Analysis of the Investment Value of the E-commerce Industry

Hanting Xu[1, *, †] Xin Yan[2, *, †] Haotian Zheng[3, *, †]

htx201@nyu.edu[1], xin.yan@hec.ca[2], harry6888@126.com[3]

New York University (Shanghai) ,Shanghai, China[1]
Université de Montréal, Chongqing, China[2]
Wuhan University, Beijing, China[3]
[†]These authors contributed equally.
These authors contributed equally to this work and should be considered co-first authors.

Abstract—This paper bases on the data from 2014 to 2019 to pick the most promising company in the E-commerce industry. Our analysis may give the insights and the advice to the investors and the relevant financial corporations in related field. In this paper, we select several indicators, i.e., profitability, PE ratio, dividend yield and the EPS etc., to comprehensively evaluate one representative company, i.e., Best Buy, in E-commerce industry. The results show that the EPS of Best Buy in 2019 is 5.75, the profitability of Best Buy is 69.66%, which is higher than 95% of companies in E-commerce industry. The dividend yield of Best Buy is 2.47%, which is higher than 70% of companies in the peer industry. The P/E ratio of Best Buy is 14.73, which is lower than 70% of companies in the peer industry. The results indicate that Best Buy Corporation is undervalued and should be focused more when making an investment decision regarding the E-commerce industry.

Keywords-E-commerce; Undervalued; Best Buy; Value investing

1. INTRODUCTION

E-commerce is a form of shopping in which consumers shop for products online, have them shipped by merchants, and deliver them to their homes by couriers. Some of the major companies in the e-commerce industry include Amazon, eBay and Target [1]. In contrast to traditional brick-and-mortar shops, consumers can implement e-commerce applications right through social media, a revolution in consumption [2]. Although, in terms of the scale of e-commerce, the e-commerce industry is no longer in its infancy, there are ample expansion opportunities, especially in 2020, during the COVID-19 pandemic, when e-commerce has become the de facto shopping solution for many consumers, thus revealing the enormous

ICEMME 2022, November 18-20, Nanjing, People's Republic of China

DOI 10.4108/eai.18-11-2022.2326935

potential of the e-commerce industry [3]. The global e-commerce market will be US$9.09 trillion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 14.7% from 2020 to 2027 [4]. The advantages brought by the e-commerce industry are reflected in two areas, respectively, the convenience for consumers and the relief for businesses. In terms of consumers, firstly, e-commerce has provided many obvious conveniences to people's lives. For example, e-commerce has to some extent determined the speed of logistics and distribution and the convenience of the future of cities. In addition to this, the e-commerce industry offers consumers more choice as they can browse the entire range of products on e-commerce platforms without leaving home and even comparing prices. With regards to the business, the first and foremost benefit is the reduction of costs for merchants. The high cost of opening a shop, including rent, purchasing merchandise and staff salaries, can pressure merchants. However, conducting e-commerce will reduce these costs as all that is needed is to register the website information and design the website. No other costs are required [5].

Under the background of the global emphasis on e-commerce, it is imperative and crucial to analyze the representative companies and the approximate marketing sizing. There are a lot of research papers to analyze e-commerce corporations like Walmart. From academia, we can find hundreds of papers for the judgments and the suggestions of Walmart. We can see the successful marketing strategies and feasible management operations then. However, it is also important to catch up with the trends and see the adaptability of the newcomers in this industry for better predictions.

Nowadays, there are fierce debates and investigations on the already-existing giants in America's household appliance retail markets, such as Walmart or Amazon. For example, Charles Courtemanche researched Walmart's development and future influences on people's weights by analyzing the number of stores and probable geographic patterns [6]. Blake Morgan compared Amazon and Walmart and pointed out that the distinctive feature of success for Amazon is the long-term strategy [7]. Amazon had to be the best. To fulfill that, it has to be the biggest. It is such a strategy that pushes the long-term prosperity of Amazon.

However, there is limited analysis towards corporations that have the potentials to be giants in the future, such as Best Buy. In this paper, we make comprehensive investigations of the selected Best Buy and devote efforts and time to explore the prospect of Best Buy. We would like to deploy such investigation and the market sizing analysis of the industry to endow more insights and future investment ideas to the readers. Unlike previous studies that focus on the development history of one company, in this paper, we analyze the issue from the perspective of stock markets. So, we utilize several statistics to fill in this gap and provide people with a way to analyze and discover potential giants.

To the best of our knowledge, this paper makes the following contributions to the literature, and the research process can be summarized as follows. The remainder of this paper is organized as follows. Section 2 presents the data and method. Section 3 reports the empirical results. In section 4, we provide its result and further discussion. Finally, section 5 concludes the paper.

2. DATA AND METHOD

To have a better study of Best Buy's performance, we chose 15 companies, including Target Corp, Macy's Inc, Home Depot Inc, Lowe's Cos Inc, CVS Health Corp, Nike Inc, Nordstrom Inc, Walmart Inc, Walgreens Boots Alliance Inc, Kohl's Corp, CDW Corp, Davita Inc, Carmax Inc, Amazon.com Inc and Ebay Inc, all of which are well-known companies in the e-commerce industry and competitors of Best Buy, and used their average indicators as benchmarks to compare with Best Buy's indicators. We found the share price, EBIT, EBITDA, and dividends for these 15 companies mainly from their annual reports from 2015 to 2019 and subsequently calculated the EPS, P/E ratio, profitability, and dividend yield for each company. Finally, the average of these ratios for these 15 companies was calculated and used as the industry average. The reason why we chose these 15 companies is all the selected companies are big corporations regarding the retail area in the household.

2.1 EPS

According to Jason Fernandoe, earnings per share (EPS) is calculated as a company's profit divided by the outstanding shares of its common stock. Thus, the resulting number serves as the manifestation of a company's profitability. Besides, the authors mentioned that a higher EPS denotes greater future value because investors will invest more for a company's shares if they conceive the company has higher profits compared to its share price.

$$\text{EPS} = \text{Net Income} / \text{Number of Shares} \tag{1}$$

We can directly see the profitability through this indicator. The price-to-earnings ratio (P/E ratio) is the ratio to value a company by measuring its current share price relative to its EPS. The price-to-earnings ratio is known as the price multiple or the earnings multiple.

2.2 P/E Ratio

$$\text{P/E ratio} = \text{Price}/\text{EPS} \tag{2}$$

We can see that whether the corporation is overvalued or disvalued by such evaluation. The dividend yield, expressed as a percentage, is a financial ratio that shows how much a company pays out in dividends each year relative to its stock price. It is the direct way to see the return of each stock.

3. RESULT

Based on the calculation and analysis of the data in this essay, the study of its EPS, P/E ratio, profitability, dividend yield, and the growth of Best Buy's EBITDA and EPS aspects, it is concluded that Best Buy is a worthwhile company for investors to invest in within the E-commerce industry. In terms of EPS and P/E ratio, the EPS of Best Buy in 2019 is 5.75, which is higher than 75% of companies in the peer industry. Besides, the P/E ratio of Best Buy is 14.73, which is lower than 70% of companies in the peer industry. The profitability of Best

Buy is 69.66%, which is higher than 95% of companies in the peer industry. This comparison concludes that Best Buy is well operated, with the vast majority of its revenue coming from its main business. Furthermore, it can also be concluded that Best Buy is less risky than other companies in its industry, especially in terms of liquidity risk. This is because it has a high level of profitability to cover its obligations and can guarantee to pay dividends to its own shareholders at maturity. Furthermore, the dividend yield of Best Buy is 2.47%, which is higher than 70% of companies in the peer industry. Therefore, investors who are chasing dividends will be very keen to invest in Best Buy.

4. DISCUSSION

To analyse this section, the main method used is multiples valuation, also known as comparables valuation, which finds companies that suffer from similar opportunities and challenges within the same industry and uses them as comparables [8]. As these comparables have the same attributes, they should have similar values. Therefore, the formula for a certain characteristic X and the comparable's multiple is:

$$value(company) = \left(\frac{value}{x}\right)_{peers} \times x(company) \tag{3}$$

By analyzing the situation of Best Buy, this essay mainly analyzes its EPS, P/E ratio, profitability, dividend yield, and the growth of Best Buy's EBITDA and EPS to compare with Best Buy's comparable's multiple through the MV method. Finally, it gives the recommendation that Best Buy is worth investing in.

4.1 Analysis of EPS:

This ratio represents the ratio of profit after tax to total share capital [9]. The higher the EPS, the higher the earning power of the company. The higher the EPS, the higher the company's earning power and the higher the share price. It also reflects the fact that the investment is making more money per share. Earnings per share is an important instrument in fundamental analysis and is one of the reference criteria that can assess the worthiness of a company's shares for investment [10].

By comparing Best Buy's EPS with that of its competitors, it is possible to analyse the investment implications of Best Buy within the industry. As the Figure 1 shows, Best Buy has been below the industry average for the past five years until 2017. However, it is essentially an upward trend. Since 2017, Best Buy has been above the industry average. This is a positive sign that Best Buy's share price increases and is performing well in its industry. Therefore, it is a company worth considering for investors to invest in. In conclusion, the EPS of Best Buy in 2019 is 5.75, which is higher than 75% of companies in the peer industry.

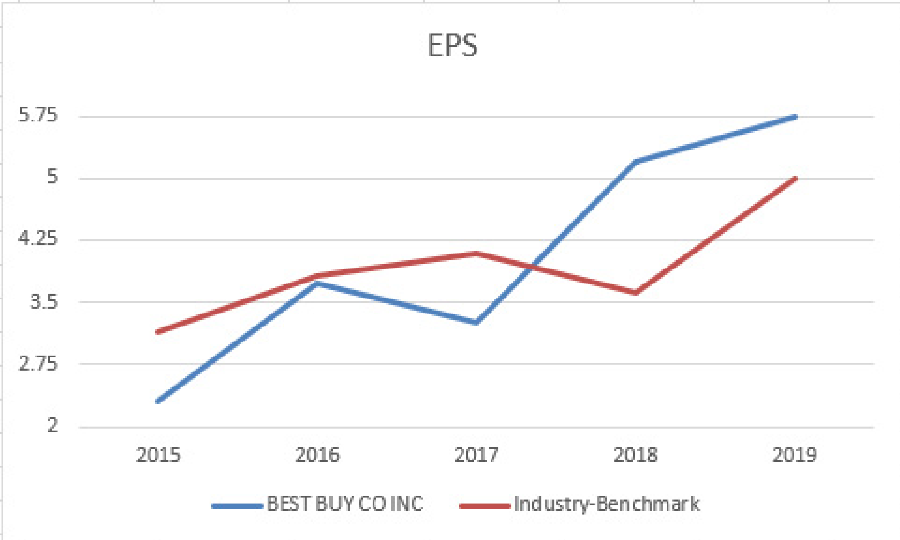

FIGURE 1. 2015-2019 BEST BUY AND PEER GROUP COMPARISONS ON EPS

4.2 Analysis of P/E Ratio:

P/E ratio is the ratio of a company's share price to the company's earnings per share [11]. It is used to value companies and to determine whether they are overvalued or undervalued [12]. In addition, it can also reflect the profitability of the company and its future profitability. Conversely, if the company is not growing and the current level of earnings remains the same, the P/E ratio can determine the number of years it will take for the company to repay each share. Therefore, the lower the P/E ratio, the more undervalued the share price and the shorter the period of time to recover the cost of investment [13] (shown in Figure 2).

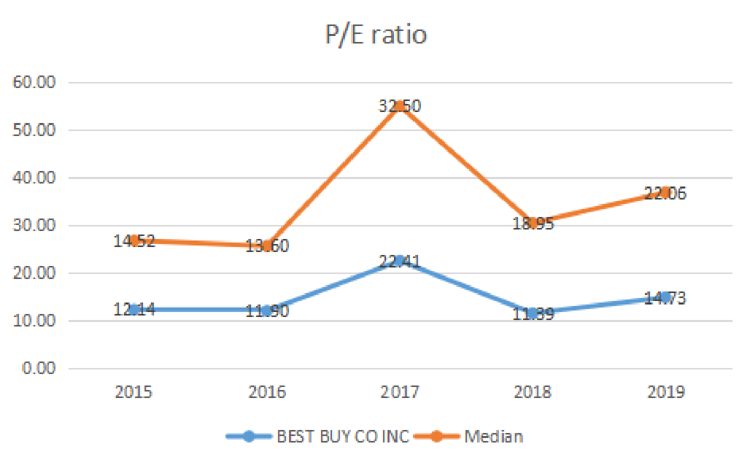

FIGURE 2. 2015-2019 BEST BUY AND PEER GROUP COMPARISONS ON P/E RATIO

The chart above illustrates Best Buy's P/E ratio trend compared to its industry peers from 2015 to 2019. There are two factors considered when analyzing Best Buy's P/E ratio: Best Buy's historical P/E ratio comparison and Best Buy's P/E ratio comparison to its industry peers. In terms of its historical P/E ratio, from 2015 to 2019, Best Buy's P/E ratio peaked at 22.41, occurring in 2017; it reached a minimum of 11.89 in 2018. The trend in historical P/E ratios allows us to judge the current valuation, which still has some upside, ranging from 14.73 to 22.41. An increase in valuation would mean an increase in the share price if net profit remained unchanged. In conclusion, the P/E ratio of Best Buy is 14.73, which is lower than 70% of companies in the peer industry. Therefore, the current valuation is not the best time to invest compared to past historical valuations. Regarding the P/E ratio of the industry average, over this period, Best Buy's P/E volatility curve fits perfectly with the industry average volatility curve. There is no doubt that Best Buy's P/E multiple has consistently outperformed the industry average. Therefore, Best Buy is worth considering for investment in the e-commerce industry.

4.3 Analysis of Profitability:

The profitability ratio is an indicator of financial statement performance that assesses the ability of a business to generate earnings over time relative to its revenues, operating costs, balance sheet assets and shareholders' equity [14]. When a company's profitability is high, it means that the company has earned a lot of profit. The company has a good operating position and has good cash flow liquidity to pay the company's obligations and pay dividends, which gives investors confidence [15].

The profitability of Best Buy was 69.66% in 2019, which is higher than 80% of companies in the peer industry (shown in Figure 3). This comparison concludes that Best Buy is well operated, with the vast majority of its revenue coming from its main business. Furthermore, it can also be concluded that Best Buy is less risky than other companies in its industry, especially in terms of liquidity risk. This is because it has a high level of profitability to cover its obligations and can guarantee to pay dividends to its own shareholders at maturity.

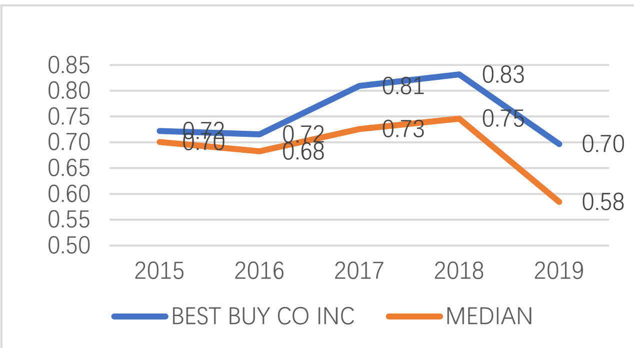

FIGURE 3. 2015-2019 BEST BUY AND PEER GROUP COMPARISONS ON PROFITABILITY

4.4 Analysis of the Dividend Yield:

The dividend yield represents the ratio of dividends paid by a company to its investors relative to its share price [16]. Similarly, it is the capital gain on dividends available to investors. Since many factors can affect dividend yields, including the overall market, interest rates and the financial position of individual companies, the dividend yield can be used to reflect other important information about that company [17]. When a company has a high dividend yield, it means that it is paying out most of its profits in the form of dividends. The dividend yield of Best Buy was 2.47% in 2019, which is higher than 60% of companies in the peer industry (shown in Figure 4). Investors who are chasing dividends will be very keen to invest in Best Buy.

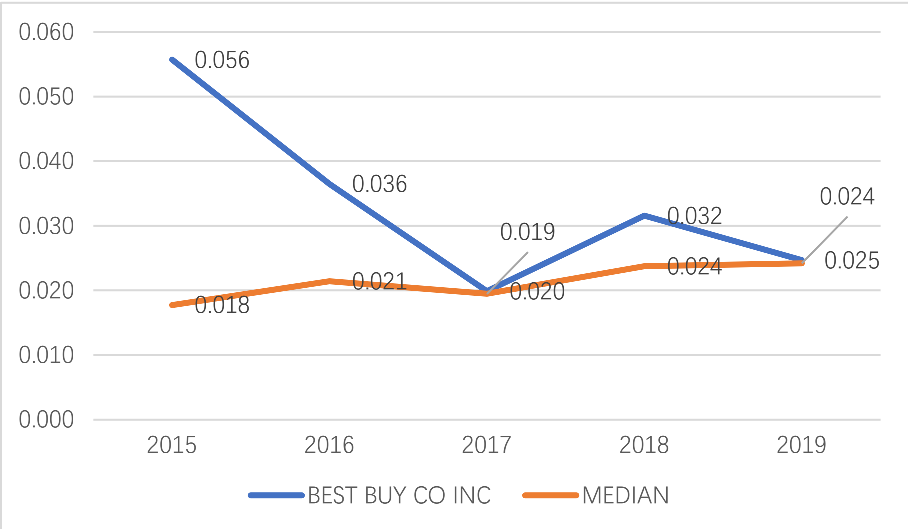

FIGURE 4. 2015-2019 BEST BUY AND PEER GROUP COMPARISONS ON THE DIVIDEND YIELD

4.5 Other Factors:

From 2015-2019, Best Buy's EBITDA and EPS growth are both basically steady and high. For EBITDA, it grew continually and kept an increasing range of about 150 million dollars. For EPS, although the growth was negative in 2016 and 2017, due to its high growth rate, the ratio is higher than 75% of certain companies in 2019. Besides, from 2015-2019, Best Buy's EBITDA growth is steady and has soared from 2162 to 2865 since 2015. For EBITDA, it grew continually and kept an increasing range of about 150 million dollars. To sum up, the above analysis may contribute to the understanding of the company of Best Buy.

5. CONCLUSION

In this paper, we analyze undervalued cross-industry companies, starting by making comparisons of indicators that measure their cheapness, growth, profitability, and payout. There are limited discussions and further investigation into the next probable giant on the

E-commerce company. Therefore, we chose the potential Best Buy and deployed the newest data to make a comprehensive analysis in this paper. Several indicators are adopted, i.e., EPS, P/E, etc. The results show that the EPS of Best Buy in 2019 is 5,75, which is higher than 75% of companies in the peer industry. The profitability of Best Buy is 69.66%, which is higher than 95% of companies in the peer industry. The dividend yield of Best Buy is 2.47%, which is higher than 70% of companies in the peer industry. Finally, the P/E ratio of Best Buy is 14.73, which is lower than 70% of companies in the peer industry. Thus, this paper concludes that Best Buy is a valuable company and has the potential to be the next giant.

However, the outbreak of the Covid-19 would somewhat disrupt our judgments on the companies and add to the uncertainty. In the future, expanding analysis into the entrance to other countries during the post-Covid 19 may deserve further discussion, as Covid-19 brought some drastic changes to the supply chine and product manufacture; this may also bring great potentials to Best Buy.

REFERENCES

[1] Young Entrepreneur Council [YEC]. (2021, March 22). *The state of the e-commerce industry in 2021*.

[2] Yadav, M., & Rahman, Z. (2017). Measuring consumer perception of social media marketing activities in e-commerce industry: Scale development & validation. *Telematics and Informatics*, *34*(7), 1294-1307.

[3] Global X ETFs. (2020, October 26). *E-commerce: Entering the next wave of growth*. Nasdaq. https://www.nasdaq.com/articles/e-commerce%3A-entering-the-next-wave-of-growth-2020-10-26

[4] Grand View Research. (2020). *E-commerce market size, share & trends analysis report, 2020 - 2027* (No. GVR-4-68038-684-4). Grand View Research. https://www.grandviewresearch.com/industry-analysis/e-commerce-market/toc

[5] Accion Opportunity Fund. (2021). *E-commerce: Advantages and disadvantages*. https://aofund.org/resource/e-commerce-advantages-and-disadvantages/

[6] Courtemanche, C., & Carden, A. (2011). Supersizing supercenters? The impact of Walmart Supercenters on body mass index and obesity. *Journal of Urban Economics*, *69*(2), 165-181.

[7] Makridakis, S., & Christodoulou, K. (2019). Blockchain: Current challenges and future prospects/applications. *Future Internet*, *11*(12), 258.

[8] Serra, R. G., & Fávero, L. P. L. (2018). Multiples' valuation: the selection of cross-border comparable firms. *Emerging Markets Finance and Trade*, *54*(9), 1973-1992.

[9] Sharif, I., Adnan, A. L. İ., & Jan, F. A. (2015). Effect of dividend policy on stock prices. *Business & management studies: an international journal*, *3*(1), 56-87.

[10] Idawati, W., & Wahyudi, A. (2015). Effect of earning per shares (EPS) and return on assets (ROA) against share price on coal mining company listed in Indonesia stock exchange. *Journal of Resources Development and Management*, *7*, 79-91.

[11] Wu, W. T. A. (2014). The P/E ratio and profitability. *Journal of Business & Economics Research (JBER)*, *12*(1), 67-76.

[12] Shen, P. (2000). The P/E ratio and stock market performance. *Economic review-Federal reserve bank of Kansas city*, *85*(4), 23-36.

[13] Tenerelli, T., & Fair, M. (2019). Stock Market Valuation.

[14] Nalurita, F. (2017). The effect of profitability ratio, solvability ratio, market ratio on stock return. *Business and Entrepreneurial Review*, *15*(1), 73-94.
[15] Husain, T., & Sunardi, N. (2020). Firm's Value Prediction Based on Profitability Ratios and Dividend Policy. *Finance & Economics Review*, *2*(2), 13-26.
[16] KANAKRIYAH, R. (2020). Dividend policy and companies' financial performance. *The Journal of Asian Finance, Economics, and Business*, *7*(10), 531-541.
[17] Auxilia, M., & PA-Krithika, J. (2018). A Study On The Investment Performance of High Dividend Yield Stocks With Reference to Nifty. *IOSR Journal Of Economics and Finance*, *9*(1), 67-74