The Financial Valuation Of Walmart Inc.

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Abstract

Walmart Inc. (Walmart hereafter) is the world's largest retailer and the largest companyin terms of revenue. It is also the biggest employer globally. Marketline (2021) states that Walmart has been the market leader for several years in 25 countries, including the US. The company operates several types of stores, as well as warehouse stores, such as Sam`s Clubs, and eCommerce websites globally. Despite Its global leadership and being sustained by its competitive advantages, Walmart faces challenges from its worldwide competitors, industry factors and the economic environment.

Understanding how the company is organized, how it positions itself in the industry, and how internal and external factors may affect its operations and financial performance are key to assessing its intrinsic value. Then comparing the intrinsic value of the Company to its stock price as of 31 January 2021 may provide valuable information to investors.

Acknowledgements

This work is dedicated to my wife, Marta, and my three kids, Matilde, Carolina and António and it is. my wish is that throughout their lives, they will always remember that anything is possible if they put their minds to it.

When preparing this work, I received direct and/or indirect help from several individuals whom I would like to acknowledge here. First of all, I would like to thank all the Professors that made this MBA course possible. A special thanks to Professor K.C. Chen for his availability and dedication to guide us, including me, in this endeavor, for his promptness in assisting us, and to opening the world to such interesting topics which was the reason I wanted to pursue this MBA in the first place. I would also like to express my appreciation to Professor Alexandre Lobo, who, although unrelated to this particular work, was always a positive force in bringing the level of this MBA up. Also a very special thank you to Professor Sérgio Gomes, who was always available to provide key insights and a hands-on approach. Lastly,I would also like to thank my fellow colleagues, who always pushed the bar and added to the atmosphere.

A special note goes to my parents who have not seen me or their grandchildren for more than two years now, and whose resilience and courage have always been an inspiration for me.

A very special word of thanks goes to my very good friend and partner in this endeavor, Hernâni Rouxinol. Without him, his support, his patience in listening to me, (sometimes for hours) his positivity, and above all his friendship, I would not have been able to make this, and certainly, I would not have been able to make this on time. Thank you, Hernâni.

Finally, my heartfelt thanks go to my lovely wife, Marta, who coped with two years of me not being at home for dinner, always supportive, always taking the burden of staying home with three children under 4 years old so I could pursue this dream of doing an MBA. Her support was something I could never repay, and her love is the fuel I am charged with to go after my (our) dreams. Think it, feel it, do it. Never Give up!

Discussion

In reviewing the findings of this research, a number of themes and issues can be identified. Firstly, the responses of the interviewees clearly indicated that they believed that the purpose of the Teacher Performance Appraisal system at the school should be, and in general was, formative in nature, rather than summative. The interviewees commonly noted that the appraisal system aimed to help them develop and improve their teaching skills, by encouraging self-reflection and receiving constructive feedback from the appraisers, as well as providing opportunities for training and professional development. Overall, the teachers viewed this formative approach to appraisal in a positive manner and expressed a preference for formative uses of the system over summative. These findings are aligned closely with those of Flores (2012), Kelly et al. (2008), and the Australian Institute for Teaching and School Leadership (AITSL) (2012). Mockler (2015) notes that formative appraisal systems are more common in schools with less hierarchical organisational structures, which appears to be the situation in this case study school, where a generally open culture was reportedly present.

There was also general agreement among the respondents that appraisal was handled in a professional manner by the school management, and the process was clearly explained, transparent and fair. The teachers understood how the appraisal process operated and what was expected of them.They felt that the appraisers carried out their duties in a professional manner. Previous research on appraisal has found that appraisal systems are most effective when the stakeholders have a clear understanding of the process, a common view of the goals, and trust in the procedural fairness and the professionalism of the appraisers (AITSL, 2012; Cardno & Robson, 2016; Danielson & McGreal, 2000; Isore, 2009; Tutyens & Devos, 2012; Weisberg et al., 2009).

The respondents highlighted a number of perceived benefits of the Teacher Performance Appraisal system at the school. Many of the teachers commented on the beneficial nature and outcomes of self-reflecting on their teaching practices and classroom performance, noting that this was very helpful in identifying their own strengths and weaknesses. The overall perception of self-appraisal was a positive one, with many of the respondents expressing the view that they preferred self-assessment to a more “top-down” approach. The findings of this case study confirm the research on self-appraisal, which

Chapter One
Introduction

Walmart Inc. (hereafter referred to as Walmart) is the biggest retailer in the world, the top-ranking company in the world in terms of revenue, and also the biggest employer in the world. Marketline (2021) indicates that in 25 countries, the company operates several types of stores, including warehouse stores such as Sam`s Clubs, and global eCommerce websitesincluding in the U.S. where Walmart has been the market leader for several years. This thesis aims to provide an overview of the Company, its industry and the economic factors that influence its operations, as well as to calculate the company's valuation as of 31 January 2021 and forecast its future value over the next few years. In this chapter, we explain the purpose of studying this topic, the methodology to be followed as well as the applicable limitations.

1.1 Purpose of Study

The objective of the present dissertation topic is two-fold. The first objective is to measure the intrinsic value of Walmart as of 31 January 2021 and to compare it with the stock's market price on that same date. This will help us determine if the company's stock was underpriced or overpriced. The second objective is to analyze the company's internal and external factors, including opportunities and threats, its positioning and strategies, and to factor these in when conducting a sensitivity analysis of the stock price. This analysis is of paramount importance to understand how the company may react to changes in the underlying factors that influence its valuation. Furthermore, we propose to identify possible future strategies for the management to consider as the company prepares for the next ten years, with the aim of continuing to create value for its stakeholders.

1.2 Methodology

In preparing this work, we utilized both quantitative and qualitative research. Chapters two to four will apply qualitative methods for collecting and analyzing data relevant to the analysis of Walmart, the industry, and the economy. Chapters five to eight will apply both qualitative and quantitative data collection and analysis methods. Data will be collected

from Walmart's annual reports for the fiscal year spanning January 2017 to January 2021 to conduct three valuation models which will allow us to conclude the intrinsic value of the company as of 31 January 2021. Finally we will perform a sensitivity analysis to understand how the Company's value reacts to changes in the underlying factors that influence its valuation.

1.3 Limitations

In preparing the present work, namely in forecasting the company's operations and results for the next ten years in order to apply the valuation models, we had to make certain assumptions with regards to the financial and operational future of the Company. However, these assumptions may pose a limitation to this analysis since they may prove to be incorrect or inaccurate. We have assumed that some of the key factors applied in the company's valuation, such as risk-free rate, cost of debt, market risk premium, and the weighted average cost of capital, would remain constant during the forecast period as it is very difficult to predict changes in these indicators. The sensitivity analysis conducted at the end of this work is also designed to accommodate certain changes to these or other factors in order to provide a broader perspective on how the company may perform in the future.

Chapter Two
Company Overview

2.1. Company Profile

Walmart is the largest retailer in the world and the largest company in the world in terms of revenue. It is also the biggest employer in the world (with approximately 2.2 million associates) (Marketline, 2021). The company's business operations are classified into three segments: Walmart US, Walmart International, and Sam`s Club. It operates several types of stores, including grocery stores, department and discount stores, neighbourhood markets, supermarkets, and hypermarkets. Additionally, it operates warehouse stores such as Sam`s Clubs and global eCommerce websites.. As of 31 January 2021, Walmart was present in 25 countries, including Canada, China, Mexico, India, Chile, several countries in Africa, Japan and the United Kingdom. In Fiscal year 2021, Walmart reported revenue of USD 559,151 billion and profits (net income) of USD 13,706 billion.

2.2. Walmart`s Major Business Segments

2.2.1. Walmart US

Walmart US is the largest segment of the company, operates under the brands “Walmart” and “Walmart Neighborhood Market” in all of the states in the USA, as well as through its website Walmart.com and other eCommerce brands. In fiscal year 2021, Walmart US posted net sales of USD 370 billion which represents 67% of the company’s consolidated net sales. (Net sales in fiscal years 2020 and 2019 were USD 341 billion and USD 331.7 billion respectively). The Walmart US region generates the highest gross profit for the company and contributes the most to its net sales and operating income.

Walmart US competes against a broad spectrum of small, medium, and large stores, from drug and dollar stores to supermarkets, hypermarkets, and supercenter-type stores, as well as other Omni-channel retailers operating discount stores, wholesale grocers and department or retail stores. It also competes against eCommerce retailers. Walmart currently has 156 distribution centers, from which the majority of Walmart US`s store merchandise purchases are shipped. Strategically located throughout the U.S., these distribution

centers work closely with a private fleet of 6,100 tractors and 61,000 trailers (and more than 7,800 drivers) to ensure the distribution of mainly general merchandise and dry grocery items.

2.2.2. Walmart International

Walmart International, the second-largest segment of the company, posted net sales of USD 121.4 billion in fiscal year 2021, which represents 22% of the company's net sales for the year. (Net sales in fiscal years 2020 and 2019 were USD 120.1 billion and USD 120.8 billion respectively). As of 31 January 2021, Walmart International was present in 25 countries, operating through wholly-owned subsidiaries (Canada, Chile and China) and majority-owned subsidiaries in Africa (Botswana, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda and Namibia), Central America (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua), India and Mexico.

In fiscal year 2021, the company also contributed to the "held for sale" business in Japan and in the United Kingdom. This category was also present in Argentina until this operation was sold in 2021 and had been present in Brazil until its sale in 2019. In India, the company capitalized on its recent acquisition of Flipkart, as well as with PhonePe, a digital platform anchored in payments. In China, the company has partnered with a major online player, JD.com and JD Daojia, enabling a "one-hour" delivery to customers strategy by using Walmart stores as fulfillment centers for online customers. Walmart International's retail units' average areas, vary and range between 1,400 square feet and 186,000 square feet. as of January 2021, the company had around 3,000 pickup locations and around 2,200 delivery locations. Walmart International utilizes 221 distribution facilities located in several countries where it is present.

2.2.3. Sam`s Club

Sam`s Club is a membership-only warehouse club which operates in 44 States in the U.S.A. and in Puerto Rico. It also operates the website samsclub.com. In fiscal year 2021

this segment had net sales of USD 63.9 billion which represented 11% of the company's consolidated net sales for the period. In fiscal years 2020 and 2019, the company had posted net sales of USD 58.8 billion and USD 57.8 billion, respectively. Sam`s Club also operates an Omni-channel strategy where retail stores and online eCommerce services and platforms are integrated, and customers may access products not found in other clubs. Sam's Club`s warehouse facility sizes may vary and range between 32,000 square feet and 168,000 square feet.

2.3. Operating Strategies

2.3.1. Mission Statement and Vision.

Walmart's mission statement is to "help people around the world save money and live better – anytime and anywhere" (Walmart, 2021). The focus on low prices and price leadership in the marketplace has been the cornerstone of Walmart's business. This is also embedded in the company's vision of making "every day easier for busy families". This vision encompasses not only the price leadership approach but also the aim to increase convenience to save their customers' time.

2.3.2. Strategy and positioning

The Company adopts the philosophy of "Every Day Low Prices" as a way to earn customers` trust everyday by applying this philosophy to a broad assortment of quality merchandise and services offered. Considering the pressure of competition on price strategies, Walmart has adopted certain programs to cope with such pressure and to strive to be the market leader. These programs are: Every Day Low Prices (EDLP) – the company prices the items to be sold at the lowest daily prices possible to gain customers' trust; Every Day Low Cost (EDLC) – a commitment to controlling expenses and passing cost savings to customers; and enhancing customers' convenience through Omni-Channels offerings.

2.4. SWOT Analysis

2.4.1. Strengths

Walmart is very efficient in managing its supply chain and distribution process. This is due to the investment in adopting technology to streamline internal and external processes. Walmart is also known to have a privately-owned cost-efficient truck fleet, allowing the company to directly control the distribution process while reducing costs. This enables the company to pass on such low costs to customers, ensuring that the company can implement its strategy of "Every Day Low Prices", which ensures its price leadership (Ofori-Nyarko, Wang, & Annoh, 2020).

2.4.2. Weaknesses

One of Walmart's weaknesses is its human resources policies. The company has been under greater scrutiny regarding how it treats its employees/associates, both in terms of remuneration and minimum standard salaries, but also in terms of fair and equal treatment among associates. Another weakness of the company is that it operates in an industry and with a strategy that is easily replicated. This explains the company's – and industry's average – profit margins, which for 2021 was only 2.42%.

2.4.3. Opportunities

There are two major opportunities which Walmart can explore. The first is to continue its internationalization. The second is to invest in the online market. Despite its size and already strong global presence, the company is present in only 25 countries. The company has the opportunity to potentially study new countries to enter while further developing its operations in countries such as China and India, where there is massive potential for scale due to the demographics and where the sector is growing at a faster rate.

2.4.4. Threats

In the US market, Walmart is being threatened by Amazon in e Commerce and online

retail, and competitors like Target which operate in a similar manner to Walmart. Internationally, and especially during the Covid-19 era, the company faces different restriction policies imposed by local governments, such as in China. Also, China accounts for a large portion of the products bought by Walmart. This exposure is a risk since the Chinese Government may impose restrictions or higher tariffs on exports due to the global economic and trade war. Inflation, products, and shipping prices are also a concern.

2.5. Core Competencies

Walmart's core competencies are related to the efficiency of its supply chain and what makes it possible. The company's supply chain management is backed by a very strong investment in information technology and state-of-the-art management programs, which allow the company to not only operate at the lowest possible price (a cornerstone strategy of the company since its inception) but also to gain a strong buying power over suppliers, ensuring that it keeps its costs at lower levels. The efficiency in how Walmart can manage all these key factors makes the company quite unique and creates a competitive advantage that others are yet to be able to reproduce or copy (Rothaermel & King, 2017).

Chapter Three
Industry Analysis

3.1 Industry Definition and Structure

Retailing may be defined as a set of (final) activities and steps, needed to place a product in a market or offer a service at the marketplace to end consumers. It may be considered as the last step in a long and complex supply chain(Dunne, Lusch, & Carver, 2014). This last step has traditionally been achieved through various channels such as supermarkets and hypermarkets, department stores, convenience stores, dollar and discount stores, etc., as shown in figure 3-1 below. Lately, eCommerce has been playing a major role in the growth of the retailing industry, as the retailing paradigm is changing throughout the world regarding how consumers purchase their goods. This is set to be one of the significant channels, if not the most, significant channel for the retailing industry.

3.2. Major Competitors

Walmart is the biggest player by revenue in the global retailing industry, followed by Amazon, which is growing at a very fast pace. Other international players are: Costco, Schwarz Group, Kroger, Walgreens, Home Depot, Target, Aldi Einkauf GmbH & Co., JD, Alibaba, Tesco, etc. (Statista, 2021). For eCommerce retailing, Amazon has taken the lead as the biggest player, followed by Walmart, JD, Alibaba, etc.

3.3. Industry Growth and Profitability

Globally, the total retail sales for the top 250 global retailers rose to USD 4.85 trillion in fiscal year 2019, up from the previous year's USD 4.74 trillion (Deloitte, 2021). The composite net profit margin for this group was 3.1%, an increase of 0.1 percentage point from the previous year. Emphasis in this study has been given to retailers with foreign operations, which accounted for 64.8% of the total retailers in this group, with a 22.2% share of retail revenue from foreign operations. Emphasis has also been given to the growth provided by the eCommerce segments and online sales. Amazon was the clear leader of this growth tendency, with projected online sales growth of 50% for the 2020 fiscal year and

online sales comprising 92% of their overall sales and also having a retail sales YoY growthof 34.8%.

In the US, the total retail sales were around USD 4.06 trillion in fiscal year 2020, which represented an increase from the previous year (USD 3.81 trillion) (Statista, 2022). There are around 4 million retail establishments in the United States, which account for 11.6% of all US business establishments. Furthermore, the retail industry in the US provides 32 million direct jobs, which represents 16% of the national total. Retailing is, therefore, the largest private employer in the country. Furthermore, the impact of the industry's total GDP was USD 3.9 trillion in 2018, representing 18.7% of the country's total GDP (PricewaterhouseCoopers LLP., 2020).

3.4. PESTEL Analysis of External Factors Affecting the Industry

3.4.1. Political Factors

For the fiscal year 2021, (which in actuality covers most of the calendar year of 2020), Walmart and the industry continued to experience the results of the then ongoing trade war and tariffs with China, as well as the immediate impact of the widespread Covid-19 pandemic, not only in the USA but all over the world. The manner which each government, each country, and each state dealt with the needs imposed by the pandemic, including imposed lockdowns that limited in-person shopping significantly impacted the industry's performance. These factors have led to necessary adjustments in the companies' operations and affected the balance of the supply chain and the distribution segments.

3.4.2. Economic Factors

The economic factors affecting the outlook for the fiscal year 2021 was of great importance as the global economy was severely hit by the impact of the Covid-19 pandemic. According to IMF's World Economic Outlook issued in October 2020, it became increasingly clear how difficult it would be for economic activity to recover to pre-pandemic levels. While the retail industry's revenue growth was not as severely affected by the

pandemic as other industries – rather being one of the few resilient industries due to the decline of in-store shopping being offset partially by a sharp rise in online shopping – the economic impacts of the global pandemic may continue to affect the prices throughout the supply chain and ultimately affect Walmart`s cornerstone principles of everyday low prices (Deloitte, 2021).

3.4.3. Social Factors

Social factors are very much related to consumer behavior and how retailers take advantage of knowledge about consumer behavior in targeted groups. In fiscal year 2021, there was a big shift towards online consumption, confirming a growing tendency registered in the last few years, that was catalyzed by the beginning of the Covid-19 pandemic.

3.4.4. Technological Factors

Technological factors play, and are expected to play, an increasingly important role in the retailing industry. Retailers have invested heavily in state-of-the-art management systems, including data warehousing, supply chain coordination systems, barcodes and related management options, automation and robotics, and on the eCommerce side, management of big data and consumer behavior analytics (Banerjee, 2015). Walmart has become one of the leading retailers in technological advancements, which allows the company not only to be cost-efficient in its operations but also to be prepared for the opportunities brought by the eCommerce channels, which were enhanced by the Covid-19 pandemic limitations to in-store buying.

3.4.5. Environmental Factors

Environmental consciousness is part of the retailers' corporate responsibility, and many have engaged in sustainability programs aiming to be more efficient in using resources to reduce waste and pollution. This is a tendency that is being recognised across the world and across industries, and retailing is gearing up to play a leading role in this arena.

Walmart has become one of the pioneers in this field in creating sustainability goals with its Project Gigaton, which aims to engage suppliers in climate action, namely to remove one gigaton of greenhouse gases from the global value chain by 2030.

3.4.6. Legal Factors

Retailers must be aware of the complex legal factors influencing the industry. Legal factors can become tricky when retailers expand their positions to other jurisdictions where new legislation needs to be complied with. Legislation such as food and safety/health regulations, data protection laws, labor laws, tax laws, etc. are of paramount importance for retailers to be aware of. Walmart, due to its size and structure, is well equipped to face such challenges, although it must rely on local operators and counsels when entering and operating in new markets.

3.5. Porter's Five Forces' Analysis of Industry Competition

Michael Porter, in his article of 1979, identified five competitive forces that shape the industries and influence player's strategies in the marketplace. These forces help to analyze the industry structure, competitiveness, and its strengths and weaknesses (Porter, 1979). Porter defines the following five forces: Threats of new entrants; Threat of substitutes; Bargaining power of suppliers; Bargaining power of customers; Rivalry among the competition.

3.5.1. Threats of New Entrants

Global players such as Walmart, Tesco, or Carrefour are large enough to accommodate the differences in markets and operate efficiently based on economies of scale, resulting in very competitive pricing strategies. The large-scale operators is due to the enormous capital expenditure needed to reach global levels, making it less likely for new players to enter the global retail market. However, there are areas where new niche operators may appear to capitalize on certain opportunities left open by the big retailers. eCommerce however, offers a lower cost structure and enables firms such as Amazon to go head–to–head with more traditional retailers such as Walmart. All in all though, the scale at

which a handful of global retailers operate is very hard to match and would take significant effort to equal. Hence, it is fair to assess that the threat of new entries in the global retailing sector may be considered moderate.

3.5.2. Threat of substitutes

Considering the global retailing industry as a whole and the variety of products that it comprises, it may be difficult to find direct or sustained substitutes for areas such as food and groceries, household products, and others such as tobacco or pharmacy products. Also, global retailers are aware of the trend shifts and have made efforts to adapt by providing equal-level products at lower prices and greater convenience. Hence, it is reasonable to assess that the threat of substitutes in the global retailing sector as weak.

3.5.3. Bargaining Power of Suppliers

Suppliers for the global retailing industry are numerous and vary, depending on the variety of products available in the market. Global retailers face several forces and pressure when dealing with suppliers, though the size of the retailer is of paramount importance when assessing its bargaining power. However, one must bear in mind that on the supply side, there are also big and strong companies making themselves differentiated and essential to some of the retailers. The balance between these forces allows us to assess the bargaining power of suppliers in the global retailing sector as moderate.

3.5.4. Bargaining Power of Customers

In the retailing business, most buyers are end-consumers, which weakens their position. Furthermore, the concentration of the retail sector's market share among a few major players further weakens the customer bargaining powers. However, while individual consumers may not significantly impact a retailer's revenues, consumer behavior trends can. Retailers will need to adapt and adjust to put products that their consumers look for on their shelves. In this case, the buyer bargaining power increases significantly. In this balance of forces, we assess the bargain power of customers in the global retailing sector as moderate to weak.

3.5.5. Rivalry Among the Competition

In the global retailing sector, bigger players operate businesses that benefit from economies of scale and can employ aggressive pricing strategies they also enjoy a significant advantage over small to medium players that cannot compete on size, location or prices. Despite being hard to match, global retailers such as Walmart still face competitors that challenges their hegemony and making them compete formarket share. For example, in recent years, we have seen the rapid growth of Amazon, which positions itself as a major player competing fiercely and succeeding in gaining more market share. Considering all factors, it is fair to assess that the rivalry amongst competitors in the global retailing sector is strong.

3.6. Industry Attractiveness

Overall, the industry may still be attractive to companies who can present state-of-the-art technology solutions, which allows them to compete in price and efficiency, as well as those who can create strong and reliable supply chains. In addition although the profitability of the industry may have narrow margins, the volume the industry moves is the key to its attractiveness.

3.7. Industry Outlook and Trends

According to Deloitte`s 2022 Retail Industry Outlook, retailers ought to reexamine their strategies to accommodate new ways of operating in this industry. The recent pandemic brought both challenges and opportunities, and how retailers deal with them will set the stage for companies that are better prepared for the future (Deloitte, 2022). These opportunities lie in the restructuring of the workforce, supply chain, inventory and pricing management, and the changing role of the physical stores combined with the development of digital and eCommerce strategies. In addition, new consumer behaviors may favor the retailers' businesses with the gradual return to in-person shopping, while eCommerce will remain a certainty for the future. Modern consumers expect easy access to products through digital and eCommerce platforms while also expecting timely delivery. Accommodating

these factors will be one of the cornerstones shaping the future of the retailing industry.

3.8. Summary

In summary, for the PESTEL analysis (external factors affecting the industry), we highlight the following factors which may be the predominant influences on the company's operations: Political Factors, Economic Factors, and Technological Factors. Regarding the analysis of Porter's 5 forces, we can conclude that the current forces shaping the retailing industry are somewhat contained due to the company's overall strong power within the industry. However, fierce competition will force the company to act and keep its focus on the efficiency of its operations, both domestically and internationally.

Chapter Four
Economic Outlook

4.1. Global Economy

The global economy contracted by 3.4% in 2020 due to the impact of the global pandemic. After this contraction, the economy rebounded at a 5.5% pace in 2021, which was the strongest post-recession pace in 80 years and the highest rate of growth in more than four decades. The world's GDP was 1.9% higher in 2021 than it was in 2019. However, it was still 3.3% short of the projected GDP for pre-pandemic times. The global economy is projected to grow by 4% in 2022 and by 3.5% in 2023 (United Nations, 2022).

Commodities prices have surged, putting pressure on inflation and resulting in higher prices for essential goods and energy. Both developed and developing economies have experienced increases in core inflation, and central banks are currently discussing increasing interest rates to smooth inflation. Government bond yields are also on the rise (World Bank, 2022).

4.2. United States Economy

The U.S. economy expanded by 5.7% in 2021, having grown by 4,9% in 2020. The U.S. economy is expected to grow by 3.7% in 2022 and 2.4/% in 2023 (Trading Economics, 2022). The consumption is bound to grow as the disruptions affecting the distribution and supply chain will lessen, and businesses will gradually recover from the initial pandemic years. Inflation had a steep rise, from 1.4% in early 2021 to 7% at end of 2021, and is projected to remain at high levels, although it is expected to flatten towards the end of 2022 (Statista, 2022). The Inflation rate is expected to be at 4.3% at the end of 2022 and 1.9% in 2023. Consumer prices are, therefore, expected to increase as well, supported by higher shipping prices as well as an increase in wages.

4.3. India

India`s economy was projected to grow at 9.4% in fiscal Year 2021-2022. The growth

rate is expected to fall to 8.1% in fiscal year 2022-2023 and thereafter to circa 5% in fiscal year 2023-2024. Inflation is following a global trend and is growing; in 2021, inflation was at 5.66% in an uptrend. However, global disruptions in the supply chain are expected to ease, and inflation is expected to grow at a slower pace at 4.6% in 2023.

4.4. China

China's GDP growth rate was set at 8.1% in 2021, showing a swift recovery from the initial pandemic year, which was supported by the economy's very strong exports. GDP is expected to grow at a slower pace in 2022 and 2023, still with an expected growth rate of 5.1% (Trading Economics, 2022). Consumption growth is steady, and inflation, although in an uptrend, is not as severe (around 1% in 2021 and expected to be of around 2% in 2022 and 2023) as in other countries, as the economy`s exposure to upstream activities is limited.

4.5. Canada

Canada's GDP had grown by around 5% in the second half of 2021. It is expected to slow down to a growth rate of 3.9% in 2022 and 2.8% in 2023. Canada was affected by global supply chain constraints and disruptions, but the economy is expected to run smoother by 2022, with inflation projected to slow down from around 5% in 2021 to 4% by the end of 2022 and around 3.5% in 2023. Unemployment is expected to fall slightly from 6.5% at the end of 2021 to around 6% in 2022 and 2023 (Trading Economics, 2022).

4.6. Mexico

Mexico's GDP has grown by 5.9% in 2021 and is expected to grow by 3.3% in 2022 and 2.5% in 2023. Growth will be supported by stronger exports, which continue to benefit from the recovery in the United States. Consumption is supported by the gradual improvement in the labor market (wages are expected to increase 2% by the end of 2022 and 3% in 2023), and the increasing share of the population who are vaccinated, but it is still 3% below the pre-pandemic level. The labor market is gradually recovering, with the unem

ployment rate being around 4% by the end of 2021 and expected to be around 3% by the end 2022 and 2023 (Trading Economics, 2022).

4.7. Summary

After analyzing the trends of both the global economy and the economies of the US and other regions where the company operates, we highlight the following conclusions in areas which could positively or negatively affect the company's operations:

-After a contraction year in 2020, the global economy is on a recovering path, with optimistic growth rates.
-However, there are risks related to the supply chain, which is not yet fully regularized and may pressure prices in the short to mid-term.
-Global trade is, nevertheless, expected to become smoother, which should support the global growth.
-Consumption and investment have been key factors in the global economy revamp.
-However, inflation poses a serious threat to a full-speed recovery. Prices have generally increased, and governments are set to change monetary policies to combat high levels of inflation. Inflation is, expected to slow down towards the end of 2022 and 2023.
-The US economy, as well as the other countries` economies where the company operates, have positive outlooks coming from the pandemic years. However, they too face inflation and are affected by the disruptions in the supply chain.
-Consumption is expected to grow in the US and other jurisdictions, which may positively influence the company's operations.
-Inflation and higher wages may cause some pressure on the company's operations due to the company's price strategies and low pricing position.

Chapter Five
Historical Financial Statements

5.1. Common Size Financial Statements

We use the common size method to analyze financial statements, as it provides us with a basic overview of all items on the income statement and balance sheet as a percentage of the company's revenue. The common size method is used by dividing each item of the financial statements by the company's revenue to determine the percentage and the weight of each item in the company's performance. This method is very useful for a quick glance at the financial statements, as it enables us to identify certain changes and abnormal results, which in turn alerts us to investigate further to understand what happened in any given financial year. This also allows us to understand the company's capital structure and profit margins.

5.1.1. Common Size Income Statement

Table 5-1 below shows the common size Income Statement of Walmart for the years from 2017 to 2021.

Table 5-1– Walmart`s Common Size Income Statement 2017-2021

FISCAL YEAR ENDS IN JANUARY. USD IN MILLIONS EXCEPT PER SHARE DATA.	2017	2018	2019	2020
REVENUE	100,00%	100,00%	100,00%	100,00%
COST OF REVENUE	74,35%	74,63%	74,90%	75,31%
GROSS PROFIT	25,65%	25,37%	25,10%	24,69%
OPERATING EXPENSES	0,00%	0,00%	0,00%	0,00%
SALES, GENERAL AND ADMINISTRATIVE	20,96%	21,19%	20,83%	20,59%
TOTAL OPERATING EXPENSES	20,96%	21,19%	20,83%	20,59%
OPERATING INCOME (EBIT)	4,69%	4,18%	4,27%	4,10%
INTEREST EXPENSE	0,49%	0,47%	0,46%	0,50%
OTHER INCOME (EXPENSE)	0,02%	0,03%	0,04%	0,04%
INCOME BEFORE TAXES	4,22%	3,75%	3,85%	3,64%
PROVISION FOR INCOME TAXES	1,28%	0,92%	0,83%	0,94%
NET INCOME FROM CONTINUING OPERATIONS	2,94%	2,83%	3,02%	2,70%
DISCONTINUING OPERATIONS	-0,13%	-0,86%	-1,73%	0,14%
NET INCOME	2,81%	1,97%	1,30%	2,84%

The first conclusion we can draw from looking at Walmart's financials is that it is a fairly stable company with no major changes in the financial items over the last 5 years. However, we can still identify certain minor changes which help us understand the company's performance. Starting with the company's gross profit, we note that the company's gross profit margin has been declining since 2017, reaching its lower point in 2020. This general decline can be attributed to the very strong competition the company faces. This also explains the relatively low gross profit margin of the company, with an average of 25.13% which is not very favourable with other industries (Walmart, 2021)[1].

The special decline in the gross profit margin in 2020 can be attributed to the Covid-19 pandemic. In 2021, the company has bounced back to a higher percentage of gross profit margin (from 24,69% in 2020 to 24,83% 2021) due to stronger net sales combined with strategic sourcing initiatives and strong sales in higher-margin categories (Walmart, 2021)[2]. Furthermore, the company has been steadily reducing its operating expenses from 21.19% in 2018 to 20.01% in 2021, which may be attributed to the company's focus on expense management (Walmart, 2021)[3]. Thus, the company was able to post its best year in terms of both operating income (rising from 4.10% in 2020 to 4.82% in 2021) and income before taxes, which explains the jump from 3.64% in 2020 to 4.43% in 2021. Again, we attribute this good performance to strong revenue growth combined with efficiency in the operating costs.

However, the net income, compared to the company's revenue for the year 2021 (2.42%) was lower than that for the previous year (2.84% in 2020). This may be explained by the gains/losses in discontinuing operations. 2020 posted a slight gain, whereas 2021 posted a considerable loss, which impacted the net income of the company. Nevertheless, in overall terms, Walmart runs a pretty efficient company but with very low gross and net profit margins due to strong competition in the same market categories.

1 Walmart 2021 Form 10 K, page 34
2 Walmart 2021 Form 10 K, page 38
3 Walmart 2021 Form 10 K, page 39

5.1.2. Common Size Balance Sheet

The common size Balance Sheet is important to analyze the company's capital structure. We will once again analyze the last 5 fiscal years (2017-2021) and how the capital structure has evolved. Table 5-2 below shows Walmart`s Common Size Balance Sheet from 2017 to 2021.

Table 5-2 - Walmart`s Common Size Balance Sheet 2017-2021

FISCAL YEAR ENDS IN JANUARY. USD IN MILLIONS EXCEPT PER SHARE DATA.	2017	2018	2019	2020	2021
ASSETS					
TOTAL CURRENT ASSETS	11,87%	11,92%	12,03%	11,80%	16,11%
TOTAL NON-CURRENT ASSETS	29,05%	28,95%	30,60%	33,34%	29,05%
TOTAL ASSETS	**40,92%**	**40,88%**	**42,63%**	**45,14%**	**45,16%**
LIABILITIES AND STOCKHOLDERS' EQUITY					
LIABILITIES					
TOTAL CURRENT LIABILITIES	13,77%	15,69%	15,06%	14,85%	16,57%
TOTAL NON-CURRENT LIABILITIES	10,57%	9,03%	12,09%	14,72%	12,93%
TOTAL LIABILITIES	**24,35%**	**24,72%**	**27,15%**	**29,57%**	**29,50%**
STOCKHOLDERS' EQUITY	0,00%	0,00%	0,00%	0,00%	0,00%
ACCUMULATED OTHER COMPREHENSIVE INCOME	-2,93%	-2,03%	-2,24%	-2,44%	-2,10%
TOTAL STOCKHOLDERS' EQUITY	**16,58%**	**16,15%**	**15,48%**	**15,56%**	**15,65%**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**40,92%**	**40,88%**	**42,63%**	**45,14%**	**45,16%**

Analyzing the company's current assets, we note that the cash and cash equivalent item has been performing well over the last 5 years, with a significant increase in the last year (from 1.81% in 2020 to 3.17% in 2021). This can be explained by the strong sales/revenue posted by the company following the pandemic situation which accelerated the inventory sale (which was reduced from 8.48% in 2020 to 8.04% in 2021) and also reduced the percentage of receivables (which was lowered from 1.20% in 2020 to 1.17% in 2021) (Walmart, 2021)[4]. Furthermore, there was a huge surge in other current assets, which can be explained by the company's assets "held for sale", as described in Walmart's 2021 Form 10-K, page 60, namely the company's operations in the UK and Japan (Walmart, 2021)[5]. Combined, the abovementioned numbers explain the jump in current assets from 11.80% in 2020 to 16.11% in 2021.

4 Walmart 2021 Form 10 K, page 37
5 Walmart 2021 Form 10 K, page 60

In terms of non-current assets, Net Property Plant and Equipment (i.e., after depreciation) significantly decreased from 24.25% in 2020 to 19.25% in 2021. According to Walmart's 2021 Form 10 K, page 60, the reduction was due to a decrease in both Land and Buildings and Improvements (Walmart, 2021)[67]. Goodwill also presented a reduction from 5.93% in 2020 to 5.18% in 2021 due to the requalification of accounts related to the operations held for sale (in UK and Japan), which were recorded as current assets, as explained above (Walmart, 2021)[89]. Due to these changes, the total non-current assets saw a reduction from 33.34% in 2020 to 29.05% in 2021. However, the total assets remain fairly stable in the last 2 years, with a slight adjustment from 45.15% in 2020 to 45.16% in 2021.

Upon analyzing the current liabilities, we can conclude that certain items, such as short-term debt and accounts payable, have registered lower numbers compared to the previous years. Short-term debt decreased from 1.05% in 2018 to 0.04% in 2021, which is an outstanding result. Accounts payable also decreased from 9.21% in 2018 to 8.79% in 2021. Additionally, the current portion of long-term debt and leases also recorded a reduction in percentage. The exception to this trend was the increase in other current liabilities from 0/00% in 2017, 2018 and 2019 to 3.57% in 2021. This increase was related to 2 items[10]. liabilities held for sale, related to the sale of operations in the UK and Japan, and other accrued liabilities such as interest, maintenance, utilities, legal proceedings, etc. (Walmart, 2021)[11]. With regard to non-current liabilities, we note that both long term debt and long-term leases have increased in the latest years. Long-term debt increased in 2019 to 8.54% from 6.04% in 2018 as a result of the purchase of Flipkart by the Company (Walmart, 2019)[12]. In 2021, the company reduced this item to 7.45%from 8.45% in 2020 due to the fact that the company did not issue any long-term debt in the 2021 fiscal year

6 Walmart 2021 Form 10 K, page 60
7 The Company`s 2021 Form 10 K notes to financial statements do not provide further information on this reduction.
8 Walmart 2021 Form 10 K, page 61
9 It is worth notice that in 2019 the company`s goodwill had a major increase due to the acquisition of Flipkart, an India e-commerce business, according to the company`s 2019 Form 10 K pages 3, 7 and 57. (Walmart, 2019)
10 Please note that in the company`s Form 10K, in the company`s balance sheet, all these items are represented under "Accrued Liabilities". Page 67 of the Form 10K breaks down this item and divide it in the same manner we present in our table above.
11 Walmart 2021 Form 10 K, page 67
12 Walmart 2019 Form 10 K, page 40

(Walmart, 2021)[13].

The company registered a significant increase in the long-term leases item in 2020 (3.91% from 1.30% in 2019), which slightly decreased in 2021 to 3.00%. This is due to the company's adoption, in 2020, of the ASU 2016-02, Leases (Topic 842) (FASB - Accounting Standards Update, 2018). This means that the company had to include in the balance sheet leases with "reasonably assured renewals". The remaining non-current liabilities are less important items and have no major fluctuations.[14]

Overall, the company's total liabilities have increased from 24.35% in 2017 to 29.50% in 2021. The first major increase was in 2019 with the acquisition of Flipkart and the issuance of long-term debt. The remaining increase was also related to the updated accounting principles and the recognition of long-term leases. Finally, with regard to stockholders' equity, there are no major changes to report. Total stockholders' equity has been quite steady throughout the years although a slight decrease from 2017 and 2018 was due to the decrease in retained earnings.

In conclusion, we can understand that one of the major investment decisions from the company in the recent years – the acquisition of Flipkart – was done by means of issuing new debt rather than by shareholders' equity. Today, the company has a capital structure whereby debt represents 65.33% of the capital structure, whereas shareholders' equity represents 34.66%.

5.2. Reorganizing Historical Financial Statements

5.2.1. Invested Capital

Invested capital is calculated by rearranging the Balance Sheet to separate operating items from financing items. We can calculate invested capital by subtracting operating

13 Walmart 2021 Form 10 K, page 69

14 Issued by the Financial Accounting Standards Board, this Accounting Standards Update No. 2016- 02, Leases (Topic 842), aims to "increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing transactions". (FASB - Accounting Standards Update, 2018)

current liabilities from operating assets. Invested capital is also calculated by summing the company's debt and equity. Table 5-3 and Table 5-4 below, present Walmart's Invested Capital for the past 5 years (2017-2021).

Table 5-3 - Walmart`s Invested Capital 2017-2021 (Operating Assets – Operating Current Liabilities)

	2017	2018	2019	2020	2021
OPERATING CURRENT ASSETS	57689	59664	61897	61806	9006
OPERATING CURRENT LIABILITIES	63008	68859	69647	69549	8734
OPERATING WORKING CAPITAL	-5319	-9195	-7750	-7743	2718
OPERATING INVESTED CAPITAL	133773	126170	143857	159042	14835
TOTAL FUNDS INVESTED	**134 252**	**133 784**	**147 852**	**165 032**	**163 3**

From analyzing the invested capital in Table 5-3 above, we can quickly conclude that the company has normally carried a negative working capital, i.e., its current liabilities are greater than its current assets. Nevertheless, this trend has been reducing, and in 2021, the working capital was actually positive. The company's management seemed to be comfortable with this situation and they made a note in its 2021 annual report (Walmart, 2021)[15], saying that *"we generally operate with a working capital deficit due to our efficient use of cash in funding operations, consistent access to the capital markets and returns provided to our shareholders in the form of payments of cash dividends and share repurchases."*

Net property, plant and equipment has been fairly stable, with a slight increase in 2020 and a decrease in 2021, whereas other long-term assets have been in a steep decrease from USD 7.1 billion to USD 1.9 billion. As discussed above, Goodwill has increased significantly, as well as intangible assets, mainly since 2019 with the acquisition of Flipkart. Operating invested capital grew from USD 126.170 billion in USD 159.042 billion in 2020. However, it decreased in the last fiscal year, with operating invested capital ending at USD 148.35 billion.

We can also look at rearranging the balance sheet by adding debt and equity together to find the total funds invested. This is presented in Table 5-4 below. This will also allow us to verify that the numbers in Table 5-3 are correct.

15 Walmart 2021 Form 10 K, page 45

Table 5-4 - Walmart`s Invested Capital 2017-2021 (Debt + Equity)

	2017	2018	2019	2020	2
DEBT & DEBT EQUIVALENTS (INTEREST-BEARING DEBTS)	50949	51010	63718	79190	69
EQUITY & EQUITY EQUIVALENTS	83 303	82 774	84 134	85 842	94
TOTAL FUNDS INVESTED	**134 252**	**133 784**	**147 852**	**165 032**	**16**

From analyzing this table, we can identify where the financing of the company's operations is coming from. We can conclude that the company has been investing, using more debt than equity capital. As identified earlier, the company had issued long-term debt to finance its acquisition of Flipkart, and that is shown in the increase of long-term debt in 2019. Additionally, the reevaluation of long-term leases pursuant to new accounting principles could explain the surge in debt and debt equivalents in 2020.

5.2.2. NOPLAT – Net Operating Profit Less Adjusted Taxes

As Koller, Goedhart, & Wessels explain, NOPLAT is the profit available for all investors and is thus very important (Koller, Goedhart, & Wessels, 2020)[16]. Also, NOPLAT is the basis for the calculation of the Free Cash Flow which, in turn, is the basis for a company's valuation models. Table 5-5 below describes the calculations to find Walmart`s NOPLAT for the last 4 fiscal years (2018 – 2021).

Table 5-5 - Walmart`s NOPLAT 2018-2021

	2018	2019	2020	2021
EBIT	20937	21957	21468	26948
-OPERATING CASH TAXES	-5950	-2193	-5747	-5147
NOPLAT	**14987**	**19764**	**15721**	**21801**
OPERATING TAXES ON EBITA				
REPORTED TAXES (PROVISION FOR INCOME TAX)	4600	4281	4915	6858
TAX SHIELD ON INTEREST PAID	571	507	670	641
^(-) TAXES ON INTEREST RECEIVED	-37	-47	-49	-34
TAXES ON EBITA	5134	4741	5537	7466
DECREASE/(INCREASE) IN DEFERRED TAXES	816	-2548	210	-2319
OPERATING CASH TAXES	5950	2193	5747	5147

16 page 135

The Company`s NOPLAT registered a steep growth from 2018 to 2019, followed by a steep decline in 2020 and then again, a growth in 2021. We understand that the decline registered in 2020 is due to the Covid-19 pandemic before the company adjusted its operations to meet the customers' needs. Once it did, it went back to a growth position in its operations. This means that the company is strong and reliable for its stakeholders.

5.2.3. Reconciliation to Net Income

To ensure the NOPLAT calculations are done correctly, we will use the Reconciliation to Net Income technique which will validate the above-mentioned assumptions. Table 5-6 below shows how to calculate the NOPLAT by using the Reconciliation to Net Income of the company for the last 4 fiscal years (2018 – 2021).

Table 5-6 - Walmart`s NOPLAT Using the Reconciliation to Net Income 2018-2021

RECONCILIATION TO NET INCOME	**2018**	**2019**	**2020**	**2021**
NET INCOME	9862	6670	14881	13510
INCREASE/(DECREASE) IN DEFERRED TAXES	-816	2548	-210	2319
ADJUSTED NET INCOME	9046	9218	14671	15829
AFTER-TAX INTEREST PAID	1759	1839	1929	1674
LOSS (GAIN) FROM DISCONTINUED OPERATIONS	4297	8877	-738	4386
TOTAL INCOME AVAILABLE TO ALL INVESTORS	15102	19934	15862	21889
AFTER-TAX INTEREST RECEIVED	-115	-170	-140	-87
NOPLAT	**14987**	**19764**	**15721**	**21801**

The Reconciliation to Net Income adjusts net income for taxes in order to find the operating profit of the company. It is a second method to calculate NOPLAT, and it also shows the available profit for investors.

15 Walmart 2021 Form 10 K, page 45

5.2.4. Free Cash Flow

The Free Cash Flow (FCF) allows us to identify the actual cash flow of the company from operating, financing and investment activities. This is an important measure for the company's performance, as well as an important information for predicting future cash flows and firm valuation. Free Cash Flow shows us the cash flows available to investors after investments in fixed assets are made, as well as after the necessary working capital is covered. Table 5-7 below shows the calculations for Walmart`s Free Cash Flow for the last 4 fiscal years (2018 – 2021).

Table 5-7 - Walmart`s Free Cash Flows 2018-2021

	2018	2019	2020	2021
NOPLAT	14987	19764	15721	21801
DEPRECIATION	10529	10678	10987	11152
GROSS CASH FLOW	25516	30442	26708	32953
(INCREASE)/DECREASE IN OPERATING WORKING CAPITAL	3876	-1445	-7	-10461
CAPITAL EXPENDITURES	-11169	-7255	-26641	6049
(INCREASE)/DECREASE IN OTHER LONG-TERM ASSETS	5572	-926	-232	1562
(INCREASE)/DECREASE IN GOODWILL	-1205	-12939	108	2090
(INCREASE)/DECREASE IN INTANGIBLES	0	-5800	600	300
INCREASE (DECREASE) IN ACCUMULATED COMPREHENSIVE INCOME	4051	-1361	-1263	1039
GROSS INVESTMENT	1125	-29726	-27435	579
FREE CASH FLOW	26641	716	-727	33532
AFTER-TAX INTEREST RECEIVED	115	170	140	87
(INCREASE) /DECREASE IN SHORT-TERM INVESTMENTS	0	0	0	0
(INCREASE) /DECREASE IN EQUITY INVESTMENTS	-7135	3619	-1995	-8971
DISCONTINUED OPERATIONS	-4297	-8877	738	-4386
CASH FLOWS TO INVESTORS	15324	-4372	-1843	20263
	2018	**2019**	**2020**	**2021**
FINANCING FLOWS				
AFTER-TAX INTEREST EXPENSE	1759	1839	1929	1674
DECREASE/(INCREASE) IN DEBT	-61	-12708	-15472	10019
FLOWS TO DEBT HOLDERS	1698	-10869	-13543	11693
DECREASE (INCREASE) IN MINORITY INTEREST	-216	-4185	255	277
DIVIDENDS (OR ADJUSTMENTS TO RETAINED EARNINGS)	14109	10992	11723	8690
NET SHARES REPURCHASED (ISSUED)	-267	-310	-278	-397
FLOWS TO EQUITY HOLDERS	13626	6497	11700	8570
CASH FLOWS AVAILABLE TO INVESTORS	15 324	-4 372	-1 843	20 263

To find Free Cash Flow, we add noncash operating expenses to NOPLAT and subtract any investments made in invested capital. By looking at Walmart`s Free Cash Flow, we conclude that the FCF has been positive during 2018-2021 except in 2020. The FCF was USD 33,532 million in 2021. The reason for a negative FCF in 2020 was due to significant capital expenditures in 2020. However, 2021 was a very positive year compared to the last 4 years, giving some positive outlook for the future of the company.

5.2.5. ROIC – Return on Invested Capital

The Return on invested capital is a good measure to get the return on the company's invested capital, i.e., what is the return on the invested capital generated by the company's operating profit. This is measured by dividing NOPLAT by the company's (last year) invested capital. This means that ROIC focuses on the company's operating results, which gives us a better understanding of the company's core business returns.

Table 5-8 below shows the calculations for Walmart`s Return on Invested Capital for the last 4 fiscal years (2018 – 2021).

Table 5-8 - Walmart`s Return on Invested Capital (2018-2021)

ROIC	2018	2019	2020	2021
	11,20%	15,66%	10,93%	13,71%

We conclude that from 2018 to 2019, the company grew its return from 11.20% to 15.66%, which is very positive. Due to the impact of the current pandemic, the company had reduced its return on invested capital in 2020 with only 10.93%. However, 2021 was another growth year, with its return increasing to 13.71%, which is again very positive.

Chapter Six
Ten-Year Pro Forma Financial Statement Forecast

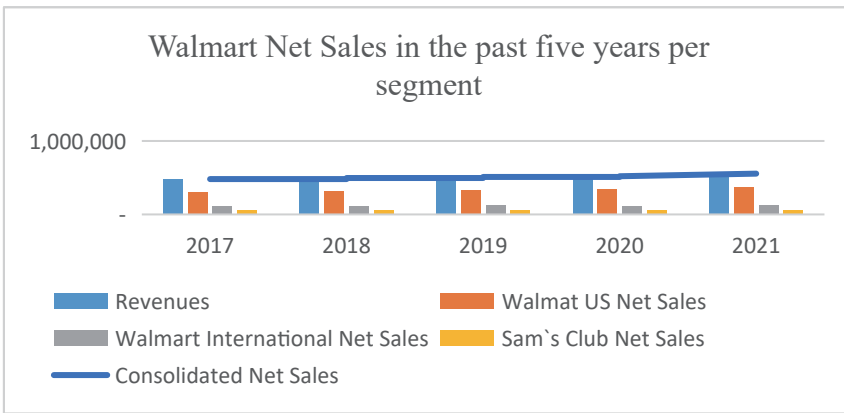
6.1. Underlying Assumptions

In order to prepare the financial statements` forecast, we have firstly analyzed the Company`s sales growth by segment over the last 5 years. Keeping this analysis in mind, we factored in the Company's business model and strategies, as well as its SWOT analysis, the industry analysis, the economic outlook described in Chapter 4 and the Company`s financial statements to project the sales/revenue growth for the next ten years.

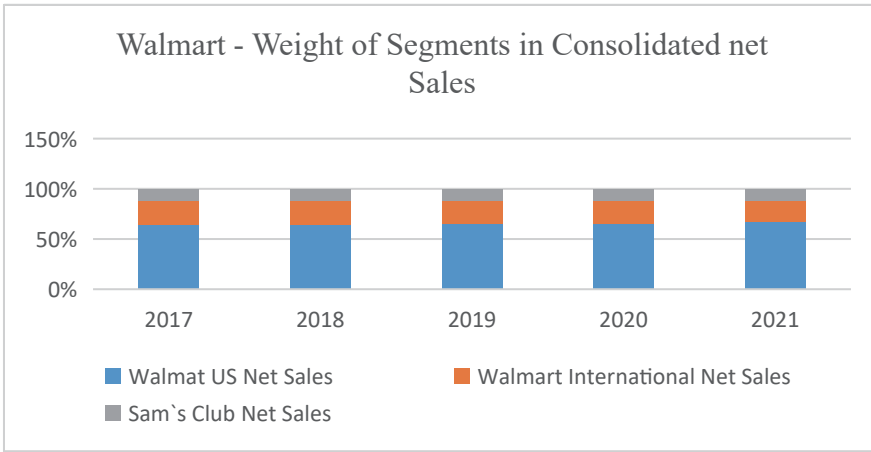
As analyzed in Chapter 2, the Company operates in three segments: Walmart U.S., Walmart International and Sam`s Club. While Walmart U.S. and Sam`s Club are solely exposed to the U.S. market, Walmart International is exposed to 25 countries. Among these, UK holds a major weight in the international operations (around 25%), while Mexico, Canada, India and China appear to be the most important and strategic locations for the Company.

In Graph 6-1 below, we demonstrate the behavior of the Company's Net Sales (in USD) in the past five years per segment and in Graph 6-2 the weight of each of the three segments in the total Net Sales of the Company.

Graph 6-1 – Walmart Sales Analysis from 2017 to 2021

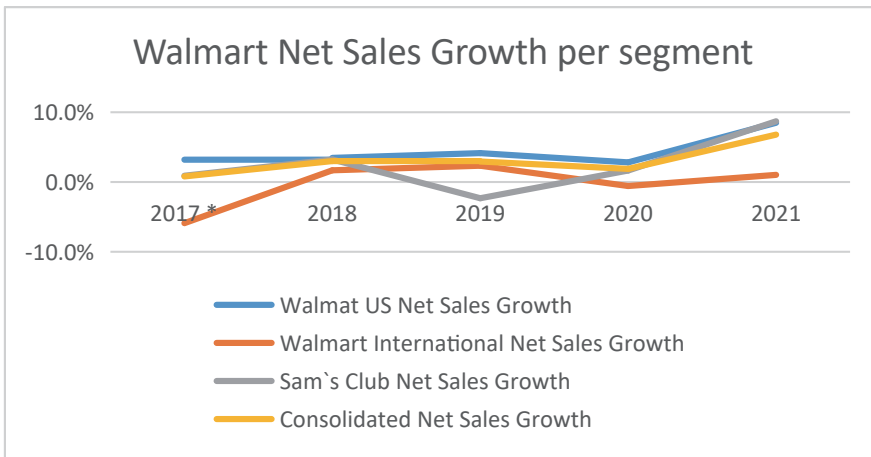


Graph 6-2 –Weight of each of Walmart`s segments in total Net Sales 2017-2021



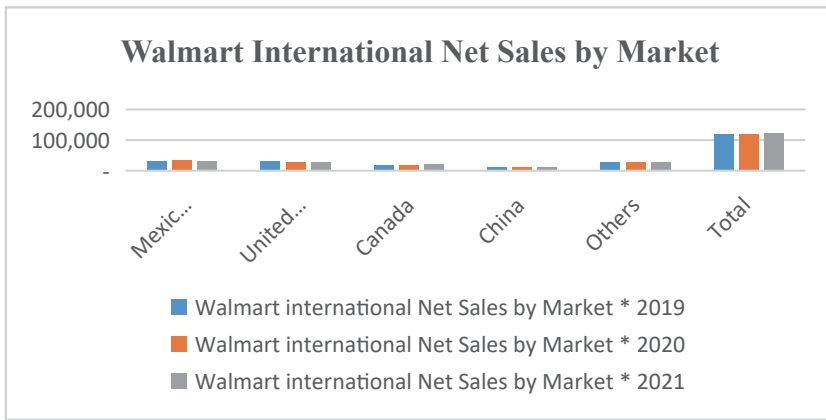
Graph 6-3 below demonstrates the net sales growth per segment in percentage for the last five years.

Graph 6-3 – Walmart Net Sales Growth per segment 2017 - 2021

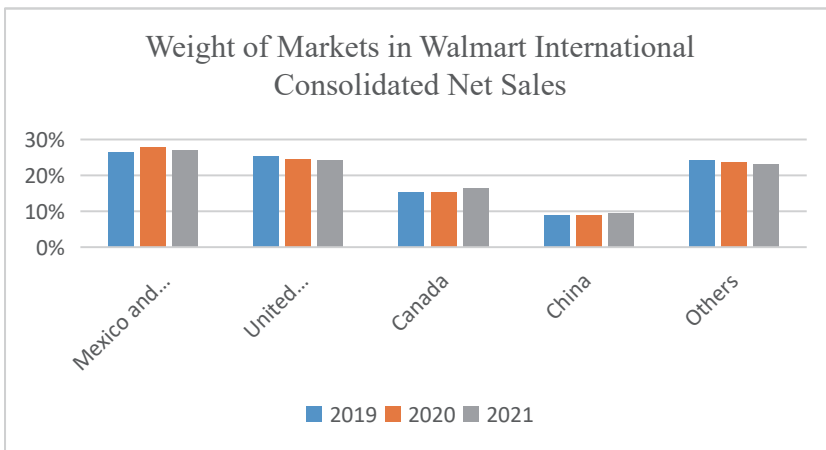


In Graph 6-4 below, we see the growth of Walmart International Net Sales per (most relevant) country and in Graph 6-5, we see the weight of each country/market for the Company`s international segment net sales.

Graph 6-4 – Walmart International Net Sales by Market 2019-2021



Graph 6-5 – Weight of Markets in Walmart International Consolidated Net Sales 2019-2021



By analyzing these historical results, we note that the most important and influential segment of the Company to its net revenue is Walmart U.S., which represents around 65% of the Company`s revenues. For the past five years, Walmart U.S. has been growing consistently and solidly, except in 2020 where adjustments had to be made due to the pandemic situation, as discussed prior. We also note that in 2021 the U.S. segment grew at an impressive 8.5% rate which is remarkable and gives us clues about what may happen in the future, especially considering the growing weight of the Company`s online/eCommerce business in this recovery. We also note that Sam`s Club segment (representing around 12% of the Company`s revenues), which is also exposed to the U.S. market, has posted interesting growth numbers throughout the years, (except in 2019). Sam's club also jumped 8,7% in 2021, which is remarkable as well.

Finally, the second most important segment of the Company, Walmart International (representing a declining 22%), has posted overall positive growth, except in 2017, due to divestures executed in China and Mexico and currency fluctuations, and 2020, due to Covid-19 pandemic. Nevertheless, 2021 presented a sales growth of 1% which, considering the international economic environment, is still positive. A deeper analysis to the countries where Walmart International operates shows that, except for Mexico, which grew 4.9%, in 2020 all the other locations presented negative results, which, for the reasons already mentioned, is understandable. The 2021 fiscal year was one of rebound for most of the segments of which we highlight the China operations, which grew 7.1%, and the Canada operations, which grew 8.5%. India is not yet a major location, but, as we explain below, we understand it will become a major factor in the Company`s international operations.

Taking into account the analysis made above, and factoring in what was analyzed previously in Chapters 2 to 4, we highlight below our assumptions in forecasting the expected revenues for the company in the next ten years:

a) When forecasting the sales growth rate for the next ten years, we took note of the existing weight of each of the Company`s segments in the Company`s revenues and how that may play out in the future.

b) We have factored in the resilience of the Walmart US segment considering its efficiency in operations and its massive implementation in the U.S. which helps to understand how the Company has shown very steady growth rates between 3,2% and 4,2% in 2017, 2018 and 2019. In 2020, with the beginning of the Pandemic, the Company still posted growth rates which allows us to conclude that, despite major disruptions the Company is resilient enough to continue to grow.
c) Considering the effects of the pandemic and the new trend in consumer behavior discussed in Chapter 3.4.4, we assumed that 2022 will be still one of great growth for Walmart US at around 7% growth rate. This rate is slightly lower than in 2021, which was a rebound year, but we believe it reflects the trend in eCommerce sales growth as well as how consumers will likely wish to stock more goods at home for unexpected crises. Walmart is a very recognized brand and due to its proximity to the costumers we believe that consumers` loyalty will remain high.
d) We have made the same assumptions for Sam`s Club which is exposed to the same U.S. environment. Hence, we have predicted a 7% growth in sales for this segment in 2022
e) This growth in the U.S. segments is in line with the forecasted growth for the US economy which is due to grow around 3,7% in 2022. (See Chapter 4.2 above).For
f) years 2023 and 2024 we have assumed a downward trend in the growth rates for the U.S. segments however we still believe that due to the trends in the U.S. economy GDP growth, the Company will be able to sustain a 4% growth rate for these two years, in line with the trend in past years 2018 and 2019 as seen above.
g) For period between 2025 and 2030, we have assumed a slightly lower growth rate at 3% for the U.S. segments as this seems a comfortable growth rate for the Company considering its past trend as well as how efficiently the Company runs and how it is adapting – and growing – in its Omni-Channel and eCommerce operations.
h) For the last two years, including 2031, for the purposes of the infinite growth calculations, we have assumed a 2% growth.
i) For Walmart International, we have assumed a significant loss in net sales due to the sale of the UK operations (and Japan operation). UK alone accounted for around 25% of the net sales for Walmart International and was divested from, in

early 2021 (calendar year). We estimated a loss of 20% in the growth of this segment for 2022 due to this factor.

j) However, we foresee that, in 2023 and 2024, the international operations will see a revamp in sales growth to 5% due to the exposure to fast growing economies such as China and India as well as the resilience of Mexico`s and Canada`s economies.

k) Looking at these countries` GDP projections (Chapter 4), we are very positive on the impact these economies will have on Walmart International, especially in China and India, which are both bound to grow around 5% per year.

l) In India, specifically, the Company operates a nationwide, very strong and fast growing, eCommerce business (Flipkart).

m) We have, therefore, assumed that the eCommerce will be a key positive factor for this international segment.

n) From 2025 onwards, we have assumed a deceleration of the global economies` GDP due to pressure of inflation and the related increase in products costs. (See Chapter 4). This will impact the operations of the Company due to the Company`s policy of low prices everyday (Chapter 2.4). We have therefore projected a growth rate of 4% from 2025 until 2030, with a slight decline to 3% in 2031 and an infinite growth rate of 2% for the purposes of using the valuation models below.

o) The assumptions made for the growth rate of the 3 segments do not factor in any out of ordinary events such as war, financial crisis, natural catastrophes or acts of terrorism.

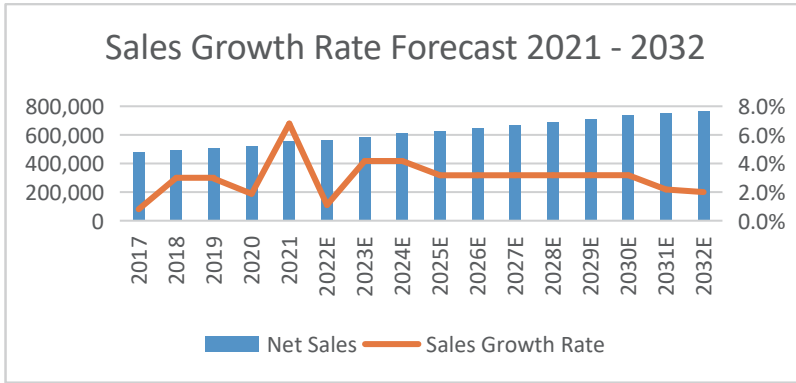
p) We have also assumed a strong resilience of the Company against a decreased growth of the economies in general due to its exposure to products of 1st and 2nd need with stiffer demand curves.

q) We have assumed that the Company will continue to rapidly grow its presence in the eCommerce sector in the US which will allow it to keep up with competitors such as Amazon while still boosting sales and compensate for less than optimal store results.

r) We have assumed that Walmart International will remain operating in the current countries as there is no evidence of the Company wishing to divest from more projects after the sale in Brazil, Argentina, Japan and UK.

As a result of the above assumptions, we have prepared the Company`s revenue growth rate forecast for the next ten years as per Graph 6-6.

Graph 6-6 – Walmart Sales Growth Rate Forecast – 2021 to 2032



In preparing this forecast, we have used the following method:

a) We have started by estimating the growth rate of each of the segments as per assumptions above.
b) We have factored in the GDP growth rate for the world, US and other countries where the Company has important operations into the projected growth rates.
c) We have calculated the consolidated growth rate of the segments combined considering the weight of each segment in the overall revenue.
d) We have applied the forecasted growth rate for the estimated net sales on top of the last financial year`s revenue (2021) to find the annual growth rate for the next ten years.

Table 6.1 below details the underlying assumptions for Walmart`s forecast from 2021 until 2032. We have estimated the cost of revenues and the Sales, General and Administrative to be a percentage of revenues, according to the previous year's behavior. However, for years 2022 and 2023, we slightly increased the forecasted numbers due to inflation and cost of labor (see Chapters 3 and 4). For depreciation, we used last fiscal year`s number. For

interest rate on debt, we used the Cost of Debt as calculated in Chapter 7.1.1 below. For the tax rate, we used the Valueline report`s estimation (25%) (ValueLine, 2021).

Table 6-1 - Assumptions Underlying Walmart`s Forecast for 2021 to 2032

ASSUMPTIONS UNDERLYING WALMART FORECAST (2021-2032)												
	t=0	t=1	t=2	t=3	t=4	t=5	t=6	t=7	t=8	t=9	t=10	t=11
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
SALES GROWTH RATE												
SALES GROWTH RATE	6,8%	1,1%	4,2%	4,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	2,2%	2,0%
OPERATING EXPENSE RATIOS												
COST OF REVENUE (% OF NET REVENUE)	75,17%	76,00%	76,00%	75,00%	75,00%	75,00%	75,00%	75,00%	75,00%	75,00%	75,00%	75,00%
SALES, GENERAL AND ADMINISTRATIVE (% OF NET REVENUE)	18,02%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%	19,00%
DEPRECIATION & AMORTIZATION EXPENSES (% OF NET REVENUE)	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%	1,99%
INTEREST EXPENSE AND INCOME												
INTEREST RATE ON DEBT	5,17%	2,42%	2,42%	2,42%	2,42%	2,42%	2,42%	2,42%	2,42%	2,42%	2,42%	2,42%
OTHER INCOME (% OF NET REVENUE)	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%	0,02%
TAXES (%)												
STATUARY TAX RATE	27,70%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%
WALMART CONSOLIDATED BALANCE SHEET - FORECAST ASSUMPTION (2021-2032)												
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
WORKING CAPITAL												
CASH	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%
ACCOUNTS RECEIVABLE	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%
INVENTORY	8,04%	10,00%	10,00%	8,00%	8,00%	8,00%	8,00%	8,00%	8,00%	8,00%	8,00%	8,00%
PREPAID EXPENSE	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%
OTHER CURRENT ASSETS (% OF NET REVENUE)	3,43%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
SHORT-TERM DEBT	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%
ACCOUNTS PAYABLE	8,79%	10,00%	10,00%	8,50%	8,50%	8,50%	8,50%	8,50%	8,50%	8,50%	8,50%	8,50%
ACCRUED LIABILITIES	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%	2,80%
CURRENT PORTION OF LONG-TERM DEBT	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%	0,56%
CURRENT PORTION OF LEASES	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%	0,35%
TAX PAYABLE	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%
UNEARNED REVENUE	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%	0,41%
OTHER CURRENT LIABILITIES	3,57%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
OTHER ASSETS												
INTANGIBLE ASSETS	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%	0,88%
GROSS PPE%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%	35,45%

NET PPE%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%	19,65%
DEFERRED TAX ASSETS (% OF SALES)	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%
GOODWILL	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%	5,18%
EQUITY INVESTMENTS	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%	2,68%
OTHER LONG-TERM ASSETS (% OF NET SALES)	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%	0,34%
OTHER LIABILITIES												
SHORT-TERM DEBT (% OF SALES)	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%
DEFERRED TAXES LIABILITY (% OF NET SALES)	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%	1,51%
LONG-TERM OBLIGATIONS: CAPITAL LEASES (% OF NET SALES)	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%
MINORITY INTEREST (% OF NET SALES)	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%	1,18%
LONG-TERM DEBT (% OF SALES)	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%	7,45%
PENSIONS AND OTHER BENEFITS (% OF SALES)	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
ACCUMULATED OTHER COMPREHENSIVE INCOME	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%	-2,10%
OTHER LONG TERM LIABILITIES	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%	0,98%

6.2. Income Statement Forecast

In this section, we forecast the Company's income statement from 2021 until 2032. As shown in Table 6-2 below, in this period revenues are forecasted to grow from $559,151 million in 2021 to $771,486 million in 2032 and net income is forecasted to grow from $13,510 million in 2021 to $21,870 million in 2032. We also note that it will take around two fiscal years for the Company to swing back from the loss in discontinuing operations. Finally, we expect retention ration to be maintained at 55% ratio.

Table 6-2 - Walmart's Income Statement Forecast for 2021 to 2032

WALMART YEARS ENDED JANUARY 31 (DOLLARS IN MILLIONS, EXCEPT PER SHARE DATA)												
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
REVENUE	559.151	565.293	588.883	613.465	632.946	653.056	673.813	695.240	717.359	740.191	756.359	771.486
COST OF REVENUE	420.315	429.623	447.551	460.098	474.710	489.792	505.360	521.430	538.019	555.143	567.269	578.614
GROSS PROFIT	138.836	135.670	141.332	153.366	158.237	163.264	168.453	173.810	179.340	185.048	189.090	192.871

SELLING, OCCUPANCY AND ADMINISTRATION	100.736	107.406	111.888	116.558	120.260	124.081	128.025	132.096	136.298	140.636	143.708	146.582
DEPRECIATION & AMORTIZATION EXPENSES	11.152	11.275	11.745	12.235	12.624	13.025	13.439	13.866	14.307	14.763	15.085	15.387
TOTAL OPERATING EXPENSES	111.888	118.680	123.633	128.794	132.884	137.106	141.463	145.962	150.606	155.399	158.793	161.969
EBIT= OPERATING INCOME	26.948	16.990	17.699	24.573	25.353	26.158	26.990	27.848	28.734	29.649	30.296	30.902
INTEREST EXPENSE	2.315	1.421	1.437	1.497	1.559	1.609	1.660	1.712	1.767	1.823	1.881	1.922
OTHER INCOME (EXPENSE)	121	122	127	133	137	141	146	150	155	160	164	167
EARNINGS BEFORE INCOME TAX PROVISION	24.754	15.691	16.390	23.209	23.931	24.691	25.476	26.286	27.122	27.986	28.579	29.147
INCOME TAX PROVISION	6.858	3.923	4.097	5.802	5.983	6.173	6.369	6.572	6.781	6.996	7.145	7.287
NET INCOME FROM CONTINUING OPERATIONS	17.896	11.769	12.292	17.407	17.948	18.518	19.107	19.715	20.342	20.989	21.434	21.860
DISCONTINUING OPERATIONS	(4.386)	–	–	–	–	–	–	–	–	–	–	–
NET INCOME	13.510	11.769	12.292	17.407	17.948	18.518	19.107	19.715	20.342	20.989	21.434	21.860
RETENTION RATIO	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%

6.3. Balance Sheet Forecast

Table 6-3 below shows the Company's forecasted balance sheets from 2021 until 2032. It is noted that the Company would have a growth in current assets due to the assumption that no major investments are expected, and that liquidity will be held as short investments. Overall, the Company is fairly stable and will continue to be so in the next decade.

Table 6-3- Walmart`s Balance Sheets for 2021 to 2032

CONSOLIDATED BALANCE SHEETS FORECAST (2021-2032)												
WALMART FOR THE YEARS ENDED JANUARY 31 (DOLLARS IN MILLIONS)												
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
ASSETS												
TOTAL CURRENT ASSETS	90067	83158	89244	88911	97929	107234	116834	126739	136958	147502	158580	169936
GROSS PROPERTY AND EQUIPMENT	198218	200395	208758	217472	224378	231507	238866	246461	254302	262396	268128	273490
LESS ACCUMULATED DEPRECIATION AND AMORTIZATION	(88370)	(89341)	(93069)	(96954)	(100033)	(103211)	(106492)	(109878)	(113374)	(116982)	(119537)	(121928)
NET PROPERTY AND EQUIPMENT	109848	111055	115689	120518	124345	128296	132374	136583	140929	145414	148590	151562
INTANGIBLE ASSETS	4900	4954	5161	5376	5547	5723	5905	6093	6286	6487	6628	6761
GOODWILL	28983	29301	30524	31798	32808	33850	34926	36037	37184	38367	39205	39989
DEFERRED TAX ASSETS	1836	1856	1934	2014	2078	2144	2212	2283	2355	2430	2484	2533
EQUITY AND OTHER INVESTMENTS	14961	15125	15757	16414	16936	17474	18029	18602	19194	19805	20238	20642
OTHER LONG-TERM ASSETS	1901	1922	2002	2086	2152	2220	2291	2364	2439	2516	2571	2623
TOTAL ASSETS	**252496**	**247371**	**260310**	**267118**	**281795**	**296942**	**312571**	**328700**	**345345**	**362522**	**378296**	**394047**

LIABILITIES AND SHAREHOLDERS' EQUITY												
TOTAL CURRENT LIABILITIES	92645	80316	83667	77958	80434	82989	85627	88350	91161	94062	96117	98039
TOTAL NON-CURRENT LIABILITIES	72320	73114	76165	79345	81865	84466	87150	89922	92782	95736	97827	99783
TOTAL SHAREHOLDERS' EQUITY	87531	93941	100477	109815	119497	129487	139794	150429	161402	172724	184353	196225
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	**252496**	**247371**	**260310**	**267118**	**281795**	**296942**	**312571**	**328700**	**345345**	**362522**	**378296**	**394047**

6.4. Invested Capital Forecast

Table 6-3 below shows the Company's forecasted balance sheets from 2021 until 2032. It is noted that the Company would have a growth in current assets due to the assumption that no major investments are expected, and that liquidity will be held as short investments. Overall, the Company is fairly stable and will continue to be so in the next decade.

Table 6-4 - Walmart's Forecasted Invested Capital for 2021 to 2032 (in million USD)

FORECASTED INVESTED CAPITAL (2021-2032)												
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
CASH	17741	18089	18844	19631	20254	20898	21562	22248	22955	23686	24203	24688
ACCOUNTS RECEIVABLE, NET	6516	6588	6862	7149	7376	7610	7852	8102	8360	8626	8814	8990
INVENTORIES	44949	56529	58888	49077	50636	52244	53905	55619	57389	59215	60509	61719
PREPAID EXPENSES	1661	1679	1749	1822	1880	1940	2002	2065	2131	2199	2247	2292
OTHER CURRENT ASSETS	19200	–	–	–	–	–	–	–	–	–	–	–
OPERATING CURRENT ASSETS	90067	82886	86344	77679	80146	82693	85321	88034	90835	93726	95773	97689
SHORT-TERM BORROWINGS												
ACCOUNTS PAYABLE	49141	56529	58888	52144	53800	55510	57274	59095	60975	62916	64290	65576
ACCRUED LIABILITIES	15680	15852	16514	17203	17749	18313	18895	19496	20117	20757	21210	21634
TAX PAYABLE	242	245	255	266	274	283	292	301	310	320	327	334
UNEARNED REVENUE	2310	2335	2433	2534	2615	2698	2784	2872	2964	3058	3125	3187
OTHER CURRENT LIABILITIES	19976	–	–	–	–	–	–	–	–	–	–	–
OPERATING CURRENT LIABILITIES	87349	74962	78090	72147	74439	76804	79245	81765	84366	87051	88953	90732
OPERATING WORKING CAPITAL	2718	7924	8255	5532	5708	5889	6076	6269	6469	6675	6820	6957
NET PROPERTY AND EQUIPMENT	109848	111055	115689	120518	124345	128296	132374	136583	140929	145414	148590	151562
OTHER LONG-TERM ASSETS	1901	1922	2002	2086	2152	2220	2291	2364	2439	2516	2571	2623
OPERATING INVESTED CAPITAL (EXCL. GOODWILL)	114467	120900	125946	128136	132205	136405	140741	145216	149836	154605	157982	161142
GOODWILL	28983	29301	30524	31798	32808	33850	34926	36037	37184	38367	39205	39989
INTANGIBLE ASSTETS	4900	4954	5161	5376	5547	5723	5905	6093	6286	6487	6628	6761
OPERATING INVESTED CAPITAL (INCL. GOODWILL)	148350	155156	161630	165310	170560	175979	181572	187346	193306	199459	203816	207892
SHORT TERM INVESTMENT OR EXCESS CASH	–	272	2900	11232	17783	24541	31513	38704	46123	53776	62806	72248
EQUITY INVESTMENTS	14961	15125	15757	16414	16936	17474	18029	18602	19194	19805	20238	20642
TOTAL FUNDS INVESTED	163311	170553	180287	192956	205278	217994	231114	244653	258624	273040	286860	300782

Table 6-5 - Walmart's Forecasted Invested Capital for 2021 to 2032 – by Debt & Equity (in million USD)

FORECASTED INVESTED CAPITAL (2021-2032) BY DEBT & EQUITY												
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SHORT-TERM DEBT	224	226	236	246	254	262	270	279	287	297	303	309
CURRENT PORTION OF LONG-TERM DEBT	3115	3149	3281	3418	3526	3638	3754	3873	3996	4124	4214	4298
CURRENT PORTION OF LEASES	1957	1978	2061	2147	2215	2286	2358	2433	2511	2591	2647	2700
LONG-TERM DEBT	41650	42108	43865	45696	47147	48645	50191	51787	53435	55135	56340	57466
PENSIONS AND OTHER BENEFITS	–	–	–	–	–	–	–	–	–	–	–	–
LONG-TERM LEASES	16756	16940	17647	18384	18967	19570	20192	20834	21497	22181	22666	23119
OTHER LONG TERM LIABILITIES	5469	5529	5760	6000	6191	6387	6591	6800	7016	7240	7398	7546
DEBT & DEBT EQUIVALENTS	69171	69931	72849	75890	78300	80788	83356	86006	88742	91567	93567	95438
DEFERRED INCOME TAXES	6609	6682	6960	7251	7481	7719	7964	8218	8479	8749	8940	9119
NET COMMON STOCK AND PAID-IN-CAPITAL	3928	3928	3928	3928	3928	3928	3928	3928	3928	3928	3928	3928
RETAINED EARNINGS	88763	95229	101984	111548	121410	131586	142084	152917	164094	175627	187405	199416
TREASURY STOCK	–	–	–	–	–	–	–	–	–	–	–	–
ACCUMULATED COMPREHENSIVE INCOME	(11766)	(11895)	(12392)	(12909)	(13319)	(13742)	(14179)	(14630)	(15095)	(15576)	(15916)	(16234)
MINORITY INTEREST	6606	6679	6957	7248	7478	7715	7961	8214	8475	8745	8936	9115
EQUITY & EQUITY EQUIVALENTS	94140	100622	107438	117066	126978	137206	147758	158647	169881	181473	193293	205343
TOTAL FUNDS INVESTED	163311	170553	180287	192956	205278	217994	231114	244653	258624	273040	286860	300782

6.5. Noplat Forecast

Net operating profit less adjusted taxes, or operating profit after taxes, provides a clear position of the company`s core operations and the profits generated by it, after deducting the income taxes related to those core operations. (Koller, Goedhart, & Wessels, 2020) NOPLAT is essential to prepare the valuation models below, hence we have prepared a forecast for the period 2021 to 2032. Table 6-6 below shows the forecasted NOPLAT for the period, as well as the reconciliation to net income. We note that the Company`s NOPLAT will reduce significantly in the first forecasted year due to the divestures operated at the international operations. From then on NOPLAT is forecasted to growth accompanying the tendency of the revenue`s growth.

Table 6-6 - Walmart's Forecasted NOPLAT for 2021 to 2032 (in Millions USD)

FORECASTED NOPLAT (2021-2032)												
	t=0	t=1	t=2	t=3	t=4	t=5	t=6	t=7	t=8	t=9	t=10	t=11
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
EBIT	26.948	16.990	17.699	24.573	25.353	26.158	26.990	27.848	28.734	29.649	30.296	30.902
OPERATING CASH TAXES	(5.147)	(4.175)	(4.146)	(5.853)	(6.108)	(6.302)	(6.502)	(6.709)	(6.922)	(7.142)	(7.383)	(7.547)
NOPLAT	21.801	12.815	13.553	18.720	19.245	19.857	20.488	21.139	21.812	22.506	22.913	23.355
OPERATING TAXES ON EBITA												
REPORTED TAXES	6.858	3.923	4.097	5.802	5.983	6.173	6.369	6.572	6.781	6.996	7.145	7.287
TAX SHIELD ON INTEREST PAID (EXCLUDING LEASE INTEREST)	641	355	359	374	390	402	415	428	442	456	470	481
TAXES ON INTEREST INCOME	(34)	(31)	(32)	(33)	(34)	(35)	(36)	(38)	(39)	(40)	(41)	(42)
TAXES ON EBITA	7.466	4.248	4.425	6.143	6.338	6.540	6.747	6.962	7.184	7.412	7.574	7.726
DECREASE/(INCREASE) IN DEFERRED TAXES	(2.319)	(73)	(279)	(291)	(230)	(238)	(245)	(253)	(261)	(270)	(191)	(179)
OPERATING CASH TAXES	5.147	4.175	4.146	5.853	6.108	6.302	6.502	6.709	6.922	7.142	7.383	7.547
RECONCILIATION TO NET INCOME	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
NET INCOME	13.510	11.769	12.292	17.407	17.948	18.518	19.107	19.715	20.342	20.989	21.434	21.860
INCREASE/(DECREASE) IN DEFERRED TAXES	2.319	73	279	291	230	238	245	253	261	270	191	179
ADJUSTED NET INCOME	15.829	11.841	12.571	17.697	18.178	18.756	19.352	19.968	20.603	21.259	21.625	22.039
AFTER-TAX INTEREST PAID (EXCLUDING LEASE INTEREST)	1.674	1.066	1.077	1.122	1.169	1.206	1.245	1.284	1.325	1.367	1.411	1.442
LOSS (GAIN) FROM DISCONTINUED OPERATIONS	4.386	–	–	–	–	–	–	–	–	–	–	–
TOTAL INCOME AVAILABLE TO ALL INVESTORS	21.889	12.907	13.649	18.820	19.348	19.963	20.597	21.252	21.928	22.627	23.036	23.481
AFTER-TAX INTEREST INCOME RECEIVED	(87)	(92)	(96)	(100)	(103)	(106)	(109)	(113)	(116)	(120)	(123)	(125)
NOPLAT	**21.801**	**12.815**	**13.553**	**18.720**	**19.245**	**19.857**	**20.488**	**21.139**	**21.812**	**22.506**	**22.913**	**23.355**

6.6. Free Cash Flow Forecast

As seen in Chapter 5.2.4, free cash flow is the after-tax cash flow generated by the core operations of the Company that is available to all investors after deducting investments in new capital (Koller, Goedhart, & Wessels, 2020). According to Koller, Goedhart, and Wessels, free cash flow is the key factor for value creation. Table 6-7 below represents Walmart's free cash flow forecast for 2021 to 2032.

Table 6-7 - Walmart's Forecasted Free Cash Flow for 2021 to 2032 (in million USD)

FORECASTED FREE CASH FLOWS (2021-2032)												
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
NOPLAT	21.801	12.815	13.553	18.720	19.245	19.857	20.488	21.139	21.812	22.506	22.913	23.355
DEPRECIATION	11.152	971	3.728	3.885	3.079	3.178	3.281	3.386	3.496	3.608	2.555	2.391
GROSS CASH FLOW	32.953	13.786	17.281	22.605	22.324	23.035	23.768	24.526	25.308	26.115	25.469	25.746
(INCREASE)/DECREASE IN OPERATING WORKING CAPITAL	(10.461)	(5.206)	(331)	2.723	(176)	(181)	(187)	(193)	(199)	(206)	(146)	(136)
CAPITAL EXPENDITURES	6.049	(2.177)	(8.362)	(8.714)	(6.906)	(7.129)	(7.359)	(7.596)	(7.841)	(8.094)	(5.731)	(5.363)
(INCREASE)/DECREASE IN OTHER ASSETS	1.562	(21)	(80)	(84)	(66)	(68)	(71)	(73)	(75)	(78)	(55)	(51)
(INCREASE)/DECREASE INVESTMENT IN GOODWILL	2.090	(318)	(1.223)	(1.274)	(1.010)	(1.042)	(1.076)	(1.111)	(1.146)	(1.183)	(838)	(784)
(INCREASE)/DECREASE. INVESTMENT IN INTANGIBLES	300	(54)	(207)	(215)	(171)	(176)	(182)	(188)	(194)	(200)	(142)	(133)
(DECREASE)/INCREASE IN ACCUMULATED COMPREHENSIVE INCOME	1.039	(129)	(496)	(517)	(410)	(423)	(437)	(451)	(465)	(480)	(340)	(318)
GROSS INVESTMENT	579	(7.906)	(10.699)	(8.082)	(8.739)	(9.020)	(9.311)	(9.611)	(9.921)	(10.242)	(7.252)	(6.785)
FREE CASH FLOW	**33.532**	**5.880**	**6.582**	**14.523**	**13.585**	**14.014**	**14.457**	**14.915**	**15.386**	**15.873**	**18.216**	**18.961**
AFTER-TAX OTHER INCOME RECEIVED	87	92	96	100	103	106	109	113	116	120	123	125
DECREASE/(INCREASE) IN EXCESS CASH	–	(272)	(2.628)	(8.332)	(6.551)	(6.758)	(6.971)	(7.192)	(7.419)	(7.653)	(9.030)	(9.441)
(INCREASE) /DECREASE IN EQUITY AND OTHER INVESTMENTS	(8.971)	(164)	(631)	(658)	(521)	(538)	(555)	(573)	(592)	(611)	(433)	(405)
DISCONTINUED OPERATIONS	(4.386)	-	1	2	3	4	5	6	7	8	9	10
CASH FLOWS TO INVESTORS	20.263	5.535	3.419	5.633	6.615	6.824	7.040	7.263	7.492	7.729	8.876	9.240
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
FINANCING FLOWS												
AFTER-TAX INTEREST EXPENSE	1.674	1.066	1.077	1.122	1.169	1.206	1.245	1.284	1.325	1.367	1.411	1.442
DECREASE/(INCREASE) IN DEBT	10.019	(760)	(2.918)	(3.041)	(2.410)	(2.488)	(2.568)	(2.651)	(2.736)	(2.825)	(2.000)	(1.871)
FLOWS TO DEBT HOLDERS	11.693	306	(1.841)	(1.918)	(1.241)	(1.281)	(1.323)	(1.366)	(1.411)	(1.457)	(589)	(430)
DECREASE (INCREASE) IN MINORITY INTEREST	277	(73)	(279)	(290)	(230)	(238)	(245)	(253)	(261)	(270)	(191)	(179)
DIVIDENDS	8.690	5.302	5.538	7.842	8.086	8.343	8.608	8.882	9.165	9.456	9.657	9.849
NET SHARES REPURCHASED (ISSUED)	(397)	–	–	–	–	–	–	–	–	–	–	–
FLOWS TO EQUITY HOLDERS	8.570	5.230	5.259	7.552	7.856	8.105	8.363	8.629	8.903	9.187	9.466	9.670
CASH FLOWS AVAILABLE TO INVESTORS	**20.263**	**5.535**	**3.419**	**5.633**	**6.615**	**6.824**	**7.040**	**7.263**	**7.492**	**7.729**	**8.876**	**9.240**

6.7. Return on Invested Capital (ROIC)

As seen in Chapter 5.2.5, the return on invested capital gives us the return the

Company earns on each dollar invested in the business (Koller, Goedhart, & Wessels, 2020. To calculate the forecasted ROIC for 2021 to 2032, we used the following equation:

Equation 6-1 - Return on Invested Capital (ROICt)

$$ROIC_t = \frac{NOPLAT_t}{Invested\ Capital_{t-1}}$$

Table 6-8 below shows Walmart`s ROIC for the forecast period. We note that in the first two years of forecast (2022 and 2023) the ROIC is expected to be reduced significantly due to the divestures of the Company`s international segment. Thereafter ROIC is expected to return to two figures values and remain constant at 11,46% with a slight reduction in the last two years of the forecast period.

Table 6-8 - Forecasted ROIC for 2021 to 2032 (in million USD)

RETURN OF INVESTED CAPITAL FORECAST (2021-2032)												
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ROIC (EXCLUDING GOODWILL)	17,76%	11,20%	11,21%	14,86%	15,02%	15,02%	15,02%	15,02%	15,02%	15,02%	14,82%	14,78%
ROIC (INCLUDING GOODWILL)	13,71%	8,64%	8,74%	11,58%	11,64%	11,64%	11,64%	11,64%	11,64%	11,64%	11,49%	11,46%

Chapter Seven
Valuation Procedures

7.1. Estimation of Input Variables

7.1.1. Cost of Debt

To estimate Cost of Debt, we gathered information on all available bonds issued by the Company and calculated the weighted average yield to maturity of each of those bonds.

We conclude that the Company`s Cost of Debt is 2,424%. It is important to reference that for the purposes of determining this Cost of Debt, we used the Survey on the Market Risk Premium and Risk-Free Rates performed by Pablo Fernandez, Sofia Bañuls and Pablo F. Acin (Fernandez, Bañuls, & Acin, 2021) in order to adjust the Cost of Debt to average rates. This is because the current Risk-Free Rates for U.S. Treasury Bonds are very low and it would not be prudent to assume those rates will remain as low as they are.

According to the Treasury Department of USA (U.S. Department of the Treasury, 2021), the Risk-Free Rate on 2 February 2021 (the next business day after the 31 January 2021) was 1,09%, whereas, according to the mentioned survey, the average Risk-Free Rate is 1,8% for 2021. Hence, we used the spread between these rates (1,8% - 1,09% = 0,71%) to adjust Walmart`s Cost of Debt from its original Average YTM 1.714% to 2.424%.

7.1.2. Beta Coefficient

Walmart`s Beta

Beta measures the stock's volatility compared to the market. It also gives us the contribution of a given stock to a portfolio risk. To find a company`s raw Beta, we can use the following market model regression (Koller, Goedhart, & Wessels, 2020)

Equation 7-1 - Stock's Return or the Dependent Variable of the Regression

$$Ri = \alpha + \beta Rm + \varepsilon$$

By executing this regression in Excel, we find that Walmart`s raw Beta is 0,4614, which means that Walmart is 53.86% less risky than the market (assuming that the market beta is 1). This also means that, for example, if the market is expected to rise 10%,

Walmart`s stock would rise only 4,614% (0,4614 x 10%). It is of interest to compare these findings with the Beta shown in Yahoo, Market Watch or ValueLine.

- In Yahoo, the Company`s Beta is 0,47 which is very similar to the Beta calculated above. This validates our conclusion. (Yahoo Finance, 2021)
- In Market Watch, the Company`s Beta is 0,53. (MarketWatch, 2021)
- In ValueLine, the Company`s Beta is 0,55. (ValueLine, 2021)

The last two sources present a beta slightly higher than the one calculated by us, which may be explained by the timing of the calculation being made.

In order to confirm the regression model as being good and acceptable, we should run certain tests, namely the "F" test (goodness of fit) and the "t" and "p" tests. Results are shown in the regression posted in Table 7-2 above. The significance F has a value of 0,0014 which is lower than 0,025. This means the regression is valid and reliable. The "t" stat is 3,35 which is higher than 1,96, meaning that Beta is not equal to 0. Similarly, the "p" value is 0,0014 which, being lower than 0,025, attests to the validity of the beta. The Beta coefficient is, therefore, significant and reliable.

Walmart`s R^2

The Company`s R2 is 0,162. This means that 16,2% of the Walmart stock`s total risk is caused by the market, i.e., systematic risk. Thus, 83,8% of the stock`s risk is the company related risk, i.e., unsystematic and, thus, diversifiable risk.

Walmart`s Competitor`s Beta and R^2

.The competitor chosen for the purpose of comparing Walmart`s Beta and related values was Costco (COST). (Yahoo Finance, 2021) Costco's Beta is 0,62, which means that Costco is 38% less risky than the market (but 18% more risky than Walmart). This also means that, for example, if the market is expected to rise 10%, Costco`s stock would rise only 6,2% (0,62 x 10%). The significance F for Costco has a value of 2,82562E-05 which is lower than 0,025. This means the regression is valid and reliable. The "t" stat is 4,55 which is higher than 1,96, meaning that Beta is not equal to 0. In the same fashion, the "p"

value is 2,82562E-05 which, being lower than 0,025, attests to the validity of the beta. The Beta coefficient is also significant and reliable.

Industry Beta

To estimate the industry Beta, we will use the data from both Walmart and Costco. We have found that the raw Beta of both companies are 0.4614 and 0,62, respectively. In order to find the Industry Beta, we must unlever both Betas- that is, remove the impact of financial risk from each company`s beta. Further, we should find the mean of both unlevered Betas and re-lever the industry's unlevered beta to find the Industry Beta. Finally, to more accurately predict the future applicable Beta, we should smooth the Industry Beta.

For the purpose of unlevering the Beta, we must choose one of two models. The models depend on the stability (or instability) of the company's capital structure. To assess if Walmart`s capital structure is stable or not, we have calculated the interest-bearing debt to total assets ratio over the past years. See below our calculations reported in Table 7-4.

Table 7-4 – Walmart`s Interest Bearing Debt Ratio, 2017-2021

	2017	2018	2019	2020	2021
INTEREST BEARING DEBT RATIO	26%	25%	29%	33%	27%
TAX RATE					27.70%

Also, see below the companies` capital structure in the latest year as shown in Table 7-5.

Table 7-5 – Walmart`s Capital Structure in 2021

	CAPITAL STRUCTURE (WMT)		CAPITAL STRUCTURE (COST)	
	Book Value	% of total Capitalization	Book Value	% of total Capitalization
SHORT-TERM DEBT	224		0	
CURRENT PORTION OF DEBT	3115		95	

CURRENT PORTION OF LEASES	1957		0	
LONG-TERM DEBT	41650		7514	
LONG-TERM LEASES	16756		2558	
PENSION & OTHER POST-RETIRE. BENEFITS	0		0	
OTHER LONG-TERM LIABILITIES	5469		1935	
INTEREST BEARING DEBT (D)	69171	**14,82%**	12102	**7,25%**
SHARES OUTSTANDING	2831		440	
STOCK PRICE (JAN 31, 2021)	140		352	
MARKET CAP OF EQUITY (E)	397727	**85,18%**	154937	**92,75%**
ENTERPRISE VALUE (V)	**466898**	100,00%	**167039**	100,00%

We have found from Table 7-5 that Walmart`s capital structure has been fairly stable, and we have assumed, for the purpose of the present exercise, that Costco`s capital structure for the past years is also stable. Thus, we have used the following equation to find the unlevered Betas of both companies (Koller, Goedhart, & Wessels, 2020):

Equation 7-2 - Unlevered Beta (βu)

$$ßμ = ße/[1+(D/E)]$$

Bu = Unlevered beta
ße = company beta
D = interest-bearing debt
E = market capitalization of equity

We then found the industry's unlevered Beta by adding both unlevered betas and dividing by two to find the mean. We have assumed the debt-to-equity ratio of Walmart (17,39%) as the target debt to equity ratio to be used in the future and we have calculated the re-levered Beta for the industry by the following formula (Koller, Goedhart, & Wessels, 2020):

Equation 7-3 - Re-levered Beta (βu)

$$ße = ßμ\ [1+(D/E)]$$

The following Table 7-6 shows our results for the Industry Beta.

Table 7-6 – Industry Beta

	Raw Betas	Market Debt To Equity Ratio	Unlevered Beta SSM = SSE/[1+(D/E)]	Industry Average Unlevered Beta	Target Debt To Equity Ratio	Relevered Beta SSE = SSM [1+(D/E)]	Smoothing Beta
WMT	0,46136	17,39%	0,42794	0,500716907	17,39%	0,58780	0,7238
COMPETITOR	0,61829	7,81%	0,57350				

Adjusted Beta (Smoothing Beta)

We finally used the Bloomberg formula to adjust the Industry Beta. The formula is the following:

Equation 7-4 - Adjusted Beta (β_{Adj})

$$\beta_{Adj} = 0.33 + 0.67 \text{ X Industry } \beta$$

The results are: $\beta_{Adj} = 0,33 + 0,67 \text{ x } 0,5878 = 0,7238$

As shown in the table above, the beta used to calculate Walmart's Cost of Equity is 0,7238.

7.1.3. Cost of Equity

The cost of equity represents the rate at which the investors/equity holders wish to be remunerated to invest in the company. It is the expected rate of return on the company`s shares/stocks. To calculate the Cost of Equity, we used the CAPM (Capital Asset Pricing Model) which is based on the principle that the expected rate of return on a security equals the risk-free rate plus the security's beta times the market risk premium. See Equation 7-5 below (Koller, Goedhart, & Wessels, 2020):

Equation 7-5 - Expected Return of Security i [E(Ri)]

$$E(R_i) = r_f + \beta_i [E(R_m) - r_f]$$

$E(R_i)$ = expected return of security

r_f = risk-free rate

β_i = stock's sensitivity to the market

$E(R_m)$ = expected return of the market

Although we found the stock`s Beta above, for the purpose of calculating the WACC below, we shall use the Adjusted Beta (Smoothing Beta) to have a more reliable Beta for the calculation of WACC, i.e., a Beta of 0,7238. We now need to find both the Risk-Free Rate and the Market Risk Premium in order to calculate the cost of equity.

Risk Free Rate

As explained above, the Risk-Free Rate can be found in the USA Treasury Department`s website by getting the current (or at date) 10 years Treasury Bonds yield(U.S. Department of the Treasury, 2021). We found that, at the end of January 2021, the 10-year Treasury Bonds yield was 1,09%. However, due to historical factors and the current abnormal situation caused by the pandemic and the expansionary monetary policies around the world, it would not be reliable to use such a low rate for our calculation. Therefore, we decided to use the average Risk-Free Rate calculated by Pablo Fernandez, Sofia Bañuls and Pablo F. Acin in their survey on the Market Risk Premium and Risk-Free Rates, which is 1,8%. (Fernandez, Bañuls, & Acin, 2021) The Risk-Free Rate is, therefore, for the purpose of the present work, assumed to be 1,8%.

Market Risk Premium

To find the Market Risk Premium, we rely, once again, on the work of Pablo Fernandez, Sofia Bañuls and Pablo F. Acin in their survey on the Market Risk Premium and Risk-Free Rates. (Fernandez, Bañuls, & Acin, 2021) According to this survey, the average Market Risk Premium in the USA is 5,5%. By inputting these variables in the CAPM, we calculated the Cost of Capital which, for Walmart, is given by Table 7-7 below.

Table 7-7 – Walmart's Cost of Equity

CAPM	
$K_e = E(R_i) = r_f + ß_i [E(R_m) - r_f]$	
$K_e =$	5,78%
$r_f =$	1,80%
$ß_i =$	0,7238
$E(R_m) - r_f =$	5,50%

The Cost of Equity for Walmart is, therefore, 5,78%

7.1.4. WACC – Weighted Average Cost of Capital

The WACC - Weighted Average Cost of Capital is defined as the opportunity cost of a Company. This rate is used to assess and evaluate if any given project is worth pursuing by a company. The WACC is used in some of the most important evaluation models as the discount factor for discounting future cash flows. To calculate WACC, we used the following formula (Koller, Goedhart, & Wessels, 2020):

Equation 7-6 - Weighted Average Cost of Capital (WACC)

$$WACC = [D/(D+E)] \times K_d \times (1 - T_m) + [E/(D+E)] \times K_e$$

WACC = Weighted average cost of capital
D / (D+E) = Weight of debt of the enterprise value
K_d = Cost of debt
E / (D+E) = Weight of equity of the enterprise value
K_e = Cost of equity
T_m = Tax rate of the company

This formula sums the after-tax cost of debt (Kd x (1- Tm)) considering the weight of debt in the company`s capital structure (D/(D+E)) and the cost of equity (Ke) considering the weight of equity in the company`s capital structure (E/(D+E)). Table 7-8 below shows our calculations for Walmart`s WACC.

Table 7-8 – Walmart`s WACC

SOURCE OF CAPITAL	Proportion of total capital	Cost of capital	Average tax rate	After-tax opportunity cost	Contribution to weighted average
DEBT	14,82%	2,42%	25,00%	1,82%	0,27%
EQUITY	85,18%	5,78%			4,92%
WACC					**5,19%**

We have computed a WACC for Walmart of 5,19%.

7.1.5. Cost of Unlevered Equity

The Cost of Unlevered Equity is the cost for the company to pursue a project, which is not leveraged, i.e., does not use debt, only equity. To calculate this Cost of Unlevered Equity, we used the following formula (Koller, Goedhart, & Wessels, 2020):

Equation 7-7 - Cost of Unlevered Equity (K_u)

$$K_u = [D/(D+E)] \times K_d + [E/(D+E)] \times K_e$$

K_u = Cost of unlevered equity
D/(D+E) = Weight of debt of the company's value
K_d = Cost of debt
E/(D+E) = Weight of equity of the company's value
K_e = Cost of equity

Using the already described values for each of these variables, we get the Unlevered Cost of Equity as per Table 7-9 below:

Table 7-9 – Walmart`s Unlevered Cost of Equity

$K_u = [D/(D+E)] \times K_d + [E/(D+E)] \times K_e$	
$K_u =$	**5,28%**

The company`s Unlevered Cost of Equity is 5,28% which is slightly higher than the WACC due to the effect of the taxes in the latter which is not accounted for in the former.

7.1.6. Expected Rate of Return on New Invested Capital (RONIC)

As seen in Chapter 5.2.5, the Return on Invested Capital derives from the Company`s core business returns. This measure is a function of the company`s strategy, competitive advantages and the industry it operates in. As we have seen in Chapter 3 the retail industry is very competitive. We also analyzed in Chapter 2 the Company`s core competencies and advantages, which are related to its efficiency and economies of scale. The combination of both industry dynamics and Walmart`s advantages explains how the Company sustains a fairly stable ROIC. In order to calculate the expected rate of return on new invested capital

(RONIC), we have assumed RONIC to be equal to the average of the last ten years of forecasted return on invested capital (ROIC). Table 7-10 shows the forecasted ROIC and the RONIC for Walmart.

Table 7-10 - Forecasted Return on Invested Capital of Walmart from 2022 to 2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ROIC	8,64%	8,74%	11,58%	11,64%	11,64%	11,64%	11,64%	11,64%	11,64%	11,49%
RONIC	11,03%	Average of the last 10 years of forecast								

According to the calculation, Walmart`s RONIC is 11,03%. However, as it is shown in Table 7-10 above, and as explained above in Chapter 6.7, the expected ROIC for the first two years of the forecast period (2022 and 2023) is significantly lower than the remaining years of the forecast period, as well as lower than the previous years. These two years have a negative influence on the average of the last ten years` ROIC calculation. Hence, considering that the ROIC throughout the forecast period is very stable, we have adopted the last year's (2032) forecasted ROIC as the Company`s RONIC for the purposes of using the valuation models described below. We will assume, therefore, a RONIC of 11,46% for the purposes of calculating the Continuing Value of the Company in the models below. Despite the RONIC calculation method, we note that the Company`s RONIC is always greater than its WACC. This means that the Company is able to create value by new invested capital.

7.1.7. Expected NOPLAT Growth Rate in Perpetuity

In order to use the valuation models below, we need to forecast the Company`s NOPLAT for the year following the end of the forecast period, which is why we have been projecting the forecast period until 2032. This, along with the long-run growth rate, will allow us to determine the continuing value of the Company, which is a necessary step to use the valuation models below. (Koller, Goedhart, & Wessels, 2020) We have assumed a slightly lower growth rate as the long-run growth rate for the Company`s revenues and NOPLAT at 2%.

7.2. Discounted Cash Flow Model Applications

In this section, we will use three different discounted cash flow (DCF) models to calculate the intrinsic value of Walmart as of 31 January 2021. This will allow us to confirm our analysis of the Company`s intrinsic value and to ultimately compare it to how the Company was priced by the market as of the same date. In theory, all the models should provide the same – or very similar – results. Table 7-11 below presents the framework to be used for the three DCF models.

Table 7-11 - Framework for Discounted Cash Flow Valuation

Model	Measure	Discounted Factor
Enterprise Discounted Cash Flow	Free Cash Flow	Weighted Average Cost of Capital
Adjusted Present Value	Free Cash Flow	Unlevered Cost of Equity
Discounted Economic Profit	Economic Profit	Weighted Average Cost of Capital

It is noted that the Enterprise Discounted Cash Flow model used WACC as the discounted factor. So does the Discounted Economic Profit model. As Koller, Goedhart and Wessels explain, the WACC-based models work better when a company maintain a stable debt-to-value ratio. (Koller, Goedhart, & Wessels, 2020) Where that does not happen, the authors recommend the use of the Adjusted Present Value model which uses as discounted factor the Unlevered Cost of Equity followed by adding the amount of tax benefits associated with debt to find the enterprise value.

7.2.1. Enterprise Discounted Cash Flow (EDCF) Model

This model discounts the free cash flow available to all investors in the forecast period at the weighted average cost of capital and deducts the claims on cash flow of debt holders and other non-equity investors from enterprise value to determine equity holders' value. (Koller, Goedhart, & Wessels, 2020) The EDCF model follows four steps:

1. Find the value of the Company`s operations by discounting the future cash flows using WACC as discounting factor. In this point we need to calculate the continuing value (CV) of the Company, as described below.
2. Identify the value of non-operating assets and add it to the value of

operations to find the entreprise value.

3. Identify the value of all deb and other non-equity claims against the enterprise value.
4. Deduct the value of debt from the enterprise value to find the equity value of the Company, i.e., its intrinsic value.

In calculating the continuing value (CV) of the Company, as described in step 1 above, we used the following Equation 7-8. Table 7-12 shows our calculation of the continuing value of the Company, in a total of $604,043.04 million. The CV needs also to be discounted at WACC to find its present value which is to be summed to the other discounted cash flows for the forecast period. After being discounted the CV of Walmart is $364,051.42 million

Equation 7-8 - Continuing Value at the Last year of the Forecasted Period (CV)

$$CV = \frac{NOPLAT_{2032}\,[1-(g/RONIC)]}{(WACC-g)}$$

CV = Continuing value at the last year of the forecasted period
$NOPLAT_{2032}$ = Net operating profit less adjusted taxes after the forecasted period
WACC = Weighted average cost of capital
RONIC = Long run forecast for return on new invested capital
g = Growth

Table 7-12 - Continuing Value for the Enterprise DCF Model (Millions USD)

CONTINUING VALUE FOR ENTERPRISE DCF VALUATION	
$NOPLAT_{2032}$ =	23.371,60
G =	2,00%
RONIC =	11,46%
WACC =	5,19%
CV =	$NOPLAT_{2032}\,[1-(g/RONIC)]$
	(WACC-g)
CV =	604.043,04

To obtain Walmart's value of operations, according to the EDCF we used Equation 7-9 below. Table 7-13 shows the results of the calculations of the Company`s intrinsic value using the EDCF model. As of 31 January 2021, the intrinsic value of Walmart shares according to the EDCF model was $144.21 per share.

Equation 7-9 - Value of Operations (VO)

$$VO = \sum_{t=1}^{10} \frac{FCF_t}{(1 + WACC)^t} + \frac{CV_{10}}{(1 + WACC)^{10}}$$

VO = Value of operations

FCF_t = Free cash flow in year t of the forecast period

CV_{10} = Continuing value at the last year of the forecast period

WACC = Weighted average cost of capital

Table 7-13 - Valuation of the Enterprise DCF Model on 31 January, 2021

ENTERPRISE DCF VALUATION OF WALMART

	Year	FCF (mil)	Discount Factor (WACC)	PV of FCF (mil)
1	2022	5.880,30	0,95	5.589,97
2	2023	6.582,21	0,90	5.948,27
3	2024	14.523,08	0,86	12.476,34
4	2025	13.585,28	0,82	11.094,47
5	2026	14.014,50	0,78	10.879,90
6	2027	14.457,46	0,74	10.669,62
7	2028	14.914,61	0,70	10.463,53
8	2029	15.386,42	0,67	10.261,56
9	2030	15.873,35	0,63	10.063,62
10	2031	18.216,40	0,60	10.978,86
10	CV	604.043,04	0,60	364.051,42
VALUE OF OPERATIONS				462.477,56
+NONOPERATING ASSETS				14.961,00
ENTERPRISE VALUE				477.438,56
-VALUE OF DEBT				69.171,00
EQUITY VALUE				408.267,56
NUMBER OF SHARES (AT FISCAL YEAR ENDED 2021)				2.831,0
ESTIMATED SHARE VALUE ($)				**144,21**

7.2.2. Discounted Economic Profit (DEP) Model

The DEP model measures the value created by the Company in a single period and highlights, contrary to the EDCF model, how and when the company creates value. (Koller,

Goedhart, & Wessels, 2020) To find the economic profit, we used the following Equation 7-10:

Equation 7-10 - Economic Profit in Year t (EP_t EP_t)

$$EP_t = IC_{t-1} \times (ROIC_t - WACC_t)$$

EP_tEP_t = Economic Profit in year t

IC_{t-1}= Invested Capital in year t-1

$ROIC_t$= Return on Invested Capital in year t

$WACC_t$= Weighted average cost of capital in year t

To apply this model, we also need to calculate the continuing value (CV) of the Company which we do by way of Equation 7-11 below.

Equation 7-11 - Continuing Value at the Last Year of the Forecasted Period (CV)

$$CV = \frac{EP_{2032}}{WACC} + \frac{NOPLAT_{2032}\,(g/RONIC)\,(RONIC - WACC)}{WACC\,(WACC - g)}$$

CV = Continuing value at the last year of the forecasted period

$NOPLAT_{2032}$ = Net operating profit less adjusted taxes after forecasted period

WACC = Weighted average cost of capital

g = Growth

EP_{2032} = Economic Profit in the year 2032

We calculate in Table 7-14 below the CV of the Company as per this model and found it to be $400,595.077 million.

Table 7-14 - Continuing Value for the Economic Profit Model (Millions USD)

CONTINUING VALUE FOR ECONOMIC PROFIT VALUATION (IN MILLIONS)

	Economic Profit $_{2032}$ =	12.804,73	
	NOPLAT $_{2032}$ =	23.371,60	
	g =	2,00%	
	RONIC	11,46%	
	WACC =	5,19%	
CV =	Economic Profit $_{2032}$	+	$NOPLAT_{2032}$ (g/RONIC) (RONIC - WACC)
	WACC		WACC (WACC - g)
CV=	**400.595,077**		-

Table 7-15 below calculates the present value of economic profit of the Company. After this calculation, we add invested capital to find the value of operations, to which we add the non-operating assets to find the enterprise value. We then deduct the value of the debt to find the equity value, i.e., the intrinsic value of the Company, which by this model is $411,626.90 million. By dividing the equity value by the number of shares, we get a share value as of 31st January 2021 of $145.40 per share.

Table 7-15 - Valuation of the Economic Profit Model on 31 January, 2021

DISCOUNTED ECONOMIC PROFIT VALUATION FOR WALMART (IN MILLIONS)							
	Year	**Invested capital**	**ROIC (%)**	**WACC (%)**	**Economic profit (mil)**	**Discount factor**	**Present value of economic profit (mil)**
1	2021	148.350,000	8.64%	5.19%	5.110,079	0,9506	4.857,77
2	2022	155.155,664	8.74%	5.19%	5.494,566	0,9037	4.965,38
3	2023	161.630,247	11.58%	5.19%	10.325,114	0,8591	8.869,99
4	2024	165.309,910	11.64%	5.19%	10.658,983	0,8167	8.704,70
5	2025	170.559,681	11.64%	5.19%	10.997,854	0,7763	8.537,98
6	2026	175.978,565	11.64%	5.19%	11.347,655	0,7380	8.374,58
7	2027	181.572,098	11.64%	5.19%	11.708,744	0,7016	8.214,42
8	2028	187.346,005	11.64%	5.19%	12.081,493	0,6669	8.057,43
9	2029	193.306,199	11.64%	5.19%	12.466,284	0,6340	7.903,55
10	2030	199.458,791	11.49%	5.19%	12.553,658	0,6027	7.565,98
10	Continuing Value			5.19%	400.595,077	0,6027	241.435,12
Present Value of economic profit							317.486,90
Invested Capital$_{2021}$							148.350,00
Invested Capital plus present value of economic profit							465.836,90
Value of operations							465.836,90
+Nonoperating assets							14.961
Enterprise value							480.797,90
-Value of debt							69.171,00
Equity value							411.626,90
Number of shares (at fiscal year ended 2017)							2.831,0
Estimated share value ($)							145,40

7.2.3. Adjusted Present Value (APV) Model

As discussed previously, the. APV model uses the unlevered cost of equity as a discount factor to discount future cash flows to the present. The reason for this is that using WACC as discount factor assumes a somewhat constant debt to equity ratio. Considering that this ratio may differ in the future, the APV model is recommended. This APV model, described as being more flexible, separates the value of operations into two components:

1)The value of operations as if the company was financed only by equity;
2)The value of the interest tax shields. (Koller, Goedhart, & Wessels, 2020)

The calculation of the value of operations by the Adjusted Present Value model is done by the following Equation 7-12:

Equation 7-12 – Value of Operations (VO)

$$VO = \sum_{T=1}^{10} \frac{FCFt + ITSt}{(1+Ku)^t} + \frac{CV10}{(1+Ku)^{10}}$$

Table 7-16 shows the forecast of interest tax shields assuming a marginal tax rate of 25%, as described in Chapter 6.1 above. (ValueLine, 2021)

Table 7-16 - Forecast of Interest Tax Shields

FORECAST OF INTEREST TAX SHIELDS (IN MILLIONS)					
Year	**Prior year net debt**	**Expected interest rate**	**Interest Payment**	**Marginal tax rate**	**Interest tax shield**
1	69.171,00	2,42%	1676,54	25,00%	419,14
2	69.930,83	2,42%	1694,96	25,00%	423,74
3	72.849,01	2,42%	1765,69	25,00%	441,42
4	75.889,97	2,42%	1839,40	25,00%	459,85
5	78.300,02	2,42%	1897,81	25,00%	474,45
6	80.787,71	2,42%	1958,11	25,00%	489,53
7	83.355,57	2,42%	2020,34	25,00%	505,09
8	86.006,24	2,42%	2084,59	25,00%	521,15
9	88.742,43	2,42%	2150,91	25,00%	537,73
10	91.566,94	2,42%	2219,37	25,00%	554,84

Table 7-17 shows the results for the calculation of the present value of the Company`s Free Cash Flow (including the Continuing Value which is the same, for this purposes as the one calculated in section 7.1.2 above) and Interest Tax Shields to find the Company`s valueof operations according to the APV model. As in previous models, we then add non-operating assets to find the enterprise value and deduct the value of debt to find the equity value, i.e., the intrinsic value. According to the APV model, Walmart`s intrinsic value as of 31 January 2021 is $408,314.08 million. Divided by the number of shares it gives us a share value of as of 31st January 2021of $144.23 per share.

Table 7-17 - Valuation of the Adjusted Present Value Model on January 31, 2021

ADJUSTED PRESENT VALUE OF WALMART						
	Year	**FCF (mil)**	**Interest tax shield**	**Discount Factor (Ku)**	**PV of FCF (mil)**	**Present value of ITS (mil)**
1	2022	5.880,304	419,14	,949,81	5.585,201	398,101,57
2	2023	6.582,213	423,74	,902,15	5.938,134	382,276,44
3	2024	14.523,081	441,42	,856,87	12.444,454	378,243,58
4	2025	13.585,277	459,85	,813,87	11.056,676	374,258,19
5	2026	14.014,497	474,45	,773,03	10.833,596	366,764,95
6	2027	14.457,460	489,53	,734,23	10.615,150	359,426,63
7	2028	14.914,614	505,09	,697,39	10.401,242	352,239,95
8	2029	15.386,419	521,15	,662,39	10.191,773	345,201,73
9	2030	15.873,353	537,73	,629,15	9.986,651	338,308,83
10	2031	18.216,399	554,84	,597,57	10.885,610	331,558,18
10	Continuing Value	604.043,044		,597,57	360.959,209	
PRESENT VALUE OF FCF AND ITS						462.524,08
VALUE OF OPERATIONS (MIL)						462.524,08
+NONOPERATING ASSETS (MIL)						14.961,00
ENTERPRISE VALUE (MIL)						477.485,08
-VALUE OF DEBT (MIL)						69.171,00
EQUITY VALUE (MIL)						408.314,08
NUMBER OF SHARES - AT FISCAL YEAR ENDED 2021 (MIL)						2831,0
ESTIMATED SHARE VALUE ($)						144,23

7.3. Summary of Valuation Applications

Table 7-18 summarizes the intrinsic value of the Company according to each of the analyzed models above. Comparison is also made to the share price of the Company as of 31 January 2021. We note that all the three models produced very similar intrinsic values which strengthens our analysis. We also note that the Company`s shares were fairly valued by the market as the differences between the intrinsic values and the stock price were very similar. We attribute these results to the fact that Walmart is a very stable and reliable company, and the market has factored in the same variables as the ones described in this work.

Table 7-18 - Summary of the Three Valuation Models

VALUATION MODELS	INTRINSIC PRICE ($) - JANUARY 31, 2021	SHARE PRICE ($) - JANUARY 31, 2021	OVER / UNDERVALUED	BY ($):	BY (%)
ENTERPRISE DCF	**144,21**	144,36	Overvalued	0,15	0,10%
ADJUSTED PRESENT VALUE	**144,23**	144,36	Overvalued	0,13	0,09%
DISCOUNTED ECONOMIC PROFIT	**145,40**	144,36	Overvalued	-1,04	-0,72%

Chapter Eight

Sensitivity Analysis, Recommendations for Management and Conclusions

8.1. Sensitivity Analysis

We have performed a sensitivity analysis to study the vulnerability of our valuation models and the impacts caused by changes to key factors in the valuation procedure, such as changes to the foreseen RONIC, growth rate in perpetuity (g) and market risk premium. Table 8-1 shows the result of deviations of an increase/decrease of 10% from the original estimated figures for RONIC (estimated at 11,46%), growth (g) (estimated at 2% in perpetuity) and market risk premium (estimated at 5,5%), respectively.

Table 8-1 – Sensitivity Analysis

	G			RONIC			Market risk premium		
TESTED VALUE	1,80%	2,00%	2,20%	10,31%	11,46%	12,61%	4,95%	5,50%	6,05%
% CHANGE TO ORIGINAL	-10,00%	0%	10,00%	-10,00%	0%	10,00%	-10,00%	0%	10,00%
NEW INTRINSIC VALUE									
DCF MODEL	138,89	144,21	150,25	141,18	144,21	146,69	164,87	144,21	127,54
% CHANGE TO ORIGINAL	-3,69%		4,19%	-2,10%		1,72%	14,32%		-11,56%
APV MODEL	138,95	144,23	150,22	141,22	144,23	146,69	164,73	144,23	127,68
% CHANGE TO ORIGINAL	-3,69%		4,15%	-2,09%		1,71%	14,21%		-11,47%
DEP MODEL	140,16	145,40	151,35	142,37	145,40	147,88	166,08	145,40	128,71
% CHANGE TO ORIGINAL	-3,69%		4,09%	-2,08%		1,71%	14,22%		-11,48%

As we can see, a change of 10% in the growth rate (g) in perpetuity may have a maximum positive or negative impact of 4,19% or -3,69%, respectively, for the EDCF model. As for RONIC, a 10% change may have a positive or negative impact of 1,72% or -2,10%, again in the EDCF model. Finally, an impact on the market risk premium could impact the valuation positively or negatively by up to 14,32% or -11,56%, respectively, in the EDCF model. We conclude, therefore, that the Company`s valuation is more sensitive to changes

in the market risk premium. Secondly, the Company`s valuation will respond stronger to change in the growth rate (g) and, finally, changes to RONIC will have a less impact on the Company's valuation.

8.2. Recommendations to Management

Considering the analysis done in Chapters 2, 3 and 4 as well as the valuations methods used and the underlying factors influencing such models, and assuming that the Company may have room to grow beyond what was expected as of 31 January 2021 (we recall that the market was in line with the calculated intrinsic value of the Company), we would recommend the Company`s Management to consider some of the following suggestions:

a) Prioritize the development, implementation, and growth of eCommerce platforms, not only to compete with its greatest competitor in this field – Amazon – but also to expand revenue streams. Prioritize sales growth for value creation.
b) Pay special attention to the Chinese and Indian markets. These countries have historically forecasted an above average GDP growth, and both have massive scale due to its enormous population. Also, these markets have great potential for technological implementations and eCommerce that could and should be maximized.
c) Study other jurisdictions and potential acquisitions to enter new, rapid growth markets. The Company has an extensive experience in entering (and exiting) new jurisdictions and has the capabilities to be efficient in its operations leveraged by its supply chain advantages.
d) Study the possibility of entering upstream operations to better control its supply chain and hedge against predicted inflation and potential further disruptions in the supply chain.

The above suggestions assume that the Company continues to steadily operate its core operations which drove a very steady growth in the past years and is forecasted to continue so in the future. However, while the Management can look into the suggested opportunities, it is our view, from the analysis made in this work, that the Company may still create value.

8.3. Conclusions

In this work we have proposed to analyze essentially two different matters:

- the intrinsic value of the Company as of 31 January 2021 and how it would compare to the stock price as of the same date; and
- how internal and external factors could influence the company`s valuation going into the future.

We believe we have clarified Walmart's resilience and powerful position in the markets where it operates, with special focus on the U.S. market. The analysis done to the Company and its operations, the industry, and the economic outlook allowed us to forecast the Company`s results for a ten-year period and produce three valuation models which showed us the intrinsic value of the Company. We also conclude that, the intrinsic value of the Company. We also conclude that the intrinsic value of the Company as of 31 January 2021 was pretty much the same value that the market attributed to the Company. This strengthens our view of the stability and trust that Walmart guarantees to its stakeholders.

We have also concluded, from our analysis, that whilst the Company shows great strengths and competitive advantages, it also faces some pressure from competitors as well as opportunities to which it cannot be indifferent. We have concluded that, depending on how the Company will act – or react – to such opportunities, this will influence the underlying factors determining the valuation models studied in this work. If the management is able to capitalize on the opportunities identified, while hedging against the inherent risks and threats from the industry, this is where the Company will find extra value.

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