

## **FINANCIAL ANALYSIS OF COSTCO WHOLESALE CORPORATION: EXPLORING THE STRENGTHS AND WEAKNESSES**

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### **ABSTRACT**

The financial analysis of any organization is regarded as one of the main prerequisites for the successful management of financial resources. The study aims to identify the financial strengths and weaknesses of Costco Wholesale Corporation, based on a detailed financial analysis. The study used the quantitative method using secondary sources of data, such as Costco's website and annual reports, various financial websites, journal research papers, and book chapters. Based on the Costco's financial statement on August 31, 2019, the study performed ratio analysis, forecasting free cash flow (FCF) for the next five years (from August 2020 to August 2024), calculating the weighted average cost of capital (WACC), measuring the market value and fundamental value to determine the exact financial performance of Costco. The financial strengths were found at the Costco's debt to equity ratio, return on assets ratio, return on equity ratio, return on capital employed ratio, interest coverage ratio, days sales outstanding ratio, days in inventory ratio, receivables turnover ratio, inventory turnover ratio, and asset turnover ratio and the financial weaknesses were found at the Costco's current ratio, quick ratio, gross margin ratio, operating margin ratio, and cash conversion cycle ratio. The compound annual growth rate (CAGR) was calculated 12.16% and, thereby forecasts of FCF suspect to increase in the coming years. The WACC of Costco was calculated 4.76% and found satisfactory. The market value of Costco was found significantly lower compared to its competitor like Walmart Stores Inc. The findings suggest that Costco's policymakers should concentrate on overcoming the existing financial weaknesses and sustaining the current financial strengths by taking precise initiatives.

**Keywords:** Financial analysis, Costco Wholesale Corporation, Strengths, Weaknesses

### **I. INTRODUCTION**

Costco Wholesale Corporation is the 2nd largest retailer in the world after Walmart. It operates a global chain of membership warehouses, primarily under the "Costco Wholesale" name, which carries brand name merchandise, quality at competitive prices than are normally noticed at conventional retail sources. Costco's ability to attract new customers without costly advertising is one main attribute that makes it

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one of the best retailers throughout the world (Kissinger, 2017). The company is always appreciated for providing its employees with higher pay and better amenities than those of other retailers. Costco's average employee wage is around \$20 per hour where the national average wage for a retail sales worker is just \$11.39 per hour. In addition to high wages, most of the Costco's employees also get company-sponsored healthcare (Kim, 2019). Costco's global net income amounted to almost \$3.67 billion in 2019 (Conway, 2020). As of 2019, Costco had a total of around 254000 employees throughout the world (O'Connell, 2020). The main competitors of Costco are Walmart, Dollar General Corporation, J.C. Penny Company, and Target Corporation, etc. (Kim, 2019). As a leading retail business organization, Costco always needs to measure its competitive position based on its current and past financial transactions.

Financial analysis is a system which measures the past and current financial data to evaluate performance and estimate future risks and potential. It is used by investors, creditors, managers, auditors, security analysts, regulatory agencies, taxing authorities, customers, and many other parties who depend on financial data for making economic decisions regarding a company (Nizam *et al.*, 2019; Al-Nasser, 2016). It determines a firm's relative strengths and weaknesses and recommends actions the firm may enact to take advantage of its strengths and overcome its weaknesses in the future (Osina, 2019). Internally, financial managers use the information found from financial analysis for making financial and investment decisions to increase the firm's value. Externally, stockholders and creditors conduct a financial analysis to measure the attractiveness of the firm as an investment by evaluating its ability to meet its current and future financial obligations (Siciliani, 2018; Al-Nasser, 2016). In the case of financial statement analysis, it is possible to use the whole range of various tools and methods. Firstly, it considers comparative financial statements and the horizontal analysis procedure together with structural financial statements and the vertical analysis procedure. In the case of horizontal analysis based on comparative financial statements, the tendency and dynamics of changes of specific basic financial statements' positions are measured. The business efficiency and security of the company are measured based on observed changes. On the other hand, vertical analysis based on structural financial statements allows insight into the financial statement structure. The financial statement structure is very important in the case of business quality (Siciliani, 2018).

Financial statement analysis deals with the study of the relationships between income statement and balance sheet accounts, how these relationships alter over time (i.e. trend analysis), and how a specific firm is compared with other firms in the industry (i.e. comparative ratio analysis) (Uddin *et al.*, 2019; Al-Nasser, 2016). Ratio analysis is regarded as one of the fundamental tools for financial analysis. It is a significant tool in business planning and decision making as it determines the strengths, weaknesses, opportunities, and threats facing the company. Basically,

managers use financial ratios to analyze a company's financial performance before taking any decision. Moreover, these ratios can be used to compare the performance of our company against that of our competitors (Pradhan *et al.*, 2018). Financial ratios disclose how a company is financed, how it utilizes its resources, its ability to pay its debts and its ability making profit. Ratios show a company's position at a specific period, and are most important when compared across periods and when compared companies in the similar industry. Merely ratios do not provide a complete picture of a company's investment potential, but they are a wise place to commence the analysis (Prajapati, 2019).

The financial performance of a company expresses competitiveness, potentials of the business, economic interests of the company's management, and trustworthiness of current and future contracts. For this reason, financial performance analysis and determination of their strengths and weaknesses based on financial performance indicators have their contribution to the management, shareholders, customers, the regulator, the financial sector, and the economy as a whole (Didenko and Dordevic, 2017). The appropriate analysis of a financial statement helps get important financial information, which can be used for making the decision. The investors analyze financial statements to decide whether to invest in or loan money to, a company. The past and current financial condition of a company can be acquired from the financial statement. Forecasting can also be made through further analysis of historical financial statements (Al-Nasser, 2016). The financial statement analysis also identifies good features of the company so that we can use the most of those advantages, but also to identify the company's weaknesses to take corrective actions. Therefore, it can be said that the management of the company is the most important use of financial statement analysis (Siciliani, 2018).

Financial analysis assists in measuring the liquidity position, financial viability and profitability, long term solvency of a firm. As a widely used financial analysis procedure, ratio analysis reveals whether the company is improving or deteriorating in previous years. In addition, comparison of various aspects of all the firms can be done properly with this. It assists the clients in deciding which firm is less risky to invest so that maximum benefit can be achieved (Khan *et al.*, 2019). Based on ratio analysis, it has been determined that the financial condition of Costco in 2019 is worse than the financial condition of half of all companies involved in the retail business. And the average ratios of this type of business activity are greater than the average for all industries. Therefore, comparing with all businesses, the Costco reveals satisfactory results (Kim, 2019). However, the study didn't measure the financial performance of Costco including the forecasts of FCF, calculation of WACC, calculation of market value and fundamental value. Thus, merely few studies measured all these financial indicators together to examine the financial performance of Costco. As per the above literature review, the objective of the study was to fill the identified gaps by measuring the financial performance of Costco including all these financial indicators.

## II. MATERIALS AND METHODS

The study used a quantitative method using secondary sources of data. The main data sources were Costco's website and annual reports, various financial websites, journal research papers, and book chapters. Based on the Costco's financial statement on August 31, 2019, this study performed ratio analysis, forecasting FCF for the next five years (from August 2020 to August 2024), calculating WACC, and evaluating the fundamental and market value to measure the current financial performance of Costco. The following formulae were used in this study.

- Forecasting of the FCF =  $FCF_{\text{current year}} (1 + \text{CAGR})^{(1/\text{no. of years}) - 1}$  where CAGR = (ending value/ beginning value)
- $WACC = E / (E + D) * K_e + D / (E + D) * K_d * (1 - t)$  where the E = market value of the Costco's equity, D = market value or book value of the Costco's debt,  $K_e$  = cost of equity,  $K_d$  = cost of debt, and t = effective tax rate.
- Market value = share price\* number of shares outstanding
- Fundamental value = market value + preferred stock + long-term debt & capital lease obligation + short-term debt & capital lease obligation + minority interest - cash, cash equivalents, marketable securities

## III. RESULTS AND DISCUSSION

### Ratio Analysis

Financial ratios are the widely used tools to analyze the financial position of any organization. The financial ratios of Costco are calculated based on its income statement and balance sheet. Therefore, Costco's income statement and balance sheet for the fiscal year ended on August 31, 2019 are presented below:

**Table 1: Income statement of Costco (fiscal year ended on August 31, 2019)**

Items	Amounts (USD in millions except per share data)
Revenue	152703
Cost of revenue	132886
<b>Gross profit</b>	<b>19817</b>
Operating expenses	
Sales, general and administrative	14994
Other operating expenses	86
Total operating expenses	15080
<b>Operating income</b>	<b>4737</b>
Interest Expense	150

Items	Amounts (USD in millions except per share data)
Other income (expense)	178
Income before taxes	4765
Provision for income taxes	1061
Net income from continuing operations	3704
Other	(45)
<b>Net income</b>	<b>3659</b>
Net income available to common shareholders	3659
Earnings per share	
Basic	8.32
Diluted	8.26
Weighted average shares outstanding	
Basic	440
Diluted	443
<b>EBITDA</b>	<b>6407</b>

Source: Mansueto (2020)

Balance sheet of Costco for the fiscal year ended on August 31, 2019 is calculated as follows

**Table 2: Balance sheet of Costco (fiscal year ended on August 31, 2019)**

Items	Amounts (USD in millions except per share data)
<b>Current assets</b>	
Cash and cash equivalents	8384
Short-term investments	1060
Total cash	9444
Receivables	1535
Inventories	11395
Other current assets	1111
<b>Total current assets</b>	<b>23485</b>
<b>Non-current assets</b>	
Gross property, plant and equipment	32626
Accumulated depreciation	(11736)
Net property, plant and equipment	20890

Items	Amounts (USD in millions except per share data)
Other long-term assets	1025
<b>Total non-current assets</b>	<b>21915</b>
<b>Total assets</b>	<b>45400</b>
Current liabilities	
Short-term debt	1699
Accounts payable	11679
Accrued liabilities	4356
Other current liabilities	5503
<b>Total current liabilities</b>	<b>23237</b>
Non-current liabilities	
Long-term debt	5124
Minority interest	341
Other long-term liabilities	1455
<b>Total non-current liabilities</b>	<b>6920</b>
<b>Total liabilities</b>	<b>30157</b>
Shareholders' equity	
Common stock	4
Additional paid-in capital	6417
Retained earnings	10258
Accumulated other comprehensive income	(1436)
<b>Total shareholders' equity</b>	<b>15243</b>
<b>Total liabilities and shareholders' equity</b>	<b>45400</b>

Source: Mansueto (2020)

**Liquidity ratios:** Liquidity ratios measure the ability of a firm to pay off both its current liabilities as they become due as well as their long-term liabilities as they become current. These ratios disclose the cash levels of a company and the ability to turn other assets into cash to pay off liabilities (Wulantika *et al.*, 2018).

- Current ratio = current assets / current liabilities = 23485/23237 = 1.01  
(here, based on Table 2, current assets = 23485; current liabilities = 23237)

The current ratio of Costco is 1.01. It indicates that Costco has \$1.01 of current assets for every \$1 of current liabilities. The satisfactory current ratios may vary from industry to industry and are normally between 1.5 and 2 for healthy business (Wulantika *et al.*, 2018). Since Costco's Current Ratio is below this range, it doesn't

indicate an excellent short-term financial strength. Therefore, the managers of Costco should take further steps, for example, making faster conversion cycle of accounts receivables, paying off current liabilities, selling-off unproductive assets, and rising shareholder's funds, etc. to improve its current ratio.

- Quick ratio = quick assets/ current liabilities =  $10979/23237 = 0.47$  (here, based on Table 2, quick assets = cash and cash equivalents + short-term investments + receivables =  $8384 + 1060 + 1535 = 10979$ ; current liabilities =  $23237$ )

The quick ratio of Costco is 0.47. It indicates that Costco has \$ 0.47 of quick assets for every \$1 of current liabilities and, thereby the Costco can't pay off all of its quick liabilities with quick assets. The company is able to pay only less than half of its current liabilities with its quick assets immediately. Preferably, the quick ratio should be 1:1 or higher, but this may vary from industry to industry (Purnomo, 2018). Therefore, the managers of Costco should take further steps, for example, increasing the sales and inventory turnover, improving the invoice collection period, and paying off liabilities as early as possible, etc. to improve its quick ratio.

- Debt to equity ratio = long-term debt/total shareholders' equity =  $5124/15243 = 0.34$  (here, based on Table 2, long-term debt = 5124; total shareholders' equity = 15243)

The debt to equity ratio of Costco is 0.34. It indicates that Costco has less than half liabilities in comparison with its equity or it can be said that the creditors provide 34 cents for each dollar provided by stockholders to finance the assets. Ideally, the debt to equity ratio should be 1:1 for most of the companies (Purnomo, 2018). The lower debt to equity ratio usually indicates a more financially stable business. Companies with a higher debt to equity ratio are deemed riskier to investors than companies with a lower ratio. In this regard, Costco needs to hold its current debt to equity ratio position for a long period.

In fine, based on the analysis of liquidity ratios, the financial strengths are found at the Costco's debt to equity ratio and the financial weaknesses are found at the Costco's current ratio and quick ratio.

**Profitability ratios:** Profitability ratios tend to compare income statement accounts to show the company's ability to make profits from its operations (Black, 2020).

- Gross margin ratio = gross profit/ revenue =  $19817/152703 = 12.98\%$  (here, based on Table 1, gross profit = revenue - cost of goods sold =  $152703 - 132886 = 19817$ ; revenue =  $152703$ )

The gross margin (GM) ratio of Costco is 12.98%. It indicates that after Costco pays off its inventory costs, Costco still has 12.98% of sales revenue to cover its operating costs. The higher the GM ratio is more desirable. The higher GM ratio indicates that the company is selling its inventory at a higher profit percentage.

Ideally, the GM ratio of 30% or more is considered good (Ali *et al.*, 2020). In this regard, Costco's authority should take further steps, for example, increasing products' prices, no discounting, avoiding price competition, and taking cash discounts from suppliers, etc. to improve its GM ratio.

- Operating margin ratio = operating income/ revenue =  $4737/152703 = 3.10\%$  (here, based on Table 1, operating income = 4737; revenue =152703)

The operating margin (OM) ratio of Costco is 3.10%. It indicates that 96.90 cents on every dollar of Costco's sales are used to pay for variable costs. Merely 3.10 cents remain to cover all non-operating expenses or fixed costs. The OM ratio is remarkable for both investors and creditors because it shows how profitable and strong the company's operations are. The OM ratio above 25% indicates financial stability and efficiency, OM below 25% indicates financial vulnerability (Ali *et al.*, 2020). In this regard, Costco's authority should take further steps, for example, reducing cost of goods sold, reducing labor costs, increasing efficiencies, and reducing operating expenses, etc. to improve its OM ratio.

- Return on assets ratio = net income/ average total assets =  $3659/ 43115 = 8.49\%$  [here, based on Table 1 & 2, net income (as of August 31, 2019) = 3659; average total assets = ((total assets (as of August 31, 2018) + total assets (as of August 31, 2019))/2 = (40830+ 45400)/2 = 43115]

The return on assets (ROA) ratio of Costco is 8.49%. It indicates that Costco's shareholders get an 8.49% return from their investment on assets. In other words, it also means that every dollar invested in assets, Costco earns 8.49 cents of net income during this year. A higher ROA is more desirable because it indicates that the company is more effectively managing its assets to produce greater amounts of net income. The ROA over 5% is considered satisfactory (Calista and Widjaja, 2019). In this regard, Costco should maintain its current ROA for a long period.

- Return on equity ratio = net income/ average shareholders' equity =  $3659/ 14021 = 26.10\%$  [here, based on Table 1 & 2, net income (as of August 31, 2019) = 3659; average shareholders' equity = ((total shareholders' equity (as of August 31, 2018) + total shareholders' equity (as of August 31, 2019))/2 = (12799 + 15243)/2=14021]

The return on equity (ROE) ratio of Costco is 26.10%. It indicates that every dollar invested in equity, Costco earns 26.10 cents of profits this year. A higher ROE is more favorable because it indicates that the company is using its investors' funds effectively. The ROE of 15%-20% is considered satisfactory (Calista and Widjaja, 2019). In this regard, Costco should maintain its current ROE for a long period.



- Return on capital employed ratio = earnings before interest and tax (EBIT)/ capital employed =  $4737 / 22163 = 21.37\%$  (here, based on Table 1 & 2, EBIT = 4737; capital employed = total assets- current liabilities =  $45400 - 23237 = 22163$ )

The return on capital employed (ROCE) of Costco is 21.37%. It indicates that Costco's shareholders get a 21.37% return from their capital employed. In other words, it indicates that every dollar invested in capital employed, Costco earns 21.37 cents of profits. A higher ROCE is more desirable because it indicates that more dollars of profits are generated by each dollar of capital employed. The ROCE of 20% or more is considered satisfactory (Casielles, 2019). In this regard, Costco should maintain its current ROCE for a long period.

- Interest coverage ratio = EBIT/ interest expense =  $4737 / 150 = 31.58$  times (here, based on Table 1, EBIT = 4737; interest expense = 150)

The interest coverage (IC) ratio of Costco is 31.58 times. It indicates that Costco's income is 31.58 times higher than its annual interest expense. In other words, it indicates that Costco can afford to pay additional interest expenses. In this case, Costco is less risky and the bank won't have any problem accepting its loan. The higher IC ratio is more favorable because it shows how many times a company can pay the interest with its before-tax income. The IC ratio of 3 or more is considered satisfactory (Ali *et al.*, 2020). In this regard, Costco should maintain its current IC ratio for a long period.

In fine, based on the analysis of profitability ratios, the financial strengths are found at the Costco's return on assets ratio, return on equity ratio, return on capital employed ratio, interest coverage ratio and the financial weaknesses are found at the Costco's gross margin ratio and operating margin ratio.

Efficiency ratios: Efficiency ratios show how well companies use their assets to make profits. These ratios are used by management for the development of the company as well as outside investors and creditors looking at the operations of the profitability of the company (Bragg and Bragg, 2020).

- Days sales outstanding ratio = (accounts receivable/ revenue) \* days in period =  $(1535 / 152703) * 365 = 3.67$  (here, based on Table 1 & 2, accounts receivable = 1535; revenue = 152703)

The days sales outstanding (DSO) ratio of Costco is 3.67 days. It indicates that Costco takes approximately only 4 days to collect cash from its customers on average in case of its credit sales. A lower DSO ratio is more desirable because it indicates that companies collect cash earlier from customers and can use this cash for other operations. Costco's competitor such as Walmart Stores Inc.'s DSO ratio was calculated 4.38 days as of January 31, 2020 (Tian, 2020b). In this regard, Costco is in a better position and should maintain its current performance.

- Days in inventory ratio = (average total inventories/ cost of goods sold) \* days in period =  $(11217.5/ 132886) * 365 = 30.81$  [here, based on Table 1 & 2, average total inventories = ((total inventories (as of August 31, 2018) + total inventories (as of August 31, 2019))/ 2 =  $(11040 + 11395)/ 2 = 11217.5$ ; cost of goods sold (as of August 31, 2019) = 132886]

The days in inventory ratio of Costco are 30.81 days. It indicates that Costco will turn its inventory into cash approximately in the next 31 days. Management always wants to make sure its inventory moves as fast as possible to reduce inventory warehousing costs and enhance cash flows. The lower days in inventory ratio are more desirable. Normally, management tries to merely buy enough inventories to sell within the next 90 days. If the inventory sits longer than that, it can start costing the company some extra money (Odelia and Wibowo, 2020). Costco's days in inventory ratio of 30.81 are quite satisfactory and represent fresh inventory. In this regard, Costco should maintain its current performance.

- Days payable outstanding ratio = (accounts payable/ cost of goods sold) \* days in period =  $(11679/ 132886) * 365 = 32.08$  (here, based on Table 1 & 2, accounts payable = 11679; cost of goods sold = 132886)

The days payable outstanding (DPO) ratio of Costco is 32.08 days. It indicates that Costco takes an average of 32.08 days to pay its bills and invoices to other companies and vendors. The higher DPO ratio means that the company is taking much time to pay its suppliers and vendors compared to the company with a smaller DPO ratio. Companies with high DPOs have benefits because they are more liquid than companies with smaller DPOs and they are able to use their cash for short-term investments. Costco's main competitor such as Walmart Inc.'s DPO ratio was calculated 43.45 days as of January 31, 2020 (Tian, 2020b). Therefore, Costco is at a disadvantage because the company is not able to use its cash as long as the Walmart. However, higher values of DPO may not always be good for the business. If the company takes much time to pay its creditors, it may jeopardize its relations with the creditors and suppliers who may refuse to offer the trade credit in the future. So, Costco needs to be prudent in case of increasing or decreasing its current DPO ratio.

- Cash conversion cycle ratio = days sales outstanding + days in inventory - days payable outstanding =  $3.67 + 30.81 - 32.08 = 2.40$  (here, based on previous calculations, days sales outstanding = 3.67; days in inventory = 30.81; days payable outstanding = 32.08)

The cash conversion cycle of Costco is 2.40 days. It indicates that Costco takes 2.40 days, from paying for its inventory to get the cash from its sale. The lower cash conversion cycle is more favorable because it indicates that the company can buy inventory, sell it, and receive cash from customers in less time. Costco's main

competitor such as Walmart Stores Inc.'s cash conversion cycle was calculated 1.91 days as of January 31, 2020 (Tian, 2020b). Comparing with Walmart, Costco is slightly lagging behind. Therefore, Costco should take further steps, for example, managing inventory more efficiently, turning over inventory faster, etc. to minimize its cash conversion cycle.

- Receivable turnover ratio = total revenues/ receivables =  $152703/ 1535 = 99.48$  times (here, based on Table 1 & 2, total revenues = 152703; receivables = 1535)

The receivable turnover ratio of Costco is 99.48 times. It indicates that Costco collects its receivables almost 99.48 times a year or approximately once every 4 (365/99.48) days. The higher receivable turnover ratio is more favorable because it measures a company's ability to efficiently collect its receivables. Costco's main competitor such as Walmart Stores Inc.'s receivable turnover ratio was calculated 83.39 times as of January 31, 2020 (Tian, 2020b). Comparing with Walmart, Costco possesses a better position. Therefore, Costco should maintain its current receivable turnover ratio for a long period.

- Inventory turnover ratio = cost of goods sold/ average total inventories =  $132886/ 11217.5 = 11.85$  times [here, based on Table 1 & 2, cost of goods sold (as of August 31, 2019) = 132886; average total inventories = ((total inventories (as of August 31, 2018) + total inventories (as of August 31, 2019))/ 2 = (11040 + 11395)/ 2 = 11217.5]

The inventory turnover ratio of Costco is 11.85 times. It indicates that Costco sells its inventory 11.85 times a year or approximately once every 31 (365/11.85) days. The higher inventory turnover ratio is more favorable because it shows how easily a company can turn its inventory into cash. Costco's main competitor such as Walmart Stores Inc.'s inventory turnover ratio was calculated 8.90 times as of January 31, 2020 (Tian, 2020b). Comparing with Walmart, Costco possesses a better position. Therefore, Costco should maintain its current inventory turnover ratio for a long period.

- Asset turnover ratio = revenue/ average total assets =  $152703/ 43115 = 3.54$  [here, based on Table 1 & 2, revenue (as of August 31, 2019) = 152703; average total assets = ((total assets (as of August 31, 2018) + total assets (as of August 31, 2019))/ 2 = (40830+ 45400)/ 2 = 43115]

The asset turnover ratio of Costco is 3.54. It indicates that Costco is making 3.54 dollars of sales for every dollar invested in assets. The higher asset turnover ratio is more favorable because it measures how efficiently a firm uses its assets to generate sales. If the industry average asset turnover ratio is 1.2 then we can say that the company has utilized its assets more efficiently in creating revenues (Jan, 2016).

Therefore, Costco is using its assets more efficiently and should maintain its current asset turnover ratio for a long period.

In fine, based on the analysis of efficiency ratios, the financial strengths are found at the Costco's days sales outstanding ratio, days in inventory ratio, receivables turnover ratio, inventory turnover ratio, and asset turnover ratio and the financial weakness is found at the Costco's cash conversion cycle ratio.

### Forecasting of the Free Cash Flow (FCF)

Compound annual growth rate (CAGR): CAGR is the average annual growth rate of an investment over a specific period of time longer than one year. The compound annual growth rate is calculated by dividing the value of an investment at the end of the period in question through the value at the beginning of that period, raising the result to the power of one divided by the period length, and subtracting one from the subsequent result (Rani *et al.*, 2017). Specifically, the formula is:

$$\text{CAGR} = (\text{ending value} / \text{beginning value})^{(1/\text{no. of years})} - 1$$

Therefore, the Costco's mean annual growth rate of investments is 12.16% during 5 years (from August 31, 2015 to August 31, 2019). It indicates that the forecasts of FCF will be increasing in the coming years.

**Table 3: Historical FCF of Costco from 2015 to 2019**

Year	FCF
August 31, 2019	\$3358 million
August 31, 2018	\$2805 million
August 31, 2017	\$4224 million
August 31, 2016	\$643 million
August 31, 2015	\$1892 million

Source: Mansueto (2020)

Now, based on Table 4,

$$\text{CAGR} = (\text{FCF}_{2019} / \text{FCF}_{2015})^{1/5} - 1 = (3358 / 1892)^{1/5} - 1 = 0.12158 = 12.16\%$$

FCF forecasts: FCF is considered as a measure of the company's financial performance calculated as operating cash flow minus capital expenditures. FCF shows the cash that a company is able to make after spending the money needed to maintain or expand its asset base. It is significant because it allows a company to pursue opportunities that increase shareholders' value (Susila, 2017).

- Forecasted FCF for August 2020,  
 $\text{FCF}_{2020} = \text{FCF}_{2019} (1 + \text{CAGR}) = 3358(1 + 0.12158) = \text{US } \$3766.27 \text{ million}$
- Forecasted FCF for August 2021,  
 $\text{FCF}_{2021} = \text{FCF}_{2020} (1 + \text{CAGR}) = 3766.27(1 + 0.12158) = \text{US } \$4224.17 \text{ million}$

- Forecasted FCF for August 2022,  
 $FCF_{2022} = FCF_{2021} (1 + CAGR) = 4224.17(1 + 0.12158) = \text{US } \$4737.74$   
million
- Forecasted FCF for August 2023,  
 $FCF_{2023} = FCF_{2022} (1 + CAGR) = 4737.74(1 + 0.12158) = \text{US } \$5313.76$   
million
- Forecasted FCF for August 2024,  
 $FCF_{2024} = FCF_{2023} (1 + CAGR) = 5313.76(1 + 0.12158) = \text{US } \$5959.80$   
million

**Table 4: Forecasted FCF of Costco from 2020 to 2024**

Year	FCF
August 31, 2020	\$3766.27 million
August 31, 2021	\$4224.17 million
August 31, 2022	\$4737.74 million
August 31, 2023	\$5313.76 million
August 31, 2024	\$5959.80 million

The FCF forecasts of Costco from 2020 to 2024 have been increasing slightly due to positive CAGR = 12.16%. And the FCF forecasts are found \$3766.27 million in 2020, \$4224.17 million in 2021, \$4737.74 million in 2022, \$5313.76 million in 2023, and \$5959.80 million in 2024.

### Calculation of the Weighted Average Cost of Capital (WACC)

WACC is the rate that a company needs to pay on average to all its security, stock, and bondholders to finance its assets. Based on the weighted average, we can decide how much interest the company needs to pay for every dollar it finances (Krüger *et al.*, 2015).

$$WACC = E / (E + D) * K_e + D / (E + D) * K_d * (1 - t)$$

Here, E = market value of the Costco's equity, D = market / book value of the Costco's debt,  $K_e$  = cost of equity,  $K_d$  = cost of debt, and t = effective tax rate.

The WACC of Costco for the fiscal year ended on August 31, 2019 is shown below:

Cost of equity ( $K_e$ ):  $K_e$  is estimated using different models, such as the dividend discount model (DDM) and capital asset pricing model (CAPM) (Jan, 2016). Now, based on CAPM,

Cost of equity,

$$K_e = R_f + \beta (R_m - R_f) = 1.50 + 0.71(6.32 - 1.50) = 1.50 + 0.71 * 4.82 = 1.50 + 3.42 = 4.92\%$$

Here, as of August, 2019,  $R_f$  (risk free rate) = 1.50 and  $R_m$  (market return) = 6.32 (Fenebris.com, 2020). As of May 08, 2020,  $\beta$  (beta coefficient) = 0.71 (Sheridan, 2020).

Market value of Costco's equity,  $E = \$129583.87$  million

Here, as of August 31, 2019, the share price of Costco = \$294.76 and the number of shares outstanding = 439.625 million (Tian, 2020a). So, the market value of Costco = share price\* number of shares outstanding =  $294.76 * 439.625 = \$129583.87$  million.

Book value of Costco's debt,  $D = \$6655$  million

Here, the book value of debt ( $D$ ) is used to simplify the calculation instead of the market value of debt. Thus, the book value of debt ( $D$ ) is calculated by adding the latest two-year average short-term debt & capital lease obligation and long-term debt & capital lease obligation together (Tian, 2020a). As of August 2019, Costco's latest two-year average short-term debt & capital lease obligation was  $(1699+0)/2 = \$849.5$  million and its latest two-year average long-term debt & capital lease obligation was  $(5124+6487)/2 = \$5805.5$  million. Therefore, the total book value of debt ( $D$ ) is  $\$849.5$  million +  $\$5805.5$  million =  $\$6655$  million.

Cost of debt,  $K_d = \frac{\text{interest expense}}{\text{total debt}} = 150/6655 = 0.0225 = 2.25\%$

Here, as of August 2019, Costco's interest expense was \$150 million and its total book value of debt ( $D$ ) was \$6655 million.

Effective tax rate,  $t = \frac{\text{income taxes}}{\text{earnings before taxes (EBT)}}$

In August 2019,  $t = 1061/4765 = 0.2227$ , In August 2018,  $t = 1263/4442 = 0.2843$ , In August 2017,  $t = 1325/4039 = 0.3281$ , In August 2016,  $t = 1243/3619 = 0.3435$

Therefore, the latest four-year average effective tax rate is  $(0.2227 + 0.2843 + 0.3281 + 0.3435) / 4 = 0.2947 = 29.47\%$

Here, the latest four-year average effective tax rate has been used to calculate WACC.

Now,  $WACC = E / (E + D) * K_e + D / (E + D) * K_d * (1-t) = 129583.87 / (129583.87 + 6655) * 0.0492 + 6655 / (129583.87 + 6655) * 0.0225 * (1 - 0.2947) = 0.0468 + 0.0008 = 0.0476 = 4.76\%$

The calculated WACC indicates that Costco must pay an average of \$0.0476 in return for every \$1 in extra funding. A high WACC is typically a signal of the higher risk associated with a firm's operations. As of July 2019, Costco's competitor such as Walmart Inc.'s WACC was 5.39% (Tian, 2020b). In this regard, Costco is at a slightly lower risk to conduct its operational activities compared to Walmart.

### Calculation of the Market Value and Fundamental Value

Market value: Market value or market capitalization is the value of a company according to the financial markets. Market value is calculated by multiplying the number of its outstanding shares by the current share price (Asri, 2017).

As of August 31, 2019, the share price of Costco = \$294.76 and the number of shares outstanding = 439.625 million (Tian, 2020a). So, the market value of Costco = share price\* number of shares outstanding =  $294.76 \times 439.625 = \$129583.87$  million = \$129.58 billion.

Fundamental value: Fundamental value is considered as the theoretical takeover price. It is deemed more comprehensive than market value, which only includes common equity. There are two purposes of fundamental value. Firstly, it calculates what it would cost to buy the entire company. Secondly, it gives a capital neutral valuation with which to compare with other companies. It is basically a modification of market value, as it includes debt and cash for identifying a company's valuation (Faulkenberry, 2014).

As of August 31, 2019, Costco's market value = \$129583.87 million; preferred stock = 0; long-term debt & capital lease obligation = \$5124 million; short-term debt & capital lease obligation = \$1699 million; minority interest = \$341 million; cash, cash equivalents, marketable securities = \$9444 million.

Therefore, fundamental value of Costco = market value + preferred stock + long-term debt & capital lease obligation + short-term debt & capital lease obligation + minority interest - cash, cash equivalents, marketable securities =  $\$129583.87 + 0 + \$5124 + \$1699 + \$341 - \$9444 = \$127304$  million = \$127.30 billion.

The market value of Costco is \$2.28 (\$129.58-\$127.30) billion higher than the fundamental value of Costco. Moreover, Costco's competitor like Walmart had market value of \$314.25 billion on July 31, 2019 (Tian, 2020b). Therefore, Costco's market value is \$184.67 (\$314.25 -\$129.58) billion less than that of Walmart. In this regard, Costco's authority should concentrate on increasing its market value by taking proper initiatives, for example, expanding market, conducting regular market research, developing the brand, changing market position, forming strategic alliances, maintaining physical assets, protecting intangible assets, showing growth potential, and retaining key employees, etc.

## IV. CONCLUSIONS

This study aimed at exploring the financial strengths and weaknesses of Costco based on its financial statement. Since Costco has been offering high-quality products to grow its market share and enhance its customer base over the years, therefore, identifying its financial strengths and weaknesses will facilitate Costco's further rapid development. The results of this study identify that Costco has

financial strengths in case of debt to equity ratio, return on assets ratio, return on equity ratio, return on capital employed ratio, interest coverage ratio, days sales outstanding ratio, days in inventory ratio, receivables turnover ratio, inventory turnover ratio, and asset turnover ratio. The study also identifies Costco's financial weaknesses in case of current ratio, quick ratio, gross margin ratio, operating margin ratio, and cash conversion cycle ratio. Costco needs to further expand its market because the market value of Costco is found significantly lower than that of Walmart. Costco should try to hold its current positive CAGR, which will develop the company by increasing future FCF. In addition, Costco needs to hold its current WACC of 4.76% because it is found lower compared to its other competitors like Walmart. The overall findings of the study provide valuable information for Costco's policymakers to develop policies and strategies for overcoming the existing financial weaknesses.

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### CONFLICT OF INTEREST

There is no conflict of interest in this study.

### REFERENCES

- Ali, M., Dianita, M., Hadian, N., Aryanti, M., and Wahyuningsih, N. (2020). Financial Performance Analysis Based on Profitability Ratio (Study at PT Astra International Tbk Period 2009-2018). *International Journal of Psychosocial Rehabilitation*, 24(02): 3474-3481. <https://doi.org/10.37200/ijpr/v24i2/pr200667>
- Al-Nasser, N. (2016). The Impact of Financial Analysis in Maximizing the Firm's Value "A Case Study on the Jordanian Industrial Companies". *International Journal of Managerial Studies and Research (IJMSR)*, 2(6): 1-9.
- Asri, M. (2017). The Influence of Inflation, Exchange Rate, Market Value Added and Market Capitalization Value on Stock Price. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2995908>
- Black, M. (2020). *Profitability Ratios: Types of Profitability Ratios and Why they Matter / Nav*. Retrieved 9 May 2020, from <https://www.nav.com/blog/profitability-ratios-types-of-profitability-ratios-444161/>
- Bragg, S., and Bragg, S. (2020). *Efficiency ratios-Accounting Tools*. Retrieved 9 May 2020, from <https://www.accountingtools.com/articles/efficiency-ratios.html>
- Calista, M., and Widjaja, I. (2019). Pengaruh Current Ratio, Return on Asset, Return on Equity, Debt to Equity Ratio, Total Turnover Asset, dan Dividend Policy Terhadap Harga Saham. *Jurnal Manajemen Bisnis Dan Kewirausahaan*, 3(5): 13. <https://doi.org/10.24912/jmbk.v3i5.6074>



- Casielles, J. (2019). ROE, ROCE, Beneficio Económico y EVA (Return on Equity, Return on Capital Employed, Economic Benefit and Economic Added Value). *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3394255>
- Conway, J. (2020). *Costco's net income worldwide 2011-2019* | Statista. Statista. Retrieved 12 July 2020, from <https://www.statista.com/statistics/327074/costcos-net-income-worldwide/>.
- Didenko, O., & Dordevic, S. (2017). The optimization of banking regulation intensity from the perspective of financial stability in banking sector: an empirical analysis. *Financial Markets, Institutions and Risks*, 1(1): 43-53. [https://doi.org/10.21272/fmir.1\(1\).43-53.2017](https://doi.org/10.21272/fmir.1(1).43-53.2017)
- Faulkenberry, K. (2014). *Enterprise Value (EV) & Calculating Enterprise Value Ratios*. Retrieved 24 March 2016, from <http://www.arborinvestmentplanner.com/enterprise-value-ev-calculating-enterprise-value-ratios/>
- Fenebris.com, F. (2020). *US - Market Risk Premia*. *Market-risk-premia.com*. Retrieved 9 March 2016, from <http://www.market-risk-premia.com/us.html>
- Jan, O. (2016). *Asset Turnover Ratios*. *Accountingexplained.com*. Retrieved 11 September 2016, from <http://accountingexplained.com/financial/ratios/asset-turnover>
- Khan, M., Khan, M., Abdulahi, M., Liaqat, I., and Shah, S. (2019). Institutional quality and financial development: The United States perspective. *Journal of Multinational Financial Management*, 49: 67-80. <https://doi.org/10.1016/j.mulfin.2019.01.001>
- Kim, J. (2019). The Entry and Growth Strategy of Multinational Retail Warehouse in Korea Market: The Case of Costco Wholesale. *International Business Review*, 23(1): 53-79. <https://doi.org/10.21739/ibr.2019.03.23.1.53>
- Kissinger, D. (2017). *Costco Wholesale SWOT Analysis*. *Panmore Institute*. Retrieved 8 September 2017, from <http://panmore.com/costco-wholesale-swot-analysis>
- Krüger, P., Landier, A., and Thesmar, D. (2015). The WACC Fallacy: The Real Effects of Using a Unique Discount Rate. *The Journal of Finance*, 70(3): 1253-1285. <https://doi.org/10.1111/jofi.12250>
- Mansueto, J. (2020). *Income Statement for Costco Wholesale Corp (COST) from Morningstar.com*. *Financials.morningstar.com*. Retrieved 17 July 2020, from <https://bit.ly/3hczL5m>
- Nizam, E., Ng, A., Dewandaru, G., Nagayev, R., and Nkoba, M. (2019). The impact of social and environmental sustainability on financial performance: A global analysis of the banking sector. *Journal of Multinational Financial Management*, 49: 35-53. <https://doi.org/10.1016/j.mulfin.2019.01.002>
- O'Connell, L. (2020). *Costco employees worldwide 2011-2019* | Statista. Statista. Retrieved 12 July 2020, from <https://www.statista.com/statistics/284430/costco-number-of-employees-worldwide-2011-2013/>.
- Odelia, T., and Wibowo, B. (2020). Pengaruh Current Ratio, Debt to Equity Ratio, Inventory Turnover dan Return on Equity Terhadap Price Earning Ratio. *JEMAP*, 2(2): 238. <https://doi.org/10.24167/jemap.v2i2.2390>

- Osina, N. (2019). Global liquidity, market sentiment, and financial stability indices. *Journal of Multinational Financial Management*, 52-53: 100606. <https://doi.org/10.1016/j.mulfin.2019.100606>
- Pradhan, R., Arvin, M., Nair, M., Bennett, S., Bahmani, S., and Hall, J. (2018). Endogenous dynamics between innovation, financial markets, venture capital and economic growth: Evidence from Europe. *Journal of Multinational Financial Management*, 45: 15-34. <https://doi.org/10.1016/j.mulfin.2018.01.002>
- Prajapati, P. (2019). Study on Financial Performance Using Ratio Analysis of Gsfcl Ltd. & Gnfcl Ltd., Gujarat". *Think India*, 22(3): 1069-1081. <https://doi.org/10.26643/think-india.v22i3.8450>
- Purnomo, A. (2018). Influence of the Ratio of Profit Margin, Financial Leverage Ratio, Current Ratio, Quick Ratio against the Conditions and Financial Distress. *Indonesian Journal of Business, Accounting and Management*, 1(1). <https://doi.org/10.36406/ijbam.v1i1.218>
- Rani, S., Habib, N., Raza, I., and Zahra, N. (2017). Estimating compound growth rate, instability index and annual fluctuation of cotton in Pakistan. *Asian Journal of Agriculture and Rural Development*, 7(4): 86-91. <https://doi.org/10.18488/journal.1005/2017.7.4/1005.4.86.91>
- Sheridan, J. (2020). *Costco Wholesale Corp, COST: NSQ financials - FT.com*. Markets.ft.com. Retrieved 8 May 2020, from <https://markets.ft.com/data/equities/tearsheet/financials?s=COST:NSQ>.
- Siciliani, P. (2018). The Disruption of Retail Banking: A Competition Analysis of the Implications for Financial Stability and Monetary Policy. *Journal of Financial Regulation*, 4(2): 167-189. <https://doi.org/10.1093/jfr/fjy006>
- Susila, I. (2017). Ekuivalensi Pendekatan Capital Cash Flow dan Free Cash Flow dalam Risky Cash Flow. *Riset Akuntansi Dan Keuangan Indonesia*, 3(2): 195-213. <https://doi.org/10.23917/reaksi.v3i2.3488>
- Tian, C. (2020a). *Costco Wholesale Market Cap | COST - GuruFocus.com*. Gurufocus.com. Retrieved 17 July 2020, from <https://www.gurufocus.com/term/mktcap/COST/Market+Cap/Costco+Wholesale+Corp>.
- Tian, C. (2020b). *Walmart Market Cap | WMT - GuruFocus.com*. Gurufocus.com. Retrieved 17 July 2020, from <https://www.gurufocus.com/term/mktcap/WMT/Market-Cap/Walmart>.
- Uddin, G., Arreola Hernandez, J., Labidi, C., Troster, V., and Yoon, S. (2019). The impact of financial and economic factors on Islamic mutual fund performance: Evidence from multiple fund categories. *Journal of Multinational Financial Management*, 52-53: 100607. <https://doi.org/10.1016/j.mulfin.2019.100607>
- Wulantika, N., Hariyanto, D., and Safitri, H. (2018). Pengaruh Current Ratio, Return on Equity dan Market to Book Ratio Terhadap Harga Saham. *Jurnal Produktivitas*, 5(1). <https://doi.org/10.29406/jpr.v5i1.1246>