

**СТУДЕНТСЬКІ СТУДІЇ**

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4 Svobody Sq., 61022, Kharkiv, UkraineE-mail: [roxanisen@gmail.com](mailto:roxanisen@gmail.com), ORCID: <https://orcid.org/0000-0003-0737-3902>**INVESTMENT ANALYSIS OF COCA COLA HELLENIC BOTTLING COMPANY**

Studying the investment attractiveness of a company is an integral part of the decision to buy or sell shares. Investment analysis includes a review of the company, competition in the industry, as well as financial analysis, likelihood of risks and company value estimation. In this article, we've conducted an investment analysis in regard to Coca-Cola Hellenic Bottling Company (HBC). Currently the company is undervalued compared to competitors in the market. However, it remains a good choice with its high stability in the market. Most of the economic indicators of the company are expected to grow rapidly in future periods. Environmental protection and health benefits of the product are the main demand drivers and trends now and in the near future (in addition to quality products and excellent communication with consumers through advertising and other activities). Moreover, existing trade and political conflicts between the countries are indicators of a looming recession, which can also affect the market of soft drinks. Besides, the company has strong competitors. We cannot say that Coca Cola HBC stands out strongly as a market leader. However, its development and market position is stable. We should mention that Coca Cola HBC 6 times in 7 years took the first place in The Dow Jones Sustainability Index and 9th year in a row company is in top 3 Global and European beverage companies. Coca-Cola HBC's main investment risks include changes in regulations and consumer preferences due to raising health and environmental concerns. The company is also exposed to the risk of currency volatility, commodity costs uncertainty which can affect its financial performance. Such risk as cyberattacks, supply and distribution disruption can cause damage to company's ability to operate effectively. There is a possibility of management failing to implement company's business model and strategies in Coca-Cola HBC's recent acquisitions. The article allows to delve deeper into the essence of the functioning of business processes in the soft drinks industry and to offer authors' vision of Coca-Cola HBC assessment.

**Keywords:** DCF model, investment analysis, DuPont analysis, Porter's Five Forces.**JEL Classification:** J12, J17, J32, F21, R42.

**Statement of the problem.** The article analyzes a giant in the soft drinks industry Coca Cola Hellenic Bottling Company. One should be constantly up to date with events in order to clearly understand the situation on the securities market under the influence of market factors, when forming an investment portfolio of securities. Standard methods are used to determine the investment attractiveness of the company, but the interpretation of the results may vary depending on the overall picture of the analysis, that is, the influence of various coefficients can offset the influence of other equally important indicators.

**Statement of the objectives of the article.** The main goal of the work is to determine the attractiveness of the company based on the synthesis of various methods of investment valuation of the company and the development of the authors' vision of the results of the work. The work includes such sections as: business description, industry and competitor analysis, company risk analysis, financial analysis and company valuation.

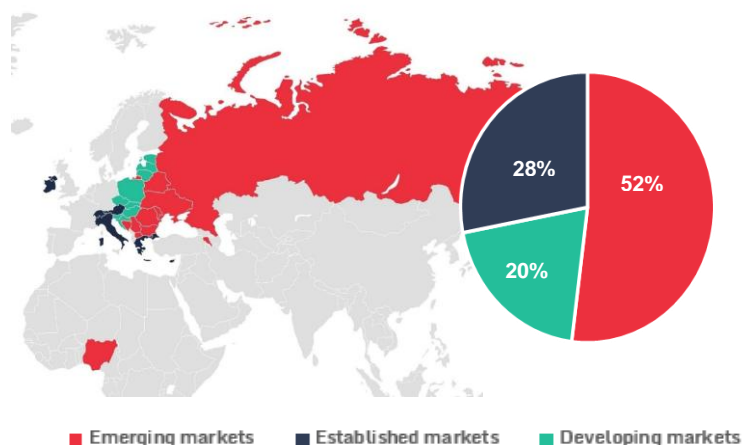
**Presentation of the base material.**

**Business description.** Coca Cola Hellenic Bottling Company is one of the biggest partners of The Coca-Cola Company, a leader in today's modern market of non-alcoholic beverages. The main business activity of this company is production, packaging, selling and delivery of different drinks. It exists since 1981, when Kar-Tess Holding SA bought 99,9% stocks of Hellenic Bottling Company S.A. From that time it has extended to a huge company with over 2 billion sales volume per year. Having 28 884 employees and 32 000 suppliers (info by the end of 2018) it provides 27 countries in Europe and 1 country (Nigeria) in Africa with various products. The company operates on 59 plants with 289 bottling lines and 292 warehouses (Official site of Coca-Cola HBC AG).

**Geographic and business segments.** Coca-Cola HBC is grouping its geographical markets into three segments: emerging, developing and established markets (Figure 1).

Emerging markets bring the most profit; in 2018 net sales on the Emerging markets amounted to € 2,880 mln, on the Established markets – to € 2,470 mln and on Developing markets – to € 1,307 mln.

Coca-Cola HBC is concentrated on such products as sparkling soft drinks, water, low and no-calorie sparkling soft beverage, juice, ready-to-drink tea, energy beverage and other. The biggest amount of sales belongs to sparkling soft drinks, that are presented by well-known brands: Coca-Cola, Sprite, Schweppes and Fanta (The Coca Cola Brand and Sustainability). Due to commitment, which was signed with the Union of European Soft Drinks Associations (UNESDA), the company started to reduce the amount of sugar in its products by reconsideration of recipes and making Coca-Cola Zero, which started to be popular with yearly sales volume up to 29.1%. Besides, activity in the segments of juice and ready-to-drink tea can be noted brands like Rich, Fuze Tea, Cappy and Pulpy. Generally, Coca Cola HBC distributes or sells around 100 beverage brands. (Jones & Comfort, 2018)



**Fig.1. Coca-Cola HBC geographical markets**

Source: (Official site of Coca-Cola HBC AG)

**Strategy.** The main purpose of the company is to have a leader position in each market, where it works. Through years while conquering new markets, the company has absorbed a lot of companies, and in September 2019 Coca Cola HBC acquired Italian natural water and sparkling drinks company Laurasia. This step allowed it to expand existing beverage portfolio. Besides, in order to have comparable EBIT margin on the level of 11% by 2020 the company is going to invest in new technologies, acquire other brands, enhance efficiency and continue reducing water discharge and energy consumption. Coca Cola HBC wishes to bring happiness not only to each customer's life, but to the whole society.

Coca Cola HBC 6 times in 7 years took the first place in The Dow Jones Sustainability Index and 9<sup>th</sup> year in a row is in top 3 Global and European beverage companies. In addition to this, in November 2019 Coca-Cola HBC made the best performer in the FTSE 100 index.

#### **Industry overview and competitive position.**

*Global demand drivers and trends. Global recession.* According to the International Monetary Fund (IMF), the global economy grew by three percent in 2019. Its documents claim that in 2020, a slowdown in the growth of most global economies is expected. So, the EU economy, according to the report, in 2019 has increased by only 1.2 percent, and in the next – by 1.4 percent. Reasons of it are conflicts between countries (primarily between the US and China), as well as the uncertainty associated with geopolitical risks (including Brexit-related risks). Therefore, impact on business may include shifts in the international corporate tax architecture and changing of the monetary policy of the next generation.

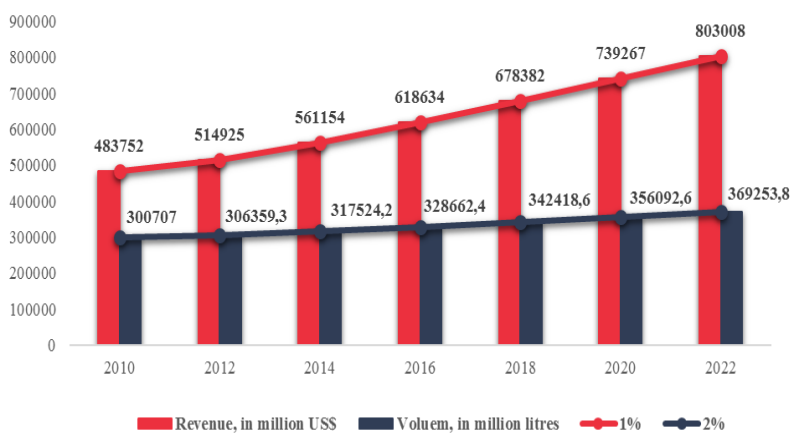
*Environment protection and trend “to be green”.* Plastic production is one of the world’s most pressing issues, having escalated to more than 320 million metric tons every year – and millions of those end up in oceans, rivers and landfills. Society is becoming better informed and more aware of the environmental impact of consumer products (Berk & DeMarzo, 2016). Therefore, when making purchases, a consumer doubts the purchase of non-eco-friendly goods or purchases in non-recyclable packaging. Thus, they are demanding that industry improves the environmental performance of its products.

*Healthcare.* There is a growing people’s interest in fresh, natural and organic products. Consumers understand food’s nutritional value (in helping to lower blood pressure, for example), as well as overall health risk. Lower calories and natural ingredients are two requirements of the market. Global Natural Food&Drinks market is estimated to grow at CAGR of 13,7 to 2023 (The portal for statistics).

Besides, in order to find out impact of various important changes and probability of their occurrence we did PESTLE analysis. Thus, the biggest influence on the market have social, technological and political factors.

*Divisional drivers and trends.* Soft Drinks market is expected to register a growth rate of 4.5% (CAGR 2019-2022) during the forecast period. The market is expected to garner a value of approximately USD 800 Billion by the end of 2022. The increasing demand for ready to drink mixed beverages, reedy to drink protein beverages, and reedy to drink cocktails are driving the growth of the global non-alcoholic RTD beverages market. Additionally, certain market players are positioning non-alcoholic RTD beverages as healthy drinks, owing to which these beverages are gaining acceptance.

Revenue in the Soft Drinks segment amounts to USD 678,382m in 2018 (Figure 2). The average per capita USD 96.03 (+3.2%). The average per capita consumption stands at 47.4L in 2019. Awareness and concern about health impacts are some of the reasons for the stronger growth of non-alcoholic beverages compared to alcoholic ones.



**Fig.2. Soft Drinks Market**

Source: author’s development (Official site of Coca-Cola HBC AG)

*Health & Wellness Drinks.* Drinks for health and well-being are now at the top of consumer demand, as are foods in this category. Such drinks meet the following criteria: naturalness, health

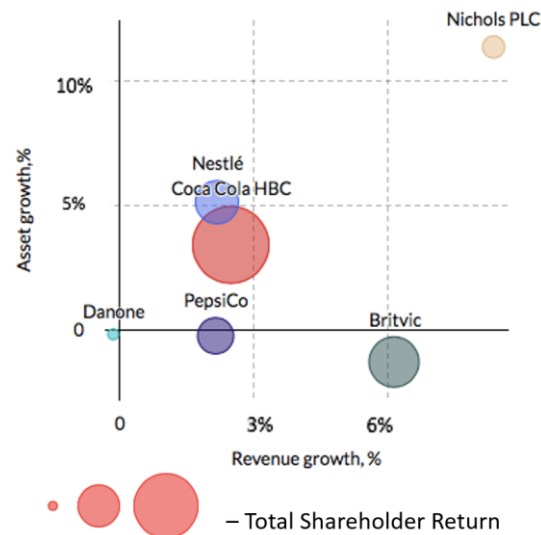
benefits, low calorie content. Demand for them will continue to increase, moreover, Health & Wellness Food and Beverages Market is expected to grow at CAGR of 6.99% from 2018 to 2023.

**Natural drinks.** Today, consumers, especially in the countries with developed economies, study in detail the composition of the product on the label and choose those that contain the least amount of artificial ingredients, and preferably 100% natural, to buy. Amid the growing number of obese people and the constant struggle of a large part of the overweight population, low-calorie foods and drinks are in high demand. The key to solving this problem, according to experts, will be natural sweeteners from stevia.

**Ready-to-drink drinks based on tea and coffee.** Ready-to-drink coffee drinks with green coffee, which has antioxidant properties, are becoming more common in European countries. The unique properties of ready-to-drink drinks – naturalness, functionality, high content of healthy ingredients – combined with ease of their use make this category very promising. It is a key driver of growth in the global beverage market as a whole. There is a strong expectation that such market will rise at CAGR of around 8% during 2019-2024.

**Energy drinks.** Energy drinks remain a huge and growing segment of the global market, it includes a large number of innovations. Thanks to this, "energy" continues to lead the global functional drinks market. On the average, the global market for power engineers grows at more than 10% per year, both in kind and in value terms. During next 8 years the global energy drinks market is estimated to grow at CAGR of 7.08% Although, regulations regarding caffeine content in such beverages and some rising statistics about health concerns about the effects of energy drinks may hamper the market growth.

**Competitors analysis.** In order to make analysis more extensive, we've compared 6 similar to The Coca Cola HBC companies which we decided to be competitors (Figure 3). We observed such indicators as TSR, Asset growth, Revenue growth, EBITDA, SG&A, COGS margins, Debt/Equity, total asset turnover, inventory, receivable, payable days and cash conversion cycle. According to these indexes we've ranked the companies and got that The Coca Cola HBC took the fourth place among its competitors.



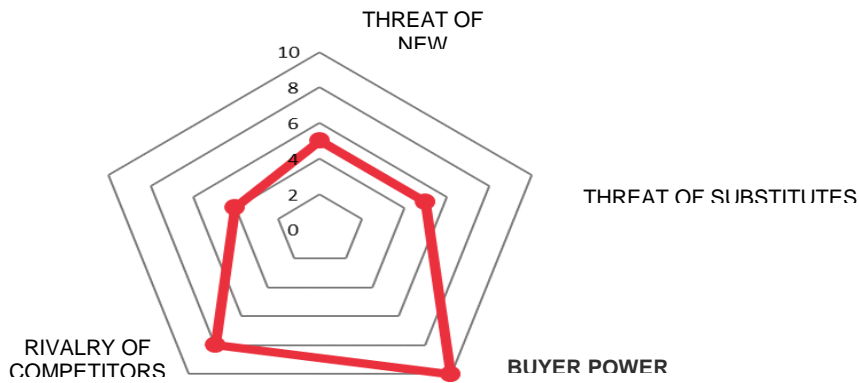
**Fig.3. Comparison of the main competitors by their activity in the market**

Source: author's development (Youinvest)

Also we analyzed market competition using Porter's five competitive forces model (Figure 4).

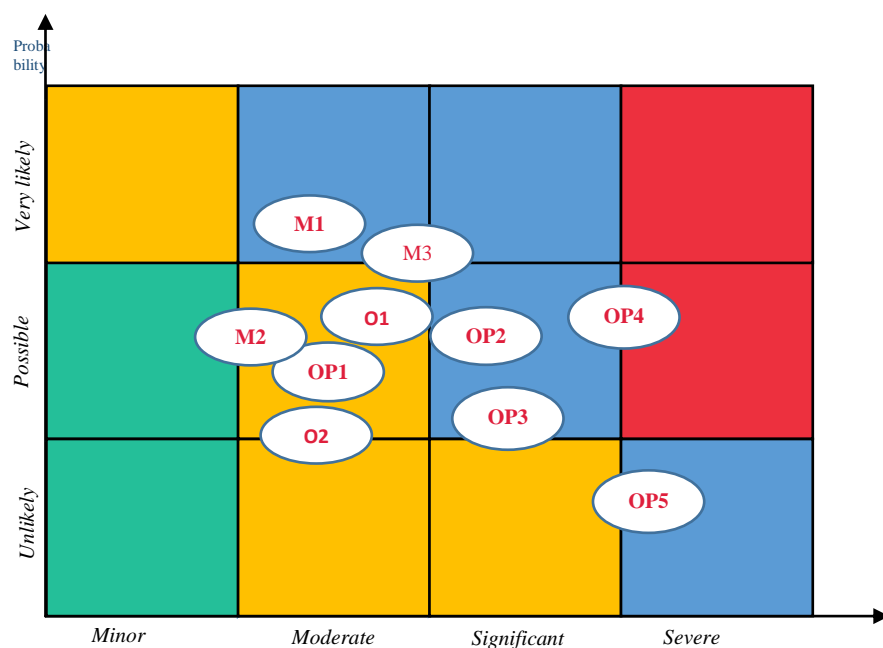
**Threat of new entrants is on the low level.** Emerging companies that want to enter the soft drinks market will need huge investments, which they most likely won't get. Eventually this is not a threat to such a company as The Coca Cola HBC, as its popularity and time spent on the market is high.

**Investment risks. Operational risks** (Figure 5).



**Fig.4. Porter's Five Forces Analysis**

Source: author's development (Official site of Coca-Cola HBC AG)



**Fig.5. Risk Matrix**

Source: author's development (Official site of Coca-Cola HBC AG)

Raw materials and packaging materials price increase (OP1). Uncertainty in future commodity and materials availability and prices can affect production process and its costs.

Mitigation: using derivative financial instruments and agreements with suppliers.

Supply chain and distribution channels disruption (OP2). Breakdowns in supply and distribution networks may cause interruptions in production process and create obstacles for products to reach consumers.

Mitigation: CCHBC constantly optimizes its significant supply chain infrastructure, logistics and products distribution. Collaboration with suppliers can minimize issues in supply chains, including quality issues.

Risk of failing to execute new acquisitions (OP3). The company has recently made significant acquisitions in its different markets. Failure to implement its business model, strategic and financial plans can lead to company's losses.

Mitigation: CCHBC should adjust its plans to acquired companies' capacity, local demand, market conditions, consumer behavior, and regulations.

Cyber risk (OP4). Cyber-attacks on company's information system may result in disruption to business activities and products delivery. Data breaches and system outages can cause significant financial losses, as well as damage the company's reputation (Brealey et al., 2011).

Mitigation: the company should implement effective cyber risk management with strict security control, monitoring the security threat landscape in compliance with frameworks, standards and laws that mandate cyber risk assessments. Early respond to cyber-attacks can prevent significant loss.

Reliance on The Coca-Cola Company and its brands (OP5). As the main partner and supplier, The Coca-Cola Company (TCCC) may significantly affect CCHBC's business by changing or terminating agreements with the company. TCCC determining concentrate prices may have an impact on CCHBC's profits, as concentrates make up more than 30% of the company's COGS. A considerable percentage (69%) of Coca-Cola HBC's sales volume is represented by products under brands licensed from TCCC, which makes sales revenues sensitive to the brands' marketing success.

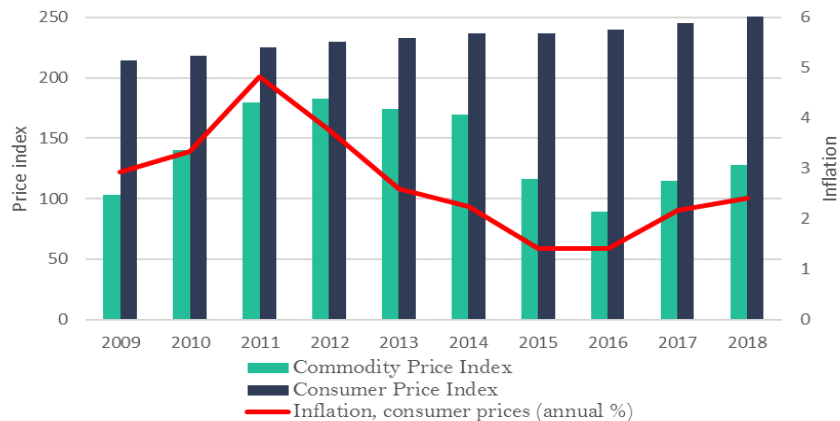
Mitigation: both parties are interested in maintaining strong business relationship due to CCHBC's strategic importance to TCCC. Companies collaborate to achieve common goals, development and growth, including success of their joint ventures. CCHBC is not fully dependent on TCCC as the company has its own brands and a diversified brand portfolio in general.

#### Market risks.

*Fluctuation in currency rates (M1).* CCHBC is exposed to foreign exchange risk as it operates in the countries with currencies other than the company's functional currency. Exchange rates volatility can affect not only financial results, but also how they are reflected in financial statements after conversion to euro. Currency rates have an impact when the company enters into transactions involving other currencies. It includes purchasing commodities from foreign suppliers, e.g. purchasing concentrates from The Coca-Cola Company in US dollars.

Mitigation: the company uses foreign currency forward, option and future contracts to hedge a portion of foreign currency risk. Matching currency sales revenue and operating costs also helps to reduce impact of the risk.

*Inflation (purchasing power) risk (M2).* Increase in inflation reduces the real value of cash flows, which affects company's future purchasing power; it can lead to higher costs and higher liabilities. Inflation may cause a distortion in financial results, e.g. higher revenue growth during the periods of inflation increase. It can also decrease future dividends worth and securities value. In addition, inflation may adversely affect consumer buying power (Figure 6), which can subsequently result in weakened demand.



**Fig.6. Inflation & Price Indexes**

Source: author's development (The World Bank Open Data)

Mitigation: caps on the level of inflationary increases protect against extreme inflation. Discrepancy in financial statements can be eliminated by using inflation information to adjust financial indicators and make them comparable over time. In order to mitigate inflation's negative effect, the company applies financial instruments to provide inflation hedge, offers products with a reasonable price to consumers.

*Changes in consumer preferences and health trends (M3).* Consumers being more health conscious may adversely affect the demand, which can lead to decline in sales, particularly of sugar-sweetened beverages. Public health concerns may also influence brands and company's reputation.

Mitigation: CCHBC reformulates recipes of its products to reduce sugar, fat, and calorie content. The company expands its beverage portfolio launching new products that contain less or no sugar, more organic ingredients in order to meet new consumer preferences.

#### **Other risks.**

*Discriminatory taxes (O1).* Due to growing health concerns and concerns regarding the environmental footprint of plastic bottles, governments are introducing taxes on added-sugar beverages and plastic packaging. Increased taxation can reduce company's profitability. Taxes also lead to products price increase, which can affect consumption volume.

Mitigation: CCHBC develops sustainable packaging, which includes using more recycled and renewable materials, and promotes sugar-free products.

*Adverse weather conditions (O2).* Sales volume may be affected by weather conditions, especially during summer season. Unseasonably cold and wet weather can result in significant demand decline.

Mitigation: The company can apply more intensive marketing to stimulate consumption, particularly in the beginning of warm season.

#### **Financial analysis.**

*Revenue growth.* In 2018 Coca-Cola HBC's sales reached € 6657.1 million, with a growth of 2.1%. The increase in operating efficiency contributed to the fact that the company's operating profit margin increased by 56 basis points, reaching a margin of 9.6% in 2018 (compared with 9.04% in 2017). In a period from 3 to 5 years, we are optimistic about the ability of business to expand its sales beyond the existing limits. The year 2020 should be more successful for Coca-Cola HBC vs 2019. We expect annual revenue growth of 2.7% in 2020 and a smooth increase.

*Segments Revenue and EBIT.* Coca-Cola HBC has historically divided its market into three main segments: Established, Developing and Emerging. In 2018, the largest percentage of total revenue came from Emerging markets 43%, then from Established markets 37% and 20% from Developing markets. We forecast that overall segment revenue ratio will change in the direction of increasing the share of revenue in 2024 in Emerging markets by 2% and its decrease in Established markets by 2%. This situation is due to the fact that Established markets are already developed ones, and Emerging markets are the largest market in terms of population, and they have the greatest growth potential.

As for EBIT, in 2018 a similar situation is observed: Emerging markets 43%, Established markets 37%, and Developing markets – 20%. We expect that in 2024 EBIT share in Established markets will increase to 41%, and its shares in Emerging and Developing markets will decrease to 40% and 18%, respectively. We attribute this to the fact that the cost price of one bottle is higher at the Established markets than in other segments.

*Reported earnings and financial soundness of COCA-COLA HBC.* We've conducted Beneish M-score and Altman-Z score analyses to evaluate earnings quality and assess Coca-Cola HBC financial health. Altman Z-Score for Coca-Cola HBC was greater than 2.95 over the last four years, which indicates that Coca-Cola HBC is safe from bankruptcy. Based on our assessment of Beneish M-Score for Coca-Cola HBC, we conclude that there is a low probability of Coca-Cola HBC manipulating reported earnings over the last five years since the score was below the benchmark M-Score of -2.22.

*Financial performance.* In 2019, the ratio of net debt to equity was 1.12 (the total debt of the company amounted to € 3608.43 million in 2019), and we expect this figure to drop to 1.11 in 2020 due to an increase in total debt. We associate this with the company's purchase of two companies, Bambi and Lurisia. We also expect this indicator to increase over the next five years.

The ratio of net debt to EBITDA over the past five years has decreased from 2.84 in 2014 to 1.66 in 2018, so we can say that the company has good solvency (Table 1). This position is

confirmed by the ratio of long-term debt to total assets. During the analyzed period, the indicator had a stable position (0.21 in 2018).

Table 1

Key Financial Indicators									
Key Financials	2016	2017	2018	2019	2020	2021	2022	2023	2024
Net sales revenue	6219,00	6522,00	6657,10	6863,30	7048,01	7036,40	7091,55	7146,55	7201,55
EBITDA	845,90	927,50	968,70	998,90	1040,16	1072,62	1109,54	1145,38	1185,03
Financial Leverage									
Debt to Equity Ratio	1,29	1,20	1,20	1,12	1,11	1,17	1,21	1,25	1,30
Net Debt to EBITDA	1,92	1,75	1,66	1,62	1,67	1,76	1,67	1,70	1,76
Long Term Debt to Assets	0,22	0,22	0,21	0,22	0,22	0,24	0,23	0,23	0,25
Cash Flow to Debt Ratio	0,21	0,22	0,21	0,24	0,25	0,24	0,23	0,23	0,22
Efficiency Ratios									
Asset Turnover	0,95	0,99	0,99	1,00	1,02	0,98	0,96	0,95	0,94
OCF to Net Sales	0,12	0,12	0,12	0,13	0,13	0,13	0,13	0,13	0,14
Cash Conversion Cycle	19,94	13,71	13,35	13,75	8,48	6,79	4,73	0,41	-0,78
Profitability Ratios									
Return on Assets	0,05	0,06	0,07	0,07	0,08	0,08	0,08	0,08	0,08
Return on Equity	0,12	0,15	0,15	0,16	0,17	0,17	0,18	0,18	0,19
Gross Profit Margin	0,37	0,37	0,38	0,40	0,42	0,42	0,42	0,43	0,43
EBITDA Margin	0,14	0,14	0,15	0,15	0,15	0,15	0,16	0,16	0,16
Operating Profit Margin	0,08	0,09	0,10	0,10	0,10	0,11	0,11	0,12	0,12
Net Profit Margin	0,06	0,07	0,07	0,07	0,08	0,08	0,08	0,09	0,09

Source: author's development (Official site of Coca-Cola HBC AG)

In 2019, the ratio of net debt to equity was 1.12 (the total debt of the company amounted to € 3608.43 million in 2019), and we expect this figure to drop to 1.11 in 2020 due to an increase in total debt. We associate this with the company's purchase of two companies – Bambi and Lurisia ones (Demirel et al., 2011). We also expect this indicator to increase over the next five years.

The ratio of net debt to EBITDA over the past five years has decreased from 2.84 in 2014 to 1.66 in 2018, so we can say that the company has good solvency. This position is confirmed by the ratio of long-term debt to total assets. During the analyzed period, the indicator was stable (0.21 in 2018).

A firm liquidity position is maintained by the current ratio and quick ratio. Since 2014, the current liquidity ratio has grown from 0.94 to 1.21 in 2018, and the quick ratio to 0.75 to 0.98. This proves to us that the company can repay current debt from its current assets. In addition to its compelling current and quick liquidity ratio, Coca-Cola HBC has a robust cash pillow of around 10% of total assets in 2018.

Working capital has been growing since 2016 from € 93.2 million to € 419.6 million in 2018. It is assumed that working capital will grow faster starting in 2019, reaching € 1,026.28 million as early as in 2024. The company can direct this money to expand its production through the purchase of new enterprises.

EBITDA margin grows over the analyzed period from 11.40% in 2014 to 14.55% in 2018. We forecast a steady annual growth rate of this indicator.

Coca-Cola HBC's return on equity will increase from 10.2% in 2014 to 19.5% in 2024. Using DuPont decomposition (Figure 7), we defined three key factors influencing ROE. The major growth driver is the increase in the EBIT margin due to operational efficiency improvement from 4.5% to 9.1%. Further, the rising equity multiplier (from 2.2 to 2.3) supports the increase in ROE. However, disproportions between the rise in book value of total assets (2.35% CAGR 2018-2024) and revenue (1.43% CAGR 2018-2024) cause a decline in asset turnover (from 0.99 in 2018 to 0.94 in 2024), which has a negative impact on ROE.

*Dividend policy.* In 2019 the company also increased its dividends paid to shareholders to € 0.57 per share. Coca-Cola HBC dividend policy is that the dividend payout target is 35–45% of comparable net income. Given the historical values and future trends of the company, we expect this figure to reach € 0.61 per share in 2020 and € 0.78 per share in 2025. The total amount of dividends



paid in 2020 should be about € 226.3 million. We explain such positive dynamics in dividend payout by the fact that, historically, dividends per share have been rising steadily over the last 5 years. Such a dividend policy is associated with the desire of Coca-Cola HBC to show loyalty to its investors.

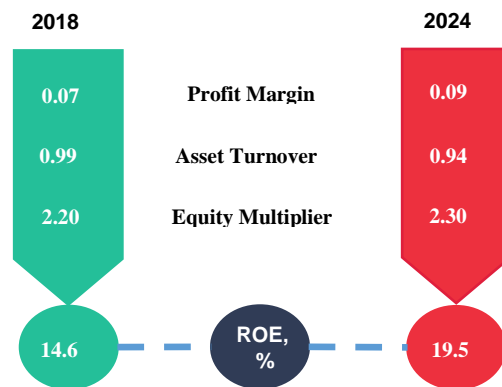


Fig.7. DuPont analysis

Source: author's development (Official site of Coca-Cola HBC AG)

**Cash flow generation.** Operating activities serve as the primary source of cash for the company. Cash from operating activities is expected to grow from € 872.3 million in 2019 to € 923.8 million in 2020. Steady growth is also expected in subsequent years after 2020 due to an increase in operating profit and working capital. Free cash flow demonstrates positive dynamics and doesn't reveal serious operational or financial problems of the company.

Days Inventory Outstanding for the analyzed period was relatively stable and is expected to remain stable in the future. The days of receivables decreased during the analyzed period from 53 days in 2016 to 50 days in 2018 and this trend is expected to continue. Payable days have been growing in recent years and are expected to grow on average by one day per year. The cash conversion cycle indicator is expected to remain stable throughout 2020, but as a result of a faster increase in daily payables compared to daily receivables and inventory turnover in days, the cash conversion cycle indicator is expected to improve significantly in the future. This means that it will take less time for the company to convert its investment into stocks into cash flows.

The OCF/Sales ratio is 0.12 the past four years and is expected to grow to 0.14 in the long term, mainly due to improved overall cash flows from operating activities.

#### Valuation.

**Target price** (Damodaran, 2006). Our target price list for Coca Cola HBC is 35.4 Euros, that is, we believe that the share price will increase by 16.7% compared to 30.17 on 12/31/2019. We evaluated the target price using two methods of comparative analysis and DCF, we got the final value by multiplying the result of each currency value method by weights (for both equal 0.5, so as not to give preference to anyone) and summing up we got our result.

**DCF. WACC.** From the data provided by this company, we received corresponding Total Enterprise Value Calculation. All data in the table is taken for 2019, where necessary we took our estimate of the parameters for this year, which was provided in the appendix 4. The tax rate in the model is 25.4%, it was predicted on the grounds of historical data. Cost of Equity amount of 9.8% was obtained using CAPM methods. As a result, we have such parameters for The weighted average cost of capital equal to 9.4%.

**CASES** (Dotsenko et al., 2019). For 2013-2019, CAGR for Total Revenue was -0.03%, for the EBITDA parameter it was 4.8%, the EBITDA margin for this period increased from 11% to 14.6%.

**BASE CASE.** In this scenario, we assume that for 2019-2024, CAGR for Total Revenue will be 1%, the forecast is based not on the trend of the entire sample, but with a review of recent years (where CAGR was significantly higher), since this better reflects the current development trend of the company, CAGR for EBITDA in this case is expected to be 2.2%, while the margin will increase to 15.44%. In this case, the PV Terminal Value is equal to 14,147 million Euros, taking into account the fact that as the multiplier we took the predicted value of the multiplier  $P / E = 20x$ . If we take the

median value of the competitors (24.6x), it turns out that the stock rating is not adequately high (checked using the Gordon model), so we decided that such a multiplier value is not suitable for our company (Комаріст та ін., 2019).

**BULL CASE.** For a positive development scenario, where we took more optimistic growth values, we got such values for the corresponding parameters: CAGR (Total Revenue) = 3.5%, CAGR (EBITDA) = 8.6%, EBITDA margin = 18.5%, PV Terminal Value = 19,183 million (20x multiplier).

**BEAR CASE.** The growth rates for this option were chosen more pessimistic, but so that the absolute discrepancy with the BASE CASE was similar to the BEAR CASE, to be fair and not to give preference to any option. Results: CAGR (Total Revenue) = -2.6%, CAGR (EBITDA) = - 5.7%, EBITDA margin = 12.4%, PV Terminal Value = 9 501 million (20x multiplier).

**SENSITIVITY ANALYSIS.** Sensitivity analysis was carried out for stock prices depending on the size of the WACC and Terminal EBITDA Multiple. The maximum value (45.3 Euros per share) is obtained at WACC = 8.5% and the multiplier is 22x, the minimum (34 Euros per share) at 10.5% and 18x, respectively. The first option is especially interesting, as in this case the stock remains attractive even if the shareholder wants to receive a profit in the flesh of up to 20%.

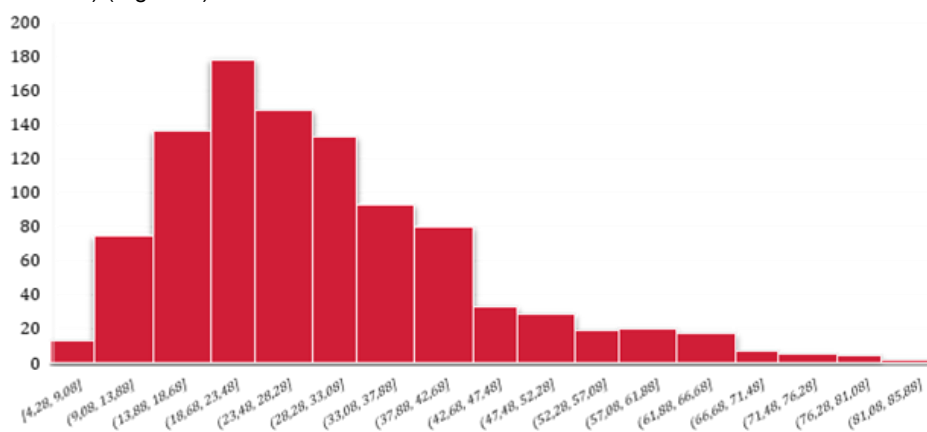
**Comparable Companies' Analysis.** Using this method, we obtained a share price of 31.41 Euros. This value is obtained as the average between the comparative analysis based on the P/E multiplier and the same method based on the EV/EBITDA multiplier.

The key element of valuation using multiples is the analysis and selection of a "peer" group. There are not many companies in the industry with a similar structure of sold goods.

That is why we have another assessment method to reduce risks by relying on just one thing. Companies were selected as similar as possible in size, structure of products sold (although some are still very different in this), market geography and other parameters. The following companies were selected: Carlsberg A/S, Davide Campari-Milano SpA, Coca Cola European Partners, Diageo plc, Britvic, Danone SA, Heineken NV, Gerresheimer AG, Coca Cola Amatil LTD.

When we evaluated state multipliers, we focused on the EV/EBITDA ratio, which is most suitable for evaluating transnational assets of a corporation, since it excludes taxes and ignores the influence of individual tax policies of the countries. As the most popular multiplier, P/E ratio was chosen as the method of assigning the relative value of the share. Coca Cola HBC's EV/EBITDA multiplier is 4%, which is lower than the median, P/E multiplier for CC HBC is 9%, which is lower than the median.

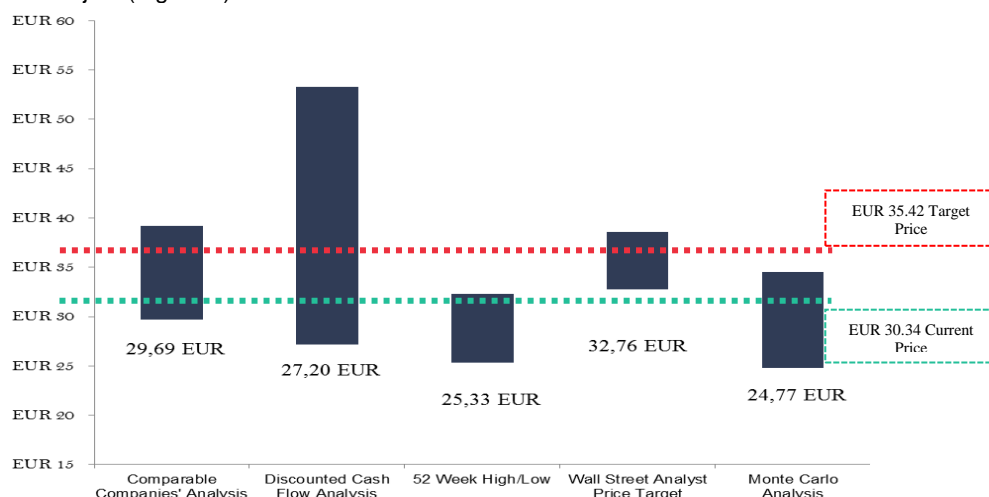
**Monte Carlo Analysis.** For the general assessment, we performed a Monte Carlo simulation of the value of shares based on historical data. The volatility over the past year amounted to 1.6%. Let us take it as the variance for deviation from the previous value. Having generated 1000 values, we get that with a probability of 0.3 our stock will cost more than 33.4 (this is a 10% increase in value, WACC = 9.4%) (Figure 8)



**Fig.8. Monte Carlo simulation**

Source: author's development (Official site of Coca-Cola HBC AG)

*General review.* For a more complete view of the situation, in addition to the one described above, we also analyzed the historical values of stocks over the past 52 weeks and expert estimates on this subject (Figure 9).



**Fig.9. Comparing Valuation Results**

Source: author's development (Official site of Coca-Cola HBC AG)

**Conclusion.** The relevance of this work is in the fact that we present our authors' vision on the application of different methods in the investment analysis of Coca-Cola Hellenic Bottling Company.

*Highlight.* The company is a good choice with high stability in the market. Most of the economic indicators of the company are expected to grow rapidly in future periods.

*Sustainable market position.* Soft drinks market is developing rapidly with perspective of the growth rate of 4.5% in the next 3 years. Environmental protection and the health benefits are the product main demand drivers and trends now and in the near future (in addition to quality products and excellent communication with consumers through advertising and other activities). Moreover, existing trade and political conflicts between the countries are indicators of looming recession, which can also affect the market of soft drinks. In addition, the company has strong competitors. We cannot say that Coca Cola HBC stands out strongly as a market leader. However, its development and market position is stable. We should mention that Coca Cola HBC 6 times in 7 years took first place in The Dow Jones Sustainability Index and 9th year in a row company is in top 3 Global and European beverage companies.

*Unstoppable financial growth.* In 2018 Coca-Cola HBC's sales reached € 6.65 billion, with 2.1% of growth. Over the next 3-5 years, we are optimistic about the ability of the business to expand its sales beyond the existing limits. 2020 should be more successful for Coca-Cola HBC than 2019. We expect annual revenue growth of 2.7% in 2020 and continuation of smooth increase in future periods. EBITDA has been increasing steadily over the recent years, and is expected to increase in 2020, reaching 14.76% (compared with 14.55% in 2019). Our Beneish M-score and Altman Z-score analyses showed that Coca-Cola HBC does not manipulate reported earnings and is safe from bankruptcy.

*Key risks.* Coca-Cola HBC's main investment risks include changes in regulations and consumer preferences due to raising health and environmental concerns. The company is also exposed to the risk of currency volatility, commodity costs uncertainty which can affect its financial performance. Such risk as cyberattacks, supply and distribution disruption can cause damage to company's ability to operate effectively. There is a possibility of management failing to implement company's business model and strategies in Coca-Cola HBC's recent acquisitions. The risk of adverse weather conditions should be taken into account as it affects consumer demand and sales volume.

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Дослідження інвестиційної привабливості компанії є невід'ємною частиною прийняття рішення про купівлю або продаж акцій. Інвестиційний аналіз включає в себе огляд діяльності компанії, конкуренцію в галузі, а також фінансовий аналіз, ймовірність ризиків і оцінку вартості компанії. У даній статті ми провели інвестиційний аналіз Coca-Cola Hellenic Bottling Company (HBC). Наразі компанія недооцінена порівняно з конкурентами на ринку. Тим не менш вона залишається хорошим вибором з високою стабільністю на ринку. Очікується, що більшість економічних показників компанії будуть швидко рости в майбутньому.

Захист навколишнього середовища і користь для здоров'я населення є основними факторами, що визначають попит і тенденції в нинішній час і в найближчому майбутньому (як додаток до якісних продуктів і відмінної комунікації зі споживачами за допомогою реклами та інших видів діяльності). Більш того, існуючі торгові і політичні конфлікти між країнами є індикаторами рецесії, яка також може вплинути на ринок безалкогольних напоїв. Крім того, у компанії є сильні конкуренти. Не можна сказати, що Соса-Кола НВС сильно виділяється як лідер ринку. Проте, її розвиток і ринкові позиції стабільні. Слід зазначити, що Соса-Кола НВС 6 разів за останні 7 років займала перше місце в індексі стійкості Доу-Джонса, і 9-й рік поспіль входить до трійки найбільших світових і європейських компаній з виробництва напоїв. Основні інвестиційні ризики Соса-Кола НВС включають зміни в правилах та вподобаннях споживачів через зростаючі проблем з здоров'ям і навколишнім середовищем. Компанія також наражається на ризики нестабільності валюти, невизначеності у вартості товарів, яка може вплинути на фінансові показники. Такі ризики, як кібератаки, перебої з поставками і розподілом, можуть нанести шкоду здатності компанії працювати ефективно. Існує ймовірність того, що керівництво не зможе реалізувати бізнес-модель і стратегії компанії щодо недавніх придбань Соса-Кола НВС. Стаття дозволяє більш детально вникнути в суть функціонування бізнес-процесів в галузі безалкогольних напоїв і пропонує авторське бачення оцінки Соса-Кола НВС.

**Ключові слова:** модель DCF, інвестиційний аналіз, аналіз Дюпон, аналіз п'яти сил Портера.

**JEL Classification:** J12, J17, J32, F21, R42

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## ИНВЕСТИЦИОННЫЙ АНАЛИЗ СОСА СОЛА HELLENIC BOTTLING COMPANY

Исследование инвестиционной привлекательности компании является неотъемлемой частью принятия решения о покупке или продаже акций. Инвестиционный анализ включает в себя обзор деятельности компании, конкуренцию в отрасли, а также финансовый анализ, вероятность рисков и оценку стоимости компании. В данной статье мы представили результаты инвестиционного анализа в отношении Соса-Кола Hellenic Bottling Company (HBC). В настоящее время компания недооценена по сравнению с конкурентами на рынке. Тем не менее, она остается хорошим выбором с высокой стабильностью на рынке. Ожидается, что большинство экономических показателей компании будут быстро расти в будущем. Защита окружающей среды и польза для здоровья населения являются основными факторами, определяющими спрос и тенденции, как в настоящее время, так и в ближайшем будущем (в дополнение к качественным продуктам и отличной коммуникации с потребителями посредством рекламы и других видов деятельности). Более того, существующие торговые и политические конфликты между странами являются индикаторами надвигающейся рецессии, которая также может повлиять на рынок безалкогольных напитков. Кроме того, у компании есть сильные конкуренты. Нельзя сказать, что Соса-Кола НВС сильно выделяется как лидер рынка. Тем не менее, ее развитие и рыночные позиции стабильны. Следует отметить, что Соса-Кола НВС 6 раз за последние 7 лет занимала первое место в индексе устойчивости Доу-Джонса, и 9-й год подряд входит в тройку крупнейших мировых и европейских компаний по производству напитков. Основные инвестиционные риски Соса-Кола НВС включают изменения в правилах и предпочтениях потребителей из-за растущих проблем со здоровьем и окружающей средой. Компания также подвержена риску нестабильности курсов валюты, неопределенности в стоимости товаров, которая может повлиять на финансовые показатели. Такие риски, как кибератаки, перебои с поставками и распределением, могут нанести ущерб эффективной работе компании. Существует вероятность того, что руководство не сможет реализовать бизнес-модель и стратегии Соса-Кола НВС, касающиеся ее недавних приобретений. Статья позволяет более детально вникнуть в суть функционирования бизнес-процессов в отрасли безалкогольных напитков и предлагает авторский взгляд на оценку Соса-Кола НВС.

**Ключевые слова:** модель DCF, инвестиционный анализ, анализ Дюпон, анализ пяти сил Портера.

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