

Financial Analysis and Valuation of PepsiCo, Inc.

Hongxuan Liu^{1,a,*}

¹Lee Shau Kee School of Business and Administration, Hong Kong Metropolitan University, Hong Kong, 999077, China

a. s1300548@live.hkmu.edu.hk

*Corresponding author

Abstract: As a leading brand in the food and beverage industry, Pepsi possesses strong competitiveness within its sector and remains highly attractive to investors. For novice value investors, the process of identifying undervalued stocks and assets for potential future growth and returns is a crucial consideration. This article aims to offer simplified information and investment strategies to amateur value investors through the utilization of basic value investment analysis. The study primarily examines the key accounting policies of PepsiCo. Subsequently, it gathers financial data from the 2022 annual reports of PepsiCo and its major competitors, namely Coca-Cola, Monster Beverage, and Keurig Dr. Pepper. Financial ratios are calculated and used as the basis for comparative analysis by applying relevant formulas. Additionally, this analysis includes an evaluation of price-earnings ratios, price-earnings growth ratios, and major risk assessments. The findings indicate that despite having sound accounting policies and a reasonable market-to-book ratio, PepsiCo needs to improve in terms of liquidity, solvency, profitability, and other aspects, suggesting that its stock value might be overestimated. Consequently, it is concluded that there may be better investment choices than PepsiCo at present. Existing investors, however, may opt to retain their holdings and await a more favorable market environment.

Keywords: Pepsi, Beverage Industry, Performance Evaluation, Valuation

1. Introduction

The project's primary focus is PepsiCo, a prominent global food and beverage company headquartered in New York, USA. Its origins date back to 1898 when Caleb Bradham, a pharmacist, established PepsiCo in North Carolina. Initially, Pepsi was created as a digestive aid and energy-providing medicinal beverage. Over time, Pepsi has gained popularity and developed a distinct taste, becoming a widely consumed carbonated drink. Through a merger with Philip Morris, PepsiCo has evolved into a large corporation, striving to become the world's leading food and beverage company. Their objectives include delivering substantial returns to investors, fostering growth opportunities for partners and employees, benefiting their communities, and upholding integrity and fairness in all operations [1].

PepsiCo engages in multiple business segments, encompassing beverages, snacks, prepared drinks, and other food items. Within the beverage sector, PepsiCo is one of the world's largest companies, offering a diverse range of products like Pepsi-Cola, Mountain Dew, Ares, Lay's, Cheetos, and Ares

energy drinks, among others. The snacks division falls under the ownership of Philip Morris and includes items such as potato chips, cereal snacks, crackers, and nuts [2].

PepsiCo has extensive sales channels and marketing networks around the world. This mainly includes advertising and new product support. Pepsi-Cola has a strong R&D team that continuously improves new products. PepsiCo sells its products around the world through partnerships with various retailers and distributors. PepsiCo uses a variety of marketing strategies, including advertising, promotions, sponsorships, and more. Consumer incentives include pricing, discounts and promotions, and other promotional offers. PepsiCo's goal is to meet the needs of different regions and consumer groups and provide high-quality food and beverage products [3]. Financially, PepsiCo is a revenue-generating company with a large presence in the beverage and food industry.

In a previous occurrence, PepsiCo made the decision to initiate a temporary product recall following the discovery of a needle in one of its items. The company promptly extended apologies to the affected customers. To prevent similar incidents in the future, PepsiCo has implemented a compensation package where customers can receive free Crystal Pepsi by providing a receipt for a previously purchased Pepsi-Cola drink. Furthermore, PepsiCo has invited stakeholders to visit their facilities and witness the rigorous cleaning protocols in place. An external company will inspect all machinery and equipment to ensure safety standards are met. This incident serves as an opportunity for PepsiCo to thoroughly assess all aspects of their plants and machinery, prioritizing customer safety. The company remains dedicated to enhancing product quality, delivering healthy and safe food, and providing considerate services to its valued customers [4].

2. Accounting Analysis

As a prominent public corporation, PepsiCo is dedicated to upholding the integrity, authenticity, and accuracy of its data and annual reports, ensuring compliance with regulations and requirements set by Nasdaq and other regulatory bodies. Specific accounting policies are in place to govern revenue recognition, marketing expenses, as well as goodwill and intangible assets. However, the execution and efficacy of these policies can be influenced by various factors, such as management decisions, market fluctuations, and the overall macroeconomic climate. A comprehensive analysis will be conducted to gain deeper insights into how these three pivotal accounting policies impact PepsiCo's financial position and performance [5].

2.1. Revenue Recognition

In 2022, PepsiCo achieved substantial sales revenue of 86,392 million, surpassing competitors within the industry [3]. The accounting policy employed by PepsiCo, which recognizes revenue upon shipment or delivery of products when control is transferred, adheres to standard practices in line with revenue recognition principles. Additionally, the policy of excluding sales, use, value-added, and specific excise taxes from net income is reasonable since these taxes do not contribute to the company's operating income. The implementation of policies to remove and replace damaged or outdated products from store shelves ensures product quality and freshness, ultimately leading to enhanced customer satisfaction and bolstering the brand's reputation [3]. However, this could lead to higher costs and lower profit margins. PepsiCo's approach of establishing reserves to account for potential expenses related to damaged or obsolete products is a cautious and responsible measure. By doing so, the company ensures that it accurately reflects and prepares for any future costs that may arise in managing such situations. This practice demonstrates PepsiCo's commitment to maintaining financial transparency and prudence in its operations.

The credit term policy implemented by PepsiCo seems reasonable and aligns with industry norms. However, it is important to note that the company faces a significant credit risk due to its reliance on

major customers like Walmart. While PepsiCo has not encountered credit issues with these customers thus far, any potential defaults or delayed payments could have a substantial impact on the company's financial performance. PepsiCo's approach to assessing and setting aside reserves for expected credit losses appears comprehensive, considering factors such as past-due accounts, historical charge-off data, customer information, and forward-looking indicators [3]. However, the effectiveness of this approach relies on the accuracy of the estimates and forecasts utilized. In general, PepsiCo's accounting policies appear well-structured and in line with standard practices. Nonetheless, it is crucial for the company to monitor and manage its credit risk exposure actively, particularly with regard to major customers, and ensure the precision of its estimations and projections concerning credit losses.

2.2. Market Spending

PepsiCo follows a standard accounting practice by considering sales incentives and discounts as reductions in revenue. This encompasses various activities such as compensating customers for in-store displays, promoting new product distribution, allocating shelf space, and offering discounts to facilitate lower retail prices [3]. The company's practice of establishing sales incentive accruals based on annual targets is a cautious approach. However, it involves subjective judgment from management to estimate client and consumer engagement and performance levels, which may introduce potential inaccuracies. PepsiCo has stated that any discrepancies between estimated fees and actual incentive costs are generally insignificant and are recognized in earnings during the respective periods specified.

To ensure timely revenue recognition, PepsiCo acknowledges upfront customer payments within a short economic or contractual timeframe. The portion of the payment not recognized as revenue is recorded as prepaid expenses or included under other current assets and other assets on the balance sheet. Regarding interim reporting, PepsiCo distributes its projected full-year sales incentives across the relevant interim periods that benefit from them throughout the year [3]. This allocation method is based on the forecasted sales incentives for the entire year and the actual total revenue or a proportional share of total revenue for each interim period. Any modifications to estimates and associated allocations of sales incentives will be recognized starting from a specified transition period.

Overall, apart from the above, good accounting policies. PepsiCo should continue to monitor and manage its sales incentives and advertising costs and ensure the accuracy of its estimates and forecasts of these costs.

2.3. Goodwill & Intangibles

PepsiCo has a thorough accounting policy in place for indefinite-lived intangible assets and goodwill. It is appropriate to refrain from amortizing these assets and to conduct annual impairment assessments [3]. The company employs a combination of qualitative and quantitative assessments to determine if impairment exists, which ensures a reliable evaluation method. The qualitative assessment considers factors such as macroeconomic conditions, industry and competitive landscape, legal and regulatory environment, historical financial performance, and noteworthy changes in brands or reporting units. If the qualitative assessment indicates potential impairment, a quantitative assessment is conducted.

The quantitative assessment for indefinite-lived intangible assets and reporting units involves evaluating their fair value. This evaluation entails analyzing future cash flows or revenues and considering annual sales growth rates. Management plays a crucial role in exercising diligent judgment to estimate the influence of various factors on future sales levels, operating profits, or cash flows. It is essential for companies to base these estimates and judgments on dependable data and regularly review and update them as needed. Companies should also be mindful that any deterioration

in the assumptions used for impairment assessments could have an adverse impact on their financial results.

3. Performance Evaluation

Pepsi-Cola occupies a good market share in the beverage industry and has strong competitive potential. Coca-Cola, Monster Beverage Corp, Keurig Dr. Pepper Co., and PepsiCo compete fiercely in the beverage industry, including market share, product portfolio, distribution channels, etc. [6]. The following will use the financial statement data in their 2022 annual reports for comparative analysis.

3.1. Liquidity Performance

Table 1: liquidity ratios of PepsiCo and its competitors.

Companies	Current ratio	Quick ratio	Cash ratio
PepsiCo	0.804	0.609	0.185
Coca-Cola	1.145	0.931	0.483
Monster Beverage	4.755	3.822	1.305
Keurig Dr. Pepper	0.471	0.308	0.066

In Table 1, the current ratio reveals that Monster Beverage has the highest current ratio of 4.755, followed by Coca-Cola at 1.145, PepsiCo at 0.804, and Keurig Dr. Pepper at 0.471. The current ratio measures a company's capacity to repay short-term debt as it becomes due. It is computed by comparing a company's current assets to its current liabilities. Generally, a current ratio above 1 is considered favorable because it indicates that a company's current assets surpass its current liabilities. This implies that Monster Beverage possesses the strongest ability to settle short-term debt obligations, while Keurig Dr. Pepper exhibits a relatively weaker ability in this regard.

The quick ratio is a more stringent liquidity measure that excludes inventory from a company's current assets because inventory may not be readily converted into cash. It is calculated by subtracting inventory from current assets and then comparing the result to current liabilities. Unlike the current ratio, the quick ratio provides a more conservative assessment of a company's ability to meet its debt obligations in an emergency. Referring to the data in Table 1, Monster Beverage once again demonstrates the highest quick ratio of 3.822, followed by Coca-Cola at 0.931, PepsiCo at 0.609, and Keurig Dr. Pepper at 0.0308. This further highlights Monster Beverage's robust ability to convert assets into cash during emergencies, while Keurig Dr. Pepper's ability in this aspect is relatively weaker.

The cash ratio is a measure of a company's available cash in relation to its current liabilities. It is considered the most conservative liquidity ratio, focusing solely on the company's cash reserves. A higher cash ratio indicates that the company possesses sufficient cash to settle its current liabilities. In the given data, Monster Beverage maintains the highest cash ratio of 1.305, followed by Coca-Cola at 0.483, PepsiCo at 0.185, and Keurig Dr. Pepper at 0.066. This indicates that Monster Beverage has the largest cash reserves and is better positioned to fulfill its current liabilities [7]. On the other hand, Keurig Dr. Pepper has relatively smaller cash reserves. Overall, among the four competitors, Monster Beverage exhibits superior liquidity performance. The primary subject of research, PepsiCo, shows weaker liquidity characteristics.

3.2. Solvency Performance

Table 2: Solvency ratio of PepsiCo and its competitors.

Companies	Total debt ratio	long-term debt ratio	times-interest-earned
PepsiCo	0.813	0.387	11.400
Coca-Cola	0.722	0.392	13.249
Monster Beverage	0.153		
Keurig Dr. Pepper	0.515	0.214	2.480

The total debt ratio represents the relationship between a company's total liabilities and total assets. It quantifies the proportion of a company's assets that are financed through debt. A higher total debt ratio indicates a relatively larger amount of debt and potentially higher risks associated with debt repayment. In Table 2, Monster Beverage showcases the lowest total debt ratio of 0.153, followed by Keurig Dr. Pepper at 0.515, Coca-Cola at 0.722, and PepsiCo with the highest total debt ratio at 0.813. This implies that PepsiCo carries a greater debt burden than the other companies, which may expose it to higher risks associated with debt repayment.

The long-term debt ratio is the ratio between a company's long-term liabilities and total assets. It measures how much a company's long-term debt affects its capital structure. A higher long-term debt ratio means that the company may need to rely on long-term debt to finance and may face greater debt repayment pressure. According to the data, Coca-Cola's long-term debt ratio is 0.392, Keurig Dr. Pepper's is 0.214, and PepsiCo's long-term debt ratio is 0.387. This shows that Coca-Cola relies on long-term debt, which is the highest proportion of its capital structure, followed by PepsiCo and Keurig Dr. Pepper.

The times-interest-earned ratio represents the ratio between the company's profits available to pay interest and the actual interest paid. A higher interest coverage ratio signifies that the company generates sufficient profits to cover its interest expenses, indicating a stable capacity to repay debt. In Table 2, Coca-Cola demonstrates the highest interest coverage ratio of 13.249, followed by PepsiCo at 11.400, and Keurig Dr. Pepper with the lowest interest coverage ratio of 2.480. This implies that Coca-Cola and PepsiCo exhibit higher profitability relative to their interest expenses, while Keurig Dr. Pepper faces lower profitability in covering its interest expenses [8]. Overall, PepsiCo carries greater debt repayment risks than other competitors, but possesses a stronger ability to meet interest payments.

3.3. Profitability Performance

Table 3: Profitability ratio of PepsiCo and its competitors.

Companies	Profit margin	Operating margin	Asset turnover
PepsiCo	0.104	0.133	0.936
Coca-Cola	0.223	0.254	0.460
Monster Beverage	0.189	0.251	0.785
Keurig Dr. Pepper	0.102	0.185	0.274

The profit margin represents the ratio of a company's net profit to its total revenue. It gauges the profit a company attains after sales of products or services. A higher profit margin indicates that the company retains a larger proportion of profit from its sales. In Table 3, Coca-Cola boasts the highest profit margin of 0.223, followed by Monster Beverage at 0.189. PepsiCo has a profit margin of 0.104, and Keurig Dr. Pepper has a profit margin of 0.102. This implies that Coca-Cola achieved a higher level of net profit, while PepsiCo and Keurig Dr. Pepper exhibit relatively lower profit margins [9].

The operating margin reflects the ratio of a company's operating profit to its total revenue. It quantifies the level of profit a company generates after deducting direct costs and expenses. A higher operating margin signifies that the company has better control over costs and expenses during its operations. In Table 3, Coca-Cola demonstrates the highest operating margin of 0.254, followed closely by Monster Beverage at 0.251. PepsiCo has an operating margin of 0.133, and Keurig Dr. Pepper has an operating margin of 0.185. This indicates that Coca-Cola and Monster Beverage are more effective in managing costs and expenses during their operations, resulting in higher operating margins.

The asset turnover ratio measures the relationship between a company's sales revenue and its total assets. It quantifies the sales revenue generated per unit of assets. A higher asset turnover ratio think that the company efficiently utilizes its assets to generate sales. According to the data in Table 3, PepsiCo exhibits the highest asset turnover ratio of 0.936, followed by Monster Beverage at 0.785. Coca-Cola's asset turnover ratio is 0.460, and Keurig Dr. Pepper's is 0.274. This implies that PepsiCo utilizes its assets more efficiently to achieve sales.

3.4. Investment Performance

Table 4: Investment ratio of PepsiCo and its competitors.

Companies	ROE	ROA	market-to-book ratio
PepsiCo	0.520	0.097	13.286
Coca-Cola	0.371	0.103	9.495
Monster Beverage	0.170	0.144	8.187
Keurig Dr. Pepper	0.057	0.028	1.724

ROE represents the ratio between a company's net profit and its shareholders' equity. It quantifies the level of profit generated by a company for its shareholders. A higher ROE indicates that the company achieves a greater return on the capital invested by shareholders. In Table 4, PepsiCo has the highest ROE at 0.520, followed by Coca-Cola at 0.371. Monster Beverage has an ROE of 0.170, and Keurig Dr. Pepper has an ROE of 0.057. This implies that PepsiCo generates higher returns on the capital received from shareholders and exhibits a better return on equity than other companies.

ROA (Return on Assets) is the ratio between a company's net profit and total assets. It measures the level of profit generated by a company per unit of assets. A higher ROA signifies that the company efficiently utilizes its assets to generate profits. In Table 4, Monster Beverage has the highest ROA at 0.144, followed by Coca-Cola at 0.103. PepsiCo has an ROA of 0.097, and Keurig Dr. Pepper has an ROA of 0.028. This indicates that Monster Beverage achieves higher levels of profit relative to its total assets.

The market-to-book ratio represents the ratio between a company's market value and its shareholders' equity. It gauges the market's valuation of a company's net assets. A higher market-to-book ratio may indicate market optimism regarding the company's future growth and earnings potential. According to Table 4, PepsiCo has the highest market-to-book ratio at 13.286, followed by Coca-Cola at 9.495. Monster Beverage ranks third with a market-to-book ratio of 8.187, and Keurig Dr. Pepper has the lowest ratio at 1.724. This suggests that PepsiCo possesses good profit potential according to market valuation.

4. Valuation

Table 5: P/E ratio and PEG ratio of PepsiCo and its competitors.

1-Nov-23	KO	PEP	MNST	KDP
Share price	\$56.44	\$164.87	\$51.65	\$30.46
TTM EPS	\$2.65	\$7.51	\$1.36	\$1.74
NTM EPS	\$2.75	\$8.00	\$1.65	\$1.88
EPS growth rate	3.8%	6.52%	21.32%	8.05%
Revenue growth rate	2.89%	3.37%	13.76%	4.10%
TTM P/E	21.30	21.95	37.98	17.51
NTM P/E	20.52	20.61	31.30	16.20
PEG	5.64	3.36	1.78	2.18

Based on the stock price of the Nasdaq Electronic Stock Exchange on November 1, 2023 and the estimated EPS of Estimize, the P/E ratio and PEG ratio of PepsiCo and its competitors can be calculated, as shown in Table 5, as of 2023 On November 1, the P/E and PEG P/E ratios of companies KO, PEP, MNST, and KDP were as follows: KO's TTM P/E ratio was 21.30, and NTM's P/E ratio was 20.52. Its PEG ratio is 5.64, which suggests the stock is likely overvalued considering its expected growth rate. This suggests that investors are paying a premium for every dollar of earnings growth. PEP's TTM has a P/E ratio of 21.95, and NTM's P/E ratio is 20.61. Its PEG ratio is 3.36, indicating that the stock is trading at a high level relative to expected earnings growth. This suggests that investors are paying a premium for expected future earnings growth. MNST's TTM company has a price-to-earnings ratio of 37.98 times, and NTM company's price-to-earnings ratio is 31.30 times. Its PEG ratio of 1.78 is the lowest of the four companies, suggesting the stock may be undervalued given its expected growth. This suggests that investors are paying less for each dollar of earnings growth, which could make it a good investment. KDP's TTM has a P/E ratio of 17.51, and NTM's P/E ratio is 16.20 times. Its PEG ratio is 2.18, which suggests the stock is reasonably priced relative to its expected earnings growth. All things considered, PepsiCo may not be the best investment option right now [10].

PepsiCo encounters notable business risks as a consequence of the ongoing conflict in Ukraine, which has led to geopolitical and macroeconomic uncertainties. The company has halted specific operations in Ukraine and Russia, which has had an adverse effect on its business. The conflict has brought about many uncertainties, such as the impact of the disconnection of production and supply. Pepsi-Cola has certain sales profits in both Russia and Ukraine, and suspending business will bring considerable losses [3].

5. Conclusion

Through value investment analysis with three other companies, MNST, KO and KDP, it can be found that they have different sizes at different financial ratios and have different competitiveness. Then they were sorted through multiple ratios, including current ratio, solvency ratio, profit margin and investment ratio, to evaluate their good and bad performance, and finally produced the best one among the three selected companies. It was found that PEP's P/E ratio is lower than MNST, and only slightly higher than KO and KDP. Its future profit potential is likely to be limited, and it is not a good value stock. Although the EPS growth rate is higher than KO and KDP, it is significantly lower than MNST. All in all, based on the P/E and PEG ratios, it appears to be overvalued relative to expected growth. PEP's P/E ratio is in line with the industry average, but its PEG ratio is higher than MNST and KDP, suggesting it may be overpriced relative to expected growth. When it comes to investing

in PEP, its P/E ratio is relatively high, while based on its PEG ratio, the stock is overvalued given its expected growth. Therefore, it may not be the best investment option at the moment. For existing investors, continuing to hold seems to be a good choice. In the future, before making an investment decision, it can also be compared with other methods, such as the company's financial status, market position and future prospects, etc., to conduct a more in-depth discussion of investment strategies and help more amateur investors choose to invest.

References

- [1] Ahmed, A. M. (2015). *Efficiency and profitability analysis in food and beverage sector—an application on PepsiCo*. Faculty of Finance and business administration.
- [2] Dai, Y. (2021, March). *Comparison of Emphasis Point Towards Marketing Strategies Between Pepsi & Coca-Cola*. In *6th International Conference on Financial Innovation and Economic Development (ICFIED 2021)* (pp. 79-83). Atlantis Press.
- [3] PepsiCo. (2022). *2022 Annual Report*, Retrieved from <https://www.pepsico.com/investors/investor-relations>
- [4] Kemp, K., & Palmer, C. (2022). *Crisis Exchange Program*. *Journal of Public Relations Education*, 8(3), 89-100.
- [5] Quan, J. (2020). *The Trend of PepsiCo by Comparing PepsiCo's Financial Reports in 2018 to 2019 Based on Harvard Analytical Framework*. In *2020 5th International Conference on Modern Management and Education Technology (MMET 2020)* (pp. 162-166). Atlantis Press.
- [6] Huang, F. (2022). *Research on the Investment Value of PepsiCo Based on Multiples Valuation*. *Strategic analysis*, 31.
- [7] Monster Beverage. (2022). *2022 Annual Report*, Retrieved from <https://investors.monsterbevcorp.com/financial-information/annual-reports>
- [8] Keurig Dr. Pepper. (2022). *2022 Annual Report*, Retrieved from <https://investors.keurigdrpepper.com/annual-reports>
- [9] Coca-Cola. (2022). *2022 Annual filings 10-k*, Retrieved from <https://investors.coca-colacompany.com/filings-reports/annual-filings-10-k>
- [10] Deng, H., & Li, Z. *A Value Investment Analysis on Soft Drink Stocks from Hybrid Perspective*. *2020 2nd International Conference on Global Economy and Business Management*. Clausius Scientific Press.