



Walmart (NYSE: WMT)

Consumer Staples – Retail

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Investment Thesis

We recommend a **BUY** rating for Walmart Inc. Walmart has a potential upside return of over 20% for investors, stemming from low consumer sentiment, which encourages consumers to flock to Walmart's everyday low price business model. Walmart's expanding eCommerce and online ordering system, Walmart+, encourages additional growth in membership revenue.

Drivers of Thesis

- Walmart's introduction of Walmart+ encourages customer loyalty by providing in-store incentives, gasoline discounts, efficient checkout processes, and free same day delivery services of in-store goods. Creating a customer loyalty program with incentives, in addition to already low prices, helps Walmart grow its large market share of the retail space.
- Increased eCommerce presence allows Walmart to evolve its omnichannel shopping through its already vast physical store presence. Walmart's physical presence in all 50 states and 26 countries provides convenient shipping to consumers utilizing online ordering systems.
- Rising inflation and lowered consumer sentiment indicates consumers will be looking for low-cost options throughout the holiday season and beyond. Walmart's everyday low-cost business model provides affordable one stop shopping for consumers this holiday season.

Risks to Thesis

- Supply chain issues continue to be a concern for companies who are looking to provide a wide array of products to consumers. The inability to provide one stop shopping to customers may deter shoppers to other suppliers such as competitors like Amazon.
- As unemployment rates decrease post pandemic, household disposable income is increasing. Additional disposable income may encourage consumers to opt for more premium goods offered by competitors such as Target and Best-Buy. The saturation of the consumer retail space offers many alternative shopping options for customers.

Stock Performance



Current Price: **\$ 147.82**

Target Price: **\$169-181**

Company Description

Walmart Inc. (NYSE: WMT) is a retail chain that specializes in discount retail, grocery, and wholesale. Walmart's three main business segments are Walmart US, Walmart International, and Sam's Club. Walmart has over 5,300 US stores and over 6,100 international stores. Historically, Walmart has emphasized a physical footprint, but has recently expanded operations to include eCommerce and online order and delivery through the new Walmart+ subscription.

Snapshot

DCF: **\$181**
DDM: **\$169**
Relative Valuation: **\$176**

Price Data

Current Price: **\$147.82**
52-Week Range: **\$129 - \$152**

Key Metrics

Market Capitalization (B) **417.801B**
Shares Outstanding (M): **2,821**
Beta: **0.43**
Forward P/E: **31.4**

Financial Overview

2021 Revenue **\$555,233**
2022E Revenue **\$542,816**
2021 Profit Margin **2.42%**
2022E Profit Margin **2.45%**

Earnings Estimates

Year	2021A	2022E	2023E
EPS	\$4.77	\$4.77	\$4.88
Growth	(8.62%)	(1.28%)	3.62%

Executive Summary

Walmart (NYSE: WMT) is the biggest retailer of consumer staples in the world, driven by its strategy to make everyday life easier for families through low prices. They operate under three business segments: Walmart US, Walmart International, and Sam's Club. We recommend a **buy** rating for Walmart with a target price range of \$169-\$181.

We believe that Walmart is in a partial steady state, with large potential for growth in eCommerce and membership revenue. Walmart's evolution in the eCommerce space with their online and same day delivery service, Walmart+, allows them to continue expansion, taking market share back from competitors such as Amazon. The consumer sentiment and inflationary concerns also implies a positive short-term outlook for Walmart as consumers will continue to look for low-cost options heading into the holiday season.

Company Analysis

Walmart is the largest retailer of consumer staples in the world, headquartered in Bentonville, Arkansas. As a large grocer, they sell a wide variety of products in almost every good category, including groceries, hardware, furniture, appliances, toys, and entertainment. They operate on the international marketplace with stores in twenty-six different countries.

Driven by its strategy to make everyday life cheaper for families, Walmart keeps prices low by purchasing incredibly large quantities of goods from suppliers in exchange for discounts and reimbursements.

Walmart operates through eCommerce websites and approximately 10,500 physical stores and clubs. They employ 2.2 million associates around the world with nearly 1.6 million in the U.S. alone.¹ Their operations are separated into three reportable segments: Walmart US, Walmart International, and Sam's Club.

Walmart US

Walmart US is the United States segment of Walmart which operates in all 50 states including Washington D.C. and Puerto Rico. They are consistently the segment with the largest net sales, operating income, and gross profit

rate (gross profit as a percentage of net sales). There are several brands under Walmart US including, Walmart+, Walmart Connect, Walmart Health, and Walmart Fulfillment Services. Historically, Walmart US faces slight seasonality with highest operating income in the fourth quarter, ending January 31, due to the holiday season.¹ They face high competition from other retailers operating in discount, grocers, drug stores, specialty stores, supermarkets, and hypermarkets.

Walmart International

Walmart International is the second largest segment that operates in the other 25 countries outside of the US. It represented 22% of fiscal 2021 net sales and had net sales of \$121.36 billion and \$148.58 billion in fiscal 2021 and 2020, respectively. The gross profit rate is lower in this segment due to the different merchandise mix. All years of net sales have been negatively impacted by currency exchange fluctuations. To maintain relevance globally after previous international mistakes, Walmart International is customer-focused on each of the markets it operates in. To maximize international relevance, Walmart International has made several strategic acquisitions and divestitures in recent years including the acquisition of majority stake of Flipkart in August 2018, the divestiture of Walmart Argentina in November 2020, and the divestiture of majority stake in retail operations in the UK and Japan in 2021.¹

Sam's Club

The Sam's Club segment, a membership-only club, operates 599 stores in 44 states across the U.S. and Puerto Rico. In fiscal 2021, it reported \$63.9 billion in net income which represented 11% of Walmart's total net income.¹ Its membership dues are reported under membership income on the income statement. Sam's Club has two membership options: the Plus Membership and the Club Membership, costing consumers \$100 and \$45 a year respectively. Its biggest competitor is Costco and other discount and wholesale retailers. In 2020, Costco's 588 warehouses produced \$163 billion in net sales. Compared to Sam's Club's 599 stores producing \$63 billion in net sales. Costco has had steady growth in recent years and has been aggressively opening more warehouses.² While Walmart has seen steady growth, they closed 63 Sam's Club warehouses in 2018.¹⁶

Corporate Strategy

Walmart's core marketing strategy is quality merchandise at everyday low prices. Under this approach, the price of goods does not fluctuate significantly, even under promotional activities.⁶ They can provide this through volume incentive programs, reimbursements, and allowances from their suppliers. This strategy makes demand forecasting easier because when prices are generally constant, there are less demand fluctuations to track during sales promotions. Due to a lower number of promotions, marketing and staffing costs are lower than companies that use other pricing methods. This method contrasts many other retailers that use a "high-low" pricing method where prices are set higher and then lowered significantly during promotional activities. This method has helped Walmart differentiate itself from its large pool of competitors that do not use this pricing method.

Omnichannel

The Marketing Science Institute has recognized omnichannel retailing as one of the five marketing research priorities.²³ Omnichannel shopping is the integration of retail store and eCommerce. Its un-siloed approach takes a common previous strategy, multichannel, and merges the channels of distribution. The multichannel approach is when customers have more than one buying channel such as retail stores, websites, and television. Omnichannel combines all of these and takes the advantages of physical stores with the information-rich experience of online shopping. Research has shown that omnichannel marketing increases customer loyalty and makes shoppers spend more at retailers. Walmart has been leveraging the omnichannel model of click-and-collect; where consumers order items online and then retrieve them from the brick-and-mortar store. This appeals to Walmart's customers because they can order from the comfort of their own home and do not have to pay delivery prices.²³ They have also added pick up options to more than 2,000 of its approximately 4,600 stores in the US. These new strategies have allowed Walmart to compete with large online entrants like Amazon.

Walmart+

Walmart launched a new membership program in September 2020 called Walmart+. The membership program includes unlimited free delivery, fuel discounts, and a scan and go option in store.⁷ Walmart is anticipating adding more benefits to the program in the near future, like exclusive Black Friday deals.⁹ The goal of Walmart+ is to increase customer loyalty and retention. It is available to all customers for \$98 a year or \$12.95 a month, both options include a 15-day trial period.⁷

The creation of Walmart+ was sparked by the increase in online and contactless shopping during the COVID-19 pandemic and to compete with Amazon's membership program, Amazon Prime. The future of Walmart+ will be an important factor in Walmart and Amazon's battle for market share.

SWOT

Strengths

Walmart's biggest strengths stem from being the largest retailer in the United States, holding 6.7% market share. Because of the size of its operations, Walmart can take more risks, use resources more efficiently, and exercise its market power. Walmart also has a competitive advantage over its largest competitor, Amazon, as they already have the physical infrastructure in place to support the transition to online sales. Ninety percent of Americans currently live within 10 miles of a Walmart store.²³ The physical infrastructure allows Walmart to leverage these stores as a point of shipment to consumers who order online via their ever-growing eCommerce platforms.

Walmart can also leverage their relationships with suppliers who offer discounted inventory. Receiving low cost and discounted inventory allows Walmart to keep prices low, encouraging their everyday low prices to customers shopping both in-store and online.

One stop shopping has been a staple for Walmart brands. Walmart currently controls 26% of the grocery market.²⁷ When customers shop for groceries in Walmart stores, they are likely to purchase other non-grocery items that Walmart offers. This is a strength that many competitors such as Target, Home Depot, and Best-Buy are not able to provide to customers.

Weaknesses

While Walmart is the largest retailer in the United States, they historically do not perform well in the international marketplace. Walmart has tried to expand in different countries such as Germany, South Korea, and Brazil. Ultimately, they have exited all these international markets after failure to capture market share. They also struggled to compete in the UK before acquiring Asda in 1999.²¹ The failure of Walmart in countries outside of the US is largely due to their inability to change their American business model and adapt to other countries consumer preferences.²²

Another large weakness for Walmart is thin profit margins. Low profit margins occur when goods and services are sold for a close price to what they are purchased for. These types of profit margins are usually seen within the grocery retail industry and when companies use a cost leadership approach, like Walmart's "Everyday Low Price" strategy. When profit margins are low like Walmart's, they must rely on volume of sales to maintain profitability.

Opportunities

Two large opportunities for Walmart are the latest omnichannel marketing strategy, Walmart+, and the large amounts of recent international growth in India and China.

Walmart+ was created to compete with Amazon's Prime subscription service. While fairly new, there are plans to increase services to Walmart+ like exclusive Black Friday, Holiday, and eventually streaming deals.⁹ This venture will be an opportunity to reclaim retail market share through omnichannel marketing.

While Walmart is notorious for failing at entering new international segments, they have found recent success when acquiring and partnering with companies internationally. In 2018, Walmart acquired Flipkart in India and partnered with Dada-JD Daojia in China.²⁸ After Walmart acquired Flipkart to compete with Amazon in India, Flipkart saw a 101.45% increase in revenue growth in 2019.³⁰ While Flipkart had major losses in 2020, due to government restrictions on nonessential ecommerce, their market share will be a large opportunity once COVID-19 restrictions are eradicated.²⁹ After acting on the partnership with JD and creating a unique dual VIP

campaign, Walmart stores in China saw an 8.8% expenditure growth rate.³¹ By learning from their previous mistakes, Walmart could ramp up their international presence.

Threats

Walmart's biggest threats are their stiff competition and market capture from Amazon and Aldi in recent years. While Walmart is the largest retailer in the US, the retail industry is highly saturated with not one competitor having a large majority of the market. Major players in the industry like Walmart, Amazon, Kroger, Home Depot, and Best Buy, only make up 18.2% of total market share.³ While minor players like mom-and-pop retailers and other small retailers make up 81.8% of total market share. This makes Walmart susceptible to competition like Amazon, who has almost double in market share in the past two years. While Walmart pushes into Amazon's e-commerce business with more online options, Amazon is inversely acquiring brick-and-mortar stores like Whole Foods to capture retail market share.

While Walmart and Amazon are all-encompassing retailers, they are getting a new challenger in their grocer sector, Aldi. Aldi boasts even lower grocer prices than the "Everyday Low Price" promise Walmart touts. This competitive edge has gained them extensive grocery market share, rapid expansion in the US, and helped them successfully keep Walmart out of the German market. Their expansion is on track to grow to 2,500 stores from their current 1,600 US locations by 2022.²⁴ This heavy expansion could push consumers away from Walmart to an even lower cost option.

Another threat to note for Walmart is the lingering COVID-19 and Delta variant affects, especially in their international markets.

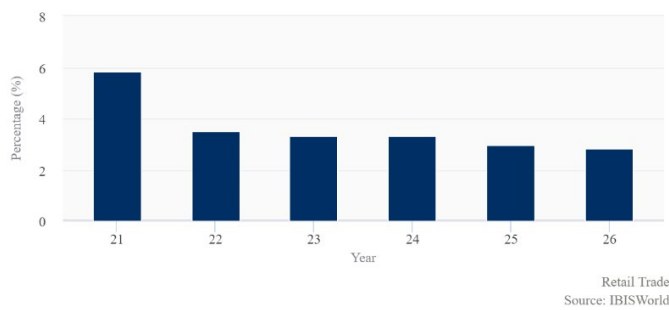
Industry Analysis

Overview

The retail trade industry can be described as the final step in the distribution of merchandise.⁴ It operates at the store and non-store level with twelve subsectors. The largest subsectors include motor vehicle and parts dealers, food and beverage stores, gasoline stations, and many more that Walmart operates in. The size of the

retail trade industry in the United States was \$5 trillion in 2020, after declining 10.75% due to the COVID-19 pandemic. While there had been steady growth in this industry before the pandemic, the decline was driven by numerous temporary store closings and stay at home orders. As seen below, the industry is expected to bounce back during 2021 with a 6% growth rate. The industry is then expected to have constant growth of around 3.5% for years 2022-2026.

Industry Outlook 2021–2026



Source: 3

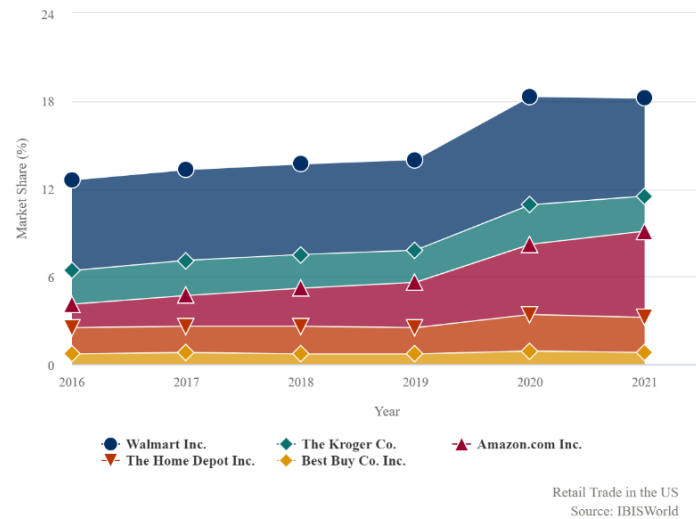
The market competition is extremely high in this industry with an estimated 2.8 million players in 2021. Major competitors include Walmart, Kroger, Amazon, Home Depot, and Best Buy. These companies account for only 18.2% of market share due to low market concentration.

For the future we think the retail trade industry will rebound at a steady rate as per capita disposable income rises again after the pandemic. Over the five years to 2026, per capita disposable income is anticipated to continue to grow, increasing at an annualized rate of 2.7%.

Competitors

While Walmart is the industry leader, many competitors have seen higher growth rates in recent years. In the past two years Amazon has almost doubled their market share from 3.1% to 5.9%. Amazon's market capture has led to the other competitors to lose market share with Walmart, Kroger, Home Depot, and Best Buy losing 0.5%, 0.3%, 0.1%, and 0.1% market share in 2021 respectively. To combat Amazon's quick takeover, many companies are trying to boost their eCommerce sales through membership programs, online ordering, and curbside pickup. Walmart has created Walmart+ and online pickup options. These initiatives have grown Walmart's online sales 79% in the last fiscal year.

Major Players and Their Market Share
2016–2021



Source: 4

Porter's Five Forces

Threat of Substitutes - High

The threat of substitutes is high within the retail industry due to the large number of competitor companies within the industry offering similar goods. Because of this, a high priority of many retail companies is customer loyalty. To strengthen this, many companies create incentive programs and lower costs to maximize customer satisfaction. Part of Walmart's shift to eCommerce and same day shipping via Walmart+ includes incentives for ordering through the Walmart+ membership program.

Bargaining Power of Suppliers - Low

The bargaining power of suppliers is weak within the retail industry due to the mass number of suppliers available in the consumer staples space. With Walmart and Amazon controlling so much of the retail space, new entrant suppliers often have to offer incentives to Walmart to introduce their product lines in their stores. Discount incentives provided by suppliers has allowed Walmart to keep costs low and continue to control the everyday low price retail space.

Bargaining Power of Buyers - Moderate

Inputs in the retail industry have high variability and can be sourced by many different suppliers. A buyer's bargaining power will be higher if the option for

switching from one supplier to another exists. Suppliers who have a high demand product can often negotiate prices with purchasers. The smaller players in the consumer staples retail space may have less bargaining power against these large suppliers than companies like Walmart or other large competitors. Walmart being one of the major players provides bargaining power for them, making the bargaining power of buyers a moderate rating for our application.

Threat of New Entrants - Weak

The threat of new entrants is weak within the retail industry because there is such high competition. New entrants must have a never-before-seen product or efficient source of delivery that makes their differentiation high to compete in this saturated market. While the barrier to entry is low in this space, companies like Walmart rarely have to worry about small entrants taking major market share from them. The degree of competition among the large players is more of a high-risk concern.

Degree of Competition – High

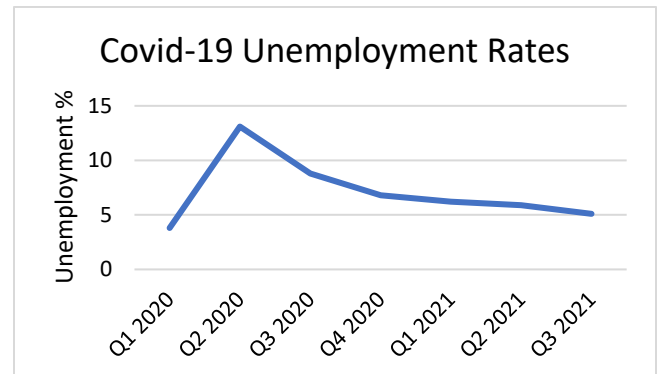
The degree of rivalry between competitors in the retail industry is strong. There are a large number of competing companies within the retail industry, each specializing in many different facets of the retail space. Consumers often have any different companies that they can choose from when searching for specific products. When searching for electronics or technology, consumers can select between companies such as Best-Buy, Target, Amazon, or Walmart. When searching for products such as hardware or tools, consumers can select between Home Depot, Lowes, or other local hardware stores. While companies such as Home Depot and Best-Buy specialize in certain product lines, companies such as Walmart and Amazon are typically one stop shopping that allows them to attract shoppers who need many varieties of goods. In the long term, Amazon is the largest competitor of Walmart as they offer next day shipping to consumers. As Walmart continues to roll out their Walmart+ memberships, they will be looking to continue taking market share back from Amazon.

Economic Analysis

The last year and a half have included unprecedented economic challenges due to the coronavirus pandemic. As the world has begun to exit the pandemic, we have seen changes to important economic indicators, including increased inflation, changing consumer price indices, unemployment swings, and changing per capita disposable incomes.

Unemployment

Unemployment hit a high of 13.1% during Q2 of 2020 and has continually dropped to just over 5% as of October 2021.¹¹ This is still higher than pre-pandemic numbers, but the decreased unemployment has led to additional household income in comparison to 2020. Employers are continually looking for employees to fill jobs as there is currently 0.7 unemployed persons per job opening, indicating each unemployed person has more than one job opening available to them.¹⁰



Source: 11

Household Disposable Income Per Capita

Per capita disposable income can be described as an individual's ability to purchase discretionary goods and services.³ In the next five years, per capita disposable income is expected to increase at an average rate of 3.5% each year. Increases in per capita disposable income means consumers will be making more discretionary purchases and opting for premium goods. The increase in household income means that families are willing to spend more on higher quality goods such as groceries and gifts during the holiday season. This is a threat to Walmart's business model as they are the low-cost player in the consumer staple space. Due to Walmart operating with the main goal of providing cheap

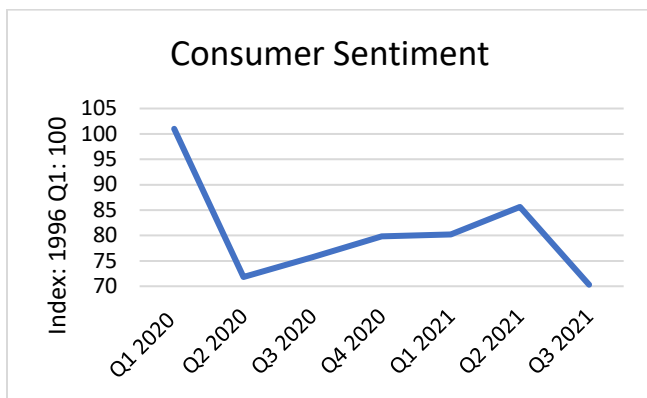
retail options for staple goods, it is expected that the rise in per capita disposable income will have an adverse effect on their market share.

Consumer Sentiment

Consumer sentiment measures the overall level of confidence that consumers have in the economy. The University of Michigan’s consumer sentiment index is measured at a basis of 100 from 1996 when the consumer sentiment index began.

Pre-pandemic consumer sentiment was measured at 101, but dropped to 71.1 during quarter two of 2020, showing low economic confidence. Consumer sentiment naturally increased throughout the pandemic but has recently dropped to 70.3 in October of 2021.¹³ This implies that consumers are uncertain of the current economic outlook.

The current low consumer confidence indicates that individuals are likely saving the additional discretionary income that they are accumulating, with the fears of future needs. This could potentially impact Walmart as their highest grossing quarter is traditional Q4 during the holiday season. As families are saving income, they will be looking for lower cost options, which Walmart provides to consumers.



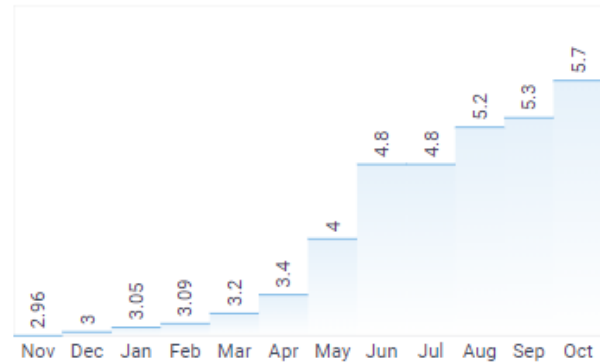
Source: 13

Inflation

The low consumer confidence is in part due to rising inflationary numbers. The most recent report of consumer inflation expectations can be seen below. The inflation percent is the one year ahead expected inflation rate. The October one year ahead expectations have risen to 5.7% from 5.3% in the month of September.¹⁴

Consumer Inflation Expectations (OCT)

HISTORICAL DATA



Source: 14

These rising inflation rate expectations are contradicting of the Federal Reserve policies. The Fed aims to achieve an inflation rate of just over 2% over the long run. The Fed committee confirmed their stance on this 2% number in a September statement on inflationary concerns.¹⁵ The 5.7% expectation being much higher than a 2% target rate of inflation will continue to decrease consumer sentiment in the market and continue encouraging consumers to save additional discretionary income as they return to the work force.

Supply Chain

The global supply chain is the system of producing and delivering a product or service from the beginning stage of sourcing the raw materials to the final delivery of the product or service to consumer. COVID-19 has caused supply chain struggles from pandemic mitigation strategies that reduced the workforce. Stopped and/or delayed work and a growing number of workers quitting their jobs created an imbalance between supply and demand.²⁰ The imbalance has caused long waits and higher prices for foreign and domestic goods and services. The government has tried to curb the supply problem by opening select ports 24/7, but experts believe that the supply chain issues will take months to a year and beyond to be fixed.¹⁸

Walmart and its competitors are using large incentive programs to attract workers to fill in their labor gaps. To combat these supply chain issues, Walmart is investing heavily in transportation infrastructure and planning as they gear up for the holiday season. By investing people and capital to ensure there is product to sell during the

holiday surge, Walmart is hoping to minimize the global shortages and maximize profits in their historically large fourth quarter.¹⁷

Valuation Analysis

Valuation Methodology

To value Walmart, we utilized historical and current economic trends to create estimates of future company performance. Utilizing ten years of historical data and our outlook on the future economic climate, we were able to apply growth forecasts to the next six fiscal years. Using these growth forecasts, we were able to build discounted cash flow, economic profit, dividend discount, and relative valuation models.

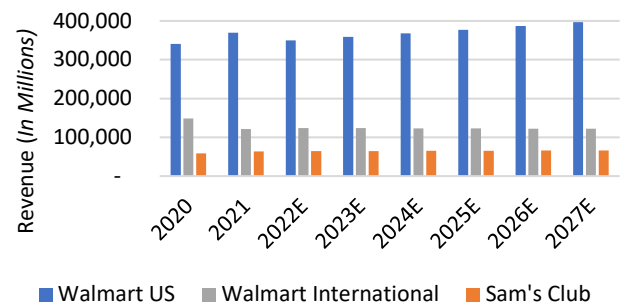
Some historical averages used in forecasting excluded fiscal year 2021 due to the abnormal outcomes from the Covid-19 pandemic. The outliers produced during this year do not accurately represent the future potential of the company, and therefore were excluded during forecasting.

Revenue Decomposition

Walmart has three main business segments: Walmart US, Walmart International, and Sam’s Club. Walmart’s revenue is broken into two categories: “Net Sales” and “Membership & Other Income.” The net sales category consists of sales stemming from grocery, health & wellness, other traditional in store sales, and eCommerce sales, including shipping revenues. Membership and other incomes have traditionally been sales from the Sam’s Club memberships. The membership category is growing as Walmart has rolled out Walmart+ in fiscal year 2021.

Net sales growth was broken down and forecasted based on the average dollar per square foot attributable to stores in the Walmart US, Walmart International, and Sam’s Club business segments. Net sales per square foot is expected to remain stable with slight growth due to natural population growth and increasing eCommerce sales.

Net Sales by Business Sector



Source: Model

Membership revenue is expected to grow as Walmart+ continues to attract new customers. As of quarter two for fiscal year 2022, Walmart membership revenue has increased over 24% for the six months ended July 31, 2021, compared to the six months ended July 31, 2020. This increase is partially attributable to the increase in Walmart+ subscriptions.

Cost of Sales

The cost of sales account (excluding depreciation and amortization) was calculated using the historical percent of sales. Historically, the percent of total revenues for cost of sales is just under 75%. This is a high percentage of total sales, leading to lower margins, but matches the low-cost business model that Walmart offers their customers.

Selling, General & Administrative

To calculate selling, general and administrative expenses, we also utilized the historical cost as a percentage of revenues. To calculate SG&A, we found that historical cost was just over 20% of total revenues. We decided to utilize the historical percentages of SG&A and cost of sales as our forecast percentage as we foresee Walmart continuing to offer low-cost items, with lower built-in margins.

WACC

The Walmart weighted average cost of capital (WACC) was calculated as 4.16%. This was calculated with a cost of equity as 4.46% at a market value weight of 87.76%. The cost of debt was calculated as 1.99% at a market value weight of 12.24%. The WACC of 4.16% is utilized as

the discount factor for the cash flows in our DCF/EP model.

Cost of Equity

The 4.46% cost of equity for Walmart was calculated using the capital asset pricing model. The risk-free rate used was 2.05%, derived from the current yield to maturity of the 20-year T-Bill. The beta used was calculated at 0.49. This beta was derived from the average 5-year raw monthly beta. The equity risk premium used was 4.88%, which is the geometric average over the 10-year treasury from 1928-2020. These inputs calculated an ending cost of equity equal to 4.46%.

Cost of Debt

The cost of debt calculated was 1.99%. The cost of debt was calculated using the risk-free rate, the implied default premium, and the pre-tax cost of debt as inputs. The risk-free rate used was 2.05%, which is the 20-year T-Bill yield to maturity. The pre-tax cost of debt used was 2.55%, which is the yield to maturity on the company's 30-year corporate bond. The implied default premium is the difference between the risk-free rate and the pre-tax cost of debt for the companies' bonds. The implied default premium was calculated as 0.50%, which conceptually makes sense as the company has a long-term debt rating of AA by Standard and Poor's. The pre-tax cost of debt is then multiplied by one minus Walmart's marginal tax rate of 22% producing an after-tax cost of debt of 1.99%.

Valuation Models

Discounted Cash Flow & Economic Profit

The discounted cash flow (DCF) model used Walmart's forecasted cash flows for the next six years and discounts them to today's present value. The cash flows are calculated by taking Walmart's net operating profit less adjusted taxes (NOPLAT), minus the change in invested capital. The cash flows are discounted using the WACC as the discount rate. The economic profit (EP) model begins by multiplying prior year invested capital by the return on invested capital (ROIC) minus WACC. The EP from each forecasted year plus the continuing value of the final year are then discounted by the WACC to compute

the present value. Based on the DCF and EP models, our implied price as of today is \$180.84.

Dividend Discount Model

The dividend discount model (DDM) uses estimated future annual dividends to be paid out. The dividends for the forecasted years 1-5 plus the continuing value of year 6 are discounted by the cost of equity to give an intrinsic value of \$169.63. Walmart has increased their dividends by \$0.04 each year for the last 8 years, and we do not see this trend changing. We forecasted the same \$0.04 dividend growth for each year of the forecast period, leading to a slightly decreased payout ratio due to increased EPS. We see the \$169.63 as the lower end of our target range for Walmart stock.

Relative Valuation

For the Relative Valuation Model, we compared Walmart to competitor companies Costco, Amazon, Target, and Dollar General. We used the price-to-earnings comparison of these competitors to calculate the implied relative value price. The average P/E estimates for comparable companies in 2021 was 37.32. Walmart's P/E for the same period was calculated as 31.4, which is below the comparison average. Multiplying this average P/E by Walmart's estimated EPS gives a relative value of \$175.75. Using this same process for 2022 gives a relative value of \$160.14 for Walmart.

The competitors used for this comparison were selected due to them being the largest threats to Walmart's share of the consumer retail space. Each of these consumers hold a competitive market share but use very different business models to do so. Some competitors were not used for this model as they had P/E ratios that would be considered outliers relative to the retail market. These varying business models, differing customer bases, and eliminated outlier P/E ratios must be taken into consideration when referencing this relative valuation model.

Sensitivity Analysis

Beta vs Risk-Free Rate

The beta and risk-free rate are both important inputs in the cost of equity calculation. The cost of equity is used as an input in both the WACC calculation, as well as the

discount factor used in the dividend discount model. With the cost of equity holding an 88% weight in the WACC calculation, the change in these values has a large impact on the DCF and EP stock values. The current beta is 0.49 and the risk-free rate is 2.05%. The sensitivity analysis below shows the changes in stock value as the beta and risk-free rates are changed positively and negatively.

		Beta							
		180.84	0.34	0.37	0.40	0.49	0.46	0.49	0.52
Risk-free Rate	1.75%	259.35	244.76	231.66	198.15	209.14	199.38	190.46	
	1.85%	249.21	235.66	223.47	192.04	202.38	193.20	184.79	
	1.95%	239.80	227.20	215.81	186.28	196.03	187.38	179.43	
	2.05%	231.05	219.30	208.64	180.84	190.04	181.88	174.36	
	2.15%	222.90	211.91	201.91	175.69	184.39	176.68	169.55	
	2.25%	215.28	204.98	195.58	170.82	179.06	171.75	164.99	
	2.35%	208.14	198.47	189.62	166.19	174.00	167.08	160.65	

WACC vs CV Growth of NOPLAT

The WACC and continuing value (CV) of NOPLAT have large impacts on the value of operating assets in the DCF model. When valuing the PV of FCF's, the continuing value is the value that gets discounted to represent all future cash flows. The larger the CV growth of NOPLAT, the larger the value of operating assets will be. The WACC is then used to discount the FCF's and CV to obtain the present value. The lower the discount factor (WACC), the higher the value of operating assets. As seen in the sensitivity analysis below, the combination of a lower WACC and higher CV growth of NOPLAT leads to higher intrinsic value.

		WACC							
		180.84	3.71%	3.86%	4.01%	4.16%	4.31%	4.46%	4.61%
CV Growth of NOPLAT	0.70%	197.65	187.54	178.35	170.05	162.25	155.17	148.63	
	0.80%	202.46	191.80	182.13	173.44	165.28	157.89	151.08	
	0.90%	207.61	196.34	186.16	177.02	168.48	160.76	153.66	
	1.00%	213.14	201.20	190.45	180.84	171.88	163.80	156.39	
	1.10%	219.09	206.41	195.04	184.91	175.49	167.02	159.27	
	1.20%	225.51	212.02	199.96	189.25	179.33	170.43	162.32	
	1.30%	232.47	218.06	205.23	193.89	183.42	174.07	165.56	

Forecasted Marginal Tax Rate vs Pre-Tax Cost of Debt

The pre-tax cost of debt and marginal tax rate are both inputs in the cost of debt calculation. The cost of debt is calculated pre-tax, then multiplied by one minus the marginal tax rate to get the cost of debt. The cost of debt has over a 12% weight in Walmart's WACC calculation. As shown in the sensitivity analysis, the higher the marginal tax rate, the lower the cost of debt, and higher intrinsic value. As cost of debt decreases, so does the WACC. The lower WACC impacts the DCF model as the

WACC is used to discount the cash flows. The lower the discount factor, the higher the value of operating assets, and higher overall intrinsic value.

		Forecasted Marginal Tax Rate							
		180.84	19%	20%	21%	22.00%	23%	24%	25%
Pre-Tax Cost of Debt	1.35%	186.60	186.70	186.81	186.92	187.03	187.14	187.25	
	1.75%	184.43	184.57	184.71	184.85	184.98	185.12	185.26	
	2.15%	182.32	182.49	182.65	182.82	182.99	183.15	183.32	
	2.55%	180.26	180.46	180.65	180.84	181.03	181.23	181.42	
	2.95%	178.26	178.47	178.69	178.91	179.13	179.35	179.57	
	3.35%	176.30	176.54	176.78	177.02	177.27	177.51	177.75	
	3.75%	174.39	174.65	174.91	175.18	175.45	175.71	175.98	

Equity Risk Premium vs Cost of Equity

The equity risk premium (ERP) used was 4.88%, which is the historic geometric average from 1928-2020. The equity risk premium has a direct impact on the cost of equity. The change in the cost of equity does not have a large impact on the stock value, but a decrease in the equity risk premium led to large increases of value. Changing the ERP from the highest percent tested to the lowest percent tested moves the stock \$30.72.

		Equity Risk Premium							
		180.84	4.28%	4.48%	4.68%	4.88%	5.08%	5.28%	5.48%
Cost of Equity	3.86%	197.46	191.30	185.50	180.01	174.81	169.89	165.21	
	4.06%	197.76	191.60	185.78	180.29	175.08	170.15	165.47	
	4.26%	198.07	191.89	186.07	180.56	175.35	170.41	165.72	
	4.46%	198.37	192.19	186.35	180.84	175.62	170.67	165.98	
	4.66%	198.68	192.48	186.64	181.12	175.89	170.94	166.23	
	4.86%	198.98	192.78	186.93	181.40	176.16	171.20	166.49	
	5.06%	199.29	193.08	187.21	181.68	176.43	171.46	166.74	

Operating SG&A as % of Sales vs Cost of Sales as % of Sales

We compared the impact of changes in the CV of operating, selling, general, and administrative expenses as a percent of sales and the CV of cost of sales as a percent of sales. Changes in these variable expenses have a large impact on stock value due to the large percent of expenses that these categories make up. These line items on the income statement make up 95% of all expenses. This is due to the low cost that Walmart wants to offer its customers. The low margins imply a larger percent of variable expenses as a percent of sales. The small increases in cost of sales or SG&A expenses can lead to the company having net losses, and low intrinsic value. The same is true as the expense as a percent of sales decreases, the value increases substantially.

		Operating SG&A as % of Sales							
		180.84	17.12%	18.12%	19.12%	20.12%	21.12%	22.12%	23.12%
Cost of Sales as % of Sales	67.00%	649.98	606.91	563.84	520.76	477.71	434.64	391.57	
	69.00%	564.68	521.61	478.54	435.46	392.41	349.34	306.27	
	71.00%	479.38	436.31	393.25	350.16	307.11	264.04	220.97	
	74.97%	310.06	266.99	223.92	180.84	137.79	94.72	51.65	
	75.00%	308.78	265.72	222.65	179.57	136.51	93.45	50.38	
	77.00%	223.49	180.42	137.35	94.27	51.22	8.15	(34.92)	
	79.00%	138.19	95.12	52.05	8.97	(34.08)	(77.15)	(120.22)	

Important Disclaimer

This report was created by students enrolled in the Applied Equity Valuation class at the University of Iowa. The report was originally created to offer an internal investment recommendation for the University of Iowa Krause Fund and its advisory board. The report also provides potential employers and other interested parties an example of the students' skills, knowledge and abilities. Members of the Krause Fund are not registered investment advisors, brokers or officially licensed financial professionals. The investment advice contained in this report does not represent an offer or solicitation to buy or sell any of the securities mentioned. Unless otherwise noted, facts and figures included in this report are from publicly available sources. This report is not a complete compilation of data, and its accuracy is not guaranteed. From time to time, the University of Iowa, its faculty, staff, students, or the Krause Fund may hold a financial interest in the companies mentioned in this report.

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Walmart Inc.*Income Statement**In Millions*

Fiscal Years Ending Jan. 31	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E
Revenues:									
Net sales	510,329	519,926	555,233	537,883	546,836	556,023	565,450	575,124	585,050
Membership & other income	4,076	4,038	3,918	4,274	4,621	4,949	5,201	5,466	5,745
Total revenues	514,405	523,964	559,151	542,157	551,456	560,972	570,651	580,590	590,794
Costs and expenses:									
Cost of sales	385,301	394,605	420,315	411,501	418,367	425,368	432,514	439,813	447,273
Depreciation & Amortization Expense	10,678	10,987	11,152	8,250	8,403	8,517	8,595	8,642	8,660
Cost of sales less depreciation and amortization	374,623	383,618	409,163	403,252	409,964	416,851	423,919	431,171	438,613
Operating, selling, general & administrative expenses	107,147	108,791	116,288	109,084	110,955	112,869	114,817	116,816	118,870
Operating income (loss)	21,957	20,568	22,548	21,572	22,135	22,734	23,320	23,960	24,652
Interest:									
Interest expense on debt	1,975	2,262	1,976	2,026	2,078	2,131	2,185	2,241	2,298
Interest expense on finance, capital lease & financing obligations	371	337	339	348	357	366	375	384	394
Interest income (gain)	217	189	121	124	127	130	134	137	141
Interest income (expense), net	2,129	2,410	2,194	2,250	2,307	2,366	2,426	2,488	2,552
Gain (loss) on extinguishment of debt	-	-	-	-	-	-	-	-	-
Other gains & (losses)	(8,368)	1,958	210	(659)	(670)	(682)	(694)	(706)	(718)
Income (loss) before income taxes	11,460	20,116	20,144	18,663	19,157	19,686	20,200	20,766	21,382
Provision (benefit) for income taxes	4,281	4,915	6,858	4,789	4,914	5,047	5,177	5,319	5,473
Consolidated net income (loss)	7,179	15,201	13,706	13,874	14,243	14,639	15,023	15,447	15,909
Consolidated net loss (income) attributable to noncontrolling interest	509	320	196	623	634	645	656	667	679
Consolidated net income (loss) attributable to Walmart Inc.	6,670	14,881	13,510	13,251	13,610	13,995	14,367	14,780	15,230
Net Income Per Common Share:									
Net income (loss) per common share - basic	2.28	5.22	4.77	4.71	4.88	5.07	5.26	5.44	5.62
Total Shares Outstanding									
Total shares outstanding - Basic	2,878	2,833	2,821	2,797	2,764	2,732	2,701	2,701	2,701
Weighted-Average Common Shares Outstanding:									
Weighted average shares outstanding - basic	2,929	2,850	2,831	2,814	2,789	2,761	2,731	2,716	2,709
Dividends declared per common share									
	2.08	2.12	2.16	2.20	2.24	2.28	2.32	2.36	2.40

Walmart Inc.

Balance Sheet

In Millions

Fiscal Years Ending Jan. 31	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E
Current Assets									
Cash & cash equivalents	7,722	9,465	17,741	25,829	29,675	36,077	41,082	49,226	65,488
Receivables, net	6,283	6,284	6,516	5,910	5,845	5,778	5,707	5,632	5,553
Inventories	44,269	44,435	44,949	43,373	43,289	43,195	43,084	42,964	42,833
Prepaid expenses & other current assets	3,623	1,622	20,861	2,402	2,444	2,486	2,529	2,573	2,618
Total current assets	61,897	61,806	90,067	77,513	81,253	87,536	92,402	100,394	116,492
Property & equipment, net	104,317	105,208	92,201	93,916	95,186	96,059	96,581	96,789	96,721
Operating lease right-of-use assets	-	17,424	13,642	13,896	14,084	14,213	14,290	14,321	14,311
Finance lease right-of-use assets, net	7,078	4,417	4,005	4,079	4,135	4,173	4,195	4,204	4,201
Property under capital lease & financing obligations	12,760	-	-	-	-	-	-	-	-
Less: accumulated amortization	5,682	-	-	-	-	-	-	-	-
Goodwill	46,003	47,640	52,581	52,581	52,581	52,581	52,581	52,581	52,581
Other assets & deferred charges	-	-	-	-	-	-	-	-	-
Total assets	219,295	236,495	252,496	241,985	247,238	254,562	260,049	268,290	284,306
LIABILITIES AND EQUITY									
Current Liabilities:									
Short-term borrowings	5,225	575	224	2,314	2,310	2,304	2,298	2,291	2,284
Accounts payable	47,060	46,973	49,141	45,918	46,706	47,512	48,332	49,174	50,038
Accrued liabilities	22,159	22,296	37,966	22,446	22,831	23,225	23,626	24,038	24,460
Accrued income taxes	428	280	242	325	331	336	342	348	354
Operating lease obligations due within one year	-	1,793	1,466	1,462	1,481	1,495	1,503	1,506	1,505
Long-term debt due within one year	1,876	5,362	3,115	3,115	3,014	4,721	4,360	1,480	5,524
Finance lease obligations due within one year	729	511	491	717	613	551	496	449	949
Current liabilities of discontinued operation	-	-	-	-	-	-	-	-	-
Total current liabilities	77,477	77,790	92,645	76,298	77,286	80,145	80,957	79,286	85,114
Long-term debt	43,520	43,714	41,194	43,080	43,360	43,544	43,640	43,659	43,610
Long-term operating lease obligations	-	16,171	12,909	13,149	13,327	13,449	13,522	13,551	13,542
Long-term finance lease obligations	6,683	4,307	3,847	4,137	4,193	4,232	4,255	4,264	4,261
Deferred income taxes & other liabilities	11,981	12,961	14,370	15,106	15,862	16,638	17,434	18,251	19,093
Commitments and Contingencies									
Equity:									
Redeemable noncontrolling interest	-	-	-	-	-	-	-	-	-
Common stock	3,253	3,531	3,928	3,928	3,928	3,928	3,928	3,928	3,928
Retained earnings (accumulated deficit)	80,785	83,943	88,763	90,823	93,185	95,885	98,916	107,286	116,015
Accumulated other comprehensive income (loss)	11,542	12,805	11,766	11,766	11,766	11,766	11,766	11,766	11,766
Total Walmart Inc. shareholders' equity (deficit)	72,496	74,669	80,925	82,985	85,347	88,047	91,078	99,448	108,177
Noncontrolling interest	7,138	6,883	6,606	7,229	7,863	8,507	9,163	9,830	10,509
Total equity (deficit)	79,634	81,552	87,531	90,214	93,210	96,554	100,241	109,278	118,686
Total Liabilities and Equity	219,295	236,495	252,496	241,985	247,238	254,562	260,049	268,290	284,306

Walmart Inc.*Historical Cash Flow Statement**In Millions***Fiscal Years Ending Jan. 31****2019****2020****2021****Cash flows from operating activities:**

Consolidated net income (loss)	7,179	15,201	13,706
Adjustments to reconcile consolidated net income to net cash provided by operating activities			
Depreciation & amortization	10,678	10,987	11,152
Net unrealized & realized losses & (gains)	3,516	(1,886)	(8,589)
Losses (gains) on disposal of business operations	4,850	15	8,401
Asda Group Limited ("Asda") pension contribution	-	(1,036)	-
Deferred income taxes	(499)	320	1,911
Loss on extinguishment of debt	-	-	-
Other operating activities	1,734	1,981	1,521
Changes in certain assets and liabilities, net of effects of acquisition and disposition:			
Receivables, net	(368)	154	(1,086)
Inventories	(1,311)	(300)	(2,395)
Accounts payable	1,831	(274)	6,966
Accrued liabilities	183	186	4,623
Accrued income taxes	(40)	(93)	(136)
Net cash flows from operating activities	27,753	25,255	36,074

Cash flows from investing activities:

Payments for property & equipment	(10,344)	(10,705)	(10,264)
Proceeds from the disposal of property & equipment	519	321	215
Proceeds from the disposal of certain operations	876	833	56
Purchase of available for sale securities	-	-	-
Payments for business acquisitions, net of cash acquired	(14,656)	(56)	(180)
Other investing activities	(431)	479	102
Net cash flows from investing activities	(24,036)	(9,128)	(10,071)

Cash flows from financing activities:

Net change in short-term borrowings	(53)	(4,656)	(324)
Proceeds from issuance of long-term debt	15,872	5,492	-
Repayments of long-term debt	(3,784)	(1,907)	(5,382)
Premiums paid to extinguish debt	-	-	-
Dividends paid	(6,102)	(6,048)	(6,116)
Purchase of company stock	(7,410)	(5,717)	(2,625)
Dividends paid to noncontrolling interest	(431)	(555)	(434)
Purchase of noncontrolling interest	-	-	-
Payment of capital lease obligations	-	-	-
Other financing activities	(629)	(908)	(1,236)
Net cash flows from financing activities	(2,537)	(14,299)	(16,117)

Effect of exchange rates on cash, cash equivalents & restricted cash	(438)	(69)	235
Net increase (decrease) in cash, cash equivalents and restricted cash	742	1,759	10,121
Cash & cash equivalents reclassified as assets held for sale	-	-	(1,848)
Cash, cash equivalents & restricted cash at beginning of year	7,014	7,756	9,515
Cash, cash equivalents & restricted cash at end of year	7,756	9,515	17,788

Walmart Inc.

Forecasted Cash Flow Statement

	2022E	2023E	2024E	2025E	2026E	2027E
Operating Activities						
Net Income	13,251	13,610	13,995	14,367	14,780	15,230
Depreciation & Amortization Expense	8,250	8,403	8,517	8,595	8,642	8,660
Adjustments to reconcile consolidated net income to net cash provided by operating activities						
Receivables, net	606	64	67	71	75	78
Inventories	1,576	83	95	111	121	131
Prepaid Expenses	18,459	(41)	(42)	(43)	(44)	(45)
Accounts payable	(3,223)	788	806	820	842	864
Accrued liabilities	(15,520)	385	394	401	411	422
Accrued income taxes	83	6	6	6	6	6
Deferred Income Tax liabilities and other liabilities	736	755	776	796	818	841
Net Cash provided by operating activities	24,220	24,052	24,613	25,124	25,650	26,189
Adjustments to reconcile consolidated net income to net cash provided by Investing Activities						
Payments for PPE	(9,964)	(9,673)	(9,391)	(9,116)	(8,850)	(8,592)
Financing ROU Asset	(74)	(55)	(38)	(23)	(9)	3
Operating Lease ROU asset	(254)	(188)	(129)	(77)	(31)	10
Operating Lease obligations due within one year	(4)	20	14	8	3	(1)
Financing Lease Obligations due within one year	226	(104)	(62)	(55)	(47)	500
Net Cash provided by Investing Activities	(10,071)	(10,000)	(9,606)	(9,263)	(8,934)	(8,079)
Adjustments to reconcile consolidated net income to net cash provided by Financing Activities						
Short-term borrowings	2,090	(5)	(5)	(6)	(7)	(7)
Long-term debt	1,886	280	184	96	19	(49)
Long-term debt due within one year	-	(101)	1,707	(361)	(2,880)	4,044
Purchase of Company Stock - Share Repurchase	(5,000)	(5,000)	(5,000)	(5,000)	-	-
Long-term financing lease obligations	290	56	38	23	9	(3)
Long Term Operating Lease obligations	240	178	122	73	29	(10)
Dividends paid to Noncontrolling interest	623	634	645	656	667	679
Dividends Paid	(6,191)	(6,248)	(6,295)	(6,336)	(6,410)	(6,501)
Net Cash provided by Financing Activities	(6,061)	(10,206)	(8,604)	(10,856)	(8,572)	(1,848)
Net Cash	8,088	3,846	6,402	5,005	8,144	16,262
Cash at Beginning of Year	17,741	25,829	29,675	36,077	41,082	49,226
Cash at End of Year	25,829	29,675	36,077	41,082	49,226	65,488

Walmart Inc.

Common Size Income Statement

Fiscal Years Ending Jan. 31	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E
Revenues:									
Net sales	99.21%	99.23%	99.30%	99.21%	99.16%	99.12%	99.09%	99.06%	99.03%
Membership & other income	0.79%	0.77%	0.70%	0.79%	0.84%	0.88%	0.91%	0.94%	0.97%
Total revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Costs and expenses:									
Cost of sales	74.90%	75.31%	75.17%	75.90%	75.87%	75.83%	75.79%	75.75%	75.71%
Depreciation & Amortization Expense	2.08%	2.10%	1.99%	1.52%	1.52%	1.52%	1.51%	1.49%	1.47%
Cost of sales less depreciation and amortization	72.83%	73.21%	73.18%	74.38%	74.34%	74.31%	74.29%	74.26%	74.24%
Operating, selling, general & administrative expenses	20.83%	20.76%	20.80%	20.12%	20.12%	20.12%	20.12%	20.12%	20.12%
Operating income (loss)	4.27%	3.93%	4.03%	3.98%	4.01%	4.05%	4.09%	4.13%	4.17%
Interest:									
Interest expense on debt	0.38%	0.43%	0.35%	0.37%	0.38%	0.38%	0.38%	0.39%	0.39%
Interest expense on finance, capital lease & financing obligations	0.07%	0.06%	0.06%	0.06%	0.06%	0.07%	0.07%	0.07%	0.07%
Interest income (gain)	0.04%	0.04%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
Interest income (expense), net	0.41%	0.46%	0.39%	0.41%	0.42%	0.42%	0.43%	0.43%	0.43%
Gain (loss) on extinguishment of debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other gains & (losses)	-1.63%	0.37%	0.04%	-0.12%	-0.12%	-0.12%	-0.12%	-0.12%	-0.12%
Income (loss) before income taxes	2.23%	3.84%	3.60%	3.44%	3.47%	3.51%	3.54%	3.58%	3.62%
Provision (benefit) for income taxes	0.83%	0.94%	1.23%	0.88%	0.89%	0.90%	0.91%	0.92%	0.93%
Consolidated net income (loss)	1.40%	2.90%	2.45%	2.56%	2.58%	2.61%	2.63%	2.66%	2.69%
Consolidated net loss (income) attributable to noncontrolling interest	0.10%	0.06%	0.04%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%
Consolidated net income (loss) attributable to Walmart Inc.	1.30%	2.84%	2.42%	2.44%	2.47%	2.49%	2.52%	2.55%	2.58%

Walmart Inc.
Common Size Balance Sheet

Fiscal Years Ending Jan. 31	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E
Current Assets									
Cash & cash equivalents	1.50%	1.81%	3.17%	4.76%	5.38%	6.43%	7.20%	8.48%	11.08%
Receivables, net	1.22%	1.20%	1.17%	1.09%	1.06%	1.03%	1.00%	0.97%	0.94%
Inventories	8.61%	8.48%	8.04%	8.00%	7.85%	7.70%	7.55%	7.40%	7.25%
Prepaid expenses & other current assets	0.70%	0.31%	3.73%	0.44%	0.44%	0.44%	0.44%	0.44%	0.44%
Total current assets	12.03%	11.80%	16.11%	14.30%	14.73%	15.60%	16.19%	17.29%	19.72%
Property & equipment, net	20.28%	20.08%	16.49%	17.32%	17.26%	17.12%	16.92%	16.67%	16.37%
Operating lease right-of-use assets	0.00%	3.33%	2.44%	2.56%	2.55%	2.53%	2.50%	2.47%	2.42%
Finance lease right-of-use assets, net	1.38%	0.84%	0.72%	0.75%	0.75%	0.74%	0.74%	0.72%	0.71%
Property under capital lease & financing obligations	2.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Less: accumulated amortization	1.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Goodwill	8.94%	9.09%	9.40%	9.70%	9.53%	9.37%	9.21%	9.06%	8.90%
Other assets & deferred charges	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total assets	42.63%	45.14%	45.16%	44.63%	44.83%	45.38%	45.57%	46.21%	48.12%
LIABILITIES AND EQUITY									
Current Liabilities:									
Short-term borrowings	1.02%	0.11%	0.04%	0.43%	0.42%	0.41%	0.40%	0.39%	0.39%
Accounts payable	9.15%	8.96%	8.79%	8.47%	8.47%	8.47%	8.47%	8.47%	8.47%
Accrued liabilities	4.31%	4.26%	6.79%	4.14%	4.14%	4.14%	4.14%	4.14%	4.14%
Accrued income taxes	0.08%	0.05%	0.04%	0.06%	0.06%	0.06%	0.06%	0.06%	0.06%
Operating lease obligations due within one year	0.00%	0.34%	0.26%	0.27%	0.27%	0.27%	0.26%	0.26%	0.25%
Long-term debt due within one year	0.36%	1.02%	0.56%	0.57%	0.55%	0.84%	0.76%	0.25%	0.93%
Finance lease obligations due within one year	0.14%	0.10%	0.09%	0.13%	0.11%	0.10%	0.09%	0.08%	0.16%
Current liabilities of discontinued operation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current liabilities	15.06%	14.85%	16.57%	14.07%	14.01%	14.29%	14.19%	13.66%	14.41%
Long-term debt	8.46%	8.34%	7.37%	7.95%	7.86%	7.76%	7.65%	7.52%	7.38%
Long-term operating lease obligations	0.00%	3.09%	2.31%	2.43%	2.42%	2.40%	2.37%	2.33%	2.29%
Long-term finance lease obligations	1.30%	0.82%	0.69%	0.76%	0.76%	0.75%	0.75%	0.73%	0.72%
Deferred income taxes & other liabilities	2.33%	2.47%	2.57%	2.79%	2.88%	2.97%	3.06%	3.14%	3.23%
Commitments and Contingencies									
Equity:									
Redeemable noncontrolling interest	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Common stock	0.63%	0.67%	0.70%	0.72%	0.71%	0.70%	0.69%	0.68%	0.66%
Retained earnings (accumulated deficit)	15.70%	16.02%	15.87%	16.75%	16.90%	17.09%	17.33%	18.48%	19.64%
Accumulated other comprehensive income (loss)	2.24%	2.44%	2.10%	2.17%	2.13%	2.10%	2.06%	2.03%	1.99%
Total Walmart Inc. shareholders' equity (deficit)	14.09%	14.25%	14.47%	15.31%	15.48%	15.70%	15.96%	17.13%	18.31%
Noncontrolling interest	1.39%	1.31%	1.18%	1.33%	1.43%	1.52%	1.61%	1.69%	1.78%
Total equity (deficit)	15.48%	15.56%	15.65%	16.64%	16.90%	17.21%	17.57%	18.82%	20.09%
Total Liabilities and Equity	42.63%	45.14%	45.16%	44.63%	44.83%	45.38%	45.57%	46.21%	48.12%

Walmart Inc.
Value Driver Estimation

Fiscal Years Ending Jan. 31	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E
NOPLAT:									
Net sales, Membership & other income	514,405	523,964	559,151	542,157	551,456	560,972	570,651	580,590	590,794
Less: Cost of sales	385,301	394,605	420,315	411,501	418,367	425,368	432,514	439,813	447,273
Less: Operating, selling, general & administrative expenses	107,147	108,791	116,288	109,084	110,955	112,869	114,817	116,816	118,870
Plus: implied interest on operating lease obligations due within one year	-	-	444	348	354	359	362	364	365
EBITA	21,957	20,568	22,992	21,920	22,489	23,093	23,683	24,325	25,017
Less: Adjusted Taxes									
Income tax provision	4,281	4,915	6,858	4,789	4,914	5,047	5,177	5,319	5,473
Plus: Tax on operating lease interest	-	-	106	104	106	108	109	109	109
Plus: Tax on interest expense	76	75	81	104	107	110	112	115	118
Plus: Tax on other gains & (losses)	-	-	-	-	-	-	-	-	-
Total Adjusted Taxes	4,357	4,990	7,044	4,998	5,127	5,264	5,398	5,544	5,700
Deferred Tax Assets	6,475	16,774	17,024	17,024	17,024	17,024	17,024	17,024	17,024
Deferred Tax Liabilities	8,527	12,476	14,851	14,851	14,851	14,851	14,851	14,851	14,851
Plus: Δ in deferred taxes	1,943	(6,350)	2,125	-	-	-	-	-	-
NOPLAT	19,543	9,228	18,073	16,923	17,362	17,829	18,285	18,781	19,317
Cash % of sales	1.50%	1.81%	3.17%	4.76%	5.38%	6.43%	7.20%	8.48%	11.08%
Invested Capital (IC):									
Current Operating Assets:									
Normal Cash	6946	7075	7550	7321	7446	7575	7705	7840	7977
Receivables, net	6,283	6,284	6,516	5,910	5,845	5,778	5,707	5,632	5,553
Inventories	44,269	44,435	44,949	43,373	43,289	43,195	43,084	42,964	42,833
Prepaid expenses & other current assets	3,623	1,622	20,861	2,402	2,444	2,486	2,529	2,573	2,618
Total current assets	61,121	59,416	79,876	59,005	59,025	59,033	59,025	59,008	58,981
Less: Current Liabilities									
Accounts payable	428	280	242	325	331	336	342	348	354
Accrued liabilities	22,159	22,296	37,966	22,446	22,831	23,225	23,626	24,038	24,460
Accrued income taxes	428	280	242	325	331	336	342	348	354
Total current liabilities	23,015	22,856	38,450	23,097	23,493	23,898	24,311	24,734	25,169
Net Operating WC	38,106	36,560	41,426	35,908	35,532	35,135	34,714	34,274	33,813
Plus: Net PPE	104,317	105,208	92,201	93,916	95,186	96,059	96,581	96,789	96,721
Plus: Operating lease ROU asset	12,288	17,424	13,642	13,896	14,084	14,213	14,290	14,321	14,311
Plus: Other Assets	-	-	-	-	-	-	-	-	-
Plus: Other assets and deferred charges:	-	-	-	-	-	-	-	-	-
Invested Capital	154,711	159,192	147,269	143,720	144,801	145,407	145,585	145,384	144,844
Free Cash Flow (FCF):									
NOPLAT	19,543	9,228	18,073	16,923	17,362	17,829	18,285	18,781	19,317
Change in IC	(14,355)	4,481	(11,923)	(3,549)	1,081	607	178	(201)	(540)
FCF	33,897	4,747	29,996	20,472	16,281	17,223	18,107	18,982	19,856
Return on Invested Capital (ROIC):									
NOPLAT	19,543	9,228	18,073	16,923	17,362	17,829	18,285	18,781	19,317
Beginning IC	\$ 169,065	\$ 154,711	\$ 159,192	\$ 147,269	\$ 143,720	\$ 144,801	\$ 145,407	\$ 145,585	\$ 145,384
ROIC	11.56%	5.96%	11.35%	11.49%	12.08%	12.31%	12.57%	12.90%	13.29%
Economic Profit (EP):									
Beginning IC	169,065	154,711	159,192	147,269	143,720	144,801	145,407	145,585	145,384
x (ROIC - WACC)	7.40%	1.81%	7.19%	7.33%	7.92%	8.15%	8.42%	8.74%	9.13%
EP	12,513	2,795	11,454	10,799	11,386	11,808	12,238	12,728	13,271

Walmart Inc.*Weighted Average Cost of Capital (WACC) Estimation***Cost of Equity:**

Risk-Free Rate	2.05%
Beta	0.49
Equity Risk Premium	4.88%
Cost of Equity	4.46%

ASSUMPTIONS:

20 yr. T-bill YTM
 5 year monthly raw betas
 1928-2020 geometric average over 10-year Treasury

Cost of Debt:

Risk-Free Rate	2.05%
Implied Default Premium	0.50%
Pre-Tax Cost of Debt	2.55%
Marginal Tax Rate	22%
After-Tax Cost of Debt	1.99%

20-year Treasury bond

YTM on company's 30-year corporate bond

Market Value of Common Equity:

Total Shares Outstanding	2,821
Current Stock Price	\$147.82
MV of Equity	417,000

MV Weights

87.76%

Market Value of Debt:

Short-Term Debt	224
Current Portion of LTD	3,115
Long-Term Debt	41,194
PV of Operating Leases	13,642
MV of Total Debt	58,175.00

12.24%

Market Value of the Firm

475,175

100.00%

Estimated WACC

4.16%

Walmart Inc.*Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models*

Key Inputs:

CV Growth of NOPLAT	1.00%
CV Year ROIC	13.29%
WACC	4.16%
Cost of Equity	4.46%

Fiscal Years Ending Jan. 31	2022E	2023E	2024E	2025E	2026E	2027E
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DCF Model:

Free Cash Flow (FCF)	20,472	16,281	17,223	18,107	18,982	19,856
Continuing Value (CV)						565,614
PV of FCF	19,655	15,007	15,241	15,384	15,484	461,375

Value of Operating Assets:	542,147
Non-Operating Adjustments	
Non-Operating Assets	
Excess Cash	25,397
Non-Operating Liabilities	
PV of Operating Leases	(13,896)
LT Debt	(41,194)
Short Term Debt	(224)
Current Portion of LTD	(3,115)
Non-Controlling Interest	(6,606)
Financing leases	(4,005)
Value of Equity	498,504
Shares Outstanding	2,821
Intrinsic Value of Last FYE	\$ 176.71
Implied Price as of Today	\$ 180.84

Walmart Inc.*Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models*

Key Inputs:

CV Growth of NOPLAT	1.00%
CV Year ROIC	13.29%
WACC	4.16%
Cost of Equity	4.46%

Fiscal Years Ending Jan. 31	2022E	2023E	2024E	2025E	2026E	2027E
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EP Model:

Economic Profit (EP)	10,799	11,386	11,808	12,238	12,728	13,271
Continuing Value (CV)						420,230
PV of EP	10,368	10,495	10,450	10,398	10,382	342,785
Total PV of EP	394,878					
Invested Capital (last FYE)	147,269					
Value of Operating Assets:	542,147					
Non-Operating Adjustments						
Non-Operating Assets						
Excess Cash	25,397					
Non-Operating Liabilities						
PV of Operating Leases	(13,896)					
LT Debt	(41,194)					
Short Term Debt	(224)					
Current Portion of LTD	(3,115)					
Non-Controlling Interest	(6,606)					
Financing leases	(4,005)					
Value of Equity	498,504					
Shares Outstanding	2,821					
Intrinsic Value of Last FYE	\$ 176.71					
Implied Price as of Today	\$ 180.84					

Walmart Inc.*Relative Valuation Models*

Ticker	Company	Price	EPS		P/E 21	P/E 22	Est. 5yr EPS gr.	PEG 21	PEG 22
			2021E	2022E					
COST	Costco Wholesale Corp	\$490.55	\$11.45	\$12.14	42.84	40.41	11.5	3.74	3.53
AMZN	Amazon.Com Inc.	\$3,404.92	\$52.39	\$66.14	64.99	51.48	37.1	1.75	1.39
TGT	Target Corp	\$257.17	\$12.98	\$13.01	19.81	19.77	13.3	1.49	1.49
DG	Dollar General	\$220.95	\$10.21	\$11.26	21.64	19.62	6.6	3.27	2.97
			Average		37.32	32.82		2.84	2.65

WMT Walmart Inc. \$147.82 4.71 4.88 31.4 30.3 10.0 3.1 3.0

Implied Relative Value:

P/E (EPS21) \$ 175.75
P/E (EPS22) \$ 160.14
PEG (EPS21) \$ 133.67
PEG (EPS22) \$ 129.42

Walmart Inc.*Dividend Discount Model (DDM) or Fundamental P/E Valuation Model*

Fiscal Years Ending Jan. 31	2022E	2023E	2024E	2025E	2026E	2027E
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EPS	\$ 4.71	\$ 4.88	\$ 5.07	\$ 5.26	\$ 5.44	\$ 5.62
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Key Assumptions

CV growth of EPS	2.02%
CV Year ROE	15.31%
Cost of Equity	4.46%

Future Cash Flows

P/E Multiple (CV Year)							35.57
EPS (CV Year)							\$ 5.62
Future Stock Price							\$ 199.97
Dividends Per Share	2.20	2.24	2.28	2.32	2.36	2.40	
Discounted Cash Flows	2.11	2.05	2.00	1.95	1.90	1.85	\$ 153.90

Intrinsic Value as of Last FYE \$ 165.76

Implied Price as of Today **\$ 169.63**

Walmart Inc.

Key Management Ratios

Fiscal Years Ending Jan. 31	2019	2020	2021	2022E	2023E	2024E	2025E	2026E	2027E
Liquidity Ratios:									
Current Ratio (CA/CL)	0.80	0.79	0.97	1.02	1.05	1.09	1.14	1.27	1.37
Quick Ratio (CA - Inv./CL)	0.23	0.22	0.49	0.45	0.49	0.55	0.61	0.72	0.87
Cash Ratio (Cash & Cash Equivalents/CL)	0.10	0.12	0.19	0.34	0.38	0.45	0.51	0.62	0.77
Asset-Management Ratios:									
Asset turnover (Revenue / Total Assets)	2.35	2.22	2.21	2.24	2.23	2.20	2.19	2.16	2.08
Inventory Turnover (COGS/Avg Inventory)	8.51	8.65	9.16	9.13	9.46	9.64	9.83	10.02	10.22
Fixed Asset Turnover (Revenue/Avg Gross PPE)	4.85	5.00	5.66	5.83	5.83	5.87	5.92	6.00	6.11
Financial Leverage Ratios:									
Debt to Equity (ST & LT Debt/Total Equity)	0.6357	0.6088	0.5088	0.5377	0.5223	0.5237	0.5018	0.4340	0.4332
Debt to assets (ST & LT debt/ Total Assets)	0.2308	0.2099	0.1764	0.2005	0.1969	0.1987	0.1934	0.1768	0.1809
Debt to capital (ST & LT Debt/(ST & LT Debt + Total Equity))	0.3886	0.3784	0.3372	0.3497	0.3431	0.3437	0.3341	0.3027	0.3023
Equity Multiplier (Total Assets/Total Equity)	2.75	2.90	2.88	2.68	2.65	2.64	2.59	2.46	2.40
Interest Coverage Ratio (EBITA/Interest Expense)	10.313	8.534	10.480	9.742	9.747	9.760	9.760	9.775	9.804
Profitability Ratios:									
Return on Equity (NI/Beg TSE)	8.57%	20.53%	18.09%	16.37%	16.40%	16.40%	16.32%	16.23%	15.31%
ROA (NI/Total Assets)	3.04%	6.29%	5.35%	5.48%	5.50%	5.50%	5.52%	5.51%	5.36%
Gross Profit Margin (Revenue - cost of sales/Rev)	27.17%	26.79%	26.82%	25.62%	25.66%	25.69%	25.71%	25.74%	25.76%
Operating profit margin (Operating profit/Revenue)	4.27%	3.93%	4.03%	3.98%	4.01%	4.05%	4.09%	4.13%	4.17%
NI margin (NI/Revenue)	1.30%	2.84%	2.42%	2.44%	2.47%	2.49%	2.52%	2.55%	2.58%
Payout Policy Ratios:									
Dividend Payout Ratio (Dividend/EPS)	91.23%	40.61%	45.28%	46.72%	45.91%	44.98%	44.10%	43.37%	42.69%
Total Payout Ratio ((Divs. + Repurchases)/NI)	202.58%	79.06%	64.70%	84.45%	82.65%	80.71%	78.90%	43.37%	-42.69%
Retention Ratio ((1-Dividend)/EPS)	8.77%	59.39%	54.72%	53.28%	54.09%	55.02%	55.90%	56.63%	57.31%

Walmart Inc.*Effects of ESOP Exercise and Share Repurchases on Common Stock Account and Number of Shares Outstanding*

Number of Options Outstanding (shares):	0
Average Time to Maturity (years):	0.00
Expected Annual Number of Options Exercised:	0

Current Average Strike Price:	\$ -
Cost of Equity:	4.46%
Current Stock Price:	\$147.82

Fiscal Years Ending Jan. 31	2022E	2023	2024	2025	2026	2027
Increase in Shares Outstanding:	0	0	0	0	0	0
Average Strike Price:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Increase in Common Stock Account:	-	-	-	-	-	-
Share Repurchases (\$)	5,000	5,000	5,000	5,000	-	-
Expected Price of Repurchased Shares:	\$ 147.82	\$ 152.21	\$ 156.73	\$ 161.39	\$ 166.18	\$ 171.12
Number of Shares Repurchased:	34	33	32	31	-	-
Shares Outstanding (beginning of the year)	2,831	2,797	2,764	2,732	2,701	2,701
Plus: Shares Issued Through ESOP	0	0	0	0	0	0
Less: Shares Repurchased in Treasury	34	33	32	31	-	-
Shares Outstanding (end of the year)	2,797	2,764	2,732	2,701	2,701	2,701

Walmart Inc.*Present Value of Operating Lease Obligations*

Fiscal Years Ending Jan. 31	2012	2013	2014	2015	2016	2017	2018	2019	2020
Year 1	1644.0	1722.0	1734.0	1759.0	2057.0	2270.0	1933.0	1856.0	
Year 2	1590.0	1598.0	1632.0	1615.0	1989.0	1787.0	1718.0	1655.0	
Year 3	1525.0	1480.0	1462.0	1482.0	1794.0	1679.0	1532.0	1420.0	
Year 4	1428.0	1384.0	1314.0	1354.0	1697.0	1524.0	1381.0	1233.0	
Year 5	1312.0	1246.0	1192.0	1236.0	1530.0	1342.0	1158.0	1063.0	
Thereafter	8916.0	9373.0	9836.0	10464.0	12438.0	9537.0	7644.0	6891.0	
Total Minimum Payments	16415.0	16803.0	17170.0	17910.0	21505.0	18139.0	15366.0	14118.0	
Less: Cumulative Interest	2303.1	2447.7	2600.0	2766.0	3268.3	2505.3	2025.7	1830.1	
PV of Minimum Payments	14111.9	14355.3	14570.0	15144.0	18236.7	15633.7	13340.3	12287.9	
Implied Interest in Year 1 Payment		359.9	366.1	371.5	386.2	465.0	398.7	340.2	
Pre-Tax Cost of Debt	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	
Years Implied by Year 6 Payment	6.8	7.5	8.3	8.5	8.1	7.1	6.6	6.5	
Expected Obligation in Year 6 & Beyond	1312	1246	1192	1236	1530	1342	1158	1063	
Present Value of Lease Payments									
PV of Year 1	1603.1	1679.2	1690.9	1715.3	2005.9	2213.6	1884.9	1809.8	
PV of Year 2	1511.9	1519.5	1551.8	1535.7	1891.3	1699.2	1633.6	1573.7	
PV of Year 3	1414.0	1372.3	1355.6	1374.2	1663.5	1556.8	1420.5	1316.7	
PV of Year 4	1291.2	1251.4	1188.1	1224.3	1534.4	1378.0	1248.7	1114.9	
PV of Year 5	1156.8	1098.6	1051.0	1089.8	1349.0	1183.2	1021.0	937.2	
PV of 6 & beyond	7134.8	7434.3	7732.6	8204.9	9792.7	7602.8	6131.5	5535.6	
Capitalized PV of Payments	14111.9	14355.3	14570.0	15144.0	18236.7	15633.7	13340.3	12287.9	

Beta

	180.84	0.34	0.37	0.40	0.49	0.46	0.49	0.52
Risk-Free Rate	180.84	0.34	0.37	0.40	0.49	0.46	0.49	0.52
1.75%	259.35	244.76	231.66	198.15	209.14	199.38	190.46	
1.85%	249.21	235.66	223.47	192.04	202.38	193.20	184.79	
1.95%	239.80	227.20	215.81	186.28	196.03	187.38	179.43	
2.05%	231.05	219.30	208.64	180.84	190.04	181.88	174.36	
2.15%	222.90	211.91	201.91	175.69	184.39	176.68	169.55	
2.25%	215.28	204.98	195.58	170.82	179.06	171.75	164.99	
2.35%	208.14	198.47	189.62	166.19	174.00	167.08	160.65	

WACC

	180.84	3.71%	3.86%	4.01%	4.16%	4.31%	4.46%	4.61%
CV Growth of NOPLAT	180.84	3.71%	3.86%	4.01%	4.16%	4.31%	4.46%	4.61%
0.70%	197.65	187.54	178.35	170.05	162.25	155.17	148.63	
0.80%	202.46	191.80	182.13	173.44	165.28	157.89	151.08	
0.90%	207.61	196.34	186.16	177.02	168.48	160.76	153.66	
1.00%	213.14	201.20	190.45	180.84	171.88	163.80	156.39	
1.10%	219.09	206.41	195.04	184.91	175.49	167.02	159.27	
1.20%	225.51	212.02	199.96	189.25	179.33	170.43	162.32	
1.30%	232.47	218.06	205.23	193.89	183.42	174.07	165.56	

Forecasted Marginal Tax Rate

	180.84	19%	20%	21%	22.00%	23%	24%	25%
Pre-Tax Cost of Debt	180.84	19%	20%	21%	22.00%	23%	24%	25%
1.35%	186.60	186.70	186.81	186.92	187.03	187.14	187.25	
1.75%	184.43	184.57	184.71	184.85	184.98	185.12	185.26	
2.15%	182.32	182.49	182.65	182.82	182.99	183.15	183.32	
2.55%	180.26	180.46	180.65	180.84	181.03	181.23	181.42	
2.95%	178.26	178.47	178.69	178.91	179.13	179.35	179.57	
3.35%	176.30	176.54	176.78	177.02	177.27	177.51	177.75	
3.75%	174.39	174.65	174.91	175.18	175.45	175.71	175.98	

Equity Risk Premium

	180.84	4.28%	4.48%	4.68%	4.88%	5.08%	5.28%	5.48%
Cost of Equity	180.84	4.28%	4.48%	4.68%	4.88%	5.08%	5.28%	5.48%
3.86%	197.46	191.30	185.50	180.01	174.81	169.89	165.21	
4.06%	197.76	191.60	185.78	180.29	175.08	170.15	165.47	
4.26%	198.07	191.89	186.07	180.56	175.35	170.41	165.72	
4.46%	198.37	192.19	186.35	180.84	175.62	170.67	165.98	
4.66%	198.68	192.48	186.64	181.12	175.89	170.94	166.23	
4.86%	198.98	192.78	186.93	181.40	176.16	171.20	166.49	
5.06%	199.29	193.08	187.21	181.68	176.43	171.46	166.74	

Operating SG&A as % of Sales

	180.84	17.12%	18.12%	19.12%	20.12%	21.12%	22.12%	23.12%
Cost of Sales as % of Sales	180.84	17.12%	18.12%	19.12%	20.12%	21.12%	22.12%	23.12%
67.00%	649.98	606.91	563.84	520.76	477.71	434.64	391.57	
69.00%	564.68	521.61	478.54	435.46	392.41	349.34	306.27	
71.00%	479.38	436.31	393.25	350.16	307.11	264.04	220.97	
74.97%	310.06	266.99	223.92	180.84	137.79	94.72	51.65	
75.00%	308.78	265.72	222.65	179.57	136.51	93.45	50.38	
77.00%	223.49	180.42	137.35	94.27	51.22	8.15	(34.92)	
79.00%	138.19	95.12	52.05	8.97	(34.08)	(77.15)	(120.22)	