Analysis of COVID-19's Investment in Corporate Value
——Taking Walmart as an example

Yuxin Jin¹,*,†, Wenlin Xu²,†, Nan Zheng³,†

¹International College, Guangzhou College of Commerce, Guangdong, Guangzhou 511363, China
²School of Public Affairs, Southwest Jiaotong University, Sichuan, Chengdu 610031, China
³Babson College, Massachusetts, Boston 02481, The United States of America
*Corresponding author. Email: 201909030004@xs.gcc.edu.cn
†These authors contributed equally.

ABSTRACT
In 2020, COVID-19 became a global health problem, which significantly affected the world economy, especially the retailed industry. Walmart is one of the most considerable retailed Corporate globally, which ranked first among the Fortune Global 500 in 2020. This article will analyse the value investment of Walmart by using ratio analysis. Besides, Porter's five forces and value chain theories will show retailed industry situation nowadays and how Walmart change its strategy to keep its value investment. We find that Walmart faces the challenge of reducing its margin profit due to the decrease of stores. To handle the risks, Walmart will put more investment into the technology in developing its eCommerce system. From our results, we conclude that Walmart has a trend that expands its business in the future. It is expected that the retailed industry will combine the two selling ways—online and offline. Thus, investors will pay more attention to eCommerce. Therefore, Walmart should improve its technology of offline logistics to keep its value investment.

Keywords: COVID-19, Walmart, Value Investment, Ratio Analysis, Porter's Five Forces, Value Chain.

1. INTRODUCTION

According to United Nations Report, in 2020, there was a significant stake in the global economy because of COVID-19, which decreases 5.2%. The global capital market is in turmoil. US stock market volatility increased, even hit the circuit breaker mechanism several times. For industry development, the COLVD-19 outbreak has a significant impact on trade and services and has further slowed global trade, according to the Economic situation report in the Chinese government report. It has also slowed down the growth of the real economy. Meanwhile, Measures such as border controls and strict travel restrictions have severely restricted local retail, wholesale, and logistics industries, adding downward pressure on the economy. The significant increase in instability and uncertainties in the world economy will curb investment and productivity and worsen the global economic recession. The retail industry faces the challenges of delayed resumption of work, sluggish sales, impeded import and export, labour shortage, and supply chain rupture, which impacted its financial status. Overall, we can find that the epidemic has hit the real economy and affected investors' confidence. For retailed industry, they tend to change its strategy, putting more investment in eCommerce. Any stores are cut down while the investment of eCommerce is increased. There is a trend that many retailed industries reduce their operating income to develop their technology, including Modern circulation methods, new retail forms, Advanced circulation operation, and management technology. Online to Offline will be a new way in retailed industries in the future. It combines offline business opportunities and the internet, making the internet a platform for offline transactions [1]. Thus, all the aspects – with the environment of COVIDL-19, global economic factors, the increase of eCommerce, and the business situation shows that Corporate value is a hot issue for the company to consider and determine whether people choose to invest in this company, so it is worth to analyse.
1.1. Literature Review

Previous scholars developed many theories of value investment. The concept is related to the Corporate theories. There are two theories in Corporate Value in the western world in recent fill years, which helps the development analyze value investment. Capital value theory put forward that after entering the era of the manufacturing economy, the range of corporate value sources expands rapidly, and the dominant position of labor in value creation is increasingly replaced by capital [2]. American economists Tom and Tim first study Corporate more comprehensively and systematically, building a model to analyze the capital of cash flows in a company to evaluate its value [3]. In this book, Tom and others put forward that the value of an enterprise comes from the cash flow and the ability of investment return based on cash flow. They put forward the valuation model of the market value of corporate. Fisher developed the future value theory, thinking that the profits determine the value of the enterprise that the enterprise can bring before it comes. The value of the enterprise is the discount value of the future earnings of the enterprise [4]. Based on many theories of Corporate value, Borisov, Goldman, Gupta thought that the value investment of the listed company is the sum of all the returns that the listed company brings to the listed stock holders utilizing encouraging payment [5]. Graham first came up with the theory of Corporate value investment. He analysis the factors of Corporate value investment from both quantity and quality ways. Quantity ways are all kinds of company data and statistics, including three major financial indicators of a company; quality ways include advantage compared to the competitors, the character of its industry, and its position to analyze the company within the environment and background [6]. Venkatraman and Ramamujam constructed a Corporate value system. They thought there are three main factors, financial status, financial and operational performance, and organizational efficiency [7]. Ou and Penman found that to forecast the Corporate profit in the future, financial indicators in the past years must be used in the analysis. Joel and Stewart established the theory of the EVA model to assess the value of Corporate investment in 1982 [8]. In recent years, Patelis, Georgio, and Chris found that the food industry preferred to use the EVA model to assess Corporate value by comparing the EVA model and Cash flow valuation. Fabio Ballini constructed a model of EVA applies to analyze air pollution. While Kambeyp and Silinaung thought that the EVA model was not only a way to assess Corporate performance, also could instruct investors used in their investment.

Chinese scholar Ruan came up with the definition of Value investment by concluding literature views of foreign and Chinese scholars. The value investment of listed companies is a kind of expectation of investors that listed companies can bring returns to investors [9]. In China, the theory of Corporate value developed after reform and opening-up, with the Establishment of the market economy institution [10]. Wang and Lin analyzed whether the Corporate value investment could be used in China, with its well-developed environment. Lin and Ji used the financial index to analyze the investment in China. After 2019, more scholars pay attention to the high technology industry [11]. Zhang studied the consumption sector; Ma developed the value investment of EGS shares.

According to the Literature review, authors find that the theory before analyzed Corporate in two aspect: one is to analyze the theory, other is that use the data according to the model. However, there are also some drawbacks if used in this article. First of all, the past articles mostly used one theory. We combine the qualitative and quantitative analyzes, using more than one model in our analysis, which can analyze Walmart's value in a more complex and systemic way. Second, there is one particular situation nowadays, that is COVID-19, which needs to take consider. Also, with the development of our world, we have to use the models that Scholars put forward in this era, which may create new ideas and values to solve Walmart's problem. Thirdly, eCommerce may increase Corporate value in the retailed industry. Nevertheless, few articles now analyze both stores and eCommerce. That may give us a chance to cover the shortage, which is also a hot issue. In conclusion, this article has three innovation points: analysis method, background, and content.

2. DATA AND METHOD

2.1. Data

Our data comes from Walmart's official website. Data samples were collected from 2018 to 2021. In addition, our data types include stock data, financial data, and other data obtained from the Internet.

Walmart is a company that aims to help people all over the world to save money and live better by giving them the chance to shop in retail stores and through eCommerce. It has the most considerable turnover in the world, and its controlling shareholder is the Walton family. Its headquarters are located in Arkansas, northwest of Little Rock, Bentonville. In the retail industry, Walmart is principally engaged and has the most employees in the world. Walmart has been ranked first among the Fortune 500 companies in the United States for seven consecutive years. There are approximately 8,500 stores in 15 countries or regions in Walmart around the world.

Furthermore, Walmart operates in 50 states and Puerto Rico. Walmart mainly includes Walmart

2.2. Method

In this paper, quantitative and qualitative research methods are used. The quantitative analysis includes profitability, margin analysis, asset turnover, short-term liquidity, and long-term solvency. The following are calculation formulas of the five aspects.

Probability analysis

1. Return on Asset = after-tax operating income / total assets

Using average total assets, ROA was almost identical:

\[ \text{ROA} = \frac{\text{after-tax operating income}}{\text{average total assets}} \]

2. Return on Equity = net income / equity

Using average equity, ROE was:

\[ \text{ROE} = \frac{\text{net income}}{\text{average equity}} \]

Margin analysis

1. Gross profit margin = gross profit / operating income × 100% = (operating revenue − operating cost) / operating revenue × 100%

2. Net income margin = net income / Net sales

Asset Turnover

1. Total asset turnover = total revenue / total Asset

2. Fixed asset turnover = sales revenue / total Fixed Asset

3. Accounts receivable turnover = sales revenue / average Accounts Receivable

4. Inventory turnover = cost of goods sold / inventory at the start of the year

Short-Term Liquidity

1. Current ratio = current assets / current liabilities × 100%

Generally speaking, the higher the current ratio, the stronger the short-term solvency. From creditors' perspective, the higher the current ratio, the better; from business operators' perspective, a high liquidity ratio means the increase of opportunity cost and the decline of profitability.

2. Quick ratio = quick assets / current liabilities × 100%

Among them: quick assets = monetary capital + trading financial assets + accounts receivable + notes receivable

The higher the quick ratio is, the stronger the debt-paying ability is. But it will greatly increase the opportunity cost of enterprises due to the excessive use of cash and accounts receivable.

3. Avg. Days Sales out = Day of one year / receivable turnover

4. Avg. Days Inventory out = Day of one year / inventory turnover

5. Avg. Cash conversion cycle = Days of inventory outstanding (also known as days sales of inventory) + Days sales outstanding - Days payables outstanding

Long-Term solvency

1. Gearing ratio = long-term debt / equity

2. Long-term debt to long-term capital ratio.

The calculation formula is the ratio of long-term liabilities to long-term capital = long-term liabilities / long-term capital.

It reflects the relative importance of long-term liabilities to capital structure (long-term financing). The long-term capital is the sum of all long-term liabilities and shareholders' equity.

3. Asset liability ratio = Total Liabilities / total assets × 100%

Generally, the smaller the asset-liability ratio is, the stronger the long-term solvency is; from business owners' perspective, the index is too small, indicating that the use of financial leverage is not enough; The decision-makers of enterprises should combine the asset-liability ratio indexes of solvency and profitability.

The Qualitative analysis includes the five forces analysis and value chain.

Michael Porter proposed the five forces analysis model in the early 1980s, which has a far-reaching global impact on enterprise strategy. For the analysis of competitive strategy, can effectively analyze the customer's competitive environment. The five forces are the bargaining power of suppliers, the bargaining power of buyers, the entry ability of potential competitors, the substitution ability of substitutes, and the present competitiveness of competitors in the industry. The different combination of the five forces ultimately affects the change of industry profit potential [12].

In 1985, Michael Porter, Professor of Harvard Business School, put forward the value chain concept. Porter believed that "every enterprise is a collection of activities in the process of designing, producing, selling, sending and assisting its products. All of these activities can be represented by a value chain." The value
creation of an enterprise consists of a series of activities, which can be divided into basic activities and auxiliary activities. The primary activities include internal logistics, production operations, external logistics, marketing and sales, services; The supporting activities include procurement, technology development, human resource management, and enterprise infrastructure. These different but interrelated production and operation activities constitute a dynamic process of creating value, namely value chain [13].

3. RESULT AND DISCUSSION

This paper will analyze the profitability of Walmart and the effectiveness of its internal operation through ratio analysis. We will discuss qualitative and quantitative aspects. On the one hand, we calculate Walmart's financial ratio according to the financial statements provided by Walmart to the public to evaluate the external strength of the enterprise. We divide the ratios of Walmart into five perspectives: Profitability, Margin Analysis, Asset Turnover, Short Term Liquidity, and Long-Term Solvency. Then, we calculate them between 2018-2020 to Compare with the business before COVID-19. On the other hand, qualitative analysis will show the situation of today's retail industry and how Walmart changes its value investment strategy and Walmart's soft power, entrepreneurship, as well as Walmart's overall internal and external environment through Porter's five forces and value chain models.

3.1. Financial Analysis of Walmart

We divide the ratios of Walmart into five parts: Profitability, Margin Analysis, Asset Turnover, Short Term Liquidity, and Long-Term Solvency. Then, we calculate them between 2018-2020 to Compare with the business before COVID-19. The following are the results (from Table 1): 

In terms of Ratio analysis, we will analyze them in five different aspects: profitability, margin analysis, asset turnover, short-term liquidity, and long-term solvency.

First and foremost, in profitability. The return on assets of Walmart has been decreasing to 5.9%, and the return on equity has been increasing to 18.9% over three years due to the investment in fixed assets, such as logistic distribution centres. Then, gross margins have fallen for three consecutive years. We analyze that due to the impact of the e-commerce platform, Walmart has to reduce sales prices to maintain competitiveness.

Secondly, we find that the gross margin of Walmart has decreased from 2018 to 2020.

It is due to the increase in the cost of sales, including the labour cost, the price of goods, and material expense.

Thirdly, inventory turnover is increased per year, and Account receivable is decreased obviously because of e-commerce selling and technology development. Markdowns of inventory or otherwise materially adversely affect its operations and operating results and could result in impairment charges to intangible assets, goodwill, or other long-lived assets.

Furthermore, for short-term liquidity, the inventory turnover of Walmart has increased for three consecutive years. We analyze the main reason is Walmart's e-commerce platform, which helps Walmart sell goods in a better and faster way. Then current ratio and quick ratio remain the same over three years, which are all below 1. Such a result is not due to poor management; instead, it results from Walmart's particular business model and strong bargaining power. To be more specific, Walmart has relatively long payable outstanding days and short days sales outstanding, which helps Walmart have a short cash conversion cycle of about 1.9 days.

Last but not least, for long-term solvency, Walmart increased its debt for three consecutive years and increased its financial leverage. As a result, the total debt to equity ratio increased from 57.7% to 89.7%. Its purpose should be to invest in logistics warehouse infrastructure to transport goods to retail stores and customers more quickly. The interest coverage ratio is 8.3, which indicates that Walmart has no financial burdens currently.

Table 1 Walmart ratios from 2018 to 2020

<table>
<thead>
<tr>
<th>Ratios</th>
<th>For the Fiscal Period Ending</th>
<th>Jan-31 2018</th>
<th>Jan-31 2019</th>
<th>Jan-31 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return on Asset</td>
<td></td>
<td>6.5%</td>
<td>6.5%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Return on Equity</td>
<td></td>
<td>13%</td>
<td>8.9%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Margin Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Margin</td>
<td></td>
<td>25.4%</td>
<td>25.1%</td>
<td>24.7%</td>
</tr>
<tr>
<td>Net Income Margin</td>
<td></td>
<td>2.0%</td>
<td>1.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Levered Free Cash Flow Margin</td>
<td></td>
<td>3.3%</td>
<td>2.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Unlevered Free Cash Flow Margin</td>
<td></td>
<td>3.6%</td>
<td>2.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Asset Turnover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.2. Analysis of retailed industry and Value chain of Walmart

3.2.1. Porter’s five forces analysis

1) Bargaining power of customers:

Customers of supermarkets like Walmart are usually a person. They do not need to buy a large number of goods at one time. However, they want the price as cheap as possible. So, the Customer will make a bargain with the retailer. To lower the price, they need to reduce their profit. Therefore, the price of products in supermarkets is meager. Besides, we go to this kind of supermarket such as Walmart to buy necessary things, food, discount clothes.

2) Bargaining power of supplier

In this part, we can first use the Scale of economics to explain the supplier of Walmart. Usually, a supermarket has a long relationship with its suppliers, which often import a large number of goods in a year. So, it will reduce the cost of sales and operation. Take an example. The suppliers of Walmart are big factories or retailers. They offer cheap products. So, the import prices of its goods are usually lower than other platforms. So, Walmart can use raw materials to produce its own brand, which has a stable price.

3) The threat of new entrants

The new entrants will face challenges outside and within the industry.

Firstly, we talk about the environment outside the industry. The new threat of the supermarket is online retailers such as Amazon. They have low operating costs and a developed network. At the same time, they have to compete with other supermarkets, and they have to put high investment to set up the company. What more, other competitors have their suppliers. It is demanding of a new entrant to find their support. Also, they have a long relationship with Customer, especially those who are members. So, they need to make an effort to expand their market and also to become an international firm.

4) The threat of substitute product

The products that supermarkets supply are commodities, which need to be consumed every day. Therefore, a large number of supermarkets take the cost leadership strategy. The price of products is low and causing low profits. Compared to an online retailer like Amazon, it does not need more stores to sell products. Thus the prices will lower than other ordinary stores. Besides, online retailers provide more kinds of merchandise. The customers can purchase both commodities and luxury merchandise. We may do not want to buy clothes in Walmart. We can turn to Amazon to buy Nike, Adidas, and so on. The supermarket's product will face the danger of being substituted by online retailer, at some Casamance. Still, the online retailer will not entirely replace it.

5) Competitive rivalry within an industry

There are massive competitions between foreign enterprises and other domestic enterprises, such as Carrefour, Metro, Costco. They use price, advertisement, and survey to attract customers. They have a good kind of service. For example, if customers have Sam’s membership, they will offer customers a certain number of times to wash their car for free in their specific place every month.

In 2020, because of Covid-19, many supermarkets offered delivery services. Customers can buy what customers want online, and staff will deliver them to home. However, many stores were cut down because of viruses.

In conclusion, Walmart has the most significant market share in the US, next comes Costco.
3.2.2. Analysis of Value Chain in Walmart

1) Inbound logistics

Walmart has a robust logistics information system. It has over 80000 kinds of goods to deliver to its chain store, with technical support. It has a satellite to convey supermarket information. Besides, it has a connected network to connect with its suppliers. The suppliers can deliver goods by need. Then, it also uses the network to contact its customer, so it helps to reduce its inventory.

2) Operations

Walmart separates procurement and operation. From the procurement aspect, Walmart demands a lower price to reduce its cost. Walmart will have a contract with its supplier every year to import all the goods it needs at one time. Walmart knows its customer needs from the other aspect due to the Internet, so it supplies the goods according to a region’s demand. Besides, Walmart has a different strategy for different goods. They build a cheap shopping plaza to meet their need that all the goods are as affordable as possible for bottom customers. For the top customer, they have integrated shopping malls.

3) Outbound logistics

Walmart first uses a network system to deliver goods to a distribution centre near the supermarket. From all kinds of distribution centres, goods are sent to stores. It reduces the time and costs that goods deliberation takes. Besides, the efficiency of good deliberation is high.

4) Marketing sales

Walmart is famous for its promotion strategy. First, Walmart gives discounts from time to time. The price of its goods is only 30% higher than its goods approximately. They often have reduction activities for clearance or promote their new goods. Also, it has membership consumption to give a discount to a specific person. Therefore, it makes Walmart’s goods have a low price for a long time.

5) Service

Walmart has cheap service costs because of network information. Customers can order goods online, and they will be delivered quickly to his home, or they can go to the nearest store to get them. The goods customers purchase will be packed, given, changed, and maintained for free.

4. CONCLUSION

From the results of the ratios analysis, there are reasonable shreds of evidence to indicate that Walmart has a trend to expand its business. One of its core competencies is an international logistics system supported by advanced information technology. For example, with the support of the system, logistics information, such as transportation, sales, and storage of each commodity in each store across the country, can be clearly seen. It also reinforces Walmart's efficient procurement process. Although Walmart has an edge in information technology, it may not have a firm grip on some areas because of its vast expansion. Although Walmart has an edge in information technology, it may not have a firm grip on some areas because of its vast expansion. Because Walmart's offerings span apparel, food, and other sectors, it may be less adaptable than more focused competitors. Walmart uses acquisitions, mergers, or strategic alliances with other international retailers to focus on specific markets such as Europe or Greater China. Its stores are currently open in only a handful of countries. Therefore, it has excellent potential to expand the market. However, Walmart's global strategy may cause political problems in the countries where it operates. In addition, vicious price competition is also a threat. In general, after the COVID-19, we think Walmart's traditional offline retail business will be hit a lot. More and more consumers will move to online shopping, and their consumption habits are changing. Second, the bulk of Walmart's business comes from its American home market, which is becoming saturated as online giants such as Amazon eat into its retail market. In recent years, Walmart has not performed well in the acquisition strategy of the e-commerce platform, and the shutdown of the Jet.com platform in 2019 due to poor operation is another sign. Walmart's purchase of these e-commerce platforms at a high price has resulted in a surge in goodwill, leaving an excellent potential for goodwill impairment in the future. These are the reasons for Walmart's very unsatisfactory financial performance in recent years.

According to Walmart's problem in the future, Walmart needs a precise expansion plan, especially in emerging markets, such as China, India, Southeast Asia, and other regions. We think expansion should cooperate with local retailers and online shopping platform, reflect each other's advantage, using the local retailer's brand effect and channel and the Internet platform of user traffic, combined with the powerful Walmart's supply chain operating system and financial ability, to expand in emerging markets business together. At the same time, Walmart should open its high-end retail stores, Sam's Superstores, in some countries and regions with better economic development to improve its revenue and gross margin. In general, online sales and offline sales are no longer two opposite concepts in the new retail concept. Instead, they should combine their characteristics and advantages to jointly reform the traditional retail industry, solve some disadvantages, and improve the efficiency of the whole industry. From our previous qualitative analysis, for Walmart, Walmart's advantage is its decades of electronic
information management ability, including the sales feedback, efficient logistics transportation system, which makes Walmart commodity prices are relatively low. It is a crucial advantage in the retail industry. In the future development, each industry sector should give full play to its more tremendous advantages. Walmart should give full play to its advantages mentioned above to continuously strengthen its supply chain management. The management and marketing of online retail platforms should cooperate with other platforms to maximize their advantages. According to the analysis of financial proportion in this paper, the gross profit margin of Walmart has almost no growth and has a downward trend. We believe that this is a problem of price warfare between offline retailers and online e-commerce platforms, which is also a vicious circle development for the whole industry. The combination of online and offline play their bit is the way out. On the plus side, according to the debt ratio of Walmart, it is investing in an offline logistics base through borrowing and financing to optimize its logistics efficiency and management ability further. It will be the foundation of Walmart's long-term competitiveness.

In terms of the contribution of this article to the country, it is officially in line with the industrial upgrading and comprehensive digital reform policy emphasized by President Xi Jinping. “We should take the initiative to respond to crises and turn them into opportunities, and use technological innovation and digital transformation to generate new growth drivers. Strengthen cooperation on data security, strengthen digital infrastructure development and create a level playing field for science and technology enterprises from all countries.” According to President Xi Jinping's reform plan, China will comprehensively reform its digital economy and implement the digital infrastructure. For the e-commerce sector, offline logistics and warehousing base are crucial for combining online and offline and help traditional retailers transform. Walmart's digital reform in China and the international market, cooperation with the e-commerce platform, and typical development are just a positive signal for the whole country.

REFERENCES


