Quantitative analysis of Coca-Cola Company in the context of the Covid-19

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Abstract: Value investment is one of the most practical valuation techniques for investors to make investment for a company in different periods, has greatly achieved great success in many practical applications such as acquisition of shares in a company and discovery of the current operations of a company. The essay aims to make quantitative analysis of Coca-Cola Company during the Covid-19 by analysing the financial statements and making multiple valuations. However, there exists the few investigations of this topic, because it is the latest topic for research. The essay presents a comprehensive analysis of key ratios of the financial statements in both 2019 and 2020 of Coca-Cola Company, followed by the in-depth analysis on estimating share prices and enterprise value, and then comparing the estimated value with real value to get a conclusion of whether these key figures had been overestimated or underestimated. In this essay, the Multiple Valuation Method being used as the main tool for valuation. The essay calculates whether Coca-Cola Company's key figures are overestimated or underestimated by the end of the essay. A suggestions and recommendations of future research topics about Coca-Cola Companies are finally given with clear justification.

1. Introduction

From 2020, the whole world was affected by the sudden outbreak of the new category of coronavirus (Covid-19). The global economy was struck to a large extent in the earlier of outbreaks, especially for the retail sectors. International Labour Organization (LRO) estimated there are 10.5% reduction of jobs for the second quarter of 2020 due to the COVID-19 [1]. During the Pandemic, one of the biggest retailers in the world, Coca-Cola Company, also presents significant opportunities and threatens for their products. The main threat is the decrease in profitability and liquidity caused by reduced consumer purchases during the Covid-19, and the financial statement of Coca-Cola presents different strategies to turn this exist threat into the opportunity. As shown in the Figure 1, the share price of Coca-Cola Company reflected the same situations as shown in the Figure 1: its share price fell in the early months of the outbreak and has since changed through a series of strategies to improve the share price. Consequently, it is worth to make the quantitative analysis because of the market share and the influences of brand intrinsic value of Coca-Cola during the Pandemic. In terms of the specific financial ratios, Coca-Cola's financial statements also experienced significant changes during the year from consistent growth in previous years to a decrease over the epidemic period. For instance, the gross margin had decreased from 60.77% in 2019 to 59.31% in 2020 which caused by specific coronavirus-related problems, and the growth rate of free cash flows had also dropped significantly during the year Both profitability and liquidity had greatly influenced by the changed statistics in financial statements which makes Coca-Cola's volatile financial ratios. Hence, it is worthwhile to analyze why these financial data anomalies occur during the pandemic.
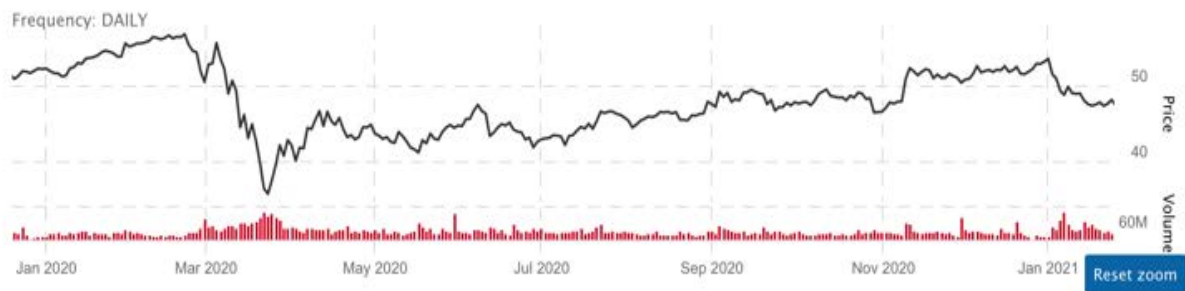
Figure 1. The share price of Coca-Cola Company in 2020.

The essay will be divided into four sections: introduction, data and method, results and discussion, and the conclusion. The introduction section will be split to the background, theoretical overview and conclusion. The crucial data of Coca-Cola and methods will be used in data and method section. In terms of results and discussion, the essay will elaborate the financial situation, quantitative analysis and future growth for Coca-Cola during the Covid-19. In the last section, the essay will present the conclusion and advice for the Coca-Cola's future. The essay will extract and present the changes in the financial data of Coca-Cola for the year before outbreak and the pandemic year, and analysing the specific reasons for these changes. The key financial ratios of profitability and liquidity will also be examined. The following ratio will be measured by financial statements, then the essay will use Multiple Valuation method to predict whether the Coca-Cola was overvalued or undervalued in terms of enterprise value and share price in 2020. Firstly, the essay will choose the main competitors of Coca-Cola based on the similar capital leverage structures (net book value of debt/net book value of equity) and similar profitability during the pandemic. Secondly, it will present the P/E ratio and EV/EBITDA ratios of each company, then calculating their average ratio. The price-to-Earnings (P/E ratio) measures its share price relative to its earnings per share which can by estimated on the share price for the year. EV multiple is enterprise value divided by earnings before interest, taxes, depreciation and amortization (EBITDA) which used to predict the enterprise value for the year. Finally, it will use the average P/E ratio multiple the earnings per share and use the average EV/EBITDA ratio multiple the EBITDA of Coca-Cola, and measuring whether these specific data were overvalued and undervalued. Meanwhile, the efficiencies of strategies adopted by Coca-Cola in reposed to pandemic will also be examined by the quarter financial statements in 2020. This will analyse what impact the company's strategies in the previous quarter has had on the company's growth in next quarter, and measuring whether Coca-Cola had well performance by using those strategies during the pandemic. Otherwise, the essay will analysis the key financial ratios from two aspects: profitability and liquidity. For the profitability, it will examine the net margin, asset turnover and return on capital employed (ROCE). Free cash flows and current ratio will be presented for the liquidity part. In the last part of discussions and results, the essay will use the data presented in the previous section to estimate Coca-Cola's financial indicators in 2021, and making some reasonable recommendations for Coca-Cola to reduce the negative impacts of the epidemic on the company's finances. Although the internal operations of Coca-Cola Company were not known, this essay will, as far as possible, provide a quantitative analysis of Coca-Cola Company during the epidemic using the available external information and give the effective recommendations for Coca-Cola Company in the post-epidemic period.

2. Data and Method

The Coca-Cola Company (NYSE: KO) is the world's biggest beverage industry, which originated in 1892 and established its headquarters in Atlanta, USA. Coca-Cola Company has over 200 brands with a history of 135 years and distributed in more than 200 countries in the world. The Coca-Cola Company divided It dominated 42.5% of the global beverage market share in 2015 and this percentage is increasing in recent years, particularly in the Asia-Pacific markets that have emerged in recent years

where Coca-Cola Company holds approximately $280 billion in industry retail value [2]. Otherwise, Coca-Cola Company dominated the world's largest beverage distribution system, it markets, manufactures and sells different kinds of beverages, including sports drinks, water, fruit juices, sparkling soft drinks, dairy products, plant-based beverages, tea and coffee [3]. Coca-Cola Company has a wide range of well-known brands: Coke, Sprite, Costa, Dasani etc. Coca-Cola Company has the rigorous process to produce their products: the most significant way for Coca-Cola Company to male profits is through the manufacture of syrups and concentrates, then giving theses semi-finished products to the approximately over 200 bottlings patterners worldwide for further production and distributions. Meanwhile, Coca-cola Company has a series of excellent strategies aimed at setting up loved brands, done sustainably and better shared future [4]. For instance, Coca-Cola Company adopted the most environmentally friendly design in its latest plastic bottle to achieve approximately 100% recycling. It utilizes a strong marketing strategy and various enterprise advertisements that entice consumers to buy their products, and they have an integrated system of marketing ranging from vending machines within the fast-food industry and multiple strong channels of distribution. However, Coca-Cola has numerous weaknesses that deserve thorough analysis. For instance, it is difficult to control the qualities for their products because of its enormous number of distributions. Besides, the customers are to a large extent attracted to the competitors of Coca-Cola because each product manufactured in a similar taste compared to other competitors.

The essay will choose three main competitors of Coca-Cola Company based on the same leverage structures and financial situations during the recent years. Then, it will calculate the P/E Ratio and EV/EBITDA Ratio for each competitor of Co-ca-Cola Company, and giving the average ratio. Finally, the share price and enterprise value will be estimated by multiple valuation method. The essay will be measured the investment appraise and quantitative analysis from the following analytical methods:

a) Price-to-Earnings ratio (P/E Ratio) = Market value per Share divided by Earnings per Share. It measures the expectations of the market and invests for the company's future growth. The P/E Ratio is the crucial data for investors to recognise profitability from now to future. A higher P/E Ratio represents investors are optimistic about the company growth. However, P/E Ratio may mislead the investors in some situations, sometimes a higher P/E Ratio company can also be considered overvalued because the higher in volatility for stock price.

b) EV/EBITDA Ratio = Enterprise Value divided by Earnings before Interests, Taxes, Depreciation & Amortization. The Enterprise Value = Market Capitalization + (Debt - Cash). The EV/EBITDA Ratio means how many times EBITDA the investors have to pay if they acquire the company. Similarly, EV/EBITDA Ratio have some drawbacks, it cannot measure the cashflows and hard to adjust different growth rate in different situations.

3. Results and discussiom

For the profitability, in 2020, Coca-Cola's revenue declines were predictable because the different coronavirus-related polices between each country, its revenue was approximately decreased by 11.41% compared to $37.3 billion in 2019. This was paralleled by a significant decline in Coca-Cola's revenue in each quarter compared to prior year, especially in the second quarter and gradually increase in resumed its growth trend in the following quarter. Coca-Cola implemented several measures to enhance its sales during the Covid-19. For instance, the company capitalized on the booming trend of retail online-to-offline (O2O) in China. By focusing on digital execution excellence, Coca-Cola gained 3 points of value share during the year across these platforms, which are leading overall digital commerce growth in China. For the different types of beverages, Coca-Cola's main operation, soft drinks, were not affected much by the decline of only 4% percent for the year, but for juices, water, coffee and tea, the decline was significant, especially for coffee and tea, which dropped by more than 10%. Otherwise, Coca-Cola made the new organization structure to enhance the company operational capabilities, and the new structure has resulted in an approximate 11% net reduction in roles, excluding the Bottling Investments and Global Ventures operating segments. Although Coca-Cola's four main sales region experienced certain level of decline in revenue, the positive operating income was

achieved in North American region and European, Middle East & Africa region to maintain a relatively healthy income. Otherwise, the revenues were decreased by the retail stores, partially influenced by the Covid-19 pressure on Costa retail machines [5]. Moreover, unit case volume declined 6% for the year, as continued strength in at-home channels was more than offset by coronavirus-related pressure in away-from-home channels [6]. The operating margin was 27.3% for the year compared to the 27.1% in the prior year, which is partially offset by top-line pressure and currency headwind. Meanwhile, the earning per share had 13% to $1.79, which is primarily caused by investors expect lower growth of the company because the excessive inventories and retailing stores suffer under the Covid-19.

In terms of debts, short-term liabilities and note payables had a substantial decrecre from 11 billion to 2.2 billion, but Coca-Cola make numerous long-term loans to obligate with coronavirus-related pressures. Accrued expenses maintain the same level with the prior year, which means that the company' liability to repay for the next year remains at the normal level. For the liquidity, Coca-Cola still maintains good liquidity and has sufficient cash to repay its debts. Although net cash provided by operating activities slightly declined nearly 6% to 9.8 billion in 2020, the net cash used in investing and financing activities had significantly decreased than 2019. The proceeds from disposals of investment provide Coca-Cola with a massive cash flow during the epidemic.

The section chose the peer group of Coca-Cola Company by the similar capital structures of its main competitors, which can be calculated by the debt ratio (the net book value of debt divided by the equity). The similar capital structure means that those peer companies have the similar leverage. Companies with lower levels of debts and higher levels of equity that investors are willing invest funds. Consequently, the similar capital structure can reflect the debt situations of a company as the measurement for find peer group to make multiple valuations. Based on the debt ratio as shown in the Table 1, the Coca-Cola Company had slightly leveraged by debts to recover the losses during the Covid-19, and the Pepsi and Unilever had the similar debt ratio with the Coca-Cola Company.

Table 1. The debt/equity ratio for coca-cola company and its competitors.

	Debt/Equity Ratio in 2020
Coca-Cola Co	2.08
PepsiCo Inc	3.00
Keurig Dr Pepper Inc	0.50
Nestle SA	0.61
Unilever PLC	1.74

The Table 2 compares the different P/E ratio for Coca-Cola Company, Pepsi, and Unilever in 2019 and 2020. The Coca-Cola Company's P/E ratio maintain the high level compared to its competitors in both 2019 and 2020 as its higher market shares and sales volumes have accumulated over the years to be much higher than others. However, both the net book value and earnings per share of three companies had declined during the pandemic. Although Coca-Cola's P/E ratio had a decline to 29.44X verses 28.41X in 2019, the ratio also remained at a relatively stable value which represents investors remain the optimistic about the growth of company in the following year. The main reason for the reduction is that earnings per share had slightly decreased from $2.07 per share to $1.79 per share because of coronavirus-related problems and changes of company strategies. Conversely, the P/E ratio for Pepsi and Unilever had increase from 2019 to 2020. The main explanation for the abnormal increases is that the expectations of a recovery in consumer demand and the favourable shareholder return polices of those two companies [7]. The Figure 3 also presents the average P/E ratio to value whether the share price of Coca-Cola Company has been overestimated or underestimated. The real earnings per share of Coca-Cola Company was $2.07 in 2019, and by using the average P/E ratio multiple the real earnings per share to calculate the estimated share price: 15.12X*$2.07 = $31.3, and the same method for 2020 to get the estimated share price is $50.98. For 2019, the share price of Coca-Cola had been overestimated compared to its real share price $4.37. For 2020, the Coca-Cola Company's share price had also been overestimated compared to its real share price $4.37. On the one

side, investors still believe Coca-Cola Company positioned for strong growth after the Covid-19. On the other side, the dividends paid to investors had increased from $1.60 to $1.64 in 2020, which means investors can acquire more profit by invest Coca-Cola Company.

The average EV/EBITDA has shown in Figure 3 to measure whether the enterprise value of Coca-Cola had been overestimated or underestimated. By using the average EV/EBITDA multiple the EBITDA, the estimated value of Coca-Cola Company is: 11.17X*$11,451 million = $127,907.67 million, and the real enterprise value in 2019 is $267.72 billion. The similar calculate process of estimated enterprise value of 2020 as the 2019, the estimated enterprise value is $169,897.29 million but the real enterprise value is $267.66 billion. Consequently, in both 2019 and 2020, the enterprise value was underestimated by investors, but the investors have more confident about the future growth after Cocid-19 in 2020 for Coca-Cola Company as the estimated enterprise value had increased compared 2019. This was made possible for the quicker changes of sale strategies to online and increase the advertisements in websites after pandemic outbreak.

Table 2. P/E Ratio and EV/EBITDA for peer group.

	2019		2020	
	P/E Ratio	EV/EBITDA	P/E Ratio	EV/EBITDA
Coca-Cola	29.44X	23.01X	28.41X	21.12X
PepsiCo Inc	15.62X	16.88X	29.37X	18.83X
Unilever Plc	14.62X	5.46X	22.38X	13.43X
Average Ratio	15.12X	11.17X	25.88X	16.13X

Coca-Cola Company make the effective strategies for the long-term future growth. Firstly, it made the brand portfolio optimization strategies, which reducing the beverage brands

to achieve the balanced combination of investment and increase the profitability. In 2020, Coca-Cola Company had reduced from 400 master brands to the 200 master brands, and this number of brands will continue to decrease in the future years [8]. Secondly, Coca-Cola Company started to replace the dwindling consumption of soft drinks by acquiring some other types of brands such as Costa and to increase its market share. Obviously, this strategy has achieved several increases in financial statements of Coca-Cola Company. Even under the epidemic Coca-Cola's revenue was essentially the same as the previous year. Lastly,

innovation is a significant factor in growth of Coca-Cola Company. Coca-Cola Company invests heavily in innovation each year to create new flavours and technology driven to simplify packaging costs. In 2020, the innovation bought approximately incremental 20% of gross profit compared to 2019 [9]. In addition to the company's strategy for the future, which will contribute to the company's future growth, Coca-Cola Company is also trending upwards at the data stages. Although the company's financial figures such as revenue and profits were more volatile during the epidemic, these figures remained relatively stable at the end of 2020 compared to previous years, demonstrating Coca-Cola's ability to respond well to the crisis.

4. Conclusion

In conclusion, although the reported financial figures of Coca-Cola Company were affected by Covid-19 in the first two quarters in 2020, Coca-Cola Company turned this situation with a change in strategies in the end of 2020. With the latest financial reports issued by Coca-Cola in 2021, Coca-Cola does present a positive financial position both in terms of its P/E ratio and liquidity. In the future, Coca-Cola Company can improve the profitability and liquidity by maintaining develop strategies and increasing free cash flows amount. Investors can be confident safely invest therir money on Coca-Cola Company because of the relatively decent and stable data compared to its peer companies based on the multiple valuation method in the essay.

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