Financial Analysis and Investment of The Food Industry

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Abstract. Through data calculation, analyze the changes in the operating status of KFC, McDonald's and Burger King in recent years. Combining global dynamics in recent years, such as the Covid 19, to derive externally changing factors and explain how these external factors have affected operating conditions. Comparing the operating data of the three fast food chains, it is analyzed that the investment risk of Burger King is greater than that of the other two fast food restaurants, and due to Restaurant Brands International Inc. (the group to which Burger King belongs), Burger King is most affected by external factors. At the same time, because the localized menu adopted by Burger King lags behind that of KFC and McDonald's, and the 100% franchise model used has low-risk resistance capability, Burger King's global reputation and several stores are not as good as those of the other two. Therefore, in terms of business status and income, Burger King is not a better investment target.

Keywords: Financial analysis, Investment decision, Food industry.

1. Introduction

1.1 Background

This paper mainly focuses on the stock fluctuations of the fast-food industry, and its importance is analyzed and suggested through the data calculation of three companies: McDonald's, KFC and Burger King. We will make a more specific analysis with specific data through research and use the cases of these three companies to highlight the suggestions we want to put forward for the future development of these companies. McDonald’s is a large multinational restaurant chain established in 1955, the company went public on January 2, 1970. Its total revenue in 2021 was $5.1 billion. KFC is one of the American multinational restaurant chains, the world's second-largest fast food and largest fried chicken chain. Its total revenue reached $9.85 billion in 2021. Burger King is one of the world's largest fast-food chains. It was founded in Miami in 1954. In 2016, Burger King was listed on the New York Stock Exchange and its 2021 full-year revenue was $1.8 billion.

1.2 Related research

Cui and Ting explored the difference between KFC's and McDonald's performance in China. Being two of the most popular fast-food company in China, those two companies have been using very different strategies. The two authors concluded that cultural difference has been a huge influencer on which strategies those two companies chose [1]. Hanaysha looks at brand equity from the customer's view. Brand equity is a very important element of a company's success. This article looks at the brand equity of the fast-food industry in the Malaysian market and proves the importance of brand image and loyalty to the fast-food industry [2]. Kee et al. discussed some factors that lead to the success of McDonald's. They discussed mostly the company's innovation, technology strategies, the satisfaction of both consumers and employees, and marketing strategies. These factors lead McDonald's to be one of the most successful fast-food companies in the world [3].

Wu discussed the difference between KFC and McDonald's marketing strategies in China. As this paper mentioned, KFC uses a "customized strategy", whereas McDonald's uses a "globalization strategy". The conclusion the paper makes is that from both ways, the two companies find the most suitable strategies for themselves and China's market. By successfully finding the best way to adapt to the market, McDonald's and KFC have been successful in China, and this also helps them to be outstanding multinational companies [4]. The fast-food industry is characterized by a high degree of uniformity in the decoration, menus, and dishes of all chain stores. People in the same food culture area and from the same fast food restaurant taste almost the same food. This is the advantage of fast-food restaurants, while ensuring the speed of eating, the taste of the food will not be too bad [5]. American fast-food restaurants such as Starbucks and KFC must cater to Chinese tastes and make changes in brand concept if they want to survive in China, such as Starbucks, Starbucks in the United States is just an ordinary coffee shop that provides coffee or other beverages, while in China, its main concept is the place itself. People are willing to work in Starbucks stores or spend leisurely time. This is a change in concept [6].

Rahayu focused on how lifestyle influenced the fast-food industry of America. Consumer behavior has changed with the company product way to sales, the market strategy to operate the product. From the essay information provided investigate the image of lifestyle change through American commercialism upon the huge fast food franchised restaurants namely McDonald's and KFC [7]. Pandey focused on KFC to focus on consumer satisfaction. Also, what is the reason that influenced the company to make decisions and how to produce the strategies for the public market [8].

1.3 Objective

The main purpose of this paper is to pay attention to the stock fluctuations in the fast-food industry so that WACC and CAPM models can be used to analyze the stock and to put forward opinions. The framework of this paper is to introduce the calculation method in detail and then apply it to the calculation of the data of specific fast-food companies to get the results and suggestions.

2. Method and Data

In this research, we use various methods to analyze the fast-food industry's risks from the stock market. But the two major formulas to calculate the business risks are from different parts. The weighted average cost of capital (WACC) is a measure of a company's overall average after-tax cost of capital, encompassing common stock, preferred stock, bonds, and other types of debt [9]. The average interest rates a business anticipates paying to finance its assets is known as WACC (Hargrave, 2021).

$$WACC = \left(\frac{E}{V} \times Re\right) + \left(\frac{D}{V} \times Rd \times (1 - Tc)\right) \tag{1}$$

Where E is the market value of the business's equity, D is the market value of the business's debts, for $V = E + D$, Re is the cost of the equity and Rd is the cost of debts, Tc is the corporate tax rate. With this model, we consider the process that focuses on and evaluates the company's whole worth, including the value of its creditors and shareholders to analyze McDonald's, KFC, and Restaurant Business International.

The relationship between systemic risk, or the overall dangers of investing, and expected return for assets, particularly equities, is described by the Capital Asset Pricing Model (CAPM). To quantify this systemic risk, CAPM was developed. It is frequently used in the financial industry to value hazardous securities and calculate projected returns for assets given their risk and cost of capital [10].

$$CAPM = r_i = r_f + \beta_i(r_m - r_f) \tag{2}$$

Where r_i is the required return on asset i, r_f is the risk-free interest rate, r_m is the required return on the market portfolio, and β_i is the asset's "beta". We use this model to investigate the McDonald's, KFC, and Restaurant Business International risks on the stock risks.

Table 1. Results of three companies

	McDonald’s	KFC	Burger King(RBI)
Market Value of Equity	1,229,433,210	2,934,519,980	150,570,980
The market value of debt	51,754,059.08	366,537.40	15,316,584.20
Weighted Average cost of capital (WACC)	5.71%	3.7%	6.51%
	McDonald’s	KFC	Burger King(RBI)
Marginals cooperate with tax rate	26%	32%	8.09%
Debt-to-Equity ratio	4.35%	4.05%	3.34%
Levered Beta	0.88	0.73	1.54
Unlevered Beta	0.78	0.58	1
The expected cost of equity capital	4.66	5.59	4.42
The expected cost of debt capital	568.69	143.07	110

3. Results

After calculation, the final Market Value of Equity of Burger King (RBI) is 150,570,980. The results for McDonald's and KFC are 1,229,433,210 and 2,934,519,980, respectively. Among the three companies, KFC has the largest Market Value of Equity. However, the Market Value of the debt of burger king (RBI) is 15,316,584,20 after calculation. The Market Value of debt of McDonald's and KFC are respectively 51,754,059,08. The weighted Average cost of Capital (WACC) for McDonald's is the highest value in Burger King (RBI), while the Weighted Average cost of capital (WACC) for McDonald's and KFC is 5.71%, 3.7% and 6.51%. Burger King (RBI) has the largest percentage.

The Marginal cooperate tax rate for the three companies is calculated to be 26% for McDonald's, 32% for KFC and 8.09% for Burger King (RBI) respectively. McDonald's has the largest percentage and Burger King (RBI) the smallest. The calculation result of the debt-to-equity ratio is McDonald's 4.35%, KFC's 4.05% and Burger King (RBI) 3.34%. Mcdonald's has the largest percentage, while Burger King (RBI) has the smallest.

The Levered beta values for McDonald's, KFC, and Burger King (RBI) are calculated to be 0.88, 0.73, and 1.54, respectively. Burger King (RBI) has the largest value, whereas KFC has the smallest value. The Unlevered Beta calculation results are McDonald's 0.78, KFC0.58, Burger King (RBI) 1. So, it can be learned that Burger King (RBI) is the largest, while KFC is the smallest. The expected cost of Equity capital is McDonald's 4.66, KFC5.59, and Burger King (RBI) 4.42. The expected cost of Debt capital is McDonald's 568.69, KFC143.07, Burger King (RBI) 110.

4. Discussions

Restaurant Brands International Inc. (RBI) has the highest beta value, which implies that it is the riskiest company compared with McDonald's and KFC. Several factors lead to this result. It can be summarized as the increase in the cost of operation and the franchisee model used by RBI.

First of all, climate change has made a huge impact on the crops and animals that the companies need, and it also brings a massive growth in the number of natural disasters caused by climate change. This brings a considerable effect on the pricing of raw materials like chicken, beef, and coffee beans. Although this might also affect McDonald's and KFC, RBI has been influenced to a greater extent, since the four sectors it owns, Burger King, Tim Hortons, Popeyes, and Firehouse Subs, are all different types of fast food; Tim Hortons focused more on the coffee industry, and Popeyes uses chickens much more than other sectors. Therefore, the change in the price of raw materials will affect RBI much more than the other two companies.

Moreover, all three companies have outlets in more than 100 countries in the world and the cultural difference has been disturbing the companies remarkably. Different strategies conducted by the companies might lead to a distinctive result. As in China, McDonald's and KFC perform over and above RBI. They both adapted to the market by changing their menu, however, at the same time, they kept what they used to have as their characteristics. RBI, on the other hand, has not been doing as well when it comes to adapting to a new environment. This could be the main issue for RBI in other countries as well. Also because of this, RBI does not have a strong and remarkable brand image compared to McDonald's or KFC. Just take coffee, for example, McDonald's coffee has been the most popular brand among Canadians, despite that RBI is a local business in Canada. This creates difficulties for RBI especially during the COVID crisis because people tend to choose the brand, they are more familiar with when ordering takeout. This leaves RBI with low sales.

Another main reason why RBI is riskier than McDonald’s and KFC is because of the special model it uses. RBI uses a 100% franchise model. The franchise model is not only used by RBI; it is also a very popular model in the restaurant industry. McDonalds and KFC are both franchisees based. McDonald’s is 93% franchised and KFC is 96% franchised. The advantage of this model is obvious. Firstly, the revenue for the company will be stable and predictable, because part of it comes from the rent and royalty income received from franchisees. Companies’ revenue largely depends on the franchisees, for example, McDonald’s has 82% of its revenue generated by franchisees. The model also brings low operating costs, since the cost is spread among all franchisees.

There are certainly benefits of using a 100% franchise model, however, there are a lot of potential risks that the company faced. Firstly, the company will face financial challenges that in the end lead to bankruptcy, which will then lead to plenty of underperforming restaurants. RBI is experiencing this issue as well. The underperforming restaurants will then lead to not enough money for wages and operations. This has happened before for Tim Hortons, they try to cut the employees’ social benefits because of the increase in the minimum wage. The increase in minimum wage policy will also lead to an increase in operating costs. The goal at that time for fast food industries is cutting down the operation cost; so, in order to avoid that problem and remain competitive, Tim Hortons has to cut the social benefits of their employees, and that hugely affects the brand image. The company drops from 4th place in a ranking of the most popular workplace in Canada to 50th place in one year.

Furthermore, the sales of RBI are also comparably weaker than KFC and McDonald’s. Using the inventory turnover ratio as a comparison. McDonald’s has a 68.91 inventory turnover- ratio, and KFC has a 23.52 inventory turnover ratio. RBI has the lowest inventory turnover ratio of 18.32. A high inventory turnover ratio implies the company sells goods quickly and has considerable demand for its products. On the other hand, the low inventory turnover ratio for RBI shows that it has comparably weak sales, which might then lead to not having enough money for salary and operations.

In addition to the potential risk the company has, the RBI’s franchises are also not performing as well as McDonald’s and KFC. In the Top 100 Global Franchises list, KFC is in 1st place, McDonald's is in 3rd place and Burger King is in 5th place.

5. Conclusion

To sum up, in this report we mainly focus on the fluctuation of the shares of the fast-food industry. How the shares have been analyzed with a more detailed calculation accompanied with some financial models, which are WACC and CAPM models. After the calculation, we gain a result which is the RBI has the highest risks. The unlevered beta is 1 and the levered beta is 1.54. The beta is all bigger than 1 which indicates the RBI has the highest risks of the share investment. Besides, the recent economic market is not stabilized as usual. Given the pandemic period, various industries may be effects and influence the regular operation. Such as the business may need to set up regulations for physical store daily operation, the storage of inventory, and the administration. Based on the new regulation, enterprises maintain their basic operation, and consequently in the stock market, their stock price also stabilized.

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