

Van Der Wals CAPITAL

Figure 1: Walmart's 5-year Target price of USD 167.23 (+5.4%)

Based on Free Cash Flows of Firm DCF approach...

SCENARIO	Target Price
Base Case (BC)	\$157.59
BC + Market Fulfilment Centres (MFCs)	\$163.27
BC + MFCs + Private Label Products (PLPs)	\$165.02
BC + MFCs + PLPs + Opening Sam's Club	\$167.23

\$158.64 (Nov 28 2023) >> \$167.23 (+5.4%)

INVESTMENT SUMMARY

We issue a BUY call on Walmart with a 5-year target price of USD 167.23 representing a 5.4% upside (refer to figure 1). The valuation model for Walmart uses projected sales growth rates based on market consensus revenue estimates and assesses the impact of various initiatives like Market Fulfilment Centres (MFCs), Private Label Products (PLPs), and opening new Sam's Club stores. The model concludes with a buy call based on the upside potential under the base case scenario but acknowledges the potential downside under bear-case scenarios where Walmart struggles with e-commerce or Sam's Club loses market share to Costco.

The addition of Manual MFCs will reduce Walmart's operation unit cost

Walmart's investment in automation and Manual MFCs has significantly improved order fulfilment efficiency and reduced costs with an increased efficiency of 70%. Going forward, Walmart is set to spend USD9 billion (26.67% of CAPEX) to implement store improvement which includes the implementation of the Manual MFCs. By 2025, 65% of Walmart's stores will be serviced by automation, resulting in a 20% average unit cost improvement, with the Manual MFCs contributing 6.7% of this reduction.

Focus on PLPs to increase cost-conscious customer base

Walmart's PLPs are positioned as low-cost alternatives to national brands. PLPs are priced 25%-40% lower than national brands due to reduced expenditures on marketing, packaging. The low cost of producing private-label items results in approximately 25% higher profit margins for retailers compared to national brands. In 2022, Walmart achieved a private label penetration rate of 20.8%, surpassing the U.S. national average of 18.2%. Walmart has had a consistent Y-o-Y growth of 1.32% in private label penetration since 2021. Walmart's projected quarterly growth in private label penetration projects an increase from 22.20% (2023) to 23.52% (2024), potentially generating an additional revenue of \$0.72380 billion. Alongside the 25% higher profit margin, this growth would contribute to an overall gain of \$1.8671 billion, enhancing Walmart's U.S. operating income.

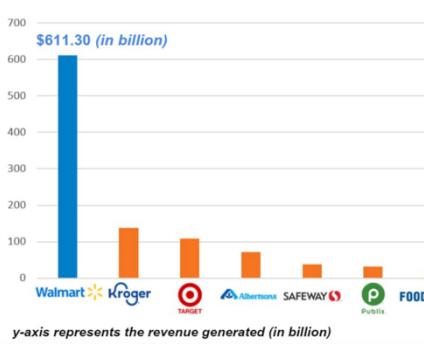
Walmart is opening 30 new Sam's Club stores to attract more membership-based shoppers and boost Walmart's revenue

Sam's Club offers discounted prices on bulk purchases and operates on memberships that contribute to 80% of Sam's Club's operating income. Sam's Club's expansion in 2010, saw an average of 5-10 new stores opening annually. Projecting a scenario of 6 new Sam's Club stores per year for the next five years, an estimated increase in sales of \$840 million is anticipated from these additional locations in 2024.

BUSINESS DESCRIPTION

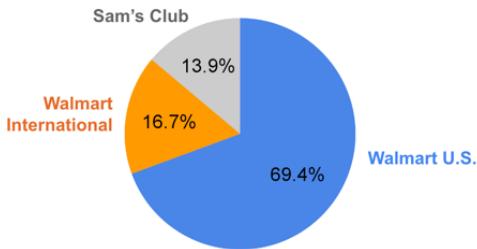
BUSINESS OVERVIEW

Walmart is the world's largest multinational retailer that integrates both its retail stores and eCommerce channels (refer to figure 2). Walmart operates across 20 countries and serves around 240 million customers every week. Walmart has three main market segments: Walmart U.S., Walmart International and Sam's Club (refer to figure 3). Walmart U.S. operates retail and wholesale stores within the United States of America and Walmart International operates retail and wholesale stores outside of the U.S. Walmart operates across 3 different physical formats: supercentres, discount stores and neighbourhood markets.



Source: National Retail Federation, 2023

Figure 3: Diversified Revenue (\$611B) by Segment



Source: Walmart Annual Report, 2023

Supercentres (retail): The most comprehensive format of Walmart with an average square feet of 178,000 (Walmart, 2023) where shoppers could get general merchandise and groceries. Alongside speciality shops such as banks, restaurants and more.

Discount Stores (retail): Has average square feet of 105,000 (Walmart, 2023) with a focus on general merchandise but a limited range of groceries compared to the supercentres.

Neighbourhood markets (retail): Has average square feet of 42,000 (Walmart, 2023) with a focus on groceries.

Sam's Club (wholesale): A membership-only warehouse club with an average square feet of 134,000 (Walmart, 2023) that is targeted to help small business owners save money on general merchandise and groceries by purchasing in bulk. In the next 5 years, Walmart will be adding 30 new Sam's Club warehouses (Cortes, 2023) in addition to their 600 Sam's Club warehouses (Sam's Club, n.d.) spread out across the U.S.

Figure 4A: Walmart Store Locations



Source: Chain Store Guide, 2023

CORPORATE STRATEGY

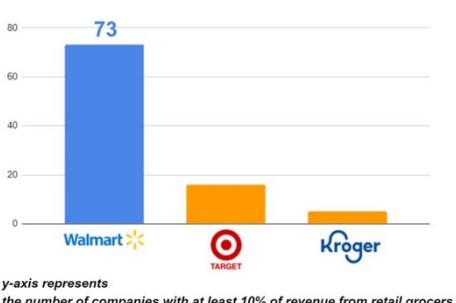
EDLP (Everyday Low Price): Walmart prices its products at the lowest prices daily such that customers have the assurance that Walmart's prices will not vary much.

EDLC (Everyday Low Cost): Walmart operates to ensure that it can provide the lowest prices to consumers by reducing its cost of production as much as possible such that less of the cost would be brought forward to customers.

BUSINESS MODEL

Walmart operates a Business-to-Consumer(B2C) model, utilising its vast store network (refer to figure 4A) to ensure that products on its shelves sell out fast from its high-volume sales. It adopts a revenue-sharing model with its suppliers who get a large proportion of their revenues from Walmart (refer to figure 4B). Therefore, this puts Walmart in a position to negotiate for lower-priced goods (as part of EDLC) that are subsequently passed on to customers as cost savings (as part of EDLP).

Figure 4B: Walmart has the highest bargaining power among retail grocers



Source: Bloomberg, 2023

Figure 5: Walmart Store Locations

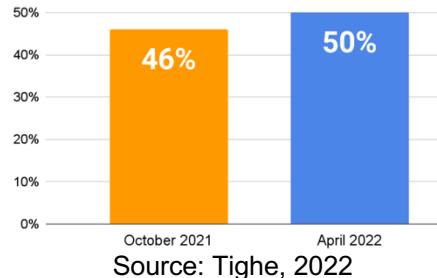


Figure 6: Spike in US Grocery Ecommerce Growth rate during COVID 19

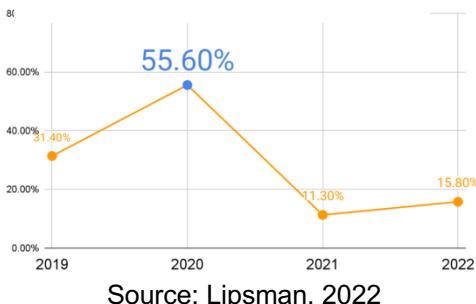


Figure 7: US Grocery Ecommerce Sales (Billions) set to increase

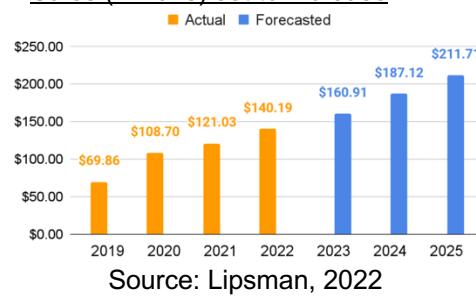


Figure 8: Walmart has the lowest price Index (overall products)

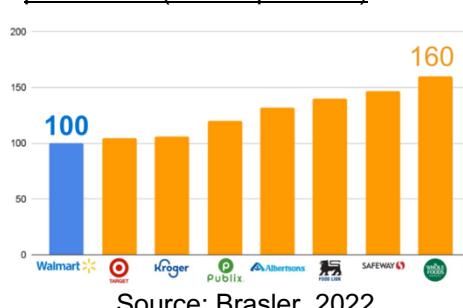
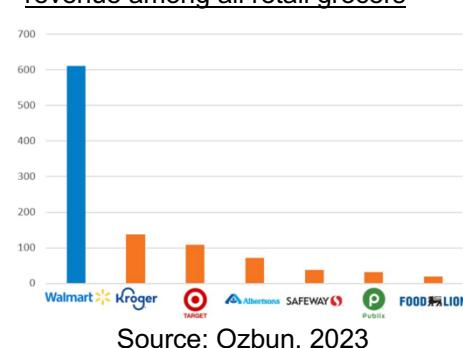


Figure 9: Walmart generates highest revenue among all retail grocers



INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

Demand: In the U.S. market, Consumers value lower prices
Amid ongoing economic uncertainties, characterised by the lingering impacts of inflation, the current inflation is at 3.2% (Statista, 2023) (U.S. Inflation, 2023) above the 10-year inflation of 2.65% (Laycock, 2023). Consumers are increasingly price-sensitive when shopping (refer to figure 5). The prevailing trend is that consumers prioritise low prices, discounts, and budget-friendly options. This shift towards cost-conscious consumerism is steering businesses to integrate lower-cost alternatives and budget-friendly options into their strategies, emphasising the enduring importance of catering to the growing number of price-conscious shoppers. (Forbes, 2023)

Demand: E-commerce growth spiked during and post-COVID-19

In the U.S., the demand for E-commerce grocery sales experienced a spike in 2019 during COVID-19 (refer to figure 6) as consumers became more concerned about contracting COVID-19. Retailers believe that the trend of e-commerce will continue (refer to figure 7) because e-commerce offers greater convenience for shoppers as there has been an increase in online orders and having them shipped to home from 70% to 77% (Nielsen, 2021) of retailers. Also, retailers become more familiar with online shopping as the number of U.S shoppers that shop at least 5 times a month online increased from 37% to 55% pre- to post-pandemic (Shaw et al., 2022).

Supply: Groceries investing in their infrastructure to meet the demand of E-Commerce

To capitalise on this demand, during the pandemic among grocers 20-30% (Aull et al., 2021) of their business shifted online as 77% (Moran, 2023) of digital grocers recognize the importance of improving fulfilment efficiency to help meet demand from sales.

Competitors Analysis

Within the US Walmart vs Other Supermarket Retail Chains:

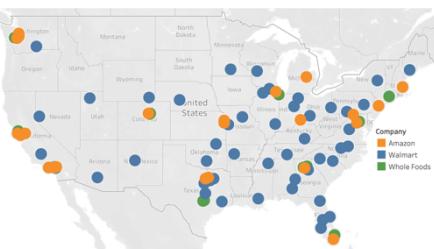
Walmart's main business model in the U.S. is to provide the lowest prices compared to other retailers (refer to figure 8). Walmart can achieve this because it has larger economies of scale that drive high-volume sales far outpace its low prices such that Walmart can generate the highest revenue among all retail grocers (refer to figure 9).

Simultaneously, this enables Walmart to sell out a large proportion of its supplier's products fast where 73 of them (Bloomberg) get at least over 10% of their revenues from Walmart compared to its competitors which enables Walmart to have a higher bargaining power where suppliers are willing to sell at a volume discount to Walmart which Walmart can then bring forward to customers in the form of lower prices.

Walmart vs Amazon in the US grocery e-commerce space:

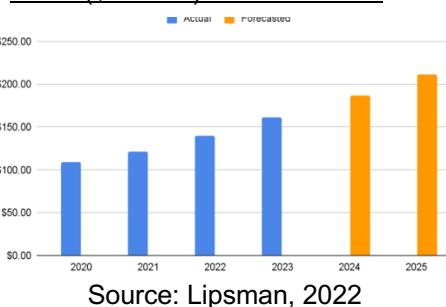
Since 2020, Walmart has surpassed Amazon in the percentage of e-commerce grocery sales share (Lipsman, 2022). Furthermore, grocery accounts for \$247 billion (59%) of Walmart's U.S. revenue in FY23 (Walmart, 2023) and in comparison online grocery for Walmart U.S. is at \$41.4 billion (25.7% * USD 160.91 billion) which is 9.89% of Walmart's U.S. revenue and 50.4% of Walmart's their e-commerce sales in the U.S.

Figure 10: Walmart FDCs more spread out across U.S. than Amazon



Source: MWPVL, 2023

Figure 11: U.S. Grocery Ecommerce Sales (\$Billions) set to increase



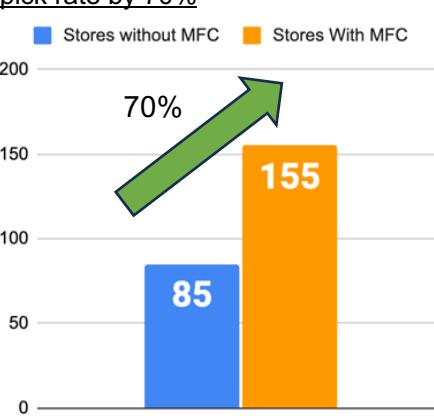
Source: Lipsman, 2022

Figure 12A: Walmart Manual MFC



Source: Walmart Investor Community Meeting, 2023

Figure 12B: MFC increase average pick rate by 70%



Source: Walmart Investor Community Meeting, 2023

Walmart can maintain its dominance in e-commerce grocery sales as Walmart has a more extensive cold-chain logistics infrastructure of 46 Food Distribution Centres (FDCs) in the US compared to Amazon at 34 (23 Amazon Fresh DCs + 11 Whole Food DCs) which are needed to prevent fresh food from getting spoiled (MWPVL, 2023). Moreover, Walmart's FDCs have a larger area of 36,367,908 square feet (MWPVL, 2023) while Amazon has an area of 7,110,697 square feet (MWPVL, 2023). Furthermore, Walmart is more spread out across the U.S. than Amazon to facilitate groceries (refer to figure 10) on top of that, the time to set up a cold chain infrastructure is at least 8.6 months in the U.S. (2.6 months + 6 months) (Allied, 2022) (Langham Logistics, 2023). We expect Walmart to be able to capture the increasing e-commerce grocery sales trend in the U.S. (refer to figure 11) as shoppers value convenience as highlighted in **Demand: E-commerce growth spiked during and post-COVID-19**.

Investment Thesis

The addition of Manual Market Fulfilment Centres will reduce Walmart's operation unit cost

The addition of the Manual Market Fulfillment Centre (MFC) at Walmart is an extension built into the store (refer to figure 12A). Implementing the Manual MFC has significantly increased the average pick rate of associates, elevating it from **80 to 90 items per hour** to an impressive **150 to 160 items per hour**. This results in a **70% increase in efficiency** in the associates' pick rate for online orders. (*Walmart 2023 Investment Community Meeting Day 2 Analyst Q&A Transcript*, 2023)

Before Manual MFCs were introduced, associates were responsible for both picking and packing online orders within the same location where customers made their purchases. Congestion and delays arise, as associates had to navigate through crowds of shoppers to fulfil orders. Now, with the Manual MFC, picking and packing processes are now conducted in a separate location from the customer purchases at Walmart.

This separation enables Walmart associates to focus solely on efficiently handling the picking and packing of online orders. This resulted in a **70% improvement in overall efficiency** in Walmart's associates' pick rate (refer to figure 12B). The increased efficiency reduces the amount of labour hours required to fulfil online orders from stores which leads to an overall reduction of Walmart's unit cost of production. (*Walmart 2023 Investment Community Meeting Day 2 Analyst Q&A Transcript*, 2023)

Based on their 2023 Investment Community meeting, their forecasted FY24 CAPEX will be approximately the same as FY23's CAPEX of USD\$16.857 Billion (refer to figure 13).

(Amounts in millions)	Fiscal Years Ended January 31,	
	2023	2022
Allocation of Capital Expenditures		
Supply chain, customer-facing initiatives and technology	\$ 9,209	\$ 7,197
Store and club remodels	4,990	3,278
New stores and clubs, including expansions and relocations	33	134
Total U.S.	\$ 14,232	\$ 10,609
Walmart International	2,625	2,497
Total capital expenditures	\$ 16,857	\$ 13,106

Figure 13: Walmart Corporate, 2023

In the next two years, Walmart plans to spend USD\$9 Billion to implement store improvements, which also include the implementation of the Manual MFC. (CNBC, 2023) This would mean that Walmart is planning to spend USD\$4.5 Billion yearly out of the USD 16.877 Billion in Walmart store

improvements, (26.66% of CAPEX) on store improvements. (Bloomberg Intelligence, 2023) From 2020 to 2023, Walmart has spent 90% of its CAPEX on supply chain automation, and store improvements.

Walmart's partnership with Knap makes Walmart's fulfilment process more efficient by streamlining a manual 12-step procedure into 5 steps. This streamlined process encompasses the five core stages of unloading, receiving, picking, packing, and shipping. (Walmart, 2022). As such, this has led to increased efficiency and Walmart can fulfil orders faster and with greater accuracy. This streamlined process (12-step to 5-step) reduces manual labour.

Walmart partnered with Symbotic to implement its high-tech automation system in Walmart's regional network. By January 2024, roughly a third of stores will get distributed from facilities with Symbotic. Walmart plans to implement this technology in all 42 Regional Distribution Centers (RDCs) by 2030. (CNBC, 2023). Walmart utilises Symbiotics algorithm and high-speed mobile bots to speed up the intake process and improve the accuracy of freight for future orders. Thus, this reduces the time taken to unload, sort, and stock freight in Walmart stores. (Symbotic, 2022)

Total Cost of production

$$= \text{Operating Cost}$$

$$= \$127 \text{ Billion}$$

Total Cost reduction (6. 66% reduction by 2025)

$$= 6.66\% * \$127 \text{ Billion}$$

$$= \$8.4582 \text{ Billion}$$

By 2025, 65% of WMT's stores will be serviced by automation with Knapp and Symbotic with 55% of volume moving through automated facilities. The technology and the implementation of the Manual Market Fulfilment Centre (MFC) helps Walmart improve throughput, and accuracy, and reduce labour hours needed, resulting in a 20% average unit cost improvement. (CNBC, 2023) Assuming that the unit cost reduction of 20% is evenly distributed, this implies that the Manual MFC caused a operation unit cost reduction of 6.66% in Walmart.

Applying the 6.66% operation unit cost reduction will lead to a total cost reduction of \$8.45 Billion in 2025 (refer to figure 14A & 14B).



Source: Edelman, 2020

	Fiscal Years Ended January 31,		
	2023	2022	2021
Revenues:			
Net sales	\$ 605,881	\$ 567,762	\$ 555,233
Membership and other income	5,408	4,992	3,918
Total revenues	611,289	572,754	559,151
Costs and expenses:			
Cost of sales	463,721	429,000	420,315
Operating, selling, general and administrative expenses	127,140	117,812	116,288
Operating income	20,428	25,942	22,548

Figure 14B: Walmart's Operating Cost

Walmart set to increase its customer base among cost-conscious consumers by focusing more on private-label products

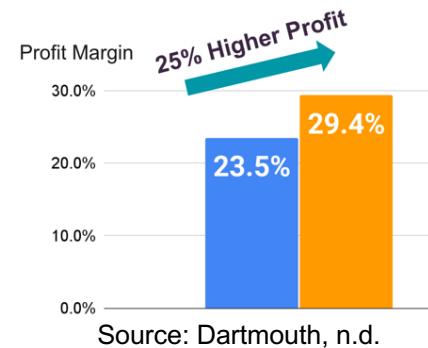
Walmart's private-label products (PLP) are products that are cheaper than national brands (refer to figure 15) as they spend less on marketing, packaging and branding compared to national brands which entice cost-conscious consumers.

PLPs are manufactured by a third-party company and sold under Walmart's brand name. With private labelling, Walmart exclusively applies the brand to the packaging. Walmart's private label brands encompass over 29,000 products and Walmart owns nearly 320 private label brands.

Walmart has a private label penetration of 20.8% in 2022 (Ozbun, 2022) which is above the U.S. national average of 18.2% in 2022 (Souza & Tilley, 2023). Walmart's private label brand penetration has been increasing at a rate of 1.32% Y-O-Y since 2021(refer to figure 16).

Source: Walmart's Q4 Earnings, 2023

Figure 17: Private label products generate 25% higher profit margin than National Brands



Source: Dartmouth, n.d.

Figure 18: The increase in Walmart's revenue due to Private label product

$$\begin{aligned} \text{Additional revenue from increased of 1.32\% of Walmart's PLP} \\ = 0.0132 * 0.2220 * \$247 \text{ Billion} \\ = \$0.72380 \text{ billion} \end{aligned}$$

$$\begin{aligned} \text{Amount of revenue from 25\% increase profit margin} \\ = 0.2220 * \$20.6 \text{ Billion} * 0.25 \\ = \$1.1433 \text{ billion} \end{aligned}$$

$$\begin{aligned} \text{Total increase in revenue due to PLP} \\ = \$0.72380 \text{ Billion} + \$1.1433 \text{ Billion} \\ = \$1.8671 \text{ Billion} \end{aligned}$$

Source: Walmart Annual Report, 2023

Figure 19: Percentage of Walmart's operating income from Sam's Club

$$\begin{aligned} \text{Percentage of operating income from Sam's Club (2023)} \\ = 1964 / (20620+2965+1964) * 100\% \\ = 7.68\% \end{aligned}$$

$$\begin{aligned} \text{Percentage of operating income from Sam's Club (2022)} \\ = 2259 / (21587+3758+2259) * 100\% \\ = 8.18\% \end{aligned}$$

$$\begin{aligned} \text{Percentage of operating income from Sam's Club (2021)} \\ = 1906 / (19116+3660+1906) * 100\% \\ = 7.72\% \end{aligned}$$

Source: Walmart Annual Report, 2023

Figure 21: Additional Sales from 6 New Sam's Club in 2024

$$\begin{aligned} \text{Net sales in 2023} \\ = 84,345 \text{ Million} \end{aligned}$$

$$\begin{aligned} \text{Net sales per store} \\ = 84,345 \text{ Million} / 600 \\ = 140 \text{ Million} \end{aligned}$$

$$\begin{aligned} \text{Additional sales from 6 new stores (in 2024)} \\ = 6 * 140 \text{ Million} \\ = 840 \text{ Million} \end{aligned}$$

Source: Walmart Annual Report, 2023

When it comes to private labelling, manufacturers would put the retailer's brand on the packaging and sell it for an average of 25%-40% less than the national brand-name product (Dartmouth, n.d.). With the lowered prices this entices cost-conscious consumers to seek out private label products. Furthermore, the cost of production of private-label products is cheaper than national brands as they spend less on marketing, packaging and branding compared to national brands such that private-label goods bring in around 25% higher profit margins for retailers than national brands (refer to figure 17).

In the base case scenario, quarterly growth in private label product penetration of 0.33%, which equals 1.32% annual growth in private label product penetration. This means that Walmart's private label products in the U.S. grocery percentage will increase from 22.20% in 2023 to 23.52% in 2024. In FY23, the total Walmart U.S. grocery sales account for USD\$247 Billion out of USD\$611 Billion in revenue. (*Walmart Annual Report, 2023*). With this, the additional revenue from the increased percentage of private label products would amount to ***\\$0.72380 billion*** (refer to figure 18).

Since Walmart's U.S. operating income is \$20.6 Billion in 2023 as seen below. (*Walmart Annual Report, 2023*) Taking 23.52% and a 25% higher profit margin from 2023 would lead to a gain of ***\\$1.1433 billion*** (refer to figure 18). With the combination of the additional revenue earned from the increase in Walmart's private label and sales of private label, this would increase to ***\\$1.8671 billion*** (refer to figure 18).

Walmart is opening 30 new Sam's Club stores to attract more membership-based shoppers and boost Walmart's revenue

Sam's Club customers make bulk purchases at discounted prices. Sam's Club offers 2 membership tiers: the Club Membership for \$50 annually and the Plus Membership for \$100 annually (*Sam's Club Membership, n.d.*). These memberships contribute to 80% of Sam's Club's operating income.

According to Walmart's 2023 Annual Report, we calculated the percentage of Walmart's operating income from Sam's Club (refer to figure 20). to be at 7.72%, 8.18% and 7.68% for FY21, FY22 and FY23 respectively (refer to figure 19)

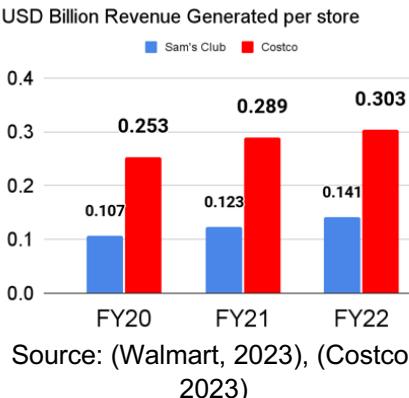
(Amounts in millions)	Walmart U.S.	Walmart International	Sam's Club	Corporate and support	Consolidated
Fiscal Year Ended January 31, 2023					
Net sales	\$ 420,553	\$ 100,983	\$ 84,345	\$ —	\$ 605,881
Operating income (loss)	20,620	2,965	1,964	(5,121)	20,428
Interest, net				(1,874)	
Other gains and (losses)				(1,538)	
Income before income taxes					\$ 17,016
Total assets	\$ 130,659	\$ 86,766	\$ 15,490	\$ 10,282	\$ 243,197
Depreciation and amortization	7,054	1,964	609	1,318	10,945
Capital expenditures	11,425	2,625	727	2,080	16,857

Figure 20: Walmart's Annual Report, 2023

We conclude that Sam's Club does play a significant role in generating revenue and profits for Walmart. Walmart's previous Sam's Club expansion in 2010, opened up an average of five to ten stores per year (Cortes, 2023). Thus, Sam's Club plays an integral role in contributing operating income to Walmart.

We took the case of Walmart opening up six stores per year (30 stores / 5 years)for the next 5 years and estimated the increase in Sales of 840 Million from the six new Sam's Clubs in 2024 (refer to figure 21)

Figure 22: The addition of new Sam's Club brings only marginal benefit compared to Costco



Counter Thesis

The addition of new Sam's Club stores bring only marginal benefit compared to Costco

A Costco store has been able to generate at least 2 times the revenue of a Sam's Club wholesale store for the past 3 fiscal years. For example, in FY22, each Sam's club store is only able to generate \$141 Million in revenue each year while each Costco store is able to generate \$303 Million in revenue each year (refer to figure 22)

This is because Costco stores offer lower prices compared to Sam's Club when it comes to bulk purchases. As seen in the figure 23, most of the items offered at Costco tend to be cheaper than Sam's Club. Thus, Costco has 2 times the market share of Sam's Club (refer to figure 24).

Figure 24: Costco has 2x Sam's Club Market Share in U.S. Warehouse Club Industry

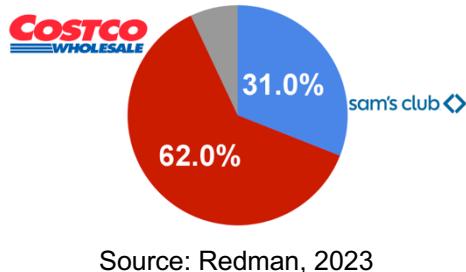


Figure 25: Amazon has over 6x Walmart's Market Share in Ecommerce

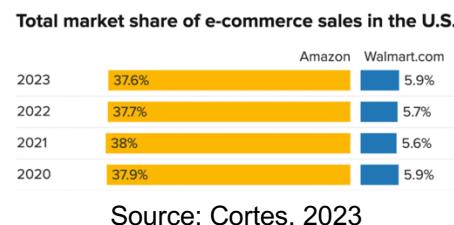
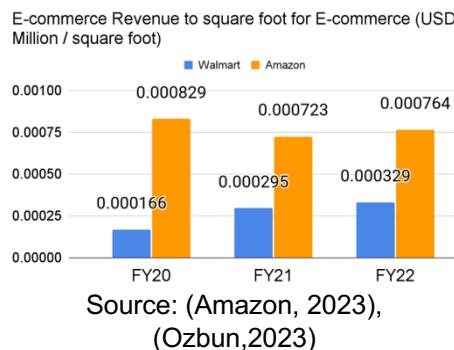


Figure 26: Walmart's Ecommerce revenue per square foot less than Amazon



Items	Sam's Club Price (\$)	Costco Price (\$)
Chicken legs	\$1.42/lb	\$0.98/lb
Salted Butter	\$3.88/lb	\$1.42/lb
Shredded Cheese	\$17.68/lb	\$15.99/lb
Organic Pears	\$1.65/lb	\$1.60/lb
Cantaloupe	\$3.12	\$2.75

Figure 23: Costco offers cheaper purchases than Sam's Club for bulk purchases

Walmart's investments in E-commerce are insufficient to gain strong position against Amazon

Walmart's investments in commerce may not have been sufficient in helping Walmart gain a strong position against Amazon. This is because the market share of Walmart has stagnated at around 5.7% to 5.9% compared to Amazon which has a market share of over 35% since 2020 (refer to figure 25).

The first reason why Walmart is behind Amazon is because Walmart is not using its physical infrastructure efficiently as compared to Amazon, the ratio of e-commerce revenue to square feet has been much lower than even half of Amazon's for the past 3 fiscal years suggesting Walmart is not using its physical infrastructure as efficiently compared to Amazon (refer to figure 26)

The second reason is that Amazon dominates Walmart in its e-commerce marketplace. Amazon has 1.9 million 3rd party sellers compared to Walmart which has 0.155 million (Meisenzahl, 2023) 3rd party sellers. The approval time for Amazon to become a 3rd party seller is at most 24 hours compared to Walmart which can range from 2 to 4 weeks (Martlin, 2023). Walmart's marketplace has been described as clunky and hard to use. It also has glitches and multiple backend and process mistakes that Amazon fixed on their site in 2017 (Mizuho, 2023, 4). This sets Walmart's e-commerce marketplace 5 years behind Amazon. Simultaneously, this enables Amazon to offer a wider variety of products compared to Walmart.

VALUATION

Figure 27: Market Consensus for Walmart's Forecasted revenue

Fiscal Year	Projected Mean Revenue (USD\$ in million)
2024	643849
2025	666298
2026	689970
2027	719001
2028	747472

Source: Bloomberg, 2023

Figure 28: Market Consensus for Walmart's Forecasted Sales Growth

Fiscal Year	Forecasted Sales Growth (to 2 decimal places)
2024	5.33%
2025	3.49%
2026	3.55%
2027	4.21%
2028	3.96%

Source: Bloomberg, 2023

We considered different base cases for forecasted sales growth rates:

1. Zero Growth (0%);
2. Long-Term Forecasted Inflation via "US Breakeven 5 Year Inflation Rate" (2.25%) (refer to Appendix)
3. Market Consensus Revenue Estimates (refer to figure 27).

After looking at the three different base cases for our forecasted sales growth rates. We decided to use the Market Consensus Revenue Estimates as the derived revenue growth rates will be indicative of what the market thinks of Walmart's growth potential, this is because the market consensus rates would be more idiosyncratic compared to the other 2 base cases.

We chose 5 years as the forecast horizon because, for thesis 1, the effect will only come into fruition from 2025, so we intended to project the effect for the next 5 years, until 2028.; and for thesis 3, the building of 30 new Sam's Club stores would be carried out over the next 5 years at an average of 6 new stores each year. Lastly, to keep it consistent, we decided to also apply a 5 year forecast horizon for thesis 2.

After getting the market consensus for Walmart's projected mean revenue from Bloomberg, we obtain Walmart's forecasted sales growth rates for each forecasted year (refer to figure 28). Using the formula: To calculate forecasted sales growth rate for each year

$$\text{Forecasted Sales Growth} = \frac{\text{Mean Consensus Revenue for Year } (t+1)}{\text{Mean Consensus Revenue for Year } (t)} * 100\%$$

Based on the conclusion from thesis 1, there will be a operation unit cost reduction of 6.67%, more specifically on Walmart's Cost of service (COS). From FY25 onwards, Walmart's COS will be reduced by 6.67% (refer to figure 29).

Fiscal Year	COS: Without Thesis 1	COS: With Thesis 1
2024	5.33%	5.33% (Effect only take place in FY25)
2025	3.49%	3.25%
2026	3.55%	3.32%
2027	4.21%	3.93%
2028	3.96%	3.70%

Figure 29: Thesis 1's projected Effect of 6.67% reduction in Walmart's COS

Based on the conclusion from thesis 2, Walmart's revenue will increase by 0.31% on the forecasted sales growth rate and this increase will be constant (not growing).

$$\text{Percentage increase in revenue} = \frac{\text{revenue increase from thesis 2}}{\text{Walmart revenue in 2023}} * 100\%$$

$$\text{Percentage increase in revenue} = \frac{1.8671 \text{ Billion}}{611 \text{ Billion}} * 100\% = 0.31\%$$

Applying 0.31% increase in revenue onto Market consensus for Walmart's forecasted sales growth will give us higher forecasted sales growth (refer to figure 30).

Figure 30: After Thesis 2, Walmart's Forecasted Sales Growth

Fiscal Year	Forecasted Sales Growth(%)
2024	5.34%
2025	3.50%
2026	3.56%
2027	4.22%
2028	3.97%

Source: Bloomberg, 2023

Based on the conclusion from thesis 3, the newly added 6 new Sam's club stores in 2024, will bring in additional \$840 Million in revenue for Walmart, which is an increase in 0.14%.

$$\text{Percentage increase in revenue} = \frac{\text{revenue increase from thesis 3}}{\text{Walmart revenue in 2023}} * 100\%$$

$$\text{Percentage increase in revenue} = \frac{0.840 \text{ Billion}}{611 \text{ Billion}} * 100\% = 0.14\%$$

Furthermore, based on our assumption we had for thesis 3, that each year, Walmart will be building 6 new Sam's Club Store for the next 5 years. This would mean that the following year there will be an additional \$840 Million earned more than the previous year.

Figure 31: After Thesis 3, Walmart's Forecasted Sales Growth

Fiscal Year	Forecasted Sales Growth(%)
2024	5.35%
2025	3.51%
2026	3.58%
2027	4.24%
2028	4.00%

Source: Bloomberg, 2023

Throughout the 5 forecasted years (2024 to 2028), Walmart's revenue component will experience an increase of 0.14% that multiplies every year as follows:

- FY 2024: Revenue faces an incremental effect of 0.14%.
- FY 2025: Revenue faces an incremental effect of $0.14\% * 2 = 0.28\%$.
- FY 2026: Revenue faces an incremental effect of $0.14\% * 3 = 0.42\%$.
- FY 2027: Revenue faces an incremental effect of $0.14\% * 4 = 0.56\%$.
- FY 2028: Revenue faces an incremental effect of $0.14\% * 5 = 0.70\%$.

Therefore, the net combined effect on the forecasted sales growth rate will be as seen in figure 31.

We referenced Damodaran's Implied Equity Risk Premium of 4.39% (correct as of Nov 1 2023) and the Nov 28 2023 bond yield for the US 10 Year Treasury Bond to achieve a Weighted Average Cost of Capital (WACC) value of 9.25%. The bond yield of the US 10-Year Treasury Bond was used as it reflects the risk-free return that investors and US market participants expect over a long-term horizon (refer to figure 32).

We chose the Free Cash Flows of Firm (FCFF) approach, to calculate the intrinsic value of equity, as FCFF method utilizes the weighted average cost of capital (WACC), whereas FCFE utilizes the cost of equity. FCFF represents the cash generated by a company that is available to all investors, including both equity and debt holders. For our case, we are valuing Walmart as a business, therefore it would be more appropriate to consider both equity and debt holders.

Weighted Average Cost of Capital	
Calculated as of Nov 28 2023	
Implied Equity Risk Premium AS OF NOV 1 2023 (see link 1)	4.39%
10 year US Govt Bond Yield AS OF NOV 28 2023 22:05 GMT (see link 2)	4.32%
Industry Asset Beta (see link 3) – Retail (General)	0.89
Short-term Liabilities + Long-term Debt Issues + OLEs (US\$)	61,721,000,000.00
Interest expenses on loans (US\$)	1,787,000,000.00
Average maturity of loans	6.69
EBIT (US\$)	20,428,000,000.00
Tax Rate	33.64%
Book Value of Equity (US\$)	83,754,000,000.00
Number of Equity Shares Outstanding (as of FY2023 Annual Report)	2,693,000,000.00
Price per Equity Share (US\$) using NOV 28 2023 PRICE CLOSE	158.64
Cost of Equity	
Equity Beta	1.325234968
Expected Equity Return	10.1377815082%
Cost of Debt	
Interest Coverage Ratio	7.95
Implied Credit Rating	Aa2/AA
Credit Spread	0.80%
Pre-tax Cost of Debt	5.12%
After-tax Cost of Debt	3.40%
WACC	
Market Value, Equity	427,217,520,000.00
Market Value, Debt	54,103,466,907.29
=Present Value of Coupons	9,913,612,227.64
+Present Value of Book Value Deb	44,189,854,679.64
Market Value, Firm	481,320,886,907.29
wE	0.8876
wD	0.1124
WACC	9.2516707%

Figure 32: Walmart's Weighted Average Cost of Capital (WACC)

We computed the intrinsic value of equity using the common parameters below:

- Market Value of Debt $\approx \$54.1$ billion
- Cash and Cash Equivalents $\approx \$8.6$ billion
- Number of Common Shares (NCS) ≈ 2.693 billion
- Short- and Long-term Marketable Securities $\approx \$48.3$ billion

And using the following intrinsic values of Walmart's operating assets.

- For Base Case (BC): \$421.6 billion
- For BC + Market Fulfilment Centres (MFCs): \$436.9 billion
- For BC + MFCs + Private Label Products (PLPs): \$441.6 billion
- For BC + MFCs + PLPs + Opening of Sam's Club Stores: \$447.5 billion

The intrinsic values of equity (V_E) obtained were:

- For Base Case (BC): \$424.4 billion
- For BC + Market Fulfilment Centres (MFCs): \$439.7 billion
- For BC + MFCs + Private Label Products (PLPs): \$444.4 billion
- For BC + MFCs + PLPs + Opening of Sam's Club Stores: \$450.3 billion

Therefore, the target prices obtained through dividing V_E by NCS were:

- For Base Case (BC): \$157.59
- For BC + Market Fulfilment Centres (MFCs): \$163.27
- For BC + MFCs + Private Label Products (PLPs): \$165.02
- For BC + MFCs + PLPs + Opening of Sam's Club Stores: \$167.23

At \$167.23, that is a **5.4% upside potential as the expected return** based on Nov 28's price of \$158.64. Consequently, our team issued a buy call on Walmart.

Based on feedback from the presentation, we have also incorporated the two bear-case scenarios into our valuation – (1) What happens when Walmart failed to expand in the E-commerce efforts? and (2) What happens if Sam's Club loses to Costco in the supermarket wholesale club industry?

The changes we made were to Thesis 1 MFCs and Thesis 3 Opening of Sam's Clubs on forecasted sales growth rates:

- For Thesis 1, we assume a 0% growth rate for e-commerce revenue to be the scenario where Walmart failed to expand in the E-commerce space. Since E-commerce took up about 15% of Walmart's total revenue for FY 2023, then only about 85% of revenue will still enjoy the original forecasted sales growth rates. This is assumed to persist throughout the 5 years forecast horizon. We arrive at a 2028 projected revenue of \$719.2 billion, 3.02% lower than the initial projection of \$740.9 billion.
- For Thesis 3, we will assume half of the projected incremental effect as initially calculated, taking into account by the fact that Costco holds about 62% of market share, double that of Sam's Club (31%). This persists throughout the 5 years forecast horizon. The updated forecasted sales growth rates (refer to figure 33). We arrive at a 2028 projected revenue of \$719.8 billion, 2.97% lower than the initial projection of \$741.9 billion.

Figure 33: Base Case, Walmart's Forecasted Sales Growth

Fiscal Year	Forecasted Sales Growth(%)
2024	5.35%
2025	3.50%
2026	3.57%
2027	4.23%
2028	3.99%

Source: Bloomberg, 2023

Consequently, our revised intrinsic value of the firm's operating assets considering both changes is \$217.3 billion. Therefore, the revised intrinsic value of equity is \$220.1 billion and correspondingly, the revised target price is **\$81.74**, in line with the bear-case scenario. That represents about a **51.5% downside potential** from Nov 28's price of \$158.64.

Appendix

(Amounts in millions)	Fiscal Years Ended January 31,		
	2023	2022	2021
Revenues			
U.S. operations	\$ 508,685	\$ 470,295	\$ 436,649
Non-U.S. operations	102,604	102,459	122,502
Total revenues	<u>\$ 611,289</u>	<u>\$ 572,754</u>	<u>\$ 559,151</u>
Long-lived assets			
U.S. operations	\$ 95,567	\$ 89,795	\$ 87,068
Non-U.S. operations	23,667	22,829	22,780
Total long-lived assets	<u>\$ 119,234</u>	<u>\$ 112,624</u>	<u>\$ 109,848</u>

Figure 34: Walmart's Total revenue (2021-2023)

(Amounts in millions)	Fiscal Years Ended January 31,		
	2023	2022	2021
Walmart U.S. net sales by merchandise category			
Grocery	\$ 247,299	\$ 218,944	\$ 208,413
General merchandise	118,597	125,876	119,406
Health and wellness	46,591	42,839	38,522
Other categories	8,066	5,588	3,622
Total	<u>\$ 420,553</u>	<u>\$ 393,247</u>	<u>\$ 369,963</u>

Figure 35: Walmart's U.S. Grocery Net Sales in (2021 to 2023)

(Amounts in millions)	Fiscal Years Ended January 31,	
	2020	2019
Walmart U.S. net sales by merchandise category		
Grocery	\$ 190,550	\$ 184,202
General merchandise	109,600	108,739
Health and wellness	37,507	35,788
Other categories	3,347	2,937
Total	<u>\$ 341,004</u>	<u>\$ 331,666</u>

Figure 36: Walmart's U.S. Grocery Net Sales in (2019 to 2020)

(Amounts in millions)	Walmart U.S.	Walmart International	Sam's Club	Corporate and support	Consolidated
Fiscal Year Ended January 31, 2023					
Net sales	\$ 420,553	\$ 100,983	\$ 84,345	\$ —	\$ 605,881
Operating income (loss)	20,620	2,965	1,964	(5,121)	20,428
Interest, net					(1,874)
Other gains and (losses)					(1,538)
Income before income taxes					\$ 17,016
Total assets	\$ 130,659	\$ 86,766	\$ 15,490	\$ 10,282	\$ 243,197
Depreciation and amortization	7,054	1,964	609	1,318	10,945
Capital expenditures	11,425	2,625	727	2,080	16,857

Figure 37: Walmart's Net Sales Breakdown 2023

(Amounts in millions)	Walmart U.S.	Walmart International	Sam's Club	Corporate and support	Consolidated
Fiscal Year Ended January 31, 2023					
Net sales	\$ 420,553	\$ 100,983	\$ 84,345	\$ —	\$ 605,881
Operating income (loss)	20,620	2,965	1,964	(5,121)	20,428
Interest, net					(1,874)
Other gains and (losses)					(1,538)
Income before income taxes					\$ 17,016
Total assets	\$ 130,659	\$ 86,766	\$ 15,490	\$ 10,282	\$ 243,197
Depreciation and amortization	7,054	1,964	609	1,318	10,945
Capital expenditures	11,425	2,625	727	2,080	16,857
Fiscal Year Ended January 31, 2022					
Net sales	\$ 393,247	\$ 100,959	\$ 73,556	\$ —	\$ 567,762
Operating income (loss)	21,587	3,758	2,259	(1,662)	25,942
Interest, net					(1,836)
Loss on extinguishment of debt					(2,410)
Other gains and (losses)					(3,000)
Income before income taxes					\$ 18,696
Total assets	\$ 125,044	\$ 91,403	\$ 14,678	\$ 13,735	\$ 244,860
Depreciation and amortization	\$ 6,773	\$ 1,963	\$ 601	\$ 1,321	10,658
Capital expenditures	\$ 8,475	\$ 2,497	\$ 622	\$ 1,512	13,106
Fiscal Year Ended January 31, 2021					
Net sales	\$ 369,963	\$ 121,360	\$ 63,910	\$ —	\$ 555,233
Operating income (loss)	19,116	3,660	1,906	(2,134)	22,548
Interest, net					(2,194)
Other gains and (losses)					210
Income before income taxes					\$ 20,564
Total assets	\$ 113,490	\$ 109,445	\$ 13,415	\$ 16,146	\$ 252,496
Depreciation and amortization	6,561	2,633	599	1,359	11,152
Capital expenditures	6,131	2,436	488	1,209	10,264

Figure 38: Walmart Annual Report, 2023

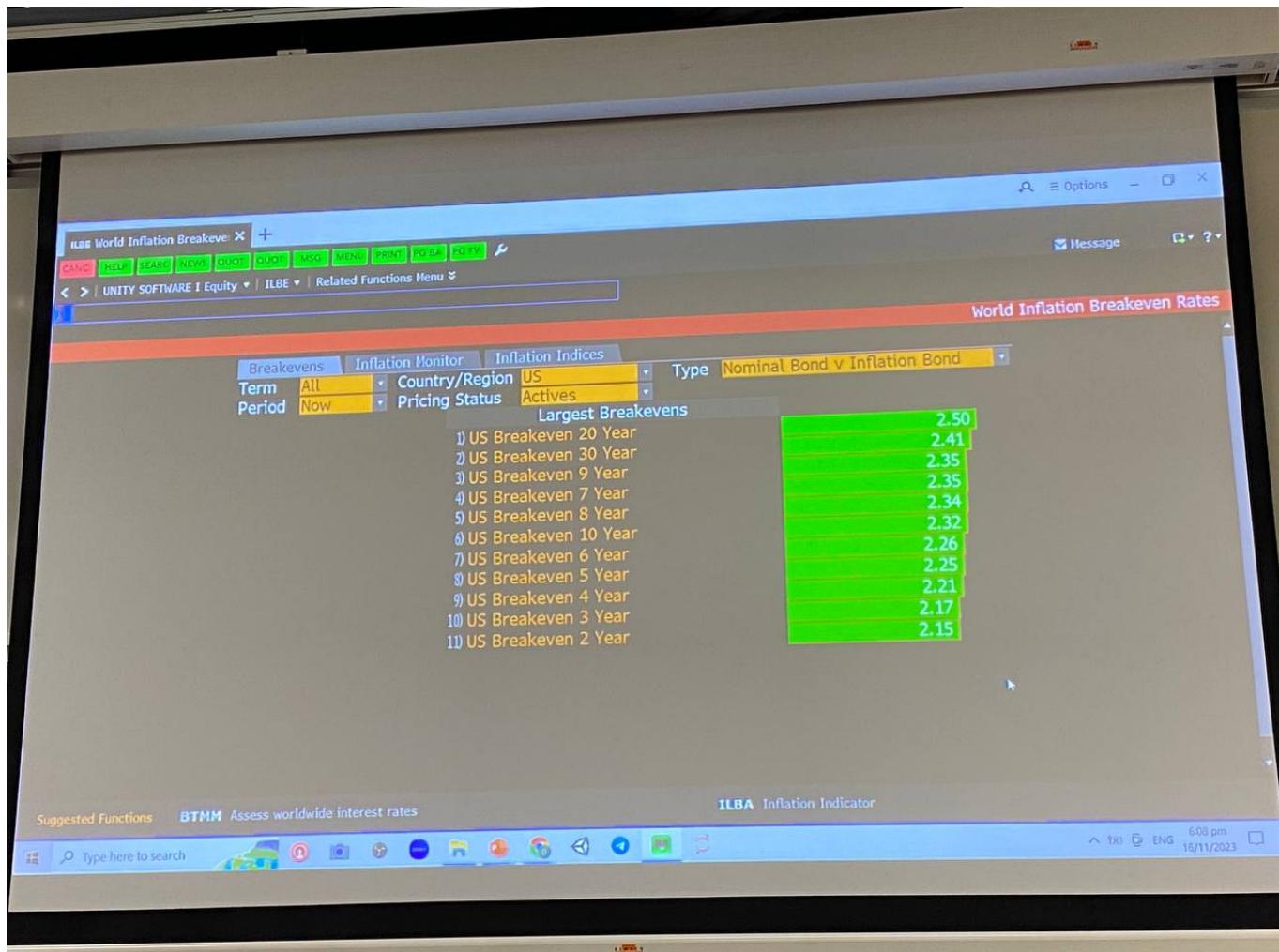


Figure 39: Long term Forecasted Inflation Via "U.S. Breakeven 5 year Inflation Rate" (2.25%) (Bloomberg)

Free Cash Flows to Firm						
Year Ended January 31						
(USD millions)	2024	2025	2026	2027	2028	
Inflows						
Profit from Operations	21516.1	22266.3	23057.4	24027.5	24979.0	
Income Taxes from Operations	(\$7,238.0)	(\$7,490.4)	(\$7,756.5)	(\$8,082.9)	(\$8,402.9)	
(Assume tax rate of 33.64%)						
Cash Inflows from Operations	14278.1	14775.9	15300.9	15944.7	16576.1	
Outflows						
Capital Expenditures	\$17,754.9	\$18,373.9	\$19,026.7	\$19,827.3	\$20,612.4	
Depreciation Expense	\$11,528.0	\$11,929.9	\$12,353.8	\$12,873.6	\$13,383.3	
Working Capital						
Accounts Receivable	\$8,355.5	\$8,646.9	\$8,954.1	\$9,330.8	\$9,700.3	
Inventory	\$59,589.5	\$61,667.2	\$63,858.1	\$66,545.0	\$69,180.1	
Accounts Payable	\$56,604.5	\$58,578.2	\$60,659.3	\$63,211.6	\$65,714.7	
Incremental Working Capital	\$573.5	\$619.1	\$652.8	\$800.6	\$785.1	
Cash Outflows from Operations	\$6,800.4	\$7,063.1	\$7,325.7	\$7,754.3	\$8,014.2	
Free Cash Flows to Firm	\$21,078.5	\$21,839.0	\$22,626.6	\$23,698.9	\$24,590.3	
Free Cash Flows to Firm						
(USD millions)	2024	2025	2026	2027	2028 TERMINAL	
Free Cash Flows to Firm		\$21,078.5	\$21,839.0	\$22,626.6	\$23,698.9	\$24,590.3
Present Value of Firm Free Cash Flows		\$19,293.50	\$18,296.84	\$17,351.42	\$16,634.76	\$15,798.77
Intrinsic Value of Firm's Operating Cash Flows	\$421,567.8					
(values below this row are displayed as is, full value [already accounted for the millions of USD])						
V_A Base Case	\$421,567,779,578.61					
Market Value of Debt (using WACC)	\$54,103,466,907.29					
Cash	\$8,625,000,000.00					
Short and Long Term Marketable Securities	\$48,308,000,000.00					
V_E Base Case	\$424,397,312,671.32					
Number of Shares of Common Equity (i.e. Common Stock)						
P_E Base Case						

Figure 40: For Base Case: \$421.6 Billion

Free Cash Flows to Firm						
Year Ended January 31						
(USD millions)	2024	2025	2026	2027	2028	
Inflows						
Profit from Operations	21516.1	22577.6	23707.2	25105.4	26491.5	
Income Taxes from Operations	(\$7,238.0)	(\$7,595.1)	(\$7,975.1)	(\$8,445.5)	(\$8,911.7)	
(Assume tax rate of 33.64%)						
Cash Inflows from Operations	14278.1	14982.5	15732.1	16659.9	17579.8	
Outflows						
Capital Expenditures	\$17,754.9	\$18,373.9	\$19,026.7	\$19,827.3	\$20,612.4	
Depreciation Expense	\$11,528.0	\$11,929.9	\$12,353.8	\$12,873.6	\$13,383.3	
Working Capital						
Accounts Receivable	\$8,355.5	\$8,646.9	\$8,954.1	\$9,330.8	\$9,700.3	
Inventory	\$59,589.5	\$61,667.2	\$63,858.1	\$66,545.0	\$69,180.1	
Accounts Payable	\$56,604.5	\$58,578.2	\$60,659.3	\$63,211.6	\$65,714.7	
Incremental Working Capital	\$573.5	\$619.1	\$652.8	\$800.6	\$785.1	
Cash Outflows from Operations	\$6,800.4	\$7,063.1	\$7,325.7	\$7,754.3	\$8,014.2	
Free Cash Flows to Firm	\$21,078.5	\$22,045.5	\$23,057.8	\$24,414.2	\$25,594.0	
Free Cash Flows to Firm						
(USD millions)	2024	2025	2026	2027	2028 TERMINAL	
Free Cash Flows to Firm		\$21,078.5	\$22,045.5	\$23,057.8	\$24,414.2	\$25,594.0
Present Value of Firm Free Cash Flows		\$19,293.50	\$18,469.90	\$17,682.11	\$17,136.83	\$16,443.62
Intrinsic Value of Firm's Operating Cash Flows	\$436,859.2					
(values below this row are displayed as is, full value [already accounted for the millions of USD])						
V_A Thesis 1	\$436,859,151,690.83					
Market Value of Debt (using WACC)	\$54,103,466,907.29					
Cash	\$8,625,000,000.00					
Short and Long Term Marketable Securities	\$48,308,000,000.00					
V_E Thesis 1	\$439,688,684,783.55					
Number of Shares of Common Equity (i.e. Common Stock)	2,693,000,000.00					
P_E Thesis 1	\$163.27					

Figure 41: For BC + Market Fulfilment Centres (MFCs): \$436.9 billion

Free Cash Flows to Firm						
Year Ended January 31						
(USD millions)	2024	2025	2026	2027	2028	
Inflows						
Profit from Operations	21615.6	22749.1	23957.2	25454.7	26941.7	
Income Taxes from Operations (Assume tax rate of 33.64%)	(\$7,271.5)	(\$7,652.8)	(\$8,059.2)	(\$8,563.0)	(\$9,063.2)	
Cash Inflows from Operations	14344.1	15096.3	15898.0	16891.7	17878.5	
Outflows						
Capital Expenditures	\$17,754.9	\$18,373.9	\$19,026.7	\$19,827.3	\$20,612.4	
Depreciation Expense	\$11,528.0	\$11,929.9	\$12,353.8	\$12,873.6	\$13,383.3	
Working Capital						
Accounts Receivable	\$8,355.5	\$8,646.9	\$8,954.1	\$9,330.8	\$9,700.3	
Inventory	\$59,589.5	\$61,667.2	\$63,858.1	\$66,545.0	\$69,180.1	
Accounts Payable	\$56,604.5	\$58,578.2	\$60,659.3	\$63,211.6	\$65,714.7	
Incremental Working Capital	\$573.5	\$619.1	\$652.8	\$800.6	\$785.1	
Cash Outflows from Operations	\$6,800.4	\$7,063.1	\$7,325.7	\$7,754.3	\$8,014.2	
Free Cash Flows to Firm	\$21,144.5	\$22,159.4	\$23,223.7	\$24,646.0	\$25,892.7	
Free Cash Flows to Firm						
(USD millions)	2024	2025	2026	2027	2028 TERMINAL	
Free Cash Flows to Firm		\$21,144.5	\$22,159.4	\$23,223.7	\$24,646.0	\$25,892.7
Present Value of Firm Free Cash Flows		\$19,353.94	\$18,565.29	\$17,809.34	\$17,299.53	\$16,635.55
Intrinsic Value of Firm's Operating Cash Flows	\$441,556.8					(discount cell H26 back to present)
(values below this row are displayed as is, full value [already accounted for the millions of USD])						
V_A Thesis 1 + 2	\$441,556,777,173.69					
Market Value of Debt (using WACC)	\$54,103,466,907.29					
Cash	\$8,625,000,000.00					
Short and Long Term Marketable Securities	\$48,308,000,000.00					
V_E Thesis 1 + 2	\$444,386,310,266.40					
Number of Shares of Common Equity (i.e. Common Stock)	2,693,000,000.00					
P_E Thesis 1 + 2	\$165.02					

Figure 42: For BC + MFCs + Private Label Products (PLPs): \$441.6 billion

Free Cash Flows to Firm						
Year Ended January 31						
(USD millions)	2024	2025	2026	2027	2028	
Inflows						
Profit from Operations	21660.5	22857.5	24167.4	25834.0	27532.6	
Income Taxes from Operations	(\$7,286.6)	(\$7,689.3)	(\$8,129.9)	(\$8,690.6)	(\$9,262.0)	
(Assume tax rate of 33.64%)						
Cash Inflows from Operations	14373.9	15168.3	16037.5	17143.5	18270.6	
Outflows						
Capital Expenditures	\$17,754.9	\$18,373.9	\$19,026.7	\$19,827.3	\$20,612.4	
Depreciation Expense	\$11,528.0	\$11,929.9	\$12,353.8	\$12,873.6	\$13,383.3	
Working Capital						
Accounts Receivable	\$8,355.5	\$8,646.9	\$8,954.1	\$9,330.8	\$9,700.3	
Inventory	\$59,589.5	\$61,667.2	\$63,858.1	\$66,545.0	\$69,180.1	
Accounts Payable	\$56,604.5	\$58,578.2	\$60,659.3	\$63,211.6	\$65,714.7	
Incremental Working Capital	\$573.5	\$619.1	\$652.8	\$800.6	\$785.1	
Cash Outflows from Operations	\$6,800.4	\$7,063.1	\$7,325.7	\$7,754.3	\$8,014.2	
Free Cash Flows to Firm	\$21,174.3	\$22,231.3	\$23,363.2	\$24,897.7	\$26,284.9	
Free Cash Flows to Firm						
(USD millions)	2024	2025	2026	2027	2028 TERMINAL	
Free Cash Flows to Firm		\$21,174.3	\$22,231.3	\$23,363.2	\$24,897.7	\$26,284.9
Present Value of Firm Free Cash Flows		\$19,381.21	\$18,625.56	\$17,916.33	\$17,476.23	\$16,887.50
Intrinsic Value of Firm's Operating Cash Flows	\$447,509.3					(discount cell H26 back to present)
(values below this row are displayed as is, full value [already accounted for the millions of USD])						
V_A Thesis 1 + 2 + 3	\$447,509,289,166.82					
Market Value of Debt (using WACC)	\$54,103,466,907.29					
Cash	\$8,625,000,000.00					
Short and Long Term Marketable Securities	\$48,308,000,000.00					
V_E Thesis 1 + 2 + 3	\$450,338,822,259.53					
Number of Shares of Common Equity (i.e. Common Stock)	2,693,000,000.00					
P_E Thesis 1 + 2 + 3	\$167.23					

Figure 43: For BC + MFCs + PLPs + Opening of Sam's Club Stores: \$447.5 billion

Link to Excel: <https://1drv.ms/x/s!Aigy7Hrm2f6pgd06ySMh6vQdPlwgDw?e=PrnkhB>

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