was bought by Santa, who cola beverage products to the present (Kofola.cz, 2016). Recipe purchase was estimated at CZK 2015 million (Idnes.cz, 2014). The company Santa be-

longed to Samara's family that was able to turn up company as a holding to its current level.

Kofola was delivered only in PET bottles and tapped into a glass as the Retail until 2002. Since 2003 Kofola has entered into the HoReCa segment as well. It started to compete in this segment wit Coca-Cola, PepsiCo and KMV. In the same year Santa a.s. officially changed its name to Kofola a.s. The main production plant of cola beverages is located in Krnov. August 6, 2003 Kofola decided to issue its first IPO. IPO was carried out on the Polish stock exchange in Warsaw. The stocks were subscribed for PLN 21 per stock (Kofola.pl, 2016). Kofola decided to enter the Polish stock exchange mainly for two reasons. The first was that Kofola is located in Ostrava and Warsaw stock exchange is preferable to entry than the PSE. The second reason was the growing interest in the Polish capital market on NewConnect Stock Exchange. Kofola is believed that there is ensured greater liquidity (Kopeček, 2017).

Kofola made a new brand Rajec in Slovakia in 2004. Under Rajec brand holding began bottling and sell natural water. The product of pure natural water is number one on Slovakia market. In the Czech Republic number one is occupied by KMV, Rajec is number two. Kofola is becoming a significant player on the Czech and Slovak market due to penetration into Retail segment. Kofola started to balance its two largest competitors in sales volume and revenues.

The year 2008 could be called as a year of acquisitions or purchases. Kofola began to grow horizontally. Holding as whole started to purchase major foreign brands and reinforced its position as leader in the beverage market. Holding went on a shopping spree in Poland and Slovakia. Kofola purchased Hoop company in Poland, which ows well-know brands Hoop and Paola (Němcová, 2008). Another large acquisition took place in Slovakia, Kofola bought the company that owns traditional brand Vinea (Kofola.cz, 2016).

Kofola had the year 2009 as the year of the largest sales volume cola drinks. Holding also managed to break the record from 70s years. Holding managed to sell about 220 million litters of cola drinks due to warm weather. In mid-2012 holding began to explore the idea of horizontal growth of the market for fruit juices. Holding took over Ugo brand in 2012. The brand is known for direct sales of fresh juices. Ugo brand is specialized in fresh fruit and vegetable juices. Holding has gained direct contact with end customers via this acquisition. This can be considered as a competitive advantage over Coca-Cola, PepsiCo and KMV. Ugo brand owned 14 fresh bars on the Czech market. Holding decided to buy Ugo brand, as a response to the growing demand for fresh products in the context of healthy lifestyle (Ihned.cz, 2014).

Kofola purchased a network of 17 fresch juice bars. These bars were taken over from Mangaloo brand in 2014. Kofola included these bars unter the Ugo brand. Kofola strengthened its position in the market with fresh fruit and vegetable juices by this way. Ugo brand has grown to a total of 37 bars due to this acquisition (Špačková, 2014).

In 2015 Kofola made its biggest ever acquisition operations. Kofola bought mineral water producer Radenska. It is the largest producer of mineral water in Slovenia. The price of transaction was CZK 1.4 billion. Kofola acquired a 75% share in Radenska, which was bought from Slovenian brewery Lasko (CNA, 2014). Kofola has opened the door to the Slovenian market by this way.

In the same year 2015, the company also decided to penetrate into the gastronomic segment. Kofola opened its first restaurant in Prague, the restaurant was called NAGRILU. The concept of the restaurant aimed for lunch menus, which were preprared on an open-grill. The concept envisaged the form of expansion through franchises in the future. Kofola wanted to open up 10 restaurants by the end of 2016 (Horáček, 2015). During 2016 the restaurant was unprofitable investment, thus Kofola has decided to absolutely leave from gastronomic concept.

December 1, 2015 Kofola issued the IPO on the PSE. The company carried out the IPO about volume of 1.5 million stocks, the issued price was CZK 510 per stock (Kofola.cz, 2016). It was the primarily IPO, the main purpose was to gain money, which should be used to buy a new acquisition targets. A special feature for many analysts was that the IPO was carried out, after the significant acquisition of Radenska. The company has a relatively long time deciding where to enter on the stock market. Consideration was agin performed IPO in Warsaw or newly in Londo, Germany and Prague. The company finally decided to choose the PSE, because Kofola had hoped that purely Czechoslovak product should be traded on Czechoslovak market (Kofola.cz, 2016).

Last year Kofola acquired a 100% share in Studenac company. Studenac is a Croation producer of mineral water and occupies second place on the local market (Kofola.cz, 2016). Holding penetrates to the Croation market and the entire Adriatic region by this way. Studenac products are sold in all Adriatic region, it is key strategic company. The transaction price of acquisition has not been published, but it is possible to estimate that the price was higher than the acquisition of Radenska in Slovenia. Radenska belongs to among the major traditional brands on the Croation market.

4.3.2   Financial overview

The analysis is based on the company's financial statements for the period 2009-2016. The reason for this period is the financial crisis and its possible implications for the development of company. The analysis is processed on audited and consol-

idated structure. Company is the publicly traded company, the entity is required to consolidate on the basis of IFRS. Financial analysis is based on the IFRS consolidated structure for the whole group.

The company was been consolidated in the default currency Polish zloty (PLN) until 2014. The reason was that Kofola had listed stocks on the Warsaw Stock Exchange. From 2015 the consolidation is being accounted in the Czech currency (CZK). The problems in the analysis are currency differences which might be incuerred when currency was converted from PLN to CZK for older financial statements. As the default currency for the conversion of older financial statements in PLN was chosen base currency exchange rate CZK 6.492 per PLN 1.000. It is the exchange rate announced by the CNB on 31. 12. 2016. The exchange rate is base, because according to it, were converted all ncesssary old data. The reason was to minimalize the risk of exchange differences. Exchange differences might arise if every year has been converted at the exchange rate announced by the CNB at the end of the las day of the year.

Because the company is manufacturing company, it is necessary to pay attention to fixed and current assets. The largest item of currency assets are not inventories as one might expect, but short-term receivables classified as maturing within one yaer and short-term financial assets. The most significant items of fixed assets are properties, buildings and equipments.
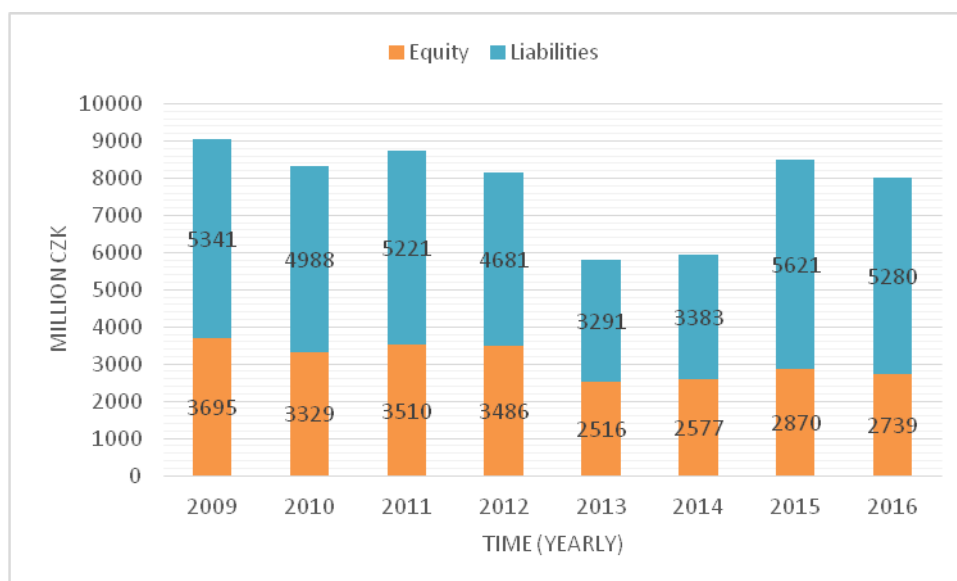
Img. 21   Development of equity and liabilities in 2009-2016
Source: Owning processing.

The most important movement is seen in the ratio between the equity and liabilities. Kofola maintained equity ration at around 40% in 2009-2014. From 2015 to present, this walue decreased to approximately 30%. Kofola started using more

liabilities and more pressured to financial leverage in the form of bank financing. Kofola significantly increased short-term and long-term bank financing since 2014. Most likely due to lower interest rates across Europe (see Macro economic layout). From 2015 through an IPO on the PSE, Kofola increased equity by about 25%. There was also the realization of a negative share premium -23%. The absolute amount of equity was raised through the IPO, but the total amount of bank loans, as part of the total liabilities grew faster in 2014-2015. There has been a decline in equity ratio. Development of equity ration and liabilities shows the following image

Total assets souhld copy acquisitions and IPO. Kofola had the highest total assets in 2009. This large property was due to the implementation of large-scale acquisition projects. Kofola took over Hoop and Paola in Poland, as well as Vinea in Slovakia. Kofola increased net value of assets due to these acquisitions. It can be conclude that financing projects have always been associated with two waves of expenditures, which negatively pressed holding's cash flow. The first wave of expenditure was associated with the purchase of companies themselves. The second wave was associated with investments into new technologies, changes in corporate structures and productions in purchased companies from the first wave of expenditure. These acquisitions were reflected as an increase in net assets in 2009. The development of the total assets is shown by the following image.
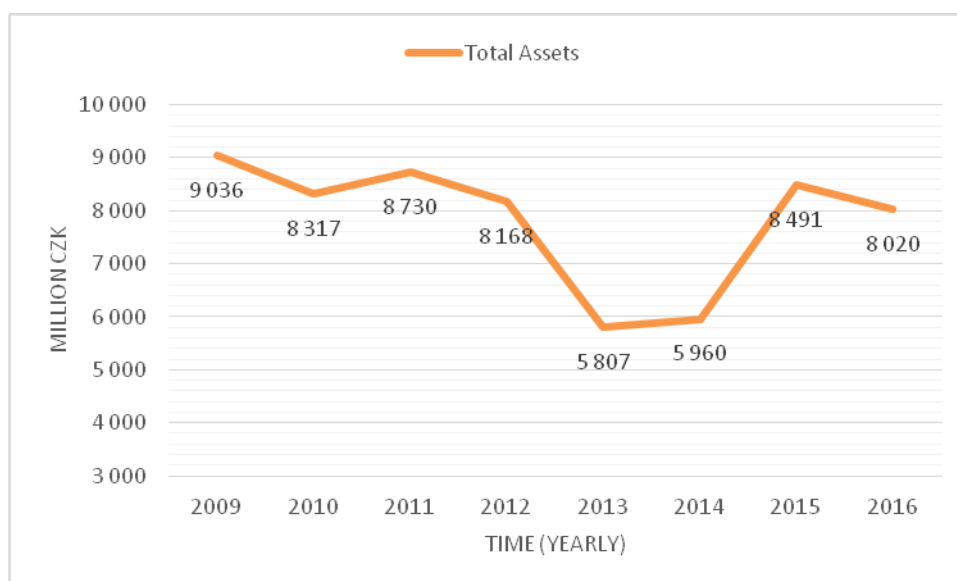
Img. 22   Development of total assets in 2009-2016
Source: Owning processing.

A similar increase in net assets took place in 2015, which was associated with the acquisition and integration of Ugo brand into company structure. This acquisition is reflected in total assets in 2015. Kofola also bought the Slovenian company Radenska. The price of the acquistition was CZK 1.4 billion. Total assets also reflect

the IPO on the PSE, which was issued in late 2015. The IPO was used to finance acquisitions. In 2016 it was completed last major acquisition purchase of Croatian company Radenska (see Brief historical and acquisition background). These last two major acquistitions and IPO led to an increase in total assets in 2015 and 2016. The relative share of liabilities is opposite of equity share in total assets. We can say that liabilities stood at 60% of total assets in the years 2009 to 2014 and then rose to the level of 70% in 2015-2016. We can see this company as a manufacturing enterprise to involve a relatively higher proportion of short-term liabilities (2016: 46%) compared to the long-term liabilities (2016: 20%).
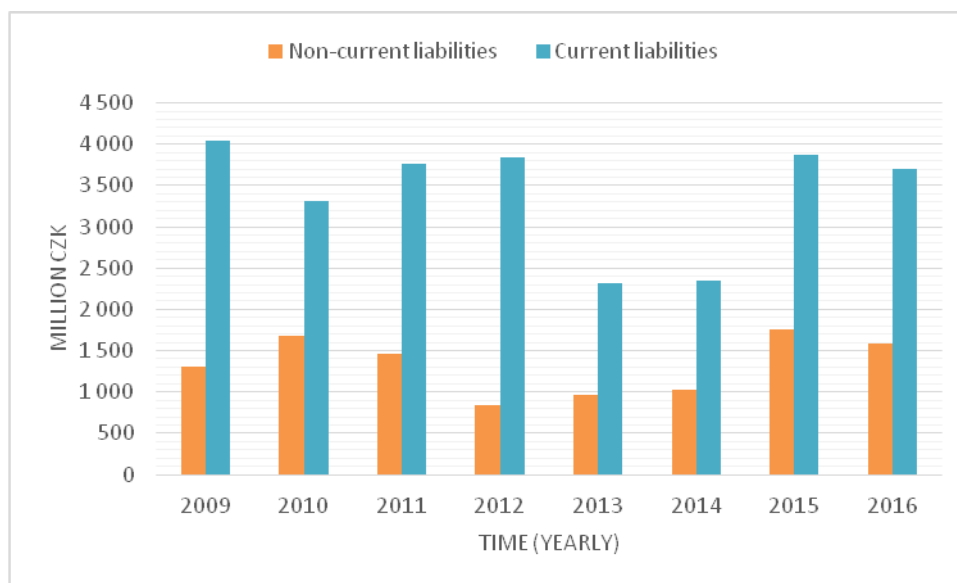
Img. 23   Development of non-current and current liabilities in 2009-2016
Source: Owning processing.

The largest item of short-term liabilities was always trade payables, which accounted for approximately 20-25% of total assets. The second largest item was short-term bank loans. In 2014 these bank loans were doubled from 10% to 20% of total assets. Short-term bank loans include overdrafts, revolving loans and bank guarantees (Kofola's Annual Report, 2016). The reason for the increase in short-term bank loans was related to two reasons in 2014. The first one was cheaper availability of external financing from banks due to lower interest rate in the market (see Theoretical background). The second reason was the realization of acquisitions. Radenska and Studenac are using a relatively large proportion of bank resources. After these acquistitions, liabilities from these new companies significantly increased entire financial leverage.

Short-term payables should be primarily to cever current assets. The big problem that company faces is a negative net working capital (NWC). For image see in Appendix C/1. Thus, the negative differences between the current assets and short-term payables. NWC development is shown in the image below. The problem may

be that all payables in the shor-term maturity, not primarily covers by the current assets. Part of it is covered by the fixed assets, which has lower liquidity in case of sudden additions of liquidity. The situation can also be seen as part of fixed assets that are not been covered by long-term liabilities. The company this situation could be solved by the transformation of some short-term for long-term liabilities. For example, to communicate with suppliers to extend the period of payment of its outstanding payables, so that they can be classified as long-term. Payables represent the most significant item of short-term liabilities (2016: 22%). Another situation of negative NWC is to increase the current assets to the optimum amount of short-term payables, so that Kofola hold a higher proportion of liquid assets. It can be assumed that Kofola knows about the problem and the situtiation would by solved by drawdown of another short-term bank loans (Kofola's Annual Report, 2016).

Bank loans represent about half of all liabilities of the company (2016: 48%). Company as a whole draws lower interest rates in individual countries from commercial banks. Interest expanses are lower due to cross-guarantees of individual companies within the holding. Holding as a whole is signed by a greater force (Kofola's Annual Report, 2016). In 2008-2009, it can be seen a slight increase in long-term bank loans. This increase was due to the purchase of Ugo brand and integrating network into the holding. In the years 2014-2016 it can be seen a significant increase in both short- and long-term bank loans, which was related to the takeover of Radenska and Studenac. Loans from these companies were moved into the consolidation of the holding.
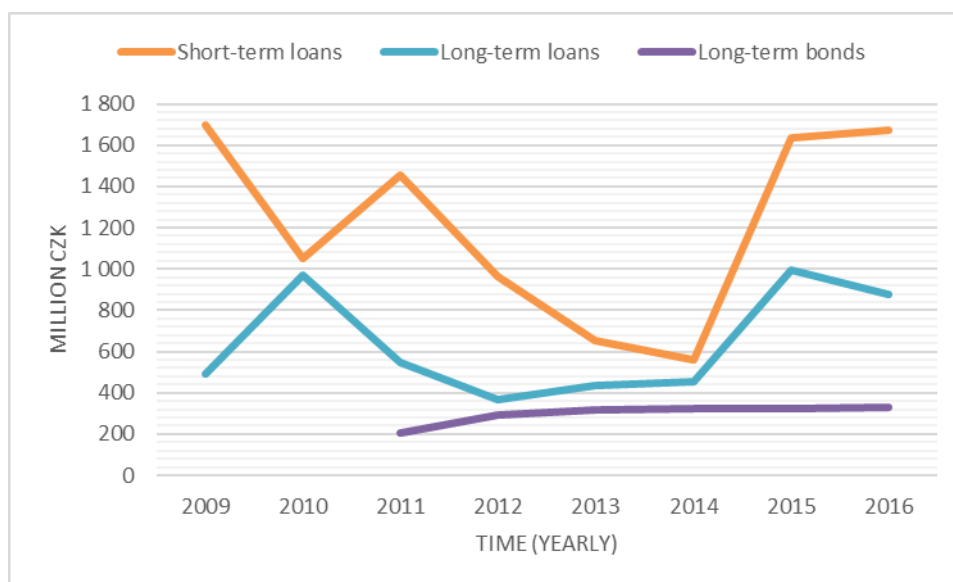
Img. 24   Development of debt financing in 2009-2016
Source: Owning processing.

An important item are also bonds. Kofola decided to make the first bond issue in 2011. Holding issued short- and long-term bonds. Previous image showns the development of short-term loans, long-term loans and long-term bonds with a maturity of over one year. Short-term bonds are not compared, they make up less than 1% of tatal assets. Long-term bonds made up more than 4% of total asset in 2016. All bonds are issued in CZK and are offered publicly. Bonds are rather designed for banks and for organizations, this is due to the amount of the nominal value. The nominal value for each tranche has always been around CZK 100 000 per bond. Kofola do not state purpose of the bonds (Kofola's Annual Report, 2016). Most likely, the bonds are used to finance fixed assets, judged by maturity.

Kofola holds a relatively large amount of fixed assets (2016: 61%). For manufacturing company, it is typical that own large amount of fixed assets in the form of buildings, lands and equipments in contrast to companies that only provide services or operate buying and selling not manufacturing. The following image shows the development between current and non-curent (fixed) assets. Image shows that Kofola kept a relatively stable structure of assets that were not disturbed even by acquisitions. Fixed assets represent about 60-70% of total assets and current assets then 30-40%. It can be assumed that this structure is optimal for beverage industry. It can be also declared that Kofola will try to maintain it in the future, it is important note for forecasting of future cash flow.
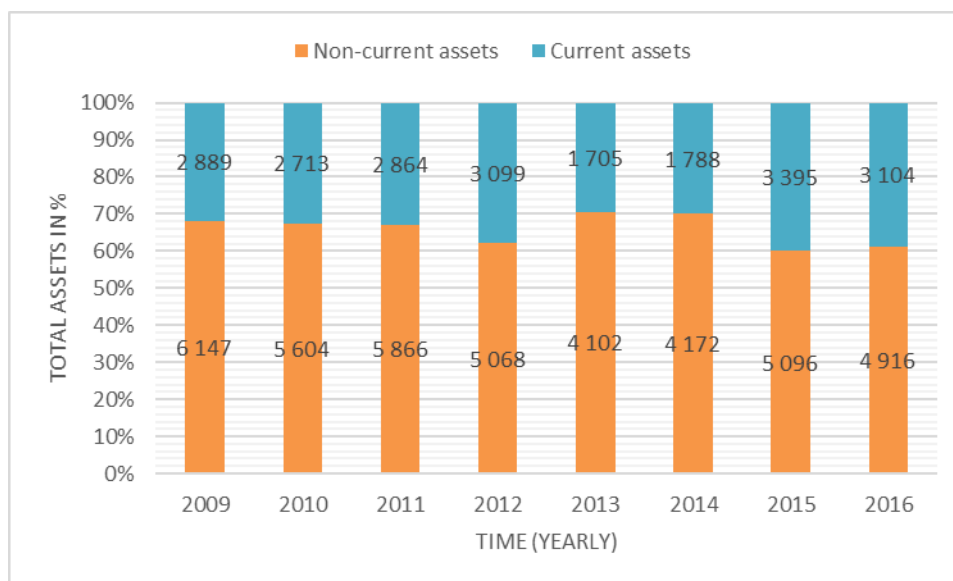
Img. 25   Development of current and non-current assets in 2009-2016
Source: Owning processing.

The largest items of fixed assets are properties, plants and equipments (2016: 43%). The second largest item is intangible assets (2016: 15%), which are also stable development. Intangible assets will enter into a finished fixed assets and will start to depreciate during the future periods. It can be seen, that Kofola invests

every year based on the development of capital expanses (CAPEX). It cannot be said clearly, whether they are maintenance or expansion investments. It can be assumed that Kofola invests CAPEX in maintenance to increase efficiency and reduce costs.

The beverage market is rather stable and carry out expansion investments to increase production would not make much sense. Expansion investments would be considered if the company entered new markets. In these markets would be an additional demand for its products, which company hold in its portofolio. In this case, the expansion of investment should make sense. These expansion investments would be targeted in the expansion of production for new additional export. Kofola declares that a particular product is always sold in a particular market. If consumers were interested in a particular brand from company's portfolio in some country, the company would make investemetns in production.

Importantly, the company maintains a positive CAPEX. Between the years 2012-2013 can be seen that there was a slight decline in investment activity. Holding these years upgraded production line in Slovakia. Conversely, the years 2014-2016 were costly for the company. CAPEX was directed to the newly acquired companies and maintenance of production lines in Slovenia and Slovakia (Kofola's Annual Report, 2016).
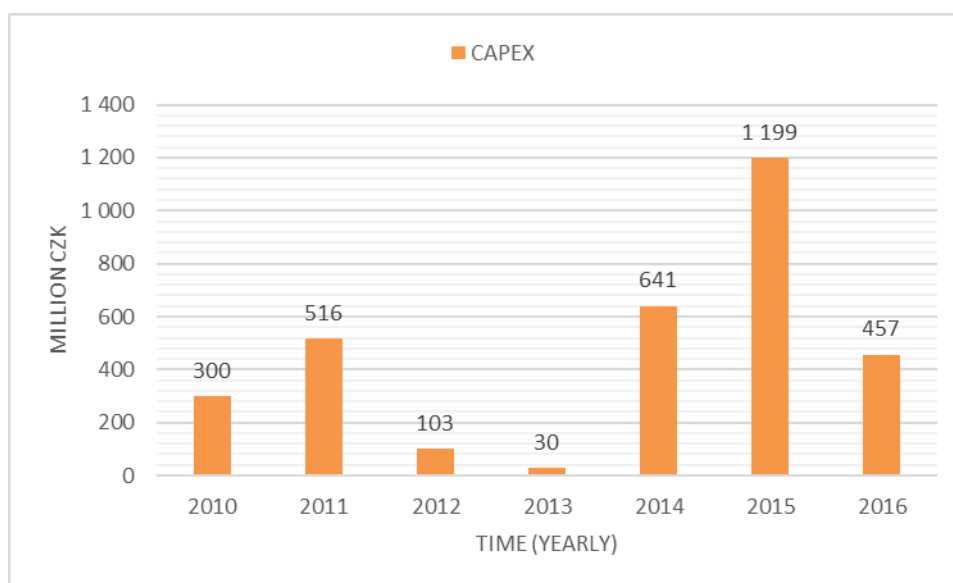
Img. 26   Development of CAPEX in 2009-2016
A Source: Owning processing.

The image (see in Appendix C/2) shows the development of short-term receivable (2016: 13%) and short-term payables (2016: 22%). It is important that the amount of receivables used to be less than the amount of payables. The figure below shows that company kept volume of payables above receivables level at all

times. Higher I terest-free payables operate as a form of buyer credit that positive-ly affects the Kofola's cash flow.

Although company is a production form of enterprise, inventories are not a signifi-cant item in the balance (2016: 6%). Inventories range about 6-8% in period. It is advantageous for the company to hold a relatively small amount of cash in inven-tory. This implies that the company manages its supply-and-sales chain efficiently. Larger quantities in stock would be more dead money for the company. The situa-tion, if the enterprise vigorously increased its inventory, could be related to the purchse of some important material that would know that the price of the ma-terial will grou significantly in the future. This way, the company would try to frontload, which would increase inventory.
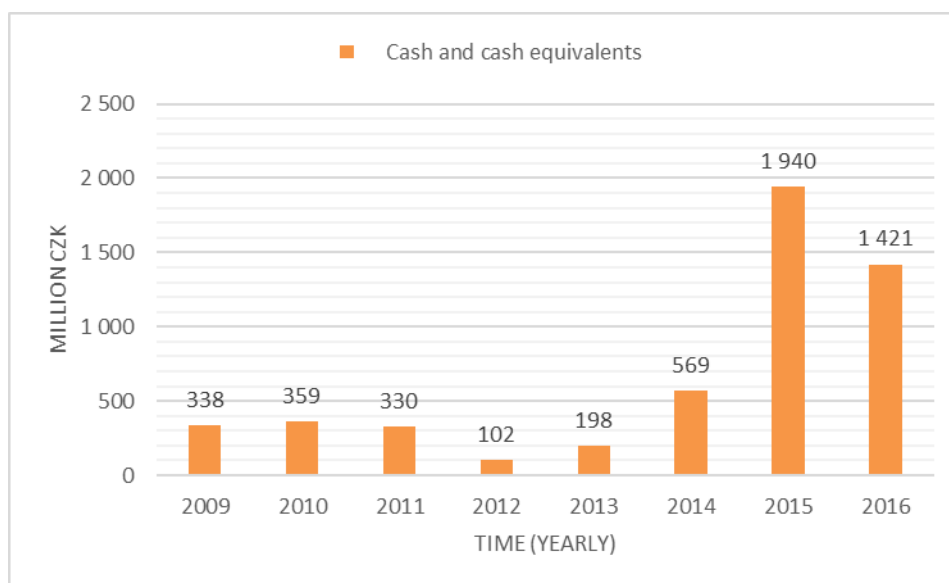
Img. 27   Development of cash and cash equivalents in 2009-2016
Source: Owning processing.

Relative cash development has significantly increased over the the past two years and represent a significant share of total assets (2016: 18% and 2015: 23%). This item is even the highest from current assets. Kofola kept its record cash in 2015. If the company holds such a large amount of free cash, it usually means that the com-pany intend to acquire new acquistitions (Kopeček, 2017).

This information cannot be complemently reled out. The company made the last major acquisition in 2015, it was bought Radenska. But in the same year the com-pany again "fill up" its free cash. It can be say that it was poised for the purchase of Studenac in 2016. This takeover also was realizaed. The rason why the company holds higher amount of free cash is not known at the moment (Kopeček, 2017). Publicly, the company still has not commented on any new acquisition. However, the purchase of a new company can not clearly be exluded in the future. Develop-

ment of free cash plays an important role in predicting the future, because new acquistitions can affect positive the intrinsic value of stock.

The following table shows the relative development of revenues and different levels of profit (EBITDA, EBIT, EBT and EAT). It is seen that the company holds a relatively high profit margin at the level of the whole holding. Margins are around 35-40% over the period. EBITDA is about 10-15% of revenues, which is typical for beverage producers (see Analysis of industry). This structure of profit development is useful for prediction.
An interesting development provides a comparison EBITDA wich CAPEX which is displayed in Appendix (C/3). Image show how CAPEX slightly ahead of EBITDA. The company achieves high EBITDA in the years that are associated with high costs. These high costs a sociated with the purchase of companies and investments in maintenance. This is due to the consolidation of the new company that eneters into the holding. The fact is also of great benefit to make prediction.

Tab. 11   Percentage change in profit levels in 2009-2016

Levels of profit	2009	2010	2011	2012	2013	2014	2015	2016
Revenues	100	100	100	100	100	100	100	100
COGS	63	63	66	66	68	62	61	60
Gross profit	37	37	34	34	32	38	39	40
EBITDA	14	6	10	13	-1	15	13	11
EBIT	8	-1	4	5	-8	7	6	4
EBT	6	-2	3	3	-9	6	5	2
EAT	5	-2	2	3	-12	5	3	1

Source: Owning processing.

The financial analysis is also important to pay attention to financial ratios. The most significant ratio of profitability ratios is return on assets (ROA). ROA is very low (2016: 5%), that is typical primarily for manufacturing companies. The company has enormous assets, which have usually acquired. Additional businesses that the company acquired, delivers constantly similar profit to the company. This is due to the fact that the company is focused on the beverage market and also through acquisitions searches beverage companies. Because the company is indebted (equity was 34% in 2016) ROE lacks sense, ROE is suitable for compananies whose equity is at least over 50%. Long-term debt to total assets indicator is probably the most interesting from financial leverage indicators. It can be said that approximately 20% of the total amount is covered by long-term resources. This can be a problem for company.

Long-term assets are at a level of 60% of total assets. These assets should be primarily covered by lon-term debt (2016: 20%) and equity (2016: 34%). The sum of these relative ratios is 54%. This is insufficient value. Part of the long-term assets

are covered by short-term sources. It could be a problem in the future if the company wants to draw new investment loans.

Possible future credit exposure is also linked to the interest coverage, which inform us whether the company has to power to pay its interests on the drawed loans. Average level of company is apporoximately 5. According to the prescribed values it should be higher than 3. Thus, it could be said that situation of interest coverage company has good.

The image shows the liquidity development of the entire holding (see in Appendix C/3). These indicators are very interesting because, as was mentined, the company holds extremely high cash. The cash ratio should be in the range of 0.2 to 0.5, as well as the values were in the past two years. However, the current ratio should be in the range of 0.5-1.5 and the quick ratio in the range of 1.5-2.5. Based on these ratios, it can be said that the company does not have the necessary liquidity needed in case of a quick payment of all its short-term payebles in due.
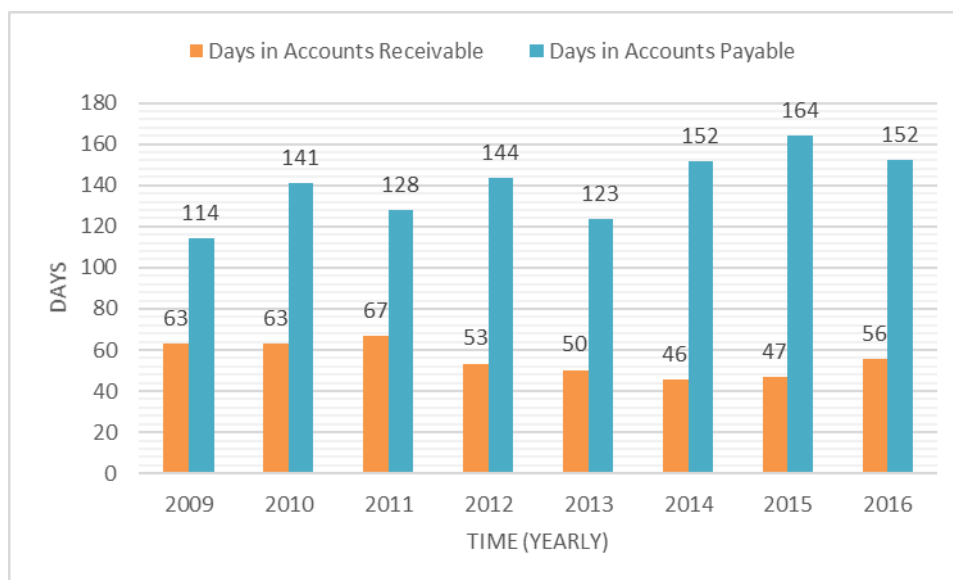
Img. 28   Development of days in accounts receivable and days in accounts payble in 2009-2016
Source: Owning processing.

The activity is compared on the basis of the accounts receivable turnover and account payable turnover. The receivable turnover is considerably shorter than payable turnover. This situation is favourable, thanks to this, the company can draw a supplier credit. When the collection of debts occurs before the maturity of the payables. This situation may be related to the fact that the company as a holding has a relatively high bargaining powet its suppliers.

Tab. 12   Determination of Economic value added for year 2016

Indicator	Value
NOPAT	213 757
Cost of Equity	4.71%
Cost of Debt	1.85%
WACC	2.30%
Capital	6 033 384
EVA	75 013

Source: Owning processing.

In the financial overview, economic value added (EVA) indicator was determinated for 2016. EVA should be applied to a purely manufacturing enterprise. EVA is the value that capital generates for stockholders. This indicator used to be in absolute value. The higher value means that the enterprise gnerates higher value added for stockholders. NOPAT was CZK 75 013 000 in 2016. The purpose of the calculation was to determine whether the EVA is positive or negative. Thus, on the basis of a positive result, it can be declared that the company makes the economically value adder for its stockholders.

For the year 2016 were calculated bankruptcy and credibility models as well. Models were selected for manufacturing company. Altman Z-Score and Taffler's model were selected as bankrupt models. These two models can be applied to a larger-sizde enterprise, including Kofola. For Altman's Z-Score the value should be higher than 3. If the value is higher than 3, the company is in the Safe Zone and company will not face bankrupt for the next 2 years. The problem with this model is to determine the market value of the business, because Kofola is publicly traded, so this problem has been overcome. Similarly, Taffler's model came out positively, where the value should also be higher then 3. If the condition is met, there is low probability of firm bankruptcy in the future. Both models were proven non-bankruptcy stability.

Tab. 13   Determinantion of bankruptcy models for year 2016

Indicator	Value
Altman Z-Score	10 21.77
Taffler's Model	0.32

Source: Owning processing.

Kralicek Quick Test and Kralicek MDA Test were selected for credibility testing. The results are summarized in the following table. Result values are classified as excedent except the indicator EBIT on total assets. In this case the value should be higher than 0.8. The result value is low especially because the model works with EBIT. This value is very difficult to overcome by businesses that are classified as dairy dairy cows. Kofola is the dairy cow, a type of business that can grow only horizontally through acquisitions. Kralicek MDA Test came out 0.97 and the result-

ing value is classified as bad. The value should be higher than 1. The bonity models were partly positively and negatively. These results could be assumed that the company holds a high proportion of other sources. If the company reduced its other sources, for example through a new IPO, most of the indicators would be positive.

Tab. 14   Determination of Kralicek Quick Test for year 2016

Indicator	Value	Result
Equity / Total Assets	0.34	Excellent
(Other sources – ST Financial Assets) / CF	2.27	Excellent
CF / Revenues	0.20	Excellent
EBIT / Total Assets	0.03	Bad

Source: Owning processing.

4.3.3   Determination of intrinsic value

A complete prediction of financial statements, both in absolute and relative forms, is part of the Appendix (C/14, C/15 and C/16). The two-step DCF model was used to determinate the intrinsic value of the stock. In particular, Free-Cash-Flow-To-The-Firm model (FCFF) was used, because the company has a relative high share of liabilities. Free-Cash-Flow-To-The-Equity model (FCFE) would not provide high *quality* intrinsic value. In the first step, free cash flow was planned for the period 2017-2022. The second step of the model will be started in 2023. This year is marked as the continuing stage and for its is chosen the terminal value. Terminal value assumes a specifically determined growth rate of continuing free cash flow for further future period.
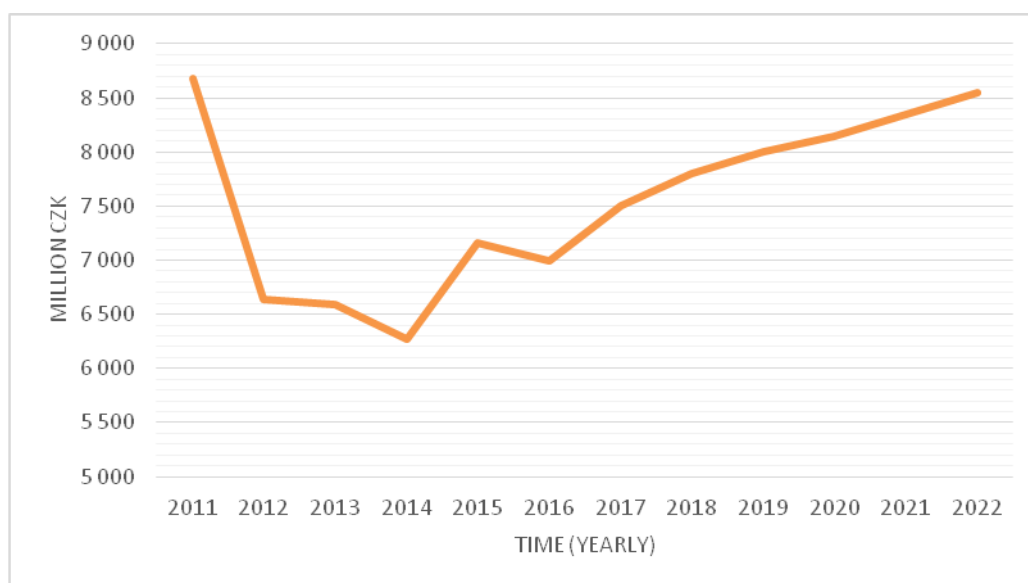
Img. 29   Prediciton of future revenue growth in the first step
Source: Owning processing.

In the case of the chosen company, it is possible to assume a slightly increasing trend of revenues, which will be mainly related to new acquisition targets and penetration into the Adriatic countries. The prediction is based on a conservative approach, not aggressive. The image above captures the predicted revenue growh for the years 2017-2022, the firste step of the DCF model. Conservative revenue growth prediction is based on compound annual growth rate (CAGR). The CAGR is 2.21% for the detailed period between 2017-2022. Thus it can be said that the assumption is the annual growth rate of 2.21% in the first step of the model. This growth is achieved through new acquisitions. The choice of a conservative growth rate is selected because the sales are also dependent on the weather. Weather forecast is impossible in this way.

The prediction emphasizes maintaining the constant growth of gross margin. It is assumed that beverage producers may slightly increase margins due to the price of sugar in the future. Sugar could be cheaper by "European liberalization" in the future (see Macroeconomic analysis). However, to keep the principle of conservative prediction, it is better to assume constant growth of cost development in the context of revenues. At the same time, the forecast assumes constant growth of all levels of profit relative to revenue growth. The chart of profit levels is shown below. Emphasis is placed on the constant proportion of EBITDA, because the company holds 13% share for a long time. Similarly, EBIT, EBT and EAT are held on the constant proportion. It can be assumed that the the proportion of revenues between Retail and HoReCa will maintain constant in the future, based on historical data. The company is more committed to Retail (2017: 70% in Czech Republic) and its acquistition targets point into companies whose core business are also Retail.

Tab. 15   Prediction of profit levels in relative terms in the first step

Levels of profit	2017E	2018E	2019E	2020E	2021E	2022E
Revenue	100	I100	100	100	100	100
COGS	59	58	58	58	58	58
Gross profit	41	42	42	42	41	42
EBITDA	13	13	14	13	13	13
EBIT	6	7	7	7	7	6
EBT	5	6	6	6	5	5
EAT	4	5	5	5	4	4

Source: Owning processing.

Tab. 16   Prediction of profit levels in absolute terms in the fist step

Levels of profit	2017E	2018E	2019E	2020E	2021E	2022E
Revenue	7 500	7 800	8 000	8 150	8 350	8 550
COGS	4 400	4 500	4 650	4 700	4 900	5 000
Gross profit	3 100	3 300	3 350	3 450	3 450	3 550
EBITDA	950	1 050	1 100	1 100	1 100	1 100
EBIT	450	550	550	550	550	550
EBT	350	452	454	456	458	460
EAT	284	366	368	369	371	373

Source: Owning processing.

The forecast includes the development of the total assets, which will increase as the result of the new acquisitions. Annual growth of the total assets will be 2.79% according to CAGR formula. It can be said, that assets will increase by 2.79% each year within the predicted period. Company's assets have always more grown proportionally than revenues. It is because the company is a diary cow and the growth potential has already exhausted, so growth will have to be horizontally. The assets are growing primarily through the takeovers of new companies. The asset prediction is captured in the image below.

New acquisition targets will most likely be implemented in the Adrianic region. The most suitable country is primarily Serbia. There are 3 full-featured brands in this country that the company might have a potentional interest in. These brands are Knjaz Miloš, La Fantana and Nectar company. It is clear from the past that the Kofola concentrated on larger acquisition targets in the price range of CZK 1.0-1.5 billion. However, in the case of the Adriatic countries, it cannot be ruled out that the amount may be considerably lower in order to buy a larger number of smaller companies at the same time.

Another possible target country could be Bosnia and Herzegovina. There is no bigger beverage company here, as in a case of Serbia. There are rather smaller local brands. These brands are mainly owned by local breweries. This country as an ac-

quisition target cannot be exluded because Kofola already has experience with the purchase company from brewery.
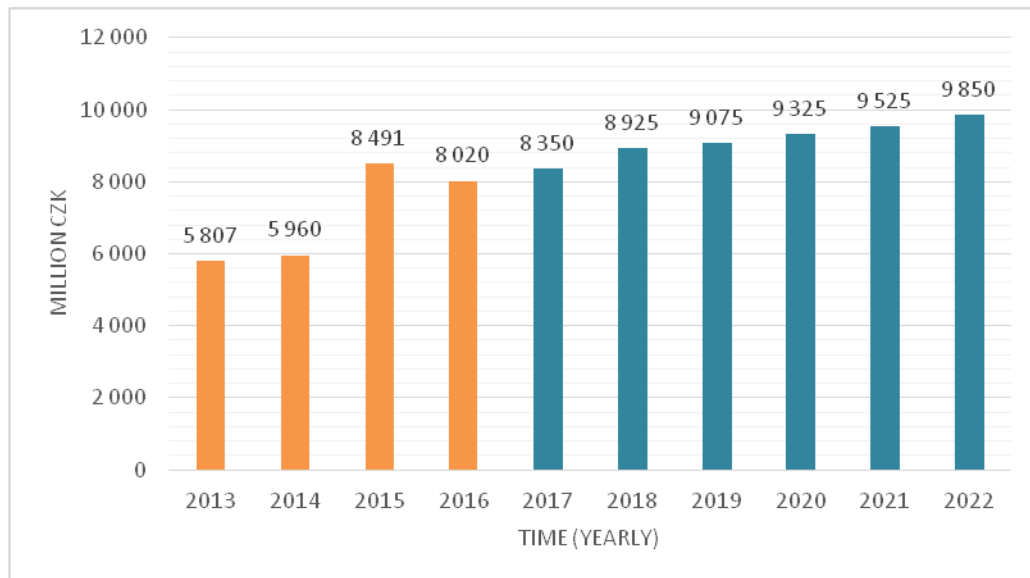
Img. 30   Prediction of the future total assets growth in the first step
Source: Owning processing.

For Kosovo, Albania and Montenegro purchases are uncertain. These countries are particularly important for export from Croatia and possibly future Serbia. These countries have no local significant brands. Thus, the target acquisition countries could be considered Serbia and Bosnia and Herzegovina. The company certainly relies on its extensive distribution network, which it wants to continue to expand into the Adriatic countries.

The prediction of acquistitions is very complex because it is often not publicly known whether the company itself is going to sell. Another problem si determining the enterprise value of the companiy. All of these beverage companies are not publicly traded on the stock market in these countries and therefore there is no possibility of finding out their current market price. As stated in Financial overview, the company has a strong free cash in hand. If the company holds large amounts of free cash in hand, the most common reason is the preparation for new acquistitions (Kopeček, 2017). The high free cash in hand has been maintained by the company since 2015. Given company's interest in buying new targets, it can be predicted that the company will want to keep its high free cash in hand in the future in order to place it in new acquisitions.
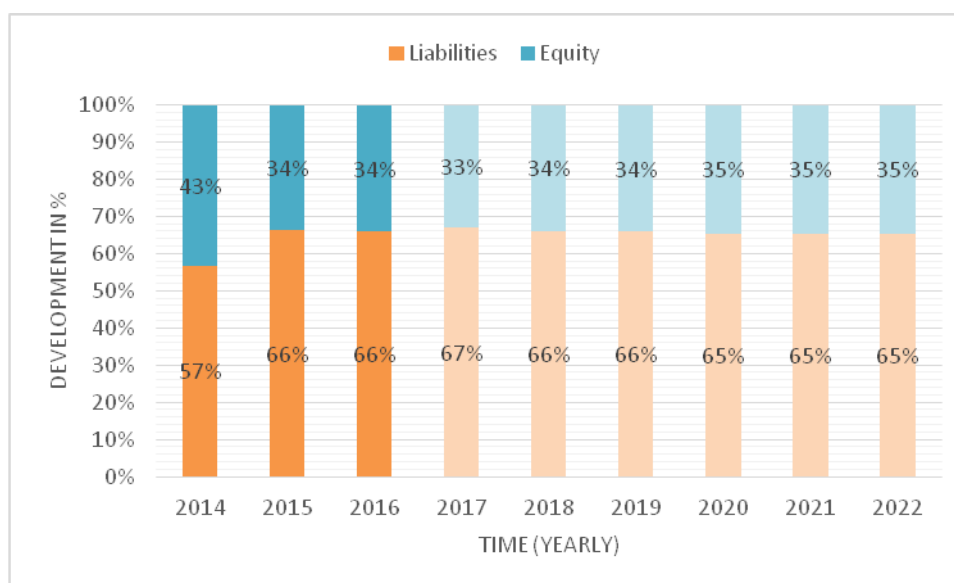
Img. 31   Prediction of the future development of equity and liabilities in the first step
Source: Owning processing.

The company has a higher level of indebtedness (see Financial overview). The low share of equity in context of the total assets is also projected. The company maintains a high proportion of liabilities even after major acquisitions or IPO. However, a possible change in the resource structure could be made by new IPO that Kofola is not excluding in the future (Lazarevič, 2016). Issued free float of 15% is low. According to analysts, the low free float is hampering in stock trading (Lazarevič, 2016). In addition, creditors would certainly welcome a new increase in equity. However, these conclusions are difficult to predict because the company has not yet announced an official statement. It is not possible to estimate when and in what amount the IPO would be issued. If the new IPO occurred, there would be a dilution of existing stocks, and the stock market price would most likely go down. The new IPO can be expected in the future at a 3-4year horizon (Kopeček, 2016). The current determination of the intrinsic value is targeting the annual horizon, therefore it can be abstained from the potential IPO.

The following image captures the predicted development of CAPEX. This item is deducted from free cash flow, which is then discounted. It could be said that the CAPEX prediction has a stong impact on the determinated intrinsic value. The company has had very volatile CAPEX in examined period. It was due to acquisition waves that were related to the actual purchases of companies and the necessary resources for the revitalization of production facilities (Kopeček, 2017). According to the acquisition targets, it could be concluded that buying companies would not have to be as costly as in previous years. In addition, acquistition targets will be more, therefore, as part of the forecast, the CAPEX will be gradually "disbanded" over the period under review. With company growth, it can be expected

a modest increase in CAPEX, which captures the image below. The increase in CAPEX will also be due to replacing old production facilities with new ones.
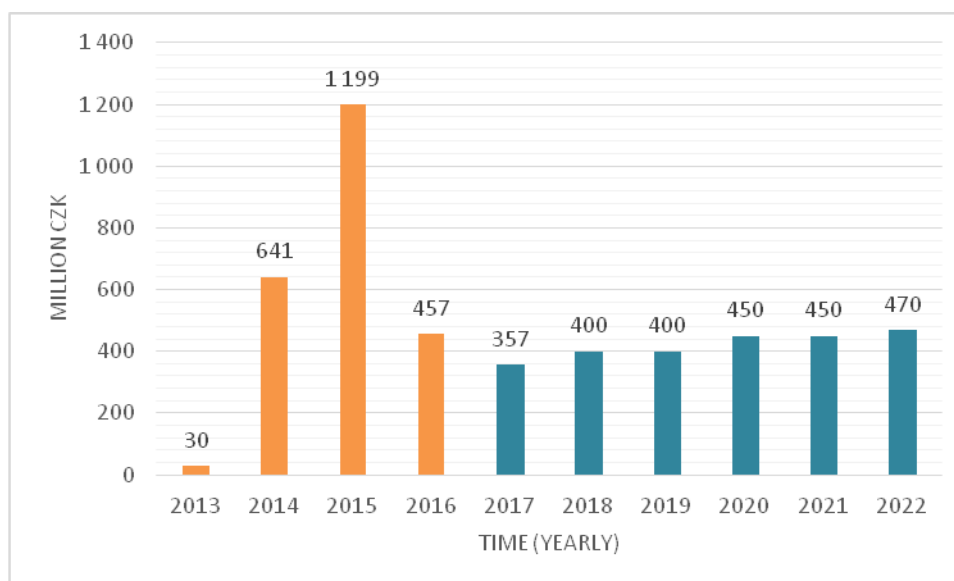
Img. 32   Prediction of the future CAPEX in the first step
Source: Owning processing.

Another component in DCF model is net working capital (NWC). The company has a long-term negative NWC. It is also accused by various analysts and market observers. Here is one fact that negative NWC makes a postivie impact on free cash flow, which is increased by this way. It is appropriate if the company moves in either purely positive or negative values of NWC than the NWC has a fluctuating development. An adventage is easier to predict. Based on this claim, it can be assumed that NWC will continue to be negative. The predicted development is captured in the Appendix (C/5).

From the prediction of the financial statements, it is worth mentioning the development of liquidity. The company has long-term liquidity problems at the entire holding level. The cash ratio is high above the state level and the quick and current ratios are low. The liquidity ratios are out of the state recommended levels. The prediction tries to keep this fluctuated development (see in Appendix C/6). The disadvantage is that liquidity is quoted on a consolidated basis, at the level of the entire holding. It is not clear from the data whether liquidity problems are faced by all companie or just the key ones. Therefore, the conclusions must be taken in general. However, as part of the prediction, it could be considered with this phenomenon.

The calculation of discounted free cash flow is shown in the table below. From the predicted financial statements were selected the items, which indentify DCF model. Net operation profit after tax (NOPAT) is adjusted EBIT from corporate tax. Depre-

ciation is also part of the formula. The amount of depreciation depends on the amount of CAPEX. If the company invests more in fixed assets, then more depreciations will be made in the future times. The company depreciated almost constantly about CZK 500 million in previous years. This amount is also retained in the prediction and it is assumed that the amount will be raised to CZK 550 million over the next years. The reason is predicted acquisition waves.

Tab. 17   Prediction of free cash flow to the frm in the fist step

Indicator	2017E	2018E	2019E	2020E	2021E	2022E
NOPAT	364 500	445 500	445 500	445 500	445 500	445 500
Depreciation	500 000	500 000	550 000	550 000	550 000	550 000
Change NWC	-76 685	75 000	-50 000	-50 000	0	125 000
CAPEX	357	400	400	450	450	470
FCF to the firm	583 809	370 500	845 500	845 500	795 500	670 500

Source: Owning processing.

The year 2023 will be so-called terminal value. From this year, it will be set a constant annual growth fot the next period (continuing step). For constant annual growth is chosen value 1.5%. It is high conservative value of the projected future because it represents roughly half of the CAGR from the predicted FCF to the firm. With the set growth rate is also worked later in the sensitivity analysis.

The next stage of the procedure requires the determination of the discount factor, which is represented by the WACC in this way. Firstly, if it wants to determinate WACC, it needs to find out the cost of equity and cost of debt. Problem is determining the beta parameter. This parameter indicates the stock sensitivity with stock market. Setting the parameter for Kofola has two problems. The first is that the stock has been traded since December 2015 and there is not enough data to estimate beta. The second problem is the select of a benchmark as a market representant. It would be used PX index from PSE, but PSE does not have enough liquidity to reflect the development and cyclicality of the economy. In this case is used external beta parameter, which is taken over from another company but in the same industry (Kopeček, 2017). For Kofola's stock is the best to use the beta parameter retrieved from Coca-Cola, which is traded on the NYSE. This parameter more reflects the market situation in conjuction with the beverage companies.

The Demodaran formula was used to determine the risk premium rate. Risk premium is chosen for the Czech Republic because the stocks are traded on the PSE. The rate of 6.69% is on average compared to other European countries. For the risk free rate was chosen ten-year government bond, which was issued by the Government of the Czech Republic. Development in government bond interest plays a crucial role in determining of the total equity cost. Because this value will be changed as the only one during the predicted period. For the year 2017 is used CNB's estimate. Value should be at level 1%. For the next period, it is assumed that

the interest rate will grow in the context of inflation. It is assumed conservative year-on-year growth of 0.20% (see Macroeconomic analysis).

Tab. 18   Prediction of cost of equity

Indicator	2017E	2018E	2019E	2020E	2021E	2022E	Terminal value
Risk free rate (%)	0.87	1.00	1.20	1.40	1.60	1.80	2.87
Risk premium rate (%)	6.69	6.69	6.69	6.69	6.69	6.69	6.69
Parameter beta	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Risk surcharge (%)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cost of equity (%)	5.71	5.76	5.82	5.89	5.96	6.03	6.39

Source: Owning processing.

The continuing stage is expected from the year 2023. For this second step is chosen the terminal value. All components will remain unchanged except for the risk free rate. The risk free rate for the terminal value must reflect inflation. The declared inflation target according to the CNB is 2%. The risk free rate is based on the year 2017 for the terminal value, into this year is added the CNB' inflation target. The development of cost of equity on the basis of the specified components show table above.

After calculation cost of equity it can be determinated WACC. WACC is different for each year. In 2023 is WACC fixed to the continuing stage. The components of equity-on-assets and debts-on-assets are taken from the predicted financial statements (see in Appendix). Further, the costs of debt have to be determined. From past years, it is possible to determine the average interest rate for the entire holding and to derive from this value in the context of the prediction. The prediction must reflect the current state of affairs related to bank financing and that interest rates for corporate clients are expected to grow in the coming years. This is also evidenced by the gradual rise in inflation in the CEE countries. Due to the rise in inflation, bank financing is also rising (Zavadilová, 2017). Because the company belongs to the category of larger companies, the impact of the growth of interest rates on the company may not be too much affected.

While it is considered the conservative approach, it is assumed that a higher interest rate will also affect Kofola. Higher interest rate on liabilities will increase the WACC value. Higher WACC value will impact the intrinsic value, which will go down. The aim of the higher interest rate is not underestimating the intrinsic value, but to reflect conservative approach. An increase in the interest rate is projected to be 0.5% for the whole holding in the period 2017-2022. A constantly stable interest rate of 4% will be set in 2021. This interest rate will also be chosen for terminal value. The development of the predicted WACC is shown in the table below.

Tab. 19   Prediction of weighted average cost of capital

Indicator	2017E	2018E	2019E	2020E	2021E	2022E	Terminal value
Equity on Assets	0.3308	0.3390	0.3414	0.3452	0.3454	0.3455	0.4000
Cost of equity (%)	5.71	5.76	5.82	5.89	5.96	6.03	6.39
Debt on Assets	0.6692	0.6610	0.6586	0.6548	0.6546	0.6545	0.6000
Cost of deb (%)	2.00	2.50	3.00	3.50	4.00	4.00	4.00
Tax (%)	19.00	19.00	19.00	19.00	19.00	19.00	19.00
WACC (%)	5.50	5.71	5.91	6.09	6.26	6.29	6.53

Source: Owning processing.

After determining the WACC and cash flow, it is possible to determine the intrinsic value itself using the DCF model. Sum of DCF represents the amount of DCF for the period 2017-2022. Terminal value is the part of cash flow that is multiplied by constant growth rate (1.5%). This value has to be devided by the difference of WACC (6.5%) and constant growth (1.5%). In order to get an enterprise value, it must be added to net debt to the terminal value. The result value must be divided by the number of issued stocks. This give us the intrinsic value of the stock and after that it would be make an investment decision.

Tab. 20   Determination of intrinsic value

Indicator	Value (in CZK)
Sum of DCF	4 079 490
Terminal value	12 107 355 865
Net debt	1 800 000 000
Equity value	10 311 435 355
Number of shares	22 293 044
Intrinsic value	463

Source: Owning processing.

The intrinsic value is set at CZK 463 per stock with an annual horizon. Now, the intrinsic value can be compared with the current stock price. The current market price is CZK 400 on April 30, 2017. Based on the determination of the intrinsic value, it can be said that the stock is undervalued. Based on the underlying determination, it could be declared that the stock should grow up to the price level of CZK 463 within a one-year horizon. Because the stock is undervaluated, the investment recommendation is to buy.

The sensitivity analysis is also performed on the detected intrinsic value. The sensitivity analysis examines the change in development of the intrinsic value between the continuing growth and WACC. The analysis shows that the highest intrinsic value of the stock will reach if the WACC drops to below the estimated value and the continuing growth will be better than predicted. The continuing growth

assumes changes in the range of 0.10%. WACC assumes also changes in the range of 0.10%.

Tab. 21   Sensitivity analysis

		Change of WACC (%)								
		6.13	6.23	6.33	6.43	6.53	6.63	6.73	6.83	6,93
Change of continuing growth (%)	**1.10**	449	450	440	430	411	411	403	394	386
	1.20	472	464	450	440	430	421	412	403	395
	1.30	484	472	461	451	441	431	422	412	404
	1.40	496	484	473	462	451	441	431	422	413
	1.50	509	497	485	474	**463**	452	442	432	423
	1.60	523	510	498	486	474	463	452	442	432
	1.70	537	524	511	498	486	475	464	453	443
	1.80	552	538	524	511	499	487	475	464	454
	1.90	568	553	539	525	512	499	487	476	465

Source: Owning processing.

Another appropriate method for determining the intrinsic value of the stock should be the dividend discounted model. Unfortunately, this method is not well used to determine the intrinsic value of the stock in the conditions of the Czech stock market. The reason is the inrregularity of the dividend payment. In addition, the company is traded on PSE for a very short time so that the DDM could not be applied. The company has paid the dividend only once. Dividend was CZK 7.00 per stock in December 2016. DDM is better suited to US titles where there is more pressure from investortors to pay dividends. Another method which should be used are historical medels. All version of these historical models work with the average stock price over the reference period. As mentioned, the stock is traded for a very short time, in order to determine an adequate average stock price. It should be quantified the average daily stock price, but it would be still lack in average daily data about sales or cash flow from holding. For this reasen, the DCF model is the only method that is the most appropriate.

4.3.4   Determination of underpricing in IPO

Stocks were listed on the PSE on the 2nd December 2015. The emission price was set at a maximum level of CZK 650. The indicative minimum price for retail customers was set at level of CZK 500. The finish issue price was set at level of CZK 510 per stock by company. The emission price was determinate by bookbuilding method. In total, it was subscribed 1 500 000 new stocks. Thanks to the IPO, the company raised equity by CZK 765 000 000.

For determination of underpricing, it has been used a procedure that takes the change between the emission price and the market price of the stock after

the fist day of trading. Because the found value is positive, it can be said that there was the underpricing and stock was underestimated on the first trading day.

Tab. 22   Determination of underpricng after the first trading day by price

Indicator	Value
Emission price (CZK)	510.00
Close price of the first day (CZK)	515.00
Underpricing (%)	0.9804

Source: Owning processing.

There is some time lag between determining the emission price and the commencement of trading. It is also possible to take into account the change in stock index when calculatin the undepricing. The detected value is positive again. Now it can be confirmed by this calculation that the undepricing occurred and the emission price was underestimated.

Tab. 23   Determination of underpricng after the first trading day by index

Indicator	Value
Emission price (CZK)	510.00
Close price of the stock on the first day (CZK)	515.00
Close price of the PX on the previous day (CZK)	1 475.33
Close price of the PX on the first day (CZK)	1 460.57
Undepricing (%)	1.9808

Source: Owning processing.

After demonstrating the underpricing, the costs associated with the undervaluation of the emission price can be quantified. The following table shows that the total costs incurred due to underpricing were CZK 7 500 000. This amount represents finance, which were not gained by company due to the undervalued emission of the stocks. Compared to the total amount of funds, which were raised, it can be said that the company lost a relavely small amount of funds. This small amount represents 0.98% of the total raised equity. Based on the calculation, it could be said that the emission was successful for the company.

Tab. 24   Determination of underpricing costs

Indicator	Value
Emission price (CZK)	510.00
Close price of the first day (CZK)	515.00
Size of the issue (number of shares)	1 500 000
Underpricing costs (CZK)	7 500 000

Source: Owning processing.

5   Conclusion and discussion

The main aim of the diploma thesis was to determine the intrinsic value of the stock and to verify the underpricing, which was generated at the primary issue of the stocks. The main aim was consisted of several sub-objectives that led to the proposal of investment recommendation.

The main objective was achieved through the fundamental analysis that was done via the top-down approach. This approach first assumes the evaluation of the macroeconomic environment, then evaluate the industry in which the company operates. Finally, the company environment is examined, whereby the intrinsic value of the stock is determinated based on the prediction. The investment recommendation is based on the buy-side approach – primarily to *real* buy or *real* sell the stock. The result of the fundamental analysis can be used for potential or existing investors, banks, investment companies and other investors.

In the diploma thesis it has been verified that current and projected future development of macroeconomic environment have a positive effect on the intrinsic value of the stock. Current economic growth in the countries of interest (Czech Republic, Slovakia, Poland, Slovenia and Croatia) is primarily due to growth in household consumption. This consumption also increases the interest in the company's products. Adriatic countries (countries for future expansion – Serbia, Bosnia and Herzegovina, Montenegro, Kosova and Macedonia) will play an important role in the future. These countries can bring new acquistition targets to companies that could lead to an increase in company capitalization. An important finding is the development of sugar price. The sugar price significantly affects the company's profit margins because sugar is approximately 40% of all production costs. The studies predict a shortage of sugar in the future, but according to "European sugar liberalization" sugar should be cheaper, which is planned from October 2017. This factor could be lead to an increase in the company's profit margin and subsequently to the increase in earning together with the market price of stock.

Industry analysis examines the main competitors in each country and the possible future development of the industry itself. The industry is categorized according to "countries of operations" and "distribution channels". The countries of operations are divided into "countries of interest" and "Adriatic countries". The distribution channels are divided into Retail and HoReCa. The company has begun to respond to new trends in healthy lifestyle that has begun to run fresh bars and salateries. The company promises a competitive advantage from the new focus. The current consumers have begun to profer pure and spring water before cola or other sweetened drinks. The company responds to this change in demand by increasing acquistions in the area of companies owning pure wellsprings or producting fresh juices. The company is flexible in these trends, unlike its main competitors.

The intrinsic value of the stock was determinated in the company's analysis. Major acquisition projects were summarized that company implemented in the past. The precondition has been made of where the company might be targeting on the basis of the past acquistions. The important role is plyed by Serbia and Boasnia and Herzegovina. The company, most likely its potential goals in the form of taking over companies, will be directed to these two countries. With the growth of acquitistions, the copmany's market capitalization is also growing.

Based on historical data and facts was prepared the prediction of the financial statements. The prediction keeps to maintain a constant proportional spread between revenues and costs. The prediction leads to a conservative approach and therefore does not anticipated the aggressive voleme of acquistions and investments made by the company. The predicted development also captures the constant spread between equity and liabilities as a response to past company development.

For determination of intrinsic value was used the method of discounted free cash flow to the firm. The method of discounted free cash flow to the equity was not useful because the company uses too much liabilities on total funding sourece. High leverage does not allow to used this method. It also offered a dividend discount model, but it was also rejected on the grounds that the company does not have a sufficient dividend history. Historacal methods were also rejected for short history time frame.

The resulting target price was set at CZK 463. The price of the underlying stock traded on the PSE was CZK 400 (last close price). The investment recommendation with a one-year horizon was set to buy. Furthemore, it was confirmed that there was the underpricing in the primary issue of stocks. The company lost a total of CZK 7 500 000 due to the undervalued issue. This amount represents less than 1% of received money from the IPO. The company can evalueate the IPO on the PSE as a successful.

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Appendix

A Images from Macroeconomic layout and forecasting part

A/1 Comparison of percentage changes of GDP in the countries of interest with the EU average
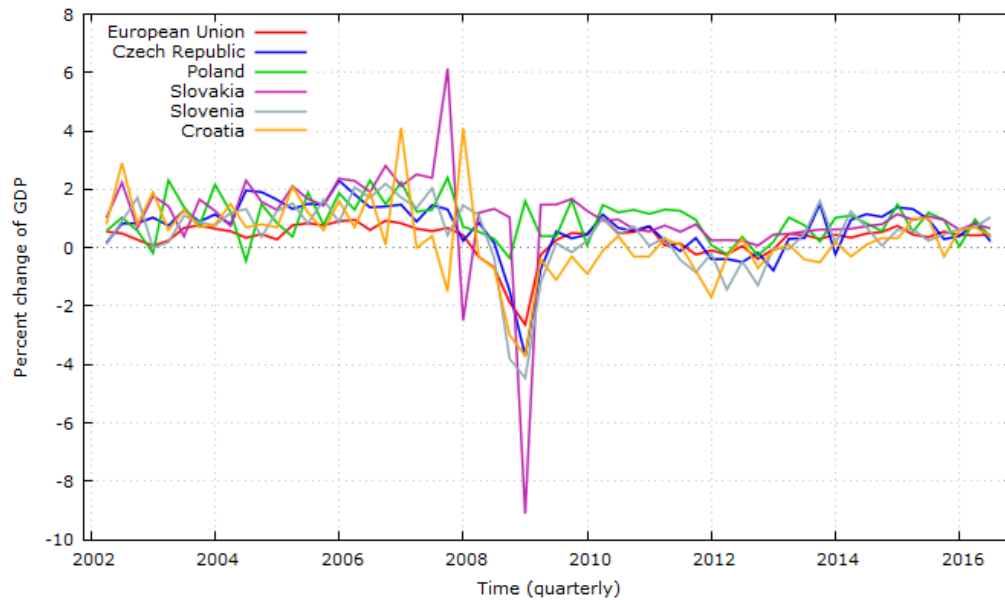
Source: Owning processing.

A/2 Comparison of percentage changes of PX index and percentage changes of Czech GDP
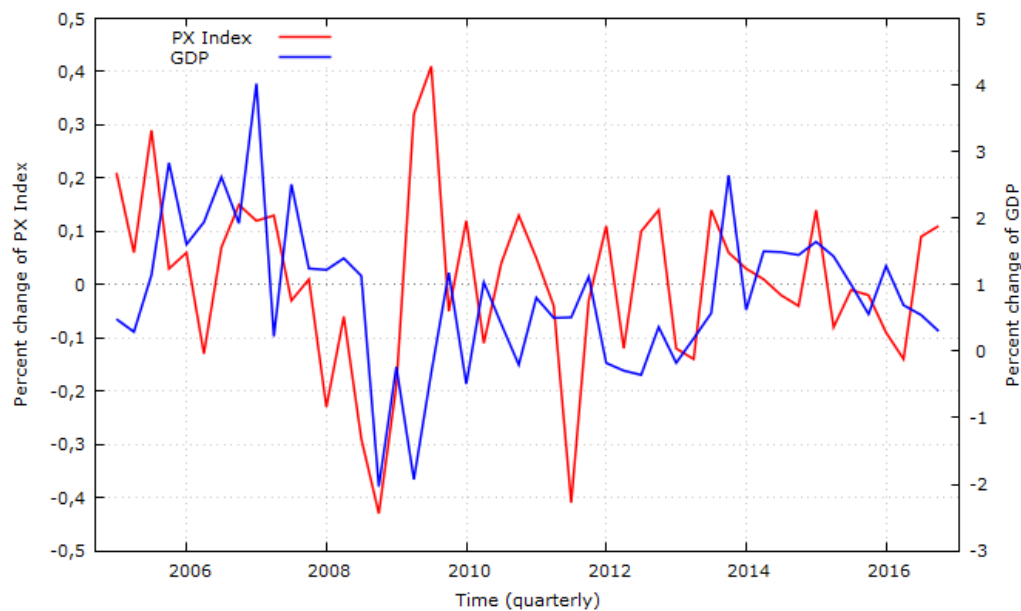
Source: Owning processing.

A/3   Comparison of CPI index and PX index
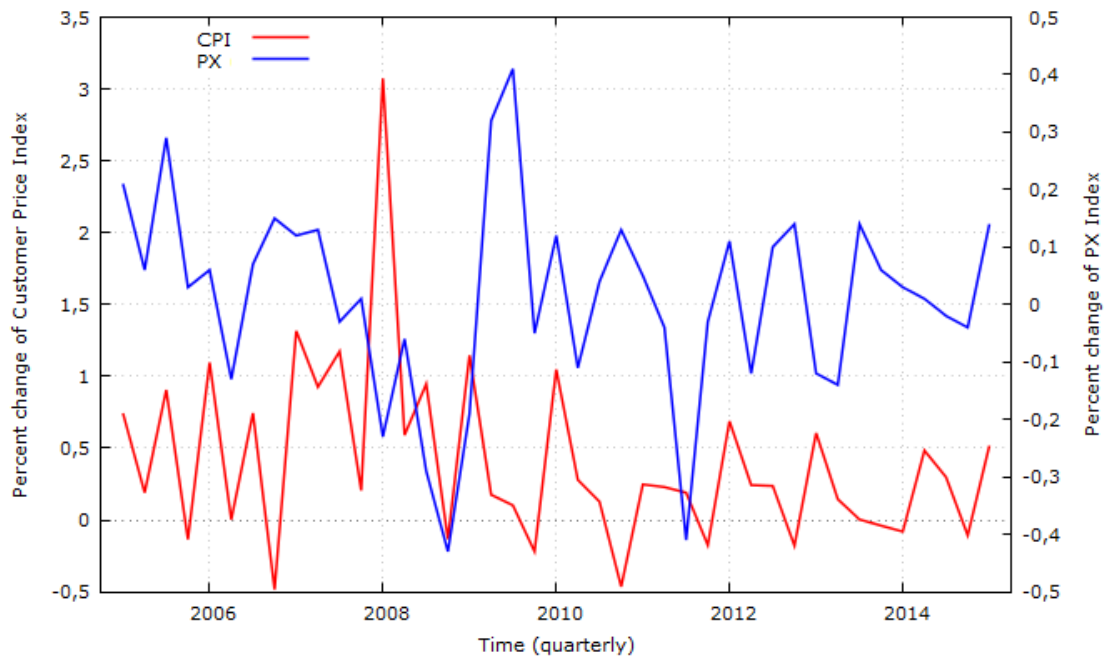
Source: Owning processing.

A/4   The amount of loans drawn by Kofola in the context of the development of the ECB interest rate
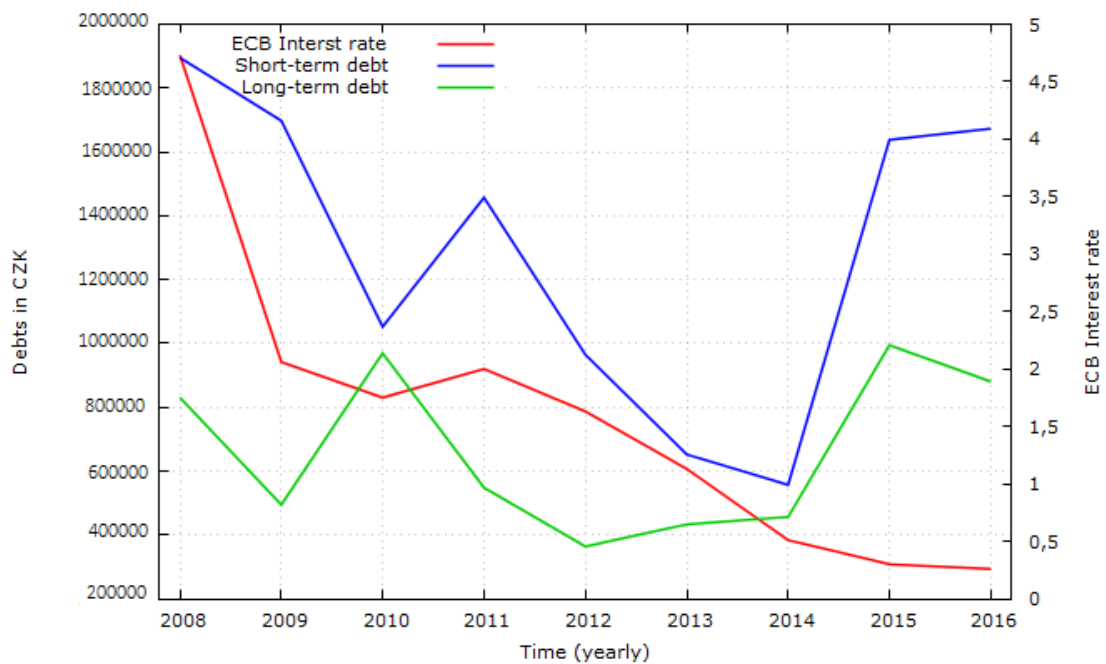
Source: Owning processing.

A/5 Unemployment in the countries of interest
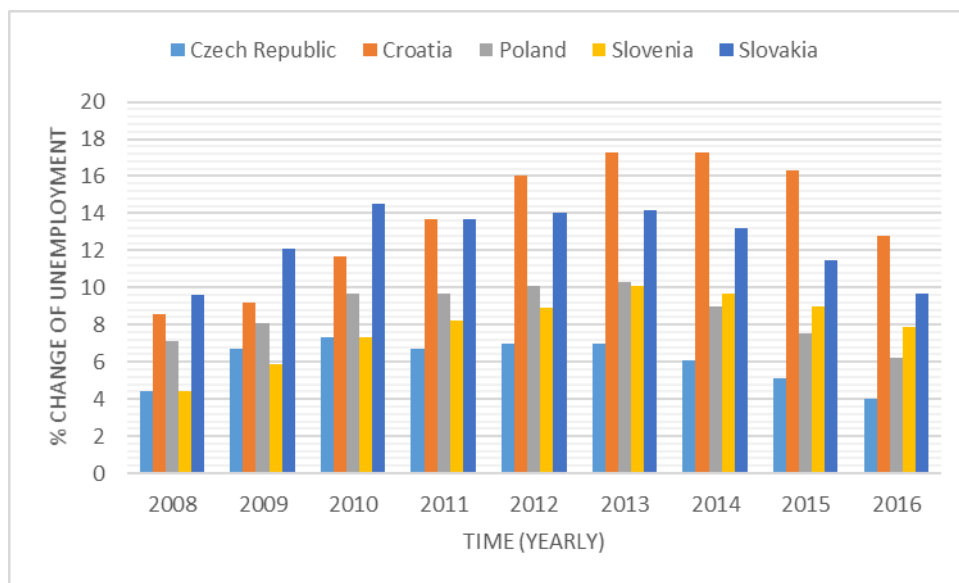
Source: Owning processing.

B Images from Competition analysis and industry layout part

B/1   Achieved revenues under Ugo brand
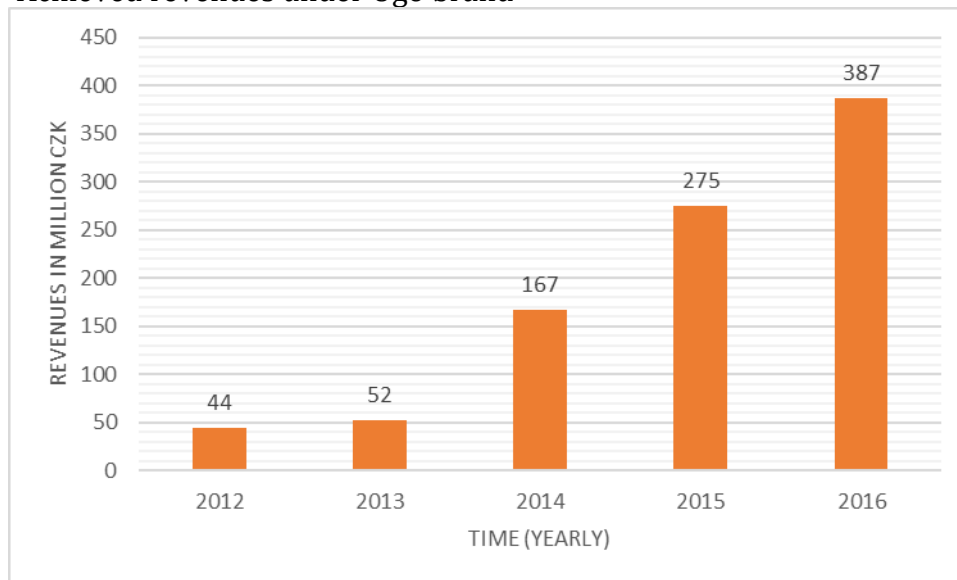
Source: Owning processing.

B/2   Number of new open fresh bars under Ugo brand
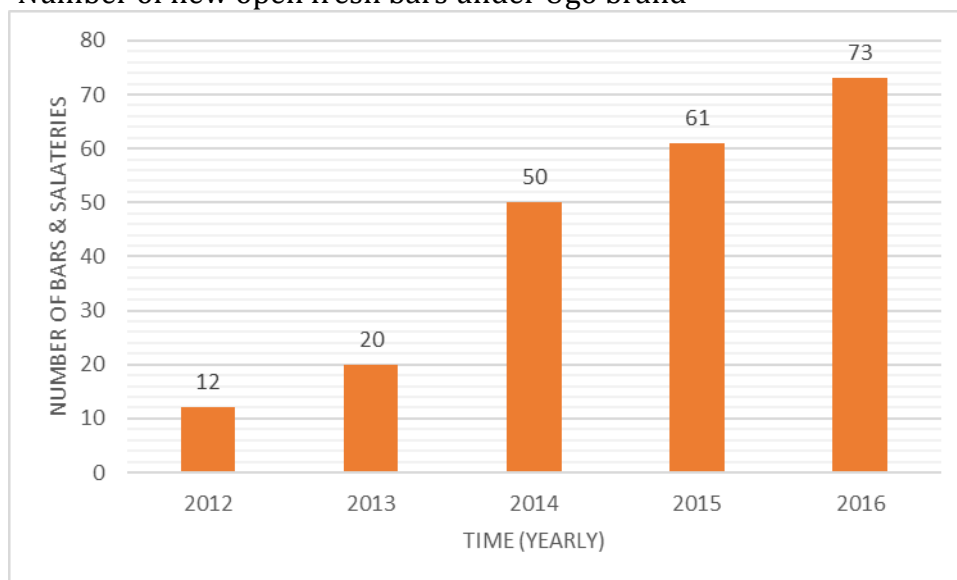
Source: Owning processing.

C Images from Company analysis part

C/1 Development of net working capital in 2009-2016
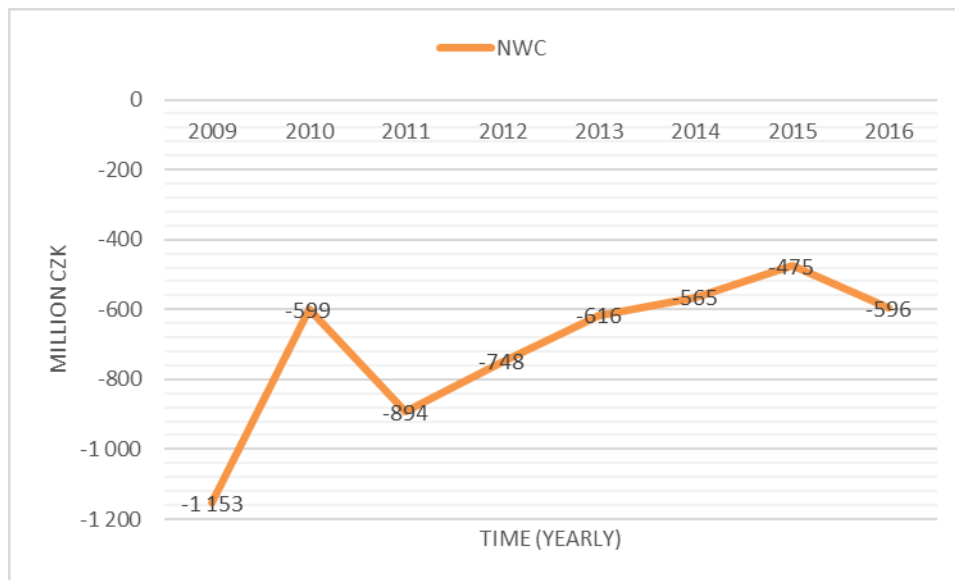
Source: Owning processing.

C/2 Development of receivables and payebles in 2009-2016
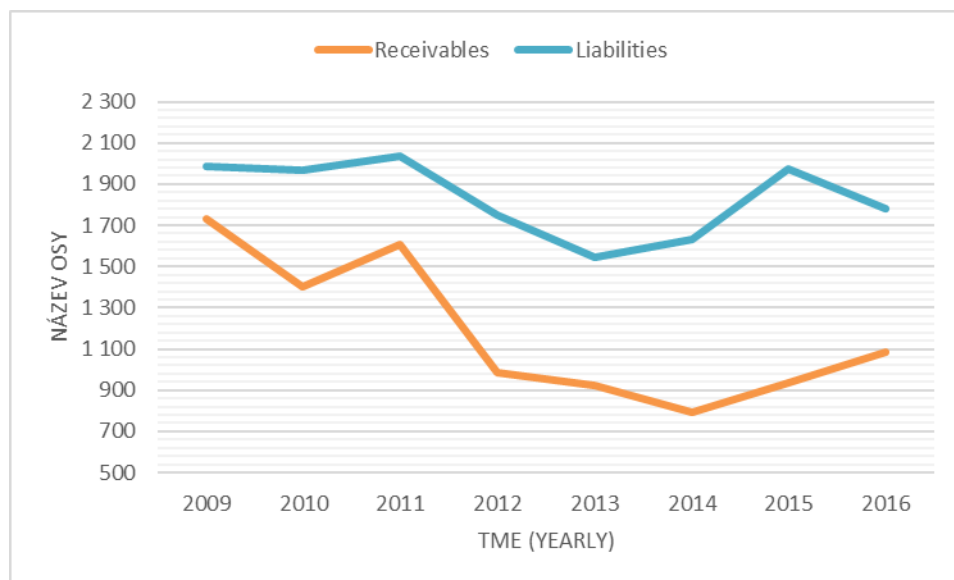
Source: Owning processing.

C/3   Development of CAPEX and EBITDA compared in 2009-201
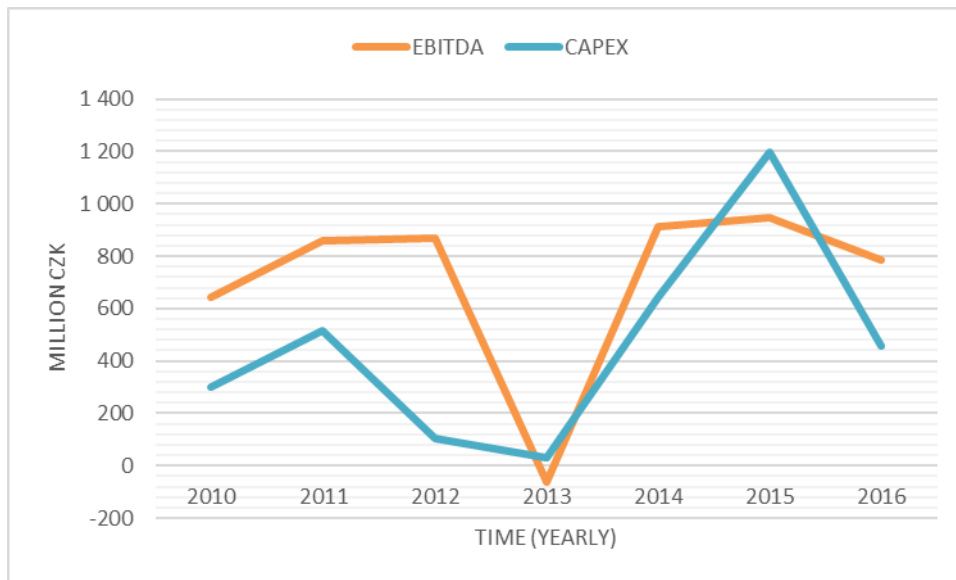
Source: Owning processing.

C/4   Development of liquidity ratios in 2009-2016
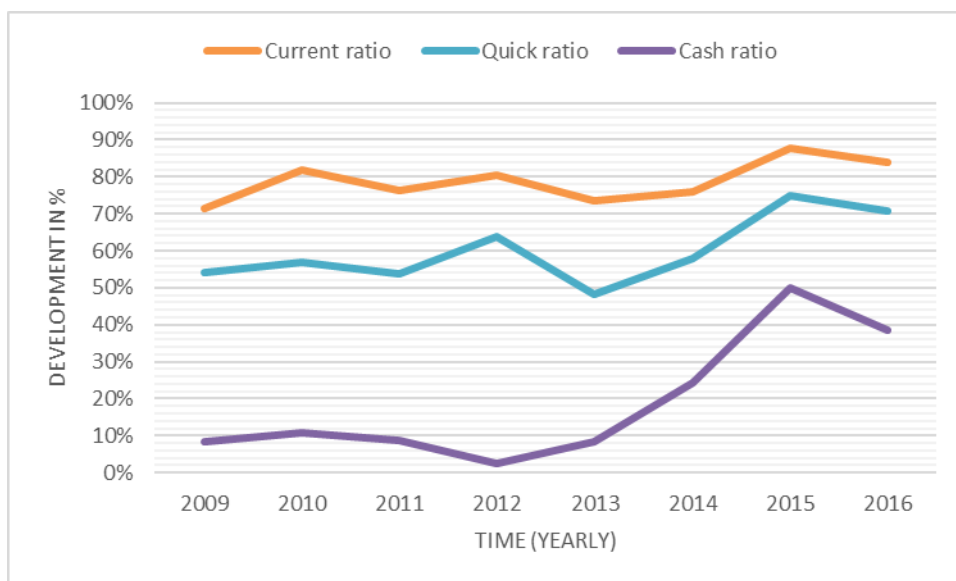
Source: Owning processing.

C/5   Prediction of the future development of NWC in the first step
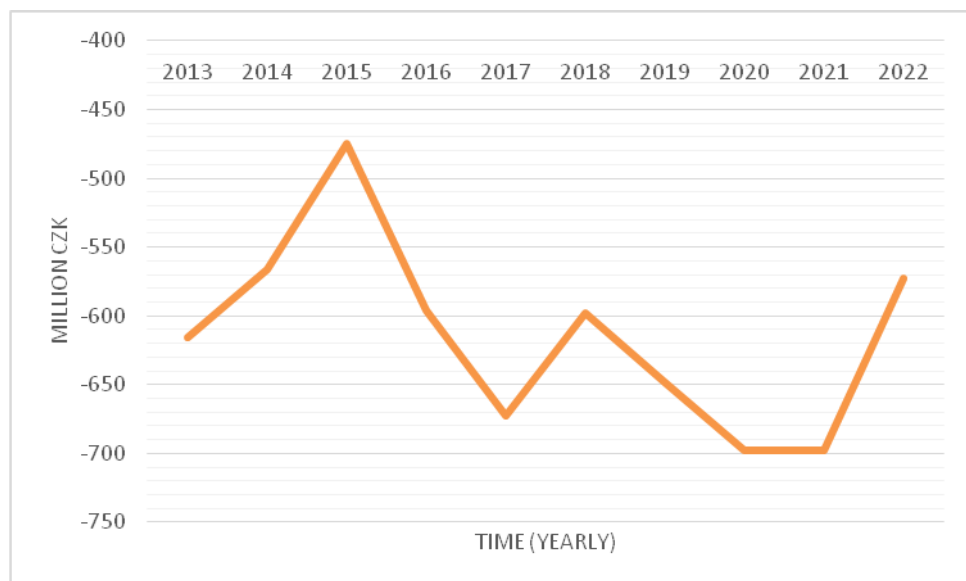
Source: Owning processing.

C/6   Prediction of the future development of liquidity ratios in the first step
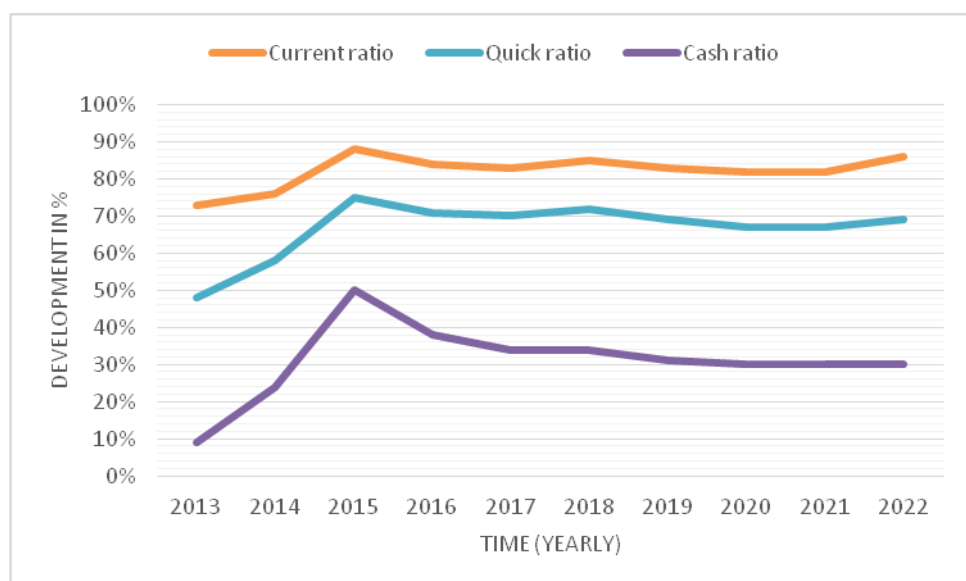
Source: Owning processing.

C/ 7   Structure of portfolio
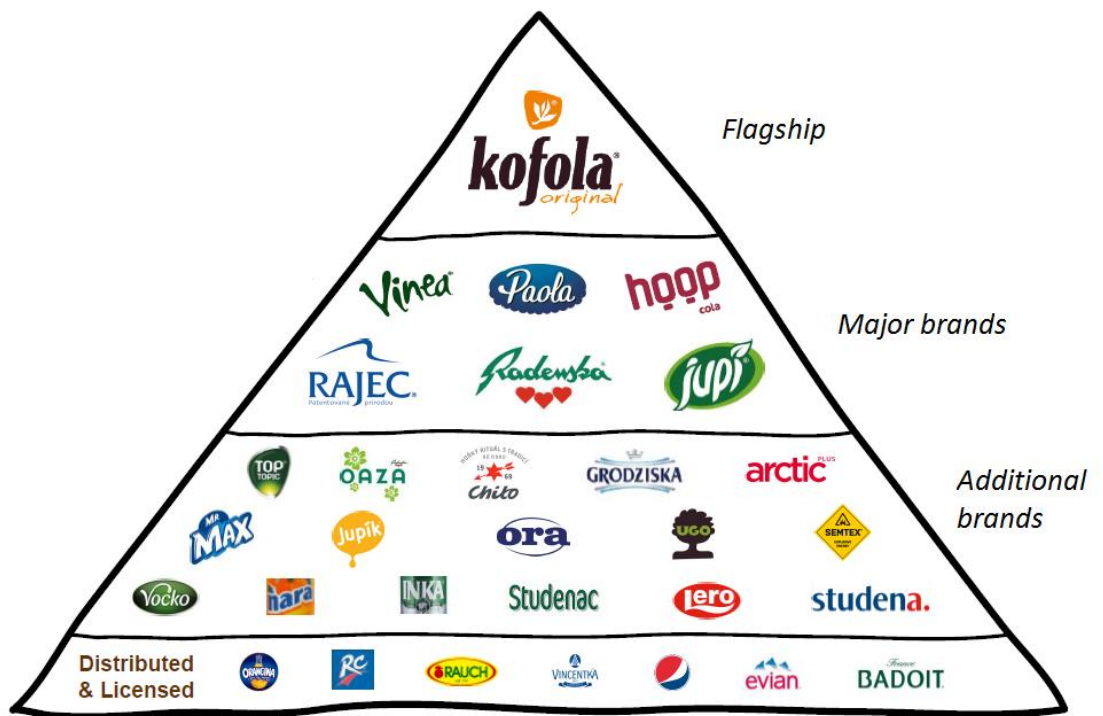
Source: Kofola's Annual Report, 2016

C/8   Structure of portofolio by countries

Source: Kofola's Annual Report, 2016

C/9   Structere of company
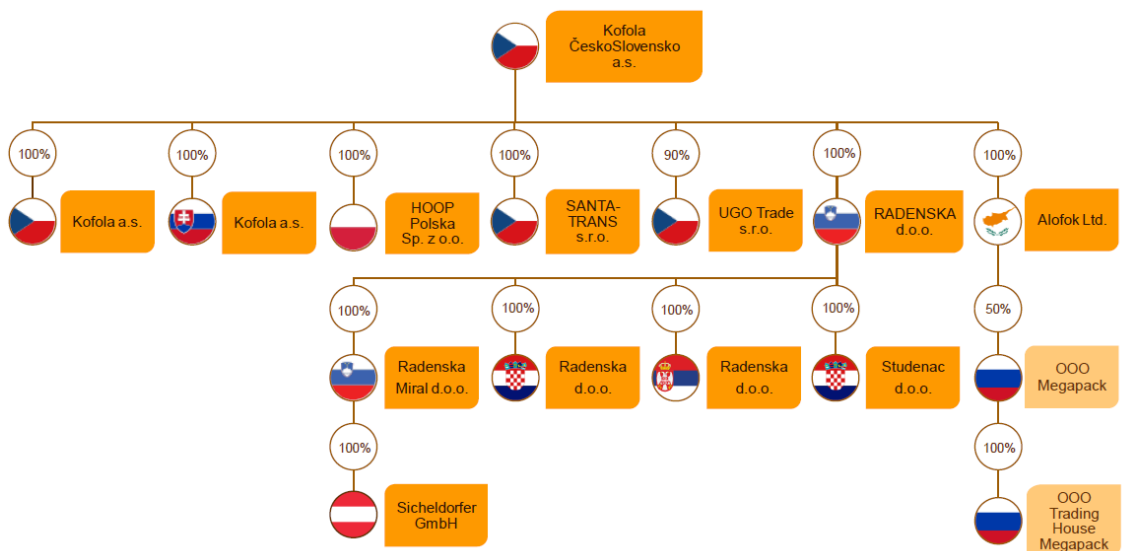
Souce: Kofola's Annual Report

C/10   Owners structure
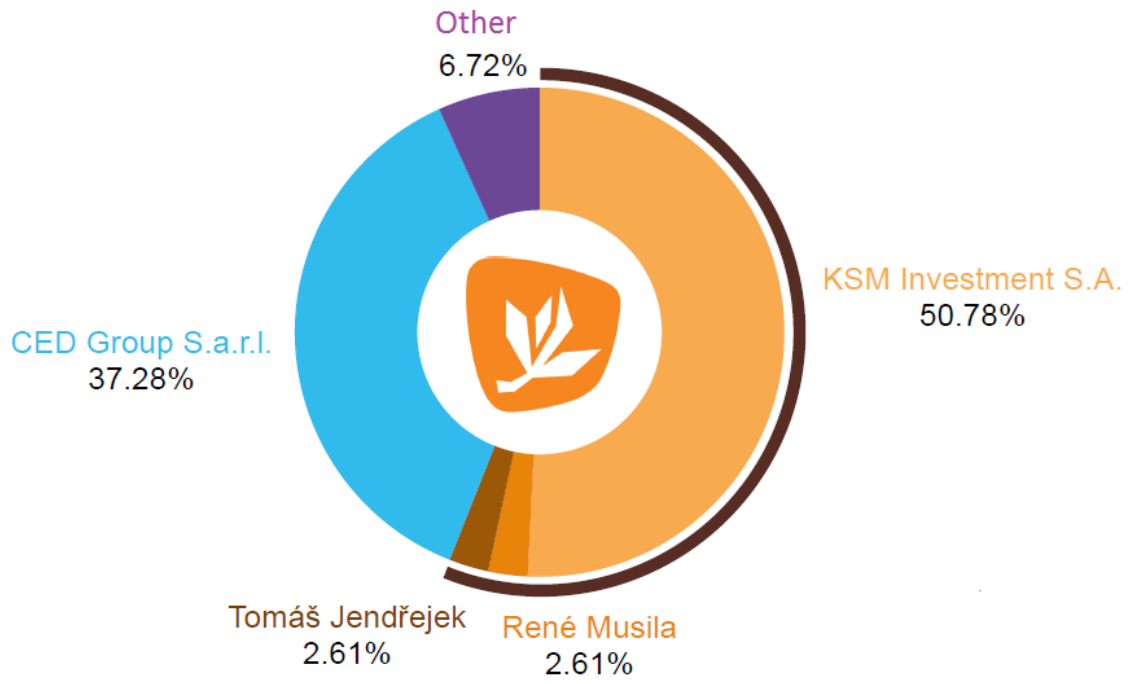
Source: Kofola's Annual Report 2016

C/11   Kofola's P&L from 2009 to 2016

Year	2009 A		2010 A		2011 A		2012 A		2013 A		2014 A		2015 A		2016 A	
Revenues	9 945 647	100%	8 044 653	100%	8 675 084	100%	6 639 128	100%	6 595 736	100%	6 275 391	100%	7 156 732	100%	6 998 960	100%
Own products/services	9 294 538	93%	7 879 756	98%	8 574 965	99%	6 616 289	100%	6 566 223	100%	6 199 737	99%	6 755 305	94%	6 506 401	93%
Goods and materials	651 109	7%	164 897	2%	100 120	1%	22 839	0%	29 513	0%	75 654	1%	401 427	6%	492 559	7%
Cost of sales	6 271 675	63%	5 031 767	63%	5 735 279	66%	4 387 073	66%	4 511 323	68%	3 881 359	62%	4 330 504	61%	4 210 496	60%
Own products/services	5 693 107	57%	4 894 299	61%	5 646 664	65%	4 367 240	66%	4 483 680	68%	3 810 655	61%	3 968 770	55%	3 792 363	54%
Goods and materials	578 567	6%	137 468	2%	88 616	1%	19 833	0%	27 643	0%	70 704	1%	361 734	5%	418 133	6%
Gross Profit (Value added)	3 673 972	37%	3 012 885	37%	2 939 805	34%	2 252 055	34%	2 084 412	32%	2 394 032	38%	2 826 228	39%	2 788 464	40%
Selling, marketing, distribution costs	2 290 819	23%	2 296 227	29%	2 156 714	25%	1 569 175	24%	1 456 740	22%	1 607 706	26%	1 898 428	27%	1 910 997	27%
Administrative costs	577 126	6%	497 644	6%	451 051	5%	339 947	5%	286 985	4%	317 937	5%	446 855	6%	444 957	6%
Included depreciation and amortization	576 613	6%	523 651	7%	508 720	6%	516 731	8%	474 000	7%	471 995	8%	513 201	7%	523 003	7%
Included wages	1 140 476	11%	176 182	2%	1 128 647	13%	864 981	13%	789 609	12%	823 329	13%	1 060 615	15%	1 146 786	16%
Other operating income	83 935	1%	21 722	0%	52 040	1%	47 658	1%	56 922	1%	14 856	0%	134 544	2%	84 491	1%
Other operating expanses	118 161	1%	302 469	4%	33 246	0%	37 433	1%	933 407	14%	40 420	1%	180 810	3%	253 104	4%
EBITDA	1 348 414	14%	461 919	6%	859 554	10%	869 889	13%	-61 797	-1%	914 820	15%	947 880	13%	786 900	11%
Adjusted from depreciation and amortization	576 613	6%	523 651	7%	508 720	6%	516 731	8%	474 000	7%	471 995	8%	513 201	7%	523 003	7%
EBIT (Operating profit)	771 801	8%	-61 732	-1%	350 834	4%	353 158	5%	-535 798	-8%	442 825	7%	434 679	6%	263 897	4%
NOPAT	625 159	6%	-50 003	-1%	284 176	3%	286 058	4%	-433 996	-7%	358 688	6%	352 090	5%	213 757	3%
Finance income	49 800	1%	64 563	1%	54 792	1%	25 241	0%	54 507	1%	7 885	0%	20 961	0%	12 329	0%
Finance costs	240 120	2%	131 463	2%	161 592	2%	147 849	2%	114 486	2%	93 247	1%	129 990	2%	104 911	1%
Interest expanses	137 040	1%	116 733	1%	128 418	1%	130 671	2%	104 015	2%	69 341	1%	79 781	1%	57 634	1%
Share of P/L of associate	0	0%	-532	0%	-721	0%	292	0%	11 549	0%	11 940	0%	-3 389	0%	-915	0%
Financial result	-190 319	-2%	-67 432	-1%	-107 521	-1%	-122 316	-2%	-48 430	-1%	-73 422	-1%	-112 418	-2%	-93 497	-1%
EBT (Profit/loss before tax)	581 482	6%	-129 165	-2%	243 314	3%	230 843	3%	-584 228	-9%	369 403	6%	322 261	5%	170 400	2%
Income tax (Tax on profit)	110 085	1%	56 454	1%	71 633	1%	57 753	1%	213 314	3%	79 274	1%	93 260	1%	87 000	1%
EAT (Profit/loss after tax)	471 397	5%	-185 619	-2%	171 681	2%	173 090	3%	-797 542	-12%	290 129	5%	229 001	3%	83 400	1%

Source: Owning processing. Kofola's Annual Reports from 2009 to 2016

C/12 Kofola's Assets from 2009 to 2016

Year	2009 A		2010 A		2011 A		2012 A		2013 A		2014 A		2015 A		2016 A	
Total assets	9 035 624	100%	8 316 908	100%	8 730 416	100%	8 167 546	100%	5 806 607	100%	5 959 862	100%	8 491 014	100%	8 019 883	100%
Non-current assets	6 146 704	68%	5 603 914	67%	5 866 398	67%	5 068 480	62%	4 101 516	71%	4 171 985	70%	5 095 724	60%	4 915 863	61%
Property, plant and equipment	3 730 147	41%	3 506 147	42%	3 512 964	40%	3 098 774	38%	2 654 631	46%	2 823 390	47%	3 508 993	41%	3 442 624	43%
Goodwill	725 111	8%	726 039	9%	772 366	9%	670 318	8%	87 116	2%	87 986	1%	86 302	1%	86 302	1%
Intangible assets	1 451 196	16%	1 213 154	15%	1 420 904	16%	1 240 887	15%	1 019 504	18%	1 064 370	18%	1 176 524	14%	1 164 092	15%
Investment in associate	88 337	1%	30 876	0%	23 073	0%	0	0%	336 552	6%	181 385	3%	155 921	2%	67 782	1%
Other receivables	0	0%	0	0%	0	0%	441	0%	0	0%	11 478	0%	56 348	1%	51 142	1%
Other non-financial assets	0	0%	0	0%	0	0%	0	0%	870	0%	396	0%	14 833	0%	2 440	0%
Deferred tax assets	151 913	2%	127 698	2%	137 092	2%	58 058	1%	2 843	0%	2 980	0%	96 803	1%	101 481	1%
Current assets	2 888 921	32%	2 712 994	33%	2 864 017	33%	3 099 067	38%	1 705 091	29%	1 787 877	30%	3 395 290	40%	3 104 020	39%
Assets classified as held for sale	106 514	1%	64 920	1%	64 920	1%	64 920	1%	0	0%	0	0%	3 506	0%	111 715	1%
Inventories	700 097	8%	825 172	10%	847 355	10%	646 181	8%	584 027	10%	423 051	7%	501 093	6%	485 440	6%
Trade and other receivables	1 729 521	19%	1 404 135	17%	1 605 095	18%	983 525	12%	921 455	16%	793 602	13%	934 452	11%	1 081 680	13%
Income tax receivables	15 185	0%	59 999	1%	16 620	0%	1 467	0%	1 331	0%	2 460	0%	16 231	0%	4 171	0%
Cash and cash equivalents	337 603	4%	358 767	4%	330 027	4%	101 963	1%	198 279	3%	568 764	10%	1 940 008	23%	1 421 014	18%
Discontinued consolidation assets	0	0%	0	0%	0	0%	1 301 010	16%	0	0%	0	0%	0	0%	0	0%

Source: Owning processing, Kofola's Annual Reports from 2009 to 2016

C/13 Kofola's Equity and Liabilities from 2009 to 2016

Year	2009 A		2010 A		2011 A		2012 A		2013 A		2014 A		2015 A		2016 A	
Total equity and liabilities	9 035 624	100%	8 316 908	100%	8 730 416	100%	8 167 546	100%	5 806 607	100%	5 959 862	100%	8 491 014	100%	8 019 883	100%
Total Equity	3 694 545	41%	3 329 000	40%	3 509 887	40%	3 486 392	43%	2 515 994	43%	2 576 829	43%	2 870 202	34%	2 739 468	34%
Controlled equity	3 416 155	38%	3 061 608	37%	3 240 488	37%	3 483 159	43%	2 511 112	43%	2 569 449	43%	2 820 969	33%	2 736 572	34%
Share capital	169 915	2%	169 915	2%	169 915	2%	169 915	2%	169 896	3%	151 499	3%	2 229 500	26%	2 229 500	28%
Share premium and cap. reorg. reserve	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	-1 962 871	-23%	-1 962 871	-24%
Other reserves	3 265 158	36%	3 134 792	38%	3 321 340	38%	3 471 240	43%	3 517 820	61%	2 004 024	34%	2 085 568	25%	2 075 994	26%
Foreign currency translation reserve	0	0%	0	0%	0	0%	171 772	2%	131 476	2%	235 031	4%	166 710	2%	165 925	2%
Own shares	0	0%	0	0%	0	0%	-448	0%	-448	0%	-2 811	0%	0	0%	-915	0%
Retained earnings	-18 918	0%	-243 099	-3%	-250 766	-3%	-329 320	-4%	-1 307 632	-23%	181 706	3%	302 062	4%	228 939	3%
Non-controlled equity	278 390	3%	267 392	3%	269 399	3%	3 233	0%	4 882	0%	7 380	0%	49 233	1%	2 896	0%
Total liabilities	5 341 079	59%	4 987 907	60%	5 220 529	60%	4 681 154	57%	3 290 613	57%	3 383 033	57%	5 620 812	66%	5 280 415	66%
Non-current liabilities	1 299 562	14%	1 676 182	20%	1 462 115	17%	833 787	10%	969 678	17%	1 029 534	17%	1 750 669	21%	1 580 357	20%
Bank credits and loans	494 379	5%	969 145	12%	547 873	6%	363 714	4%	432 893	7%	456 297	8%	994 323	12%	880 318	11%
Bonds issued	0	0%	0	0%	206 498	2%	294 536	4%	318 140	5%	323 814	5%	325 885	4%	327 072	4%
Finance lease liabilities	244 106	3%	190 079	2%	102 100	1%	61 590	1%	45 515	1%	74 632	1%	199 620	2%	167 295	2%
Provisions	1 071	0%	1 396	0%	454	0%	4 369	0%	4 382	0%	3 649	0%	24 940	0%	27 002	0%
Other liabilities	142 538	2%	113 013	1%	131 664	2%	72 931	1%	41 016	1%	34 440	1%	47 903	1%	15 925	0%
Deferred tax liabilities	417 468	5%	402 549	5%	473 526	5%	36 647	0%	127 730	2%	136 702	2%	157 998	2%	162 745	2%
Current liabilities	4 041 517	45%	3 311 725	40%	3 758 414	43%	3 847 367	47%	2 320 935	40%	2 353 499	39%	3 870 143	46%	3 700 058	46%
Bank credits and loans	1 697 567	19%	1 051 685	13%	1 456 714	17%	964 503	12%	651 998	11%	556 708	9%	1 637 805	19%	1 672 723	21%
Bonds issued	0	0%	0	0%	532	0%	20 534	0%	3 811	0%	3 707	0%	3 657	0%	3 668	0%
Finance lease liabilities	132 865	1%	88 986	1%	82 961	1%	62 148	1%	47 372	1%	40 607	1%	55 600	1%	58 603	1%
Trade and other liabilities	1 988 091	22%	1 968 667	24%	2 035 735	23%	1 748 880	21%	1 545 219	27%	1 634 692	27%	1 975 230	23%	1 779 351	22%
Income tax liabilities	17 574	0%	4 564	0%	21 800	0%	23 780	0%	17 217	0%	29 980	1%	1 399	0%	17 562	0%
Other financial liabilities	0	0%	214	0%	117	0%	760	0%	0	0%	325	0%	0	0%	10 916	0%
Provisions	205 420	2%	197 610	2%	146 005	2%	66 063	1%	55 318	1%	87 480	1%	196 452	2%	157 235	2%
Discountinued consolidation liabilities	0	0%	0	0%	0	0%	949 358	12%	0	0%	0	0%	0	0%	0	0%
Other non-financial liabilities	0	0%	0	0%	14 549	0%	11 342	0%	0	0%	0	0%	0	0%	0	0%

Source: Owning processing, Kofola's Annual Reports from 2009 to 2016

C/14   Kofola's P&L Prediction from 2017 to 2022

Year	2017 E		2018 E		2019 E		2020 E		2021 E		2022 E	
Revenues	7 500 000	100%	7 800 000	100%	8 000 000	100%	8 150 000	100%	8 350 000	100%	8 550 000	100%
Own products/services	7 000 000	93%	7 200 000	92%	7 400 000	93%	7 600 000	93%	7 800 000	93%	8 000 000	94%
Goods and materials	500 000	7%	500 000	6%	500 000	6%	550 000	7%	550 000	7%	550 000	6%
Cost of sales	4 400 000	59%	4 500 000	58%	4 650 000	58%	4 700 000	58%	4 900 000	59%	5 000 000	58%
Own products/services	4 000 000	53%	4 100 000	53%	4 250 000	53%	4 300 000	53%	4 500 000	54%	4 600 000	54%
Goods and materials	400 000	5%	400 000	5%	400 000	5%	400 000	5%	400 000	5%	400 000	5%
Gross Profit (Value added)	3 100 000	41%	3 300 000	42%	3 350 000	42%	3 450 000	42%	3 450 000	41%	3 550 000	42%
Selling, marketing, distribution costs	2 000 000	27%	2 100 000	27%	2 100 000	26%	2 200 000	27%	2 200 000	26%	2 300 000	27%
Administrative costs	500 000	7%	500 000	6%	500 000	6%	500 000	6%	500 000	6%	500 000	6%
Included depreciation and amortization	500 000	7%	500 000	6%	500 000	6%	500 000	6%	500 000	6%	500 000	6%
Included wages	1 200 000	16%	1 200 000	15%	1 200 000	15%	1 200 000	15%	1 200 000	14%	1 200 000	14%
Other operating income	100 000	1%	100 000	1%	100 000	1%	100 000	1%	100 000	1%	100 000	1%
Other operating expanses	250 000	3%	250 000	3%	250 000	3%	250 000	3%	250 000	3%	250 000	3%
EBITDA	950 000	13%	1 050 000	13%	1 100 000	14%	1 100 000	13%	1 100 000	13%	1 100 000	13%
Adjusted from depreciation and amortization	500 000	7%	500 000	6%	550 000	7%	550 000	7%	550 000	7%	550 000	6%
EBIT (Operating profit)	450 000	6%	550 000	7%	550 000	7%	550 000	7%	550 000	7%	550 000	6%
NOPAT	364 500	5%	445 500	6%	445 500	6%	445 500	5%	445 500	5%	445 500	5%
Finance income	10 000	0%	12 000	0%	14 000	0%	16 000	0%	18 000	0%	20 000	0%
Finance costs	110 000	1%	110 000	1%	110 000	1%	110 000	1%	110 000	1%	110 000	1%
Interest expanses	60 000	1%	60 000	1%	60 000	1%	60 000	1%	60 000	1%	60 000	1%
Share of P/L of associate	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Financial result	-100 000	-1%	-98 000	-1%	-96 000	-1%	-94 000	-1%	-92 000	-1%	-90 000	-1%
EBT (Profit/loss before tax)	350 000	5%	452 000	6%	454 000	6%	456 000	6%	458 000	5%	460 000	5%
Income tax (Tax on profit)	66 500	1%	85 880	1%	86 260	1%	86 640	1%	87 020	1%	87 400	1%
EAT (Profit/loss after tax)	283 500	4%	366 120	5%	367 740	5%	369 360	5%	370 980	4%	372 600	4%

Source: Owning processing, Kofola's Annual Reports from 2009 to 2016

C/15 Kofola's Assets Prediction from 2017 to 2022

Year	2017 E		2018 E		2019 E		2020 E		2021 E		2022 E	
Total assets	8 350 000	100%	8 925 000	100%	9 075 000	100%	9 325 000	100%	9 525 000	100%	9 850 000	100%
Non-current assets	5 150 000	62%	5 650 000	63%	5 850 000	64%	6 050 000	65%	6 250 000	66%	6 450 000	65%
Property, plant and equipment	3 800 000	46%	4 300 000	48%	4 500 000	50%	4 700 000	50%	4 900 000	51%	5 100 000	52%
Goodwill	90 000	1%	90 000	1%	90 000	1%	90 000	1%	90 000	1%	90 000	1%
Intangible assets	1 100 000	13%	1 100 000	12%	1 100 000	12%	1 100 000	12%	1 100 000	12%	1 100 000	11%
Investment in associate	60 000	1%	60 000	1%	60 000	1%	60 000	1%	60 000	1%	60 000	1%
Other receivables	50 000	1%	50 000	1%	50 000	1%	50 000	1%	50 000	1%	50 000	1%
Other non-financial assets	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Deferred tax assets	50 000	1%	50 000	1%	50 000	1%	50 000	1%	50 000	1%	50 000	1%
Current assets	3 200 000	38%	3 275 000	37%	3 225 000	36%	3 275 000	35%	3 275 000	34%	3 400 000	35%
Assets classified as held for sale	100 000	1%	75 000	1%	75 000	1%	75 000	1%	75 000	1%	50 000	1%
Inventories	500 000	6%	500 000	6%	550 000	6%	600 000	6%	600 000	6%	650 000	7%
Trade and other receivables	1 300 000	16%	1 400 000	16%	1 400 000	15%	1 400 000	15%	1 400 000	15%	1 500 000	15%
Income tax receivables	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Cash and cash equivalents	1 300 000	16%	1 300 000	15%	1 200 000	13%	1 200 000	13%	1 200 000	13%	1 200 000	12%
Discontinued consolidation assets	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Source: Owning processing, Kofola's Annual Reports from 2009 to 2016

C/16   Kofola's Equity and Liabilities Prediction from 2017 to 2022

Year	2017 E		2018 E		2019 E		2020 E		2021 E		2022 E	
Total equity and liabilities	8 350 000	100%	8 925 000	100%	9 075 000	100%	9 325 000	100%	9 525 000	100%	9 850 000	100%
Total Equity	2 650 029	32%	2 800 129	31%	2 882 749	32%	2 984 369	32%	2 985 989	31%	2 987 609	30%
Controlled equity	2 650 029	32%	2 800 129	31%	2 882 749	32%	2 984 369	32%	2 985 989	31%	2 987 609	30%
Share capital	2 229 500	27%	2 229 500	25%	2 229 500	25%	2 229 500	24%	2 229 500	23%	2 229 500	23%
Share premium and cap. reorg. reserve	-1 962 871	-24%	-1 962 871	-22%	-1 962 871	-22%	-1 962 871	-21%	-1 962 871	-21%	-1 962 871	-20%
Other reserves	2 100 000	25%	2 200 000	25%	2 200 000	24%	2 300 000	25%	2 300 000	24%	2 300 000	23%
Foreign currency translation reserve	200 000	2%	200 000	2%	200 000	2%	200 000	2%	200 000	2%	200 000	2%
Own shares	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Retained earnings	83 400	1%	133 500	1%	216 120	2%	217 740	2%	219 360	2%	220 980	2%
Non-controlled equity	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total liabilities	5 699 971	68%	6 124 871	69%	6 192 251	68%	6 340 631	68%	6 539 011	69%	6 862 391	70%
Non-current liabilities	1 827 248	22%	2 252 148	25%	2 319 528	26%	2 319 528	25%	2 319 528	24%	2 319 528	24%
Bank credits and loans	1 139 953	14%	1 400 000	16%	1 400 000	15%	1 400 000	15%	1 400 000	15%	1 400 000	14%
Bonds issued	320 000	4%	420 000	5%	420 000	5%	420 000	5%	420 000	4%	420 000	4%
Finance lease liabilities	167 295	2%	217 295	2%	217 295	2%	217 295	2%	217 295	2%	217 295	2%
Provisions	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other liabilities	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Deferred tax liabilities	200 000	2%	214 853	2%	282 233	3%	282 233	3%	282 233	3%	282 233	3%
Current liabilities	3 872 723	46%	3 872 723	43%	3 872 723	43%	4 021 103	43%	4 219 483	44%	4 542 863	46%
Bank credits and loans	1 672 723	20%	1 672 723	19%	1 672 723	18%	1 672 723	18%	1 672 723	18%	1 672 723	17%
Bonds issued	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Finance lease liabilities	50 000	1%	50 000	1%	50 000	1%	50 000	1%	50 000	1%	50 000	1%
Trade and other liabilities	2 000 000	24%	2 000 000	22%	2 000 000	22%	2 148 380	23%	2 346 760	25%	2 670 140	27%
Income tax liabilities	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other financial liabilities	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Provisions	150 000	2%	150 000	2%	150 000	2%	150 000	2%	150 000	2%	150 000	2%
Discountinued consolidation liabilities	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other non-financial liabilites	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Source: Owning processing, Kofola's Annual Reports from 2009 to 2016

C/17   Ratios from 2009 to 2016

Year	2009 A	2010 A	2011 A	2012 A	2013 A	2014 A	2015 A	2016 A
Profitability								
Gross margin	37%	37%	34%	34%	32%	38%	39%	40%
EBITDA margin	14%	6%	10%	13%	-1%	15%	13%	11%
EBIT margin	8%	-1%	4%	5%	-8%	7%	6%	4%
EAT margin	5%	-2%	2%	3%	-12%	5%	3%	1%
ROE	13%	-6%	5%	5%	-32%	11%	8%	3%
ROA	5%	-2%	2%	2%	-14%	5%	3%	1%
ROCE	9%	-4%	3%	4%	-23%	8%	5%	2%
ROS	5%	-2%	2%	3%	-12%	5%	3%	1%
ROIC	10%	-4%	4%	4%	-24%	10%	9%	3%
Financial Leverage								
Equity ratio	41%	40%	40%	43%	43%	43%	34%	34%
Debt to Equity	145%	150%	149%	134%	131%	131%	196%	193%
Long-term Debt to Equity	35%	50%	42%	24%	39%	40%	61%	58%
Long-term Debt to Assets	14%	20%	17%	10%	17%	17%	21%	20%
Interest Coverage	5,63	-0,53	2,73	2,70	-5,15	6,39	5,45	4,58
Liquidity								
Current ratio	0,71	0,82	0,76	0,81	0,73	0,76	0,88	0,84
Quick ratio	0,54	0,57	0,54	0,64	0,48	0,58	0,75	0,71
Cash ratio	0,08	0,11	0,09	0,03	0,09	0,24	0,50	0,38
Activity								
Total asset Turnover	1,10	0,97	0,99	0,81	1,14	1,05	0,84	0,87
Fixed Asset Turnver	1,62	1,44	1,48	1,31	1,61	1,50	1,40	1,42
Inventory Turnover	14,21	9,75	10,24	10,27	11,29	14,83	14,28	14,42
Days in Invetory	40	59	53	53	47	39	42	42
Accounts Receivable Turnover	5,75	5,13	5,77	5,13	6,92	7,32	8,28	6,94
Days in Accounts Receivable	63	63	67	53	50	46	47	56
Accounts Payable Turnover	1,00	1,00	1,02	0,92	0,94	1,03	1,09	0,95
Days in Accounts Payable	114	141	128	144	123	152	164	152
Cash Conversion Cycle	-11	-19	-8	-37	-26	-67	-76	-55
Net Working Capital	-1 152 596	-598 731	-894 396	-748 300	-615 844	-565 622	-474 853	-596 038
Shareholder Ratios								
Earning per share (not adjusted)	21,15	-8,33	7,70	7,76	-35,78	13,01	10,27	3,74
Dividend per share	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,00
Dividend payout ratio	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,87

Source: Owning processing.

C/18   Ratios Prediction from 2017 to 2022

Year	2017 E	2018 E	2019 E	2020 E	2021 E	2022 E
Profitability						
Gross margin	41%	42%	42%	42%	41%	42%
EBITDA margin	13%	13%	14%	13%	13%	13%
EBIT margin	6%	7%	7%	7%	7%	6%
EAT margin	1%	1%	1%	1%	1%	1%
ROE	11%	13%	13%	12%	12%	12%
ROA	3%	4%	4%	4%	4%	4%
ROCE	6%	7%	7%	7%	7%	7%
ROS	4%	5%	5%	5%	4%	4%
ROIC	9%	10%	9%	9%	9%	9%
Financial Leverage						
Equity ratio	32%	31%	32%	32%	31%	30%
Debt to Equity	215%	219%	215%	212%	219%	230%
Long-term Debt to Equity	69%	80%	80%	78%	78%	78%
Long-term Debt to Assets	22%	25%	26%	25%	24%	24%
Interest Coverage	7,50	9,17	9,17	9,17	9,17	9,17
Liquidity						
Current ratio	0,83	0,85	0,83	0,81	0,78	0,75
Quick ratio	0,70	0,72	0,69	0,67	0,63	0,61
Cash ratio	0,34	0,34	0,31	0,30	0,28	0,26
Activity						
Total asset Turnover	0,90	0,87	0,88	0,87	0,88	0,87
Fixed Asset Turnver	1,46	1,38	1,37	1,35	1,34	1,33
Inventory Turnover	15,00	15,60	14,55	13,58	13,92	13,15
Days in Invetory	41	40	43	46	44	47
Accounts Receivable Turnover	6,30	5,78	5,71	5,82	5,96	5,90
Days in Accounts Receivable	62	65	63	62	60	63
Accounts Payable Turnover	1,06	1,00	1,00	1,04	1,04	1,06
Days in Accounts Payable	164	160	155	165	172	192
Cash Conversion Cycle	-60	-55	-49	-57	-68	-82
Net Working Capital	-672 723	-597 723	-647 723	-746 103	-944 483	-1 142 863
Shareholder Ratios						
Earning per share (not adjusted)	12,72	16,42	16,50	16,57	16,64	16,71
Dividend per share	7,00	8,00	8,00	9,00	10,00	12,00
Dividend payout ratio	0,55	0,49	0,48	0,54	0,60	0,72

Source: Owning processing.