

Comprehensive Investment Value Analysis of Beer Industry Companies

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Abstract. Due to the introduction of numerous alternatives and consumers becoming more health concerned, beer sales have declined recently. But it is still one of people's daily consumption. Budweiser and Heineken are global leaders in the beer sector with approximately a third of the market share. Carlsberg, Tsingtao, Snow Breweries, Asahi, and other companies have market shares that aren't that different. The top corporations in the beer business, including Budweiser, Heineken, and Tsingtao are the specific objectives of this study. The report's goal is to assist investors in making investment decisions by calculating the financial ratio and analyzing the performance of the company. The study found that all three companies had successful financial operations. Budweiser and Heineken are two excellent options for investors looking for a low-risk, sound investment; Tsingtao can be the first choice for investors who can accept higher risk.

Keywords: Beer Industry, Financial Ratio, Ratio Analysis, Investment.

1. Introduction

1.1 Background

Modern beer is now a basic staple of the global economy. The beer industry whether good times or bad enjoys steady rates of consumer consumption and is one of the top beverages of choice around the world. The beer industry is dominated by massive conglomerates such as Budweiser and Heineken, etc. This is an industry mostly devoid of small, fast-growing companies. But for those looking for stable growth over time from this large component of the consumer staples sector of the stock market, some beer stocks are worth considering. Investors seeking investment opportunities in beer companies can be achieved through financial performance analysis. The significance of a number only becomes apparent when it is compared to other numbers, thus just because a number is on financial information somehow doesn't mean that it is important or that it gives us relevant information. When a comparison of two or more firms, can provide significant information to investors regarding the performance of the business. On the other hand, many investors lack basic financial knowledge, they cannot use financial ratios to assess the performance of beer companies. Current shareholders evaluate the performance of the companies based on the interest payments and cash dividends they receive. Such criteria do not provide reliable information regarding the performance and productivity of the companies business. There is a lot of debate surrounding the claim that financial measures have a greater influence on the values assigned to firms than they should. To assist investors in making investment assessments and judgments, The study aimed at how these issues affected the financial ratios of various beer companies' financial performance.

1.2 Related Research

The study by Singh et al. is the operation and industry strategy of the beer industry during COVID-19. Interviews with breweries, bars and customers found that the beer industry has gone through three stages of survival, secure, and sustain under government restrictions and lockdown. The strategy taken by owners and managers of breweries and bars to sustain their business during this period

explains how innovation creates value for different stakeholders and the value co-creation. The final results concluded that innovative solutions that can help companies create value need to be combined with sustainable price co-creation and the need to stay connected to stakeholders [1]. Török et al.'s study discuss the competitiveness of the global beer market. With the index of symmetric revealed comparative advantage (SRCA), it examines the comparative advantage of several of the world's most competitive beer exporting countries. It also tested the factors affecting competitiveness with a panel regression model, and concluded that beer with a high production level, high domestic consumption per capita, access to the EU market, and beers with better production and origin have higher comparative advantages [2]. Lee and Lee studied the impact of market uncertainty on firms' exports. Modeling and data analysis links market uncertainty, financial friction, and corporate exports. It turns out that firms which have lower uncertainty and higher productivity can export more. The more diversified the company, the greater its export income [3].

Cai et al. investigated how corporate environmental responsibility (CER) affects corporate risk. Under different assumptions, the correlation between the two is distinct. Different models and diversified tests were also used in the study, and concluded that environmentally responsible companies generally had lower corporate risks, but different industries showed different results, and environmentally responsible food industry companies had lower risks [4]. Delgado - García et al. studied the impact of companies' reputation on unsystematic risk, total risk, and systematic risk based on data on Spanish listed companies. Based on calculating reputation, risk, and other five variables as controls, the study concluded that firm's reputation increases a firm's systemic risk and reduces unsystematic risk. Moreover, the risk of small companies is more affected by reputation [5].

Moschini and Wingstedt pointed to Budweiser's "Stand by Me" water donation campaign, which was released in 2018, as a way for the company to be socially responsible in terms of lyrics, melody, symbol, visual, and running time. This advertisement not only promotes the company's charity action, but also sets up a good image. A good corporate image can affect a company's market value [6]. Schultz wrote that Coors Light, which is owned by Budweiser, used better advertising in order to stand out from the "highly controlled, ever-changing craft beer cans" on store shelves. The company adopted the "celebrity effect" in its publicity, using music stars to promote publicity and sales [7].

Schiff et al. calculated the data of the average beer consumption, intake and alcohol concentration of American households from 2004 to 2014 by querying the Nielsen Consumer Panel. The research analyzed. It found that while the consumption in American households was declining, the preference was gradually shifting toward high alcohol content beers [8].

Calvo-Porrall et al. used hierarchical cluster analysis to analyze beer consumers and consumption preferences. The study used seven factors (namely, loyalty, image, perceived quality, familiarity, premium price, purchase intention and value for money) to divide their consumers and preferences into five categories. These five categories could be further divided into two categories, customer - based and product - based. This classification will help beer companies target groups more precisely [9].

Jacobsen believes that beer is now losing market share in alcoholic beverages and mixed drinks. People today are more health and diet conscious, and there are many alternatives (mixed drinks such as soda, tea, etc.) that have been developed. With all these changes, beer sales are still declining, despite the overall trend in retail sales that helped during the pandemic [10].

1.3 Objective

This paper analyzes the investment value of the three companies by comparing different data from the financial reports of three beer companies. In the second section, this article will introduce the calculation method of the financial data of the three beer companies. The corresponding calculation results are obtained in the third section, and the calculation results of the three companies are analyzed and compared. In the conclusion, calculation results and analysis are used to provide investors with investment conclusions and suggestions for these three beer companies.

2. Method And Data

The selected financial ratios and calculations are shown in Table 1. However, differences in presentation currencies do not affect the results of the analysis as they are based on financial ratios.

Table 1. The Selected Financial Ratios and Calculations

Financial Ratio	Calculation
Profitability Ratio	
Return on Assets	Net Profit/Total Assets
Return on Equity	Net Profit/Total Equity
Net Margin	Net Profit/Total Sales
Gross Margin	Gross Profit/Total Sales
Liquidity Ratio	
The Current Ratio	Current Assets/Current Liabilities
Quick Ratio	(Current Assets-Inventory)/Current liabilities
Cash Ratio	Cash/Current Liabilities
Net Working Capital	Current Assets - Current Liabilities
Efficiency Ratio	
Total Assets Turnover	Sales/Average Total Assets
Receivables Turnover	Credit sales/Average Receivables
Inventory Turnover	Cost of sales/Average Inventories
Payables Turnover	Credit Purchases/Average Payables
Gearing Ratio	
Debt Ratio	Total Debt/Total Assets
Equity Ratio	Total Equity/Total Assets
Debt-to-Equity Ratio	Total Debt/Total Equity
R_E	$R_f + \beta_E(R_m - R_f)$
R_D	Total Interest Expense/Total Debt
R_A	WACC/(1-TL/1-L)
WACC	$WACC = (V_E \times R_E) + (V_D \times R_D) \times (1 - T_C)$

3. Result And Discussion

Based on the method and data formulas, the following section of this paper derives data results by calculating profitability, liquidity, efficiency, and gearing ratios. According to the calculation results, this paper analyzed the investment risks of the three beer companies and made investment recommendations for investors.

3.1 Profitability Ratio

Table 2. Profitability Ratio for Three Companies

Company	Budweiser[11]	Heineken[12]	Tsingtao[13]
Return on Asset	5.31%	4.39%	4.11%
Return on Equity	7.82%	5.80%	7.79%
Gross Margin	53.90%	49.08%	43.75%
Net Margin	14.00%	15.15%	10.46%

By dividing net income by total assets, one can determine the return on assets. Return on equity is calculated by dividing net income by shareholder equity. Both measures are key to determining how effectively a business turns a profit. Table 2 shows that Budweiser had greater asset returns and equity returns in 2021. This is due to Profit attributable to equity holders of the company increased from 514 million US dollars in FY20 to 950 million US dollars in FY21, as a result of a higher EBIT, primarily driven by the revenue growth supported. Gross profit margin and net profit margin can both be used

to determine how efficiently a company earns money in comparison to the costs of providing goods and services. Table 2 finds that Heineken is the highest among the other companies, a high net profit margin suggests that a company is pricing its products effectively and keeping costs under control. On the other hand, Table 2 demonstrates both companies' gross margins did not vary considerably. The higher Budweiser gross margin is a sign of improved productivity and cost-control in the business.

3.2 Liquidity Ratio

Table 3. Liquidity Ratio for Three Companies

Company	Budweiser[11]	Heineken[12]	Tsingtao[13]
The Current Ratio	0.67	0.79	1.59
Quick Ratio	0.57	0.59	1.39
Cash Ratio	0.43	0.27	0.80
Net Working Capital (Billion Dollar)	-1.53	-2.52	10.70

Liquidity ratios analyzed the ability of three companies to pay their debts, and this paper found that Tsingtao has the highest ability. Table 3 shows that the current ratio of Tsingtao is the highest and greater than 1, while the current ratio of Budweiser and Heineken is lower, and both are lower than 1. The study found that a company with a current ratio greater than 1 has a better financial situation and a better ability to repay current liabilities; a company with a current ratio lower than 1 has a weaker ability to repay current liabilities and may be at risk of bankruptcy. Therefore, the current ratio indicates that Tsingtao's default risk is relatively lower than Budweiser's and Heineken's. Then, comparing the quick ratio and cash ratio of the three companies, Tsingtao's data are higher than the other two companies, which also proves that Tsingtao's asset realization ability is higher than the other two companies. Furthermore, net working capital indicates the liquidity and solvency of the company's funds. A higher net working capital means that the company has more funds to cover short-term liabilities, and can reducing the company's risk of default and bankruptcy. Among the three companies, Tsingtao has a positive net working capital, so Tsingtao has a lower risk; while Budweiser and Heineken's net working capital is negative, they have a relatively high bankruptcy risk. Therefore, by analyzing the liquidity ratios of these three companies, this paper finds that Tsingtao's data shows that it has lower bankruptcy and default risks than Budweiser and Heineken, and a higher ability to repay debt.

3.3 Efficiency Ratio

Table 4. Efficiency Ratio for Three Companies

Company	Budweiser[11]	Heineken[12]	Tsingtao[13]
Inventory Turnover	6.9	6.16	5.64
Accounts Receivable Turnover	12	6.78	247.03
Accounts Payable Turnover	1.16	1.95	6.71

The efficiency ratio approach is used to examine various turnover rates. The effectiveness with which a business manages its assets and liabilities is shown by its turnover. In this report, the inventory turnover accounts, payable turnover, and accounts receivable turnover are calculated and compared. These three companies have higher inventory turnover, which suggests that their inventory management techniques are more successful. The differences in accounts receivable turnover across these companies are the most significant of all the data comparisons. The ratio in Tsingtao is almost 40 times higher than in the other two companies. A low ratio indicates that the company's current assets have inadequate liquidity and that there is a higher chance of bad debts. A high ratio suggests rapid asset flow and robust solvency. In contrast, Budweiser is considered to have a reliable credit policy and liquidity. Data from Tsingtao show that a high turnover rate results in a short turnover period, which attests to the company's rigorous credit policy and demanding payment terms. This

will significantly slow down sales growth and influence its profitability. This statistic is also taken into account as one of the key variables in the efficiency ratio analysis that separates the risk of Tsingtao from Budweiser and Heineken assets.

3.4 Gearing Ratio

Table 5. Gearing Ratio for Three Companies

Company	Budweiser[11]	Heineken[12]	Tsingtao[13]
Debt Ratio	1.22%	34.54%	0.87%
Equity Ratio	66.66%	40.33%	51.10%
Debt-Equity Ratio	1.83%	85.65%	2.00%
R_E	11.41%	14.11%	15.71%
R_D	9.36%	2.90%	6.58%
R_A	11.38%	9.50%	15.60%
WACC	11.32%	8.69%	15.53%

Gearing ratios reflect the financial risk and capital structure of the three companies. The debt ratio is the ratio of the company's debt to total company assets to determine the risk of the company, and the lower the ratio, the better for the company. From Table 5, Heineken has the highest debt ratio, which accounts for 34.54%, so Heineken has the highest financial risk among the three companies. The equity ratio shows the proportion of shareholder's equity to total assets, which reflects the company's financial structure and long-term solvency. Among the three companies, Budweiser has the highest equity ratio, and Heineken has the lowest. Therefore, Budweiser has the highest risk and high return among the three companies, and Heineken has the lowest risk. Also, debt-to-equity shows that Heineken is a relatively aggressive company. The higher the Debt-to-equity ratio, the higher the proportion of the company borrowing money to invest. Heineken's leverage is about 80% higher than the other two companies, so Heineken's interest costs and repayment pressures are higher, and it has less proprietary capital and higher operational risk for its creditors. Moreover, the WACC represents the proportion of various types of capital to the company's capital and illustrates the cost of raising capital for the company. From Table 5, if this article does not consider the market situation in which China's interest rates are relatively high relative to the United States during the epidemic, it finds that Heineken's WACC is lower, which means that Heineken can attract investors for the company at a lower cost; while Tsingtao's higher WACC reflects that it needs to increase its return on capital in order to generate more profit for investors and the company.

Table 6. Business Risk for Three Companies

Company	Budweiser[11]	Heineken[12]	Tsingtao[13]
Business Risk (β_A)	54.31%	42.39%	80.99%

The paper also calculated the business risk (β_A) of these three companies. Tsingtao's business risk is about double that of the other two companies, which is partly due to the different degrees of globalization and reputation of the three companies. Globalization is a good way for beer companies to improve their competitiveness. Tsingtao is a relatively local beer brand in China, and the export restrictions in China during the epidemic made it less globalized. For the beer industry, Heineken's exporter, the Netherlands, is the world's second-largest beer exporter, accounts for 14.1% of global exports; Budweiser's exporter, the United States, accounts for 4.3% of global exports. The proportion of exporting countries reflects the market scope and competitiveness of the three companies. A company with a larger market can balance the lack of sales in other regions through high sales in some regions, thereby reducing the company's sales risk. In addition, according to the research by Cai et al., corporate environmental responsibility also affects the company's reputation and the company's competitiveness, and environmentally responsible companies have lower corporate risks [4]. In 2021, Heineken proposed the "EverGreen" environmental protection policy and advocated sustainable

development, and the company also used renewable packaging. These environmental policies also improve Heineken's reputation and reduce corporate risk.

4. Conclusion

To assist investors in evaluating their investments, this study employs ratio analysis to examine the variations in the financial ratios of the financial performance of various brewing companies. The three companies are doing relatively well in terms of performance overall. Tsingtao might be considered the top option for investors from the standpoint of several financial measures. According to its ratios, Tsingtao has higher liquidity and stronger solvency. However, Tsingtao has the largest risk due to the sales concentration. A minor portion of Tsingtao's sales are made outside of China; Budweiser and Heineken are available in the majority of the world's nations. Budweiser and Heineken still have other nations to earn a profit if the economy is weak, but Tsingtao's strong concentration significantly raises the risk. Therefore, Tsingtao is an excellent option for those who are risk takers. Budweiser and Heineken, as steady business developments, can also be a good investment choice for those who are risk averse.

This paper fills the gap in the value comparison of typical companies in the beer industry in recent years, and provides investment options for investors in the beer industry based on different aspects of the financial data of the three companies. Moreover, this paper also provides a method for the analysis of the investment value of companies in the food industry.

The current study focuses on the analysis of company's financial data and financial statements. The analysis of financial statements is an important consideration when considering investing in a company, but the impact of the epidemic on the food industry and the policies of different countries in recent years can also have an impact on the investment value of beer companies. Therefore, future research could do more in-depth research on the impact of the epidemic and policies on investment in the food industry.

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