Research for the Stock Performance of Toyota Industries Group with Multiple Valuations

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ABSTRACT
Multiple valuations are the main tool to value the stock prices of a company, examining the financial situation and stock price between the company and its main competitors. During the financial ratios analyzing the financial statement of a company, the Price-Earnings (P/E) ratio and EV/EBITDA are two convincing ratios used by analysts to illustrate the stock prices of a company. In this essay, Toyota Industries Group's stock prices for the past three years will be analyzed if they are over-valued, under-valued, or fair by using the P/E ratio and EV/EBITDA these two main multiple valuation tools with the data from its main competitors- Mitsubishi Heavy Industries Ltd, Panasonic Corporation, MISUMI Group Inc, Fanuc Corp, and Daikin Industries, Ltd. The current strategy and recent financial performance will also be considered as significant factors affecting the value of a company. The research leads to the result that Tyson Foods is considerably competitive among these competitors. Finally, the conclusion could be that the stock prices of Toyota industries Group are fair except for the year 2020 and the enterprise values are under-valued.

Keywords: *Price-Earnings (P/E) ratio, EV/EBITDA, multiple valuations, stock price*

1. INTRODUCTION

Manufacturing plays an important role for the whole society, laying the foundation of people's daily life. Toyota Industries Group is one of the largest manufacturing corporations in Japan and all over the world, which mainly focuses on motor products. According to Kerbache [1], considerable damage has been caused for various industries since the COVID-19 pandemic, especially for the manufacturing industry. Although global supply chains have shown robustness and flexibility in recent decades, the availability and supply chain for raw materials, intermediate goods, and finished products has been disrupted. Companies in this industry have to adjust their strategy in order to face the situation. In this passage, the P/E ratio and EV/EBITDA are the two main multiple valuation tools to analyze Toyota Industries Group and its main competitors to explore the stock performance and enterprise values of Toyota Industries.

Before moving to the data process, the advantages and drawbacks of this method are expected to be illustrated first. According to Barker [2], the P/E ratio is the preferred valuation model chosen by analysts, which contributes to the importance of this method for the stock market sector. Stocks with lower P/E ratios indicate an under-estimated stock price, which means higher returns in the subsequence period. EV/EBITDA is another valuation tool to analyze the estimated value of the company. 'EBITDA (earnings before interests, taxes, depreciation, and amortization) is a cash operating profit commonly used to measure value and monitor a business, which is also a critical measure of the cash flow available to service debt' [3]. Compared with EBITA and EBIT, EBITDA is the most accurate tool as EBITDA provides additional data on a company's financial position, profitability, cash-generating ability, liquidity risk, and credit risk. It also makes it possible to compare firms in different countries and areas as the tax and other spending are not the same in the world. For the past reaches, P/E ratios are the main way of analyzing companies' performance and stock price but in this passage, EV/EBITDA would also be the rule to illustrate the performance of Toyota Industries and its main competitors.

Despite the advantages, risks and limitations are worth considering. For these two multiple valuation methods, appropriate competitors are needed in order to do an estimation. However, it may be arduous to search for the appropriate especially for start-ups and companies in new industries [4]. For example, the food delivery

industry is one of the new industries developing rapidly in these years and belongs to the e-commerce sector. However, if they are compared with e-commerce giants like Amazon and Alibaba, the results could be totally different and less convincing in this situation. In this passage, the competitors chosen for the Toyota Industries Group (Mitsubishi Heavy Industries Ltd, Panasonic Corporation, MISUMI Group Inc, Fanuc Corp, and Daikin Industries, Ltd) have about the same competitiveness and they are all based in Japan as Young and Zeng concluded that the competitors should be in the same industry if the multiples' valuation method is used [5].

This article introduces the background in the DATA part and the methods used for this research first. After that, the current strategy and stock price analysis will be illustrated in the RESULTS AND DISCUSSION part. Finally, it will lead to the conclusion that the stock prices of Toyota industries Group are fair except for the year 2020 and the enterprise values are under-valued.

2. DATA

Founded in 1926, Toyota Industries Corporation mainly focus on manufacturing and selling the automatic looms which the founder Sakichi Toyoda had invented and perfected. Since that time Toyota Industries has promoted diversification and expanded the scope of its business domains to include textile machinery, automobiles like vehicles, engines, car air-conditioning compressors, materials handling equipment, and electronics. According to Crunchbase, it belongs to the manufacturing and automotive industries. In 1949, Company stock was listed on Tokyo, Osaka, and Nagoya Stock Exchanges. To estimate the stock price of Toyota Industries is over-valued, under-valued, or fair, multiple valuations could be one of the methods to be used. This essay will first introduce the current strategy and then analyze its main competitors and current financial situations and then use multiples' valuation to estimate whether Toyota Industries Group's stock price is fair.

3. METHODS

As for the main methods (multiple valuations) used by this research, the P/E ratio and EV/EBITDA are two important ratios. P/E ratio=Price/ Earnings and EV/EBITDA=Enterprise Value/ Earnings Before Interest, Taxes, Depreciation and Amortization while Enterprise Value= Market Capitalization+ (Debt- Cash). As for the multiple valuations, the average ratio from the statistics of its competitors should be calculated first. Then for the stock price estimation, it could be calculated by the average ratio multiplied by the EPS of the company, which could be found in their financial reports. Additionally, the average EV/EBITDA multiplies the EBITDA of the company could lead to the estimated enterprise value, which also could be found in the Income Statement for the company. If the value calculated is significantly lower than the real figure, the stock price or the enterprise value is undervalued and people should buy the company's stock. If the data is about the same, then the stock price or the enterprise value is fair. Similarly, when the value calculated is significantly higher than the real figure, the stock price or the enterprise value is over-valued and people should sell the company's stock.

4. RESULTS AND DISCUSSION

4.1. Current Strategy

For the current strategy of the Toyota Industries Group, to repair the impact caused by the COVID-19 pandemic remains the priority. As explained by Okorie et.al, 'for manufacturing the COVID-19 disruption scope has been largely twofold; an endogenous disruption of manufacturing processes and systems as well as extreme shifts in demand and supply caused by exogenous supply chain disruption' [6]. During the pandemic period around the world, the supply chain blocked most manufacturing factories. For example, a kind of computer chip was produced by some south-east countries for one of the most significant parts of car production. But when these factories were forced to close because of the COVID-19, companies like Toyota cannot produce cars as usual even their own country are not affected by the pandemic [7]. However, compared with other major global automakers that are forced to reduce production plans earlier, Toyota Industries Group manages to avoid cutting production because it has learned experience from the 2011 Tohoku Earthquake in Japan. It has optimized its supply chain and stockpiled critical components to prevent supply interruptions [8]. For the expectations to 2030, Toyota Industries Group will put more effort into realization on a sustainable society [9]. By articulating the importance of helping to make the planet a better place to live, enriching lifestyles, and promoting compassionate societies, as a vision to 2030, Toyota Industries Group will accelerate the initiatives to contribute to achieving the UN's 17 sustainable development goals [10]. The actions could be contributing to the circular economy, mitigating global warming, and creating innovative values. In addition, the foundation should be relied on a safe and healthy environment, sustainable procurement and compliance, and risk management. In conclusion, the current strategy of Toyota Industries Group is to repair the impact caused by the COVID-19 pandemic and maintain sustainable development for the future.

4.2. Stock price analyzation

After the introduction of the current strategy of Toyota industries Group, the information of their main competitors is essential to be analyzed to estimate the

stock price. For the P/E ratios in 2021 shown in table 1, Toyota Industries Group does not hold the lowest ratio although the data is lower than the average P/E ratio of its competitors (Mitsubishi Heavy Industries Ltd, Panasonic Corporation, MISUMI Group Inc, Fanuc Corp, and Daikin Industries, Ltd [11]). Mitsubishi Heavy Industries Group holds the lowest P/E ratio in this industry because it is Japan's largest military industry company. It has dozens of independent Mitsubishi subsidiaries and more than 2,000 brands. Its business covers all areas of people's lives, such as chemical, nuclear energy, finance, defense, machinery, power, agriculture, machine tools, shipbuilding, military industry, air conditioning, entertainment, life, printing, electronics, automobiles, aerospace, etc [12]. This lead to a more competitive company for Toyota Industries Group. When it comes to 2020, the average P/E ratio was significantly higher than any year. This could be explained by the exploration of the COVID-19 pandemic, which means at the start of the pandemic, companies, and relative policies are not mature enough to adapt to the situation. For Toyota Industries Group, the performance of PE ratio in 2020 was comparatively excellent, which could result from the storage of its critical components. At the same time, employees had to stay at home because of the pandemic. As a result, other competitors like Mitsubishi Heavy Industries Ltd, MISUMI Group Inc, and Fanuc Corp had a high ratio compared with 2021 and 2019. On the contrary, Toyota Industries Group has optimized its supply chain and stockpiled critical components to prevent supply interruptions [9] as it has learned experience from the 2011 Tohoku Earthquake in Japan. The P/E ratio for Toyota in 2019 (table 3) is 12.24, which was the lowest during these three years. The statistics for 2021 are almost the same as in 2019, indicating that the performance of the stock will almost return to 2019.

The passage will use multiples' valuation to estimate whether Toyota Industries Group's stock price is fair. The main competitors are selected as the passage mentioned before and the average ratio for P/E and EV/EBITDA could be calculated by summing up the competitors' statistics and then divided by the number of competitors. Then the estimated stock price value and estimated enterprise value could be calculated according to the formula. For the statistics shown in Table 1, the estimated stock value for Toyota Industries Group is 57908.145 million JPY, and the real stock value for Toyota Industries Group is 33463.037 million JPY [13]. Although there is a difference between these two numbers, the currency unit is the Japanese Yen, which indicates that the difference will be much smaller when it comes to USD. As a consequence, the status for the stock price of Toyota Industries Group in 2021 is fair. When it comes to its enterprise value, the estimated enterprise value for Toyota Industries Group in 2021 is 80973.5 million JPY. This figure is significantly higher than Toyota Industries Group's real enterprise value. In this situation, the data indicates that the enterprise value for Toyota Industries Group is undervalued in 2021. However, for the year 2020 (table 2), both the stock price and the enterprise value for Toyota industries Group were under-valued. The abnormal data from Fanuc Corp and Mitsubishi Heavy Industries Ltd attributed to the high average P/E ratio and high average EV/EBITDA. As a result, the performance for Toyota Industries Group seemed better than other competitors and both the stock price and the enterprise value were under-estimated. For the year 2019 shown in table 3, the stock price of Toyota Industries Group was fair while the enterprise value was under-valued because 27263.2955 million JYP was significantly lower than 45329.335 million JYP. Overall, the stock price for Toyota Industries Group is fair while the enterprise value is under-estimated.

Table 1. The current performance of the stock price and enterprise value

Current (JPY in million)	P/E	EV/EBITDA
Toyota Industries Group	14.88	7.5
Mitsubishi Heavy Industries Ltd	7.81	6.35
Panasonic Corporation	10.84	4.98
MISUMI Group Inc	43.52	21.55
Fanuc Corp	31.56	17.49
Daikin Industries, Ltd	35.04	16.12
Average	25.75	13.30
Estimated stock value for Toyota Industries Group in 2021	average P/E * EPS = 25.75* 2248.86=57908.145	
Real stock value for Toyota Industries Group	33463.037	fair
Estimated enterprise value for Toyota Industries Group in 2021	average EV/EBITDA*EBITDA=13.3*6088.233=80973.5	
Real enterprise value for Toyota Industries Group	45661.75	under-valued

Table 2. The performance of the stock price and enterprise value in 2020

2020 (JPY in million)	P/E	EV/EBITDA
Toyota Industries Group	22.86	8.94
Mitsubishi Heavy Industries Ltd	1379.68	9.03
Panasonic Corporation	16.23	5.07
MISUMI Group Inc	67.21	26.45
Fanuc Corp	77.26	36.58
Daikin Industries, Ltd	50.38	18.59
Average	318.15	19.14
Estimated stock value for Toyota Industries Group in 2020	average P/E * EPS = 318.15* 1471.22=468068.643	
Real stock value for Toyota Industries Group	33632.09	under-valued
Estimated enterprise value for Toyota Industries Group in 2020	average EV/EBITDA*EBITDA=19.14*4192.207=80238.842	
Real enterprise value for Toyota Industries Group	37478.33	under-valued

Table 3. The performance of the stock price and enterprise value in 2019

2019 (JPY in million)	P/E	EV/EBITDA
Toyota Industries Group	12.24	6.64
Mitsubishi Heavy Industries Ltd	13.61	6.8
Panasonic Corporation	8.81	4.41
MISUMI Group Inc	——	——
Fanuc Corp	34.2	21.44
Daikin Industries, Ltd	23.08	11.5
Average	19.93	11.04
Estimated stock value for Toyota Industries Group in 2019	average P/E * EPS = 19.93* 1301.1=25930.923	
Real stock value for Toyota Industries Group	15925.464	fair
Estimated enterprise value for Toyota Industries Group in 2019	average EV/EBITDA*EBITDA=11.04*4105.918=45329.335	
Real enterprise value for Toyota Industries Group	27263.2955	Under-valued

Having analyzed the main competitors of Toyota Industries Group, the financial statements also contribute to the stock price analysis. From the income statement of the nearest 3 years of Tyson Foods shown in Table 4 [14] (the currency unit is the Japanese Yen and the table is made according to IFRS), although the revenue experienced a decrease during these three years, the net income increased during this period of time. One of the reasons could be that during the COVID-19 pandemic period, the Toyota Industries group started consuming the storage of some components [15]. As a result, the cost of revenue would show a downward trend during these three years. The impact from the COVID-19 pandemic had a deep impact on this company but Toyota Industries Group could repair this damage very quickly and a better expectation could be seen in the future.

Table 4. Three-Year Income Statement summary for Toyota Industries Group

JPY in million	2019	2020	2021
revenue	30225681	29929992	27214593
cost of revenue	24781785	24522364	22382220
gross profit	5443896	5407628	4832373

operating expenses	2976351	2964759	2634625
operating income	2467545	2442869	2197748
interest expense	28078	32217	42421
other income	-154002	143955	777027
income before tax	2285465	2554607	2932354
provision	659944	683430	649976
other income	360066	271152	——
net income	1985587	2142329	2282378
other	-102714	-66146	-37117
net income	1882873	2076183	2245261
preferred dividend	14788	17284	-12569
net income available	1868085	2058899	2257830
earnings er share	——	——	——
basic	1301.1	1471.22	1606.46
diluted	1290.22	1459	1589.34
weighted average share	——	——	——
basic	1436	1399	1398
diluted	1459	1423	1421
EBITDA	4105918	4192207	4619065

5. CONCLUSION

In conclusion, by using the multiple valuations with the Price-Earnings (P/E) ratio and EV/EBITDA analyzing the Toyota Industries Group's stock prices and its main competitors (Mitsubishi Heavy Industries Ltd, Panasonic Corporation, MISUMI Group Inc, Fanuc Corp, and Daikin Industries, Ltd), it is reasonable to conclude that the stock prices of Toyota industries Group are fair except the year 2020 and the enterprise values are under-valued. The importance of analyzing these data with multiple valuations could also be seen in that it could illustrate a company's status reasonably instead of only suggestions on buying or selling stocks. As for Toyota Industries Group, it performed well during the COVID-19 pandemic period and it is one of the most successful manufacturing companies in Japan. So it is reasonable to predict that the stock price performance will remain well and stable in the future. As the enterprise value has been undervalued, it could suggest that the stock is worth buying at this time from the statistics analyzed in this passage.

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