

## Analyst Report 2017-2018 Student Managed Fund

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16 April 2018
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## Recommendation Overview

## Costco Wholesale Corporation (NASDAQ: COST)

Sector: Consumer Staples

| Current Px | Px Target | 52-wk High | 52-wk Low | P/E | Mkt. Cap. | Rating |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 188.91$ | $\$ 217.52$ | $\$ 199.88$ | $\$ 150.00$ | $28.96 x$ | $\$ 82.90 B$ | BUY |

## Basis for Recommendation

We recommend a BUY rating for COST because of its industry position and operational excellence. Costco's unique value proposition (low-cost, "treasure hunt" experience), strong customer retention ( $90 \%$ historically), and established market share ( $17.5 \% \mathrm{w} /$ in Wholesalers) make them an industry stand-out. Our recommendation relies on the following drivers:

- Resilient brick-and-mortar sales: Same-store-sales have been impressive despite heightened competition
- Surging E-commerce business: The company has broadened the products available on its E-commerce platform and improved delivery speeds to compete with AMZN and WMT
- Capex commitments driving growth: COST has ramped up Capex spending to develop its online platform and continue adding warehouse locations ( $\sim 30$ starts per year)

Figure 1. Five Year Stock Performance vs. SPY


## Costco Corporation Overview

Figure 2. Costco Product Array


## Business Description

Costco Wholesale Corporation is the world's largest membership wholesale club with 730+ locations worldwide serving nearly 90 million members. A majority of their stores are in the U.S., Canada and Mexico, with additional locations in the Asia and EMEA regions. Costco also operates an e-commerce website, costco.com, where many of the same products can be purchased. Costco sells an annual membership for $\$ 60$ or $\$ 120$ which give cardholders access to discounts at warehouse locations. Warehouses average 145,000 sq. ft. and have efficient layouts. Products are displayed on pallets and only the fastest selling varieties are stocked. The company sells a broad array of national brands $(3,800$ SKUs) as well as Kirkland Signature, their low-cost proprietary brand.

The average warehouse is 145,000 square feet, and have floor plans that economically and efficiently use the available selling space. These stores are no-frills and the entrances and exits are tightly controlled, which leads to far lower inventory losses than competitors. On average the warehouses operate on a seven-day, 70 -hour week. Gasoline operations have extended hours. Because the warehouse hours are lower than most competitors, labor costs are lower than competitors relative to sales.
Costco offers merchandise in the following categories:

- Foods - including dry foods, packaged foods, and groceries
- Sundries - including snack foods, candy, alcoholic and nonalcoholic beverages, and cleaning supplies
- Hardlines - including major appliances, electronics, health and beauty aids, hardware, and garden and patio)
- Fresh Foods - including meat, produce, deli, and bakery
- Softlines - including apparel and small appliances
- Ancillary - including gas stations and pharmacy

The ancillary businesses provide complementary services to customers, and encourage members to shop more frequently. These include gas stations, pharmacy, optical dispensing centers, food courts, and hearing-aid centers.

Memberships can be used at any Costco warehouse worldwide. There are four options for membership: Gold Star, Gold Star Executive, Business, and Business Executive. Both Gold Star and Business cost $\$ 60$ annually, and the Executive versions of both cost $\$ 120$. The benefits of upgrading to Executive membership include annual 2\% reward on eligible Costco and Costco Travel purchases, and extra benefits on selected Costco services including auto and home insurance, and check printing services. Costco's membership renewal rate was $90 \%$ in the U.S. and Canada and $87 \%$ on a worldwide basis in 2017. At the end of 2017 there were $90,300,000$ total cardholders, of which $38 \%$ were Executive members.

## Corporate Strategy

Management believes that low prices on a limited selection of national brand merchandise and selected private-label products in a wide range of merchandise categories, produce high sales volume and rapid inventory turnover. These high levels of turnover combined with efficiencies gained from volume purchasing, a no-frills self-service warehouse facility, and the income from membership fees enables the business to operate a lower gross margins than competitors. Costco generally sells inventory before they are required to pay for it, even while taking advantage of early payment discounts when available. Management also believes that revenue growth will continue to be aided by frequent opening of new warehouses, both in the United States and also abroad.

In the 2017 Annual Report, CEO Craig Jelinek said that, "members of our leadership team and beyond realize the key to long-term success is not high margins; rather it is how you treat, engage, and include people: our members, our employees and our suppliers alike". This clearly demonstrates the perspective that management has when it comes to how to run the business - they clearly value putting the customer and their employees first, before profits.

## Industry Analysis

Figure 3. Costco Gasoline


## Trends \& Drivers

The Consumer Staples GICS Sector has returned -7.04\% YTD, while the Hypermarkets \& Super-Centers subindustry has returned $-7.69 \%$. Despite recent headwinds, demand from consumers remains strong within the mature and highly concentrated industry. Hypermarkets and supercenters are poised to gain market share, based on their price advantage to traditional retailers. Revenue growth is expected to be $0.3 \%$ annually through 2022 (IBIS) on increased spending by higher-income customers and small businesses, who are attracted by the quality and value offered at these retailers.

The industry is driven by consumer disposable income and global oil prices, which are both expected to rise in the next five year period. Many players, including COST, sell gasoline at their locations, and stand to benefit from rising fuel prices. In addition, the industry is seeing a rapid shift towards online channels. Under pressure from AMZN, many retailers have expanded their online ecosystems and delivery networks to better serve consumers. The industry is positioned well to protect against macroeconomic trends, because of the inelastic demand for consumer staples. Headwinds for the business include continuing downward pressures on margins, rising wages, foreign currency gains and losses, and shipping costs.

## Competitive Analysis

COST competes with other firms in the Food \& Staples Retailing Industry, which can be broken down into the Drug, Food Distributors, Food Retail, and Hypermarkets \& Super Centers sub-industries. COST primarily competes with the Sam's Club division of WMT and BJ's Wholesale (private). Costco controlled $18 \%$ of the market in 2017, compared with $71.7 \%$ by Walmart. Other competitors with single-digit market shares include Amazon (Whole Foods), Target, Dollar General, Dollar Tree, Five Below, Big Lots, Dollarama, and Kroger.

Figure 4. Costco Fuel Price Advantage

## Fill 'Er Up

Average savings per gallon of gasoline compared to nearby competitors

| Costco |  |
| :--- | :--- |
| BJ's | $\$ 0.20$ |
| Sams Club | $\$ 0.11$ |
| Kroger | $\$ 0.11$ |
| 7-Eleven | $\$ 0.05$ |

Source: GasBuddy.com THE WALL STREET JOURNAL.

## Competitive Advantages

Costco has a proven business model (high-density/lowcost) that allows them to price products lower than industry comps ( $20 \%$ cheaper than WMT, $7 \%$ cheaper than AMZN on average). They emphasize low labor costs (by selling products directly from pallets), high inventory turnover, and high employee satisfaction and retention. Because of this operational excellence and skilled capital allocation, Costco has grown EBITDA margins in the last 5 years ( $3.70 \%$ to $4.15 \%$ ) and returned between 11 and $14 \%$ on invested capital. Their experienced management team (13 year average tenure) has shown ability to withstand price competition and maintain consistent margins.

Costco is also further pursuing competitive advantages by exploring vertical integration. They are currently under construction on a meat plant in Illinois, and they recently broke ground on a poultry plant in Nebraska. This means that they are taking some steps into producing their own meat, which would allow them to realize lower costs and be able to sell meat at lower prices than their competitors.

## Investment Thesis

Figure 5. Historical SSS

Growth



COST will deliver long-term returns due to its industry position as a differentiated low-cost provider and operational excellence. Our opinion is based on the following drivers:

## Resilient Brick-and-Mortar Sales

They have shown resilience amid increased competition from retail comps, with sales results for second quarter 2018 representing an increase of $8.4 \%$ for the total company, over last year. According to the US Department of Commerce, in Q3 2017 only $9.1 \%$ of total retail sales were online sales. This might come as a surprise, given the media hype about how Amazon is taking over the entire world, but the reality is that people still by a vast majority prefer to shop in person.

Figure 3. Costco's Online Platform


Costcolirocery


Figure 3. Costco's increasing Capex Spend


Going forward, we see Costco's warehouses as a vital asset because it will continue to make sense for people to purchase large bulky items in stores and the drive them home in their own cars, versus having them shipped. Further, we haven't seen a complete abandonment of brick and mortar retail when it comes to small items, so that will continue to remain robust going forward, and furthermore Costco is rapidly increasing its online presence and offering many of the smaller and higher value items online, at prices that are lower or comparable with other online retailers.

## Surging E-Commerce Growth

Costco's expanding E-Commerce presence (4\% of 2017 revenues) is an important catalyst. In their March Sales Results press release they reported an impressive 33.7\% growth in e-commerce sales over the last 31 weeks. This is stunning, compared to the retail industry overall ( $0.3 \%$ annualized growth). While E-commerce still makes up a small portion of total sales, from its rapid growth we can see that Costco members are starting to make their purchases on Costco's website, rather than switch to using Amazon. Costco has steadily increased the number of products available for two-day or same-day delivery while maintaining its price advantage over Walmart. We believe that e-commerce will continue to help bolster revenue, and provide an effective defense to the threat posed by Amazon.

## Capex Spending Driving Revenue

Additionally, Costco ramped up Capex spending in 2017 to establish footholds in new geographies, such as France and Iceland. This spending is directed at opening roughly 30 new warehouse stores each year, with most being in the US and a smaller portion being in international markets. As of the end of fiscal year 2017, they had 741 warehouses worldwide, with 514 of those being in the US. The next largest are Canada and Mexico with 97 and 37, respectively. They also have a large presence in Mexico (37), the UK (28), and Japan (26). One of their newest stores that they opened this year is in France. According to a Bloomberg article, Costco is finding success even in this market which is known to prefer high quality in small quantities. The success of this store has shown that the membership model can be implemented across cultures.

## Revenues

Net sales for the 53 -week fiscal year totaled $\$ 126.2$ billion, an increase of nine percent from $\$ 116.1$ billion in the 52week 2016 fiscal year, with a comparable sales increase of four percent.

Membership fee revenue increased $8 \%$ to $\$ 2,853$, primarily due to membership sign-ups at existing and new warehouses, an extra week of membership fees in 2017, the annual fee increase, and executive membership upgrades. Net income increased $14 \%$ to $\$ 2,679$, or $\$ 6.08$ per diluted share compared to $\$ 2,350$, or $\$ 5.33$ per diluted share in 2016. The 2017 results were positively impacted by an $\$ 82$ tax benefit, or $\$ 0.19$ per diluted share, in connection with the special cash dividend paid to the Company's $401(\mathrm{k})$ Plan participants and other net benefits of approximately $\$ 51$, or $\$ 0.07$ per diluted share, for nonrecurring net legal and other matters.

## Working capital

Costco's primary requirement for capital is acquiring land, buildings, and equipment for new and remodeled warehouses. To a lesser extent, capital is required for initial warehouse operations, our information systems, and working capital. They opened 26 new warehouses and relocated 2 warehouses in 2017 and plan to open up to 24 new warehouses and relocate up to six warehouses in 2018. In 2017 they spent $\$ 2,502$ on capital expenditures, and it is their current intention to spend approximately $\$ 2,500$ to $\$ 2,700$ during fiscal year 2018. These expenditures are expected to be financed with cash from operations, existing cash and cash equivalents, and short-term investments; and will support revenue growth going forward.

Figure 6. Valuation Summary

|  | Wt. |  | Tgt. Price |  |
| :--- | ---: | :--- | :--- | :---: |
| DCF | $100 \%$ | $\$$ | 217.52 |  |
| Multiples | $0 \%$ | $\$$ | 156.63 |  |

Price Target
\$ 217.52

Figure 7. Share Sensitivity

Share Price Sensitivity


Figure 8. M.O.S. Sensitivity
Margin of Safety Sensitivity


Our valuation for Costco is based on a discounted cash flow and a multiples valuation that was used as a reference point. The target price based on the DCF was $\$ 217.52$ (appendix D) and represents a $15.1 \%$ margin of safety over the price of $\$ 188.91$. Based on the current value of Costco, we recommend a LONG position in the stock. This is definitely a great company to hold for the long term, as we see room for capital appreciation beyond the predictions of my valuation. We weighted the DCF $100 \%$ and the Comps $0 \%$, because we felt that only BJ's and Sam's Club were true comps, and BJ's is private and Sam's Club information is not broken out in detail on WMT's financial statements.
However, we did run a comparable companies valuation as a sanity check on our discounted cash flow valuation, and the value it returned was in line with our target price.

## Discounted Cash Flow Valuation

Our target price comes entirely from the DCF because we felt that it was the most appropriate way to value the business, due to the predictability of the various drivers of valuation. Some highlights from my assumptions include revenue: we projected revenue growth of $8.5 \%$ in 2018 rising to $10 \%$ in 2020 and then tapering each year down to $7.5 \%$ in 2024. This was based on strong $9 \%$ growth in sales in the last few months as according to a press release from Costco. We also believe that dramatically increasing sales online (up $43.6 \%$ in the 12 weeks ending November 26, 2017) will serve as a strong catalyst for revenue growth going forward.

Another thing supporting the valuation is their consistency when it comes to cost of revenues. They have historically kept COGS pegged right around $89 \%$ of revenues ( $88.7 \%$ ) and we have projected that they will continue to achieve this level of consistency going forward, based on their competency in logistics and inventory management. Capital expenditures were discussed by management, and in their Q4 presentation they guided that spending would be in the neighborhood of $\$ 2.6+$ billion in the coming years, so we projected accordingly. This spending is specifically to support expanding the number of warehouses across the globe, especially internationally because of increasing saturation in the US.

Figure 9. Multiples Valuation Summary

| Method | Share Price using <br> ex. AMZN multiple |
| :--- | ---: |
| P/E | $\$ 159.93$ |
| P/B | $\$ 130.68$ |
| EV/EBITDA | $\$ 179.29$ |
| Share Price | $\$ 156.63$ |

## Multiples Valuation

The multiples valuation is two-tiered, one value includes the multiples from Amazon and the other does not. This is because Amazon trades at an elevated multiple which is not representative of the broader industry. It was difficult to find direct comps for COST because the two best comps are either private (BJ's) or subsidiary of a larger company (Sam's Club). This means that we had to use a peer group of Walmart, Target, Dollar General, Dollar Tree, Five Below, Big Lots, Dollarama, Kroger, and Amazon. Including AMZN, the expected share price based on comps is $\$ 236.27$, and without AMZN it is $\$ 156.63$, the variance is explained by the dramatic difference seen in the average $\mathrm{P} / \mathrm{E}$, more detail available in appendix H .

Figure 10. Store Locations

| 747 Warehouses Worldwide |  |
| :--- | :---: |
| $519-$ U.S. | 13 - Taiwan |
| $98-$ CN | 9 - Australia |
| $37-$ Mexico | 2 - Spain |
| $28-$ UK | 1 - Iceland |
| 26 - Japan | 1 - France |
| $13-$ Korea |  |

## Concentration Risk

Costco is highly dependent on the financial performance of their U.S. and Canadian operations, which comprised $87 \%$ and $85 \%$ of net sales and operating income in 2017, respectively. Within the U.S., they are highly dependent on their California operations, which comprised $30 \%$ of U.S. net sales in 2017. While the geographic concentration of sales is very heavily reliant on the U.S., we feel that going forward the U.S. and Canadian markets will continue to be strong, and Costco's international presence will only continue to grow and get stronger, mitigating the concentration risk that is present today.

## Cannibalization Risk

Another risk faced by COST is the threat of selfcannibalization, especially in the US market. Their increased focus on opening new stores across the country is adding to the level of saturation that exists, and we have seen new stores cannibalizing their neighboring locations. However, we feel that this risk is mitigated because they have not yet reached full saturation and overall sales are still set to rise; and once the US market is fully saturated, we are confident in management's proven ability to expand into foreign markets.

Figure 11. Membership Data

## Members:

- 49.9M households
-91.5M total cardholders
- 90\% renewal rate (U.S. \& CN)
- \$2.9B in cash fees (LTM)


## Pricing Risk

COST faces competitive pricing pressures from its competitors, including AMZN, which is mitigated by its efficient operations and supply-chain capabilities. Costco competes with other big box wholesalers such as BJ's and Sam's club, with WMT's Sam's Club being the larger threat. However, we view Sam's club as more of a me-too effort, without the private label recognition of Kirkland brand products.

## Membership Deterioration Risk

Finally, COST faces risks associated with its membership renewal rates because of competition from other wholesale clubs and Amazon Prime. COST relies on the membership fees to enable their lower margin prices. We think that COST has proven itself capable of maintaining high renewal rates in the $90+\%$ range, and therefore don't see this as a large threat to the business. Also, the performance of COST's online business and the nature of its product offerings serve to mitigate this risk.

## CSR Considerations

Costco is a leader in corporate social responsibility. They are renowned for treating their employees well, and for focusing on driving savings for their customers. Below are some statistics that demonstrate their commitment to responsible business practices.

## Key CSR Metrics vs. Industry Average

\% Nonexecutive Directors on Board 91\% (Industry 87\%)
$\%$ Women on Board: 18\% (Industry 24\%)
CEO/Average COST Emp. Salary: 172x
Employee Attrition Rate: 6\% (Industry 50\%)
Community Ranking by CSR Hub 50 out of 100
Source: Bloomberg
As you can see, their board is more independent that the industry on average, while they do lag slightly on Women on the Board. One area where they truly shine is in the employee attrition rate, which is a mere $6 \%$ compared to the retail industry average of $50 \%$. This is staggering and really proves that their employees are happy and are loyal to the company. This has many positive effects, including that the employees are more knowledgeable when helping customers and running the operations.

We recommend a BUY rating on Costco (COST) with a price target of $\$ \mathbf{2 1 7 . 5 2}$, which represents a $\mathbf{1 5 . 1 \%}$ margin of safety as of the final closing price on April 13th, 2018 of $\$ 188.91$. Costco is a great opportunity because of resilient brick and mortar performance, strong e-commerce growth, and commitment to capital expenditures for store expansions.

## Appendix

## Appendix A. DCF Analysis

## Costco Wholesale Corp

## DCF Analysis

(Dollars in Millions, Except Per Share Amounts)

|  | Historicals |  | Projections |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fiscal Year Ending December 31 |  |  |  |  |  |  |  |  |  |
|  | 2016A | 2017A | 2018E | 2019E | 2020E | 2021E | 2022 E | 2023E | 2024E | Terminal |
| Revenue | \$118,719 | \$129,025 | \$139,978 | \$153,230 | \$168,453 | \$184,331 | \$199,867 | \$214,758 | \$230,761 | \$230,761 |
| \% Growth | 2.2\% | 8.7\% | 8.5\% | 9.5\% | 9.9\% | 9.4\% | 8.4\% | 7.5\% | 7.5\% |  |
| Adj. EBITDA | \$4,927 | \$5,430 | \$5,953 | \$6,395 | \$7,112 | \$7,674 | \$8,207 | \$8,732 | \$9,292 | \$9,292 |
| \% Margin | 4.2\% | 4.2\% | 4.3\% | 4.2\% | 4.2\% | 4.2\% | 4.1\% | 4.1\% | 4.0\% | 4.0\% |
| Less: Depreciation \& Amortization | $(1,255)$ | $(1,370)$ | $(1,540)$ | $(1,605)$ | $(1,764)$ | $(1,930)$ | $(2,093)$ | $(2,249)$ | $(2,417)$ | $(4,384)$ |
| Adj. EBIT | \$3,672 | \$4,060 | \$4,413 | \$4,790 | \$5,348 | \$5,744 | \$6,113 | \$6,483 | \$6,875 | \$4,907 |
| \% Margin | 3.1\% | 3.1\% | 3.2\% | 3.1\% | 3.2\% | 3.1\% | 3.1\% | 3.0\% | 3.0\% | 2.1\% |
| Less: Taxes | $(1,248)$ | $(1,380)$ | (927) | $(1,006)$ | $(1,123)$ | $(1,206)$ | $(1,284)$ | $(1,361)$ | $(1,444)$ | $(1,031)$ |
| Memo: Effective Tax Rate | 34.0\% | 34.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% |
| Tax-Effected EBIT | \$2,424 | \$2,680 | \$3,486 | \$3,784 | \$4,225 | \$4,538 | \$4,830 | \$5,121 | \$5,432 | \$3,877 |
| Plus: Depreciation \& Amortization | 1,255 | 1,370 | 1,540 | 1,605 | 1,764 | 1,930 | 2,093 | 2,249 | 2,417 | 4,384 |
| Less: Change in NWC | (910) | 1,885 | (241) | 456 | 527 | 552 | 541 | 518 | 557 | 557 |
| Less: Capital Expenditures | $(2,649)$ | $(2,502)$ | $(2,660)$ | $(2,911)$ | $(3,201)$ | $(3,502)$ | $(3,797)$ | $(4,080)$ | $(4,384)$ | $(4,384)$ |
| Unlevered Free Cash Flows | \$120 | \$3,433 | \$2,125 | \$2,933 | \$3,316 | \$3,518 | \$3,667 | \$3,808 | \$4,020 | \$4,434 |


| Memo: Net Working Capital Calculation |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Accounts Receivable | 1,252 | 1,432 | 1,534 | 1,679 | 1,846 | 2,020 | 2,190 | 2,354 | 2,529 |
| Inventories | 8,969 | 9,834 | 10,638 | 11,645 | 12,802 | 14,009 | 15,190 | 16,322 | 17,538 |
| Other Current Assets | 268 | 272 | 274 | 300 | 330 | 361 | 392 | 421 | 453 |
| Current Assets | \$10,489 | \$11,538 | \$12,446 | \$13,624 | \$14,978 | \$16,390 | \$17,772 | \$19,096 | \$20,519 |
| Less: Accounts payable | $(7,612)$ | $(9,608)$ | $(10,177)$ | $(11,144)$ | $(12,258)$ | $(13,423)$ | $(14,564)$ | $(15,656)$ | $(16,830)$ |
| Less: Accrued Salaries and Benefits | $(2,629)$ | $(2,703)$ | $(2,944)$ | $(3,223)$ | $(3,543)$ | $(3,877)$ | $(4,204)$ | $(4,517)$ | $(4,854)$ |
| Less:Accrued Member Rewards | (869) | (961) | (855) | (855) | (856) | (856) | (857) | (857) | (858) |
| Less: Deferred Membership Fees | $(1,362)$ | $(1,498)$ | $(1,580)$ | $(1,729)$ | $(1,901)$ | $(2,080)$ | $(2,255)$ | $(2,423)$ | $(2,604)$ |
| Less: Other Current Liabilities | $(2,003)$ | $(2,639)$ | $(2,520)$ | $(2,758)$ | $(3,032)$ | $(3,318)$ | $(3,598)$ | $(3,866)$ | $(4,154)$ |
| Net Working Capital | $(\$ 3,986)$ | $(\$ 5,871)$ | $(\$ 5,630)$ | $(\$ 6,085)$ | $(\$ 6,612)$ | $(\$ 7,164)$ | $(\$ 7,706)$ | $(\$ 8,223)$ | $(\$ 8,780)$ |


| Discount | Perp. | Discounted Cash Flows |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate | Growth |  | 1 | 2 | 3 | 4 | 5 | 6 |
| 7.6\% | 2.00\% | 7.63\% | \$2,725 | \$2,862 | \$2,821 | \$2,732 | \$2,636 | \$2,586 |
| 8.1\% | 2.50\% | 8.13\% | 2,713 | 2,836 | 2,782 | 2,682 | 2,576 | 2,515 |
| 8.6\% | 3.00\% | 8.63\% | 2,700 | 2,810 | 2,744 | 2,633 | 2,517 | 2,446 |

Step $0.50 \% \quad 0.50 \%$

## Appendix

## Appendix B. Comparable Company Data

Costco Wholesale Corp

| Comparable Company Analysis |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name | Ticker | Mkt Cap (\$M) P/E |  | EPS FY1 (\$) | P/B | BPS FY1 | EV / EBITDA | EBITDA FY1 (\$M) |
| WAL-MART STORES INC | WMT US | 253,819 | 19.51x | 5.01 | $3.26 x$ | 27.83 | 9.01x | 33,241.49 |
| TARGET CORP | TGT US | 38,535 | 15.18x | 5.28 | 3.31x | 22.46 | 7.39x | 6,618.64 |
| DOLLAR GENERAL CORP | DG US | 25,856 | 20.99x | 6.17 | $4.22 x$ | 27.33 | 11.03x | 2,669.70 |
| DOLLAR TREE INC | DLTR US | 23,052 | 20.41x | 5.79 | 3.19x | 36.95 | 10.22x | 2,659.86 |
| FIVE BELOW | FIVE US | 4,174 | 40.89x | 2.52 | 9.10x | 9.56 | 17.78x | 228.61 |
| BIG LOTS INC | BIG US | 1,773 | 9.46x | 4.96 | 2.63 x | 17.95 |  | 403.73 |
| DOLLARAMA INC | DOLCN | 12,927 | 32.59x | 4.17 |  | (2.21) | 20.23x | 714.97 |
| KROGER CO | KR US | 20,550 | 14.19x | 2.10 | 2.98x | 9.33 |  | 5,411.39 |
| AMAZON.COM INC | AMZN US | 692,656 | 313.82x | 17.54 | 24.99x | 79.50 | 26.56x | 28,649.27 |
|  | Mean | 89.5 | 44.78x | 5.07 | 5.87x | 20.94 | 13.41x | 8,320.26 |
|  | Mean ex. AMZN | 47.6 | 21.65x | 4.50 | 4.10x | 18.65 | 12.61x | 6,493.55 |
|  | Median | 23.1 | 20.41x | 5.01 | 3.28x | 22.46 | 11.03x | 2,669.70 |
| COSTCO WHOLESALE CORP | COST US | 82,898 | 28.96x | 7.39 | 7.05x | 31.88 | 13.84x | 6,236.66 |

COST Shrs. Out. (Million)
438.6

## Appendix C. WACC Calculation

| WACC Calculation |  |
| :--- | ---: |
|  |  |
| Current Stock Price | $\$ 188.91$ |
| Book Debt Value | 6,666 |
| Market Equity Value | $83,297,409$ |
| Debt + Equity | $83,304,075$ |
| US 10 year (Rf) | $2.25 \%$ |
| Tax rate | $34 \%$ |
| Return on the Market | $8 \%$ |
| Beta | 1.023 |
| Cost of Equity | $8.13 \%$ |
| Cost of Debt | $2.01 \%$ |
|  |  |
| WACC | $\mathbf{8 . 1 3 \%}$ |

## Appendix

## Appendix D. DCF Input Data

## Costco Wholesale Corp

Financial Projections
(Dollars in Millions, Except Per Share Amounts)

|  | Projections |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fiscal Year Ending December 31 |  |  |  |  |  |  |  |  |  |  |
|  | 2014A | 2015A | 2016A | 2017A | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E | 2024E |
| Total Revenues | \$112,640 | \$116,199 | \$118,719 | \$129,025 | \$139,978 | \$153,230 | \$168,453 | \$184,331 | \$199,867 | \$214,758 | \$230,761 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Net Sales | \$110,212 | \$113,666 | \$116,073 | \$126,172 | \$136,897 | \$149,902 | \$164,892 | \$180,557 | \$195,904 | \$210,597 | \$226,392 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Membership Fees | \$2,428 | \$2,533 | \$2,646 | \$2,853 | \$3,081 | \$3,328 | \$3,561 | \$3,774 | \$3,963 | \$4,161 | \$4,369 |


| Total Costs of Revenues | $(\$ 98,458)$ | $(\$ 101,065)$ | $(\$ 102,901)$ | $(\$ 111,882)$ | $(\$ 121,427)$ | $(\$ 132,963)$ | $(\$ 146,259)$ | $(\$ 160,154)$ | $(\$ 173,767)$ | $(\$ 186,799)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Merchandise Costs | $(\$ 200,809)$ |  |  |  |  |  |  |  |  |  |
| SG\&A | $(\$ 98,458)$ | $(\$ 101,065)$ | $(\$ 102,901)$ | $(\$ 111,882)$ | $(\$ 121,427)$ | $(\$ 132,963)$ | $(\$ 146,259)$ | $(\$ 160,154)$ | $(\$ 173,767)$ | $(\$ 186,799)$ |
|  | $(\$ 200,809)$ |  |  |  |  |  |  |  |  |  |
| Other Nonoperating Income and (Expenses) | $(\$ 10,899)$ | $(\$ 11,445)$ | $(\$ 12,068)$ | $(\$ 12,950)$ | $(\$ 13,998)$ | $(\$ 15,323)$ | $(\$ 16,845)$ | $(\$ 18,433)$ | $(\$ 19,987)$ | $(\$ 21,476)$ |


| Other Current Assets | \$669 | \$228 | \$268 | \$272 | \$274 | \$300 | \$330 | \$361 | \$392 | \$421 | \$453 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Accounts Payable | \$8,491 | \$9,011 | \$7,612 | \$9,608 | \$10,177 | \$11,144 | \$12,258 | \$13,423 | \$14,564 | \$15,656 | \$16,830 |
| Accrued Salaries, Benefits | \$2,231 | \$2,468 | \$2,629 | \$2,703 | \$2,944 | \$3,223 | \$3,543 | \$3,877 | \$4,204 | \$4,517 | \$4,854 |
| Accrued member rewards | \$773 | \$813 | \$869 | \$961 | \$855 | \$855 | \$856 | \$856 | \$857 | \$857 | \$858 |
| Deferred Membership Fees | \$1,254 | \$1,269 | \$1,362 | \$1,498 | \$1,580 | \$1,729 | \$1,901 | \$2,080 | \$2,255 | \$2,423 | \$2,604 |
| Other Current Liabilities | \$1,221 | \$1,695 | \$2,003 | \$2,639 | \$2,520 | \$2,758 | \$3,032 | \$3,318 | \$3,598 | \$3,866 | \$4,154 |
| Depreciation, Depletion and Amortization | \$1,029 | \$1,127 | \$1,255 | \$1,370 | \$1,540 | \$1,605 | \$1,764 | \$1,930 | \$2,093 | \$2,249 | \$2,417 |
| Capex | $(\$ 1,993)$ | (\$2,393) | (\$2,649) | (\$2,502) | $(\$ 2,660)$ | $(\$ 2,911)$ | $(\$ 3,201)$ | (\$3,502) | $(\$ 3,797)$ | $(\$ 4,080)$ | (\$4,384) |

## Appendix

## Appendix E. Historical Income Statement

| COSTCO WHOLESALE CORP (COST) CashFlowFlag INCOME STATEMENT |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| USD in millions except per share data. | 2013-08 | 2014-08 | 2015-08 | 2016-08 | 2017-08 | TTM |
| Revenue | 105,156 | 112,640 | 116,199 | 118,719 | 129,025 | 135,964 |
| Cost of revenue | 91,948 | 98,458 | 101,065 | 102,901 | 111,882 | 118,017 |
| Gross profit | 13,208 | 14,182 | 15,134 | 15,818 | 17,143 | 17,947 |
| Operating expenses |  |  |  |  |  |  |
| Sales, General and administrative | 10,104 | 10,899 | 11,445 | 12,068 | 12,950 | 13,488 |
| Other operating expenses | 51 | 63 | 65 | 78 | 82 | 74 |
| Total operating expenses | 10,155 | 10,962 | 11,510 | 12,146 | 13,032 | 13,562 |
| Operating income | 3,053 | 3,220 | 3,624 | 3,672 | 4,111 | 4,385 |
| Interest Expense | 99 | 113 | 124 | 133 | 134 | 148 |
| Other income (expense) | 97 | 90 | 104 | 80 | 62 | 69 |
| Income before income taxes | 3,051 | 3,197 | 3,604 | 3,619 | 4,039 | 4,306 |
| Provision for income taxes | 990 | 1,109 | 1,195 | 1,243 | 1,325 | 1,304 |
| Minority interest | 22 | 30 | 32 | 26 | 35 | 42 |
| Other income | 22 | 30 | 32 | 26 | 35 | 42 |
| Net income from continuing operations | 2,061 | 2,088 | 2,409 | 2,376 | 2,714 | 3,002 |
| Other | (22) | (30) | (32) | (26) | (35) | (42) |
| Net income | 2,039 | 2,058 | 2,377 | 2,350 | 2,679 | 2,960 |
| Net income available to common shareholders | 2,039 | 2,058 | 2,377 | 2,350 | 2,679 | 2,960 |
| Earnings per share |  |  |  |  |  |  |
| Basic | 5 | 5 | 5 | 5 | 6 | 7 |
| Diluted | 5 | 5 | 5 | 5 | 6 | 7 |
| Weighted average shares outstanding |  |  |  |  |  |  |
| Basic | 436 | 439 | 439 | 439 | 438 | 438 |
| Diluted | 441 | 442 | 443 | 441 | 441 | 441 |
| EBITDA | 4,096 | 4,339 | 4,855 | 5,007 | 5,543 | 5,894 |

## Appendix

## Appendix F. Historical Balance Sheet

| COSTCO WHOLESALE CORP (COST) BALANCE SHEET |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| USD in millions except per share data. | 2013-08 | 2014-08 | 2015-08 | 2016-08 | 2017-08 |
| Assets |  |  |  |  |  |
| Current assets |  |  |  |  |  |
| Cash and cash equivalents | 4,644 | 5,738 | 4,801 | 3,379 | 4,546 |
| Short-term investments | 1,480 | 1,577 | 1,618 | 1,350 | 1,233 |
| Total cash | 6,124 | 7,315 | 6,419 | 4,729 | 5,779 |
| Receivables | 1,201 | 1,148 | 1,224 | 1,252 | 1,432 |
| Inventories | 7,894 | 8,456 | 8,908 | 8,969 | 9,834 |
| Deferred income taxes | 621 | 669 | 748 |  |  |
| Other current assets |  |  |  | 268 | 272 |
| Total current assets | 15,840 | 17,588 | 17,299 | 15,218 | 17,317 |
| Non-current assets |  |  |  |  |  |
| Property, plant and equipment |  |  |  |  |  |
| Land | 4,409 | 4,716 | 4,961 | 5,395 | 5,690 |
| Fixtures and equipment | 4,472 | 4,845 | 5,274 | 6,077 | 6,681 |
| Other properties | 12,141 | 13,114 | 13,429 | 14,695 | 15,970 |
| Property and equipment, at cost | 21,022 | 22,675 | 23,664 | 26,167 | 28,341 |
| Accumulated Depreciation | $(7,141)$ | $(7,845)$ | $(8,263)$ | $(9,124)$ | $(10,180)$ |
| Property, plant and equipment, net | 13,881 | 14,830 | 15,401 | 17,043 | 18,161 |
| Goodwill | 63 |  |  |  |  |
| Other long-term assets | 499 | 606 | 740 | 902 | 869 |
| Total non-current assets | 14,443 | 15,436 | 16,141 | 17,945 | 19,030 |
| Total assets | 30,283 | 33,024 | 33,440 | 33,163 | 36,347 |
| Liabilities and stockholders' equity |  |  |  |  |  |
| Liabilities |  |  |  |  |  |
| Current liabilities |  |  |  |  |  |
| Short-term debt |  |  | 1,283 | 1,100 | 86 |
| Accounts payable | 7,872 | 8,491 | 9,011 | 7,612 | 9,608 |
| Deferred income taxes | 77 | 136 |  |  |  |
| Accrued liabilities | 1,092 | 1,215 | 1,304 | 1,401 | 961 |
| Other current liabilities | 4,216 | 4,570 | 4,942 | 5,462 | 6,840 |
| Total current liabilities | 13,257 | 14,412 | 16,540 | 15,575 | 17,495 |
| Non-current liabilities |  |  |  |  |  |
| Long-term debt | 4,998 | 5,093 | 4,864 | 4,061 | 6,573 |
| Deferred taxes liabilities | 1,016 | 1,004 | 1,193 |  |  |
| Minority interest | 179 | 212 | 226 | 253 | 301 |
| Other long-term liabilities | (179) | (212) | (226) | 942 | 899 |
| Total non-current liabilities | 6,014 | 6,097 | 6,057 | 5,256 | 7,773 |
| Total liabilities | 19,271 | 20,509 | 22,597 | 20,831 | 25,268 |
| Stockholders' equity |  |  |  |  |  |
| Common stock | 2 | 2 | 2 | 2 | 4 |
| Additional paid-in capital | 4,670 | 4,919 | 5,218 | 5,490 | 5,800 |
| Retained earnings | 6,283 | 7,458 | 6,518 | 7,686 | 5,988 |
| Accumulated other comprehensive income | (122) | (76) | $(1,121)$ | $(1,099)$ | $(1,014)$ |
| Total stockholders' equity | 10,833 | 12,303 | 10,617 | 12,079 | 10,778 |
| Total liabilities and stockholders' equity | 30,104 | 32,812 | 33,214 | 32,910 | 36,046 |

## Appendix

## Appendix G. Historical Statement of Cash Flow

| COSTCO WHOLESALE CORP (COST) Statement of CASH FLOW Fiscal year ends in August. USD in millions except per share data. | 2013-08 | 2014-08 | 2015-08 | 2016-08 | 2017-08 | TTM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash Flows From Operating Activities |  |  |  |  |  |  |
| Depreciation \& amortization | 946 | 1,029 | 1,127 | 1,255 | 1,370 | 1,440 |
| Deferred income taxes | 7 | (63) | (101) | 269 | (29) | (138) |
| Stock based compensation | 285 | 327 | 394 | 459 | 514 | 538 |
| Inventory | (898) | (563) | (890) | (25) | (894) | (961) |
| Accounts payable | 718 | 529 | 880 | $(1,532)$ | 2,258 | 1,165 |
| Other working capital | 386 | 699 | 557 | 547 | 807 | 464 |
| Other non-cash items | 1,993 | 2,026 | 2,318 | 2,319 | 2,700 | 3,047 |
| Net cash provided by operating activities | 3,437 | 3,984 | 4,285 | 3,292 | 6,726 | 5,555 |
| Cash Flows From Investing Activities |  |  |  |  |  |  |
| Investments in property, plant, and equipment | $(2,083)$ | $(1,993)$ | $(2,393)$ | $(2,649)$ | $(2,502)$ | $(2,647)$ |
| Purchases of investments | $(2,572)$ | $(2,503)$ | $(1,501)$ | $(1,432)$ | $(1,279)$ | $(1,061)$ |
| Sales/Maturities of investments | 2,385 | 2,406 | 1,434 | 1,709 | 1,385 | 1,239 |
| Other investing charges | 19 | (3) | (20) | 27 | 30 | (3) |
| Net cash used for investing activities | $(2,251)$ | $(2,093)$ | $(2,480)$ | $(2,345)$ | $(2,366)$ | $(2,472)$ |
| Cash Flows From Financing Activities |  |  |  |  |  |  |
| Short-term borrowing | (31) | 61 | (45) | 81 | (236) | 3 |
| Long-term debt issued | 3,717 | 117 | 1,125 | 185 | 3,782 |  |
| Long-term debt repayment |  |  |  | $(1,288)$ | $(2,200)$ | $(2,258)$ |
| Excess tax benefit from stock based compensation | 61 | 84 | 86 | 74 | 38 |  |
| Repurchases of treasury stock | (36) | (334) | (481) | (486) | (469) | (463) |
| Cash dividends paid | $(3,560)$ | (584) | $(2,865)$ | (746) | $(3,904)$ | $(3,926)$ |
| Other financing activities | (107) | (130) | (144) | (239) | (229) | 3,503 |
| Net cash provided by (used for) financing activities | 44 | (786) | $(2,324)$ | $(2,419)$ | $(3,218)$ | $(3,141)$ |
| Effect of exchange rate changes | (114) | (11) | (418) | 50 | 25 | 95 |
| Net change in cash | 1,116 | 1,094 | (937) | $(1,422)$ | 1,167 | 37 |
| Cash at beginning of period | 3,528 | 4,644 | 5,738 | 4,801 | 3,379 | 4,744 |
| Cash at end of period | 4,644 | 5,738 | 4,801 | 3,379 | 4,546 | 4,781 |
| Free Cash Flow |  |  |  |  |  |  |
| Operating cash flow | 3,437 | 3,984 | 4,285 | 3,292 | 6,726 | 5,555 |
| Capital expenditure | $(2,083)$ | $(1,993)$ | $(2,393)$ | $(2,649)$ | $(2,502)$ | $(2,647)$ |
| Free cash flow | 1,354 | 1,991 | 1,892 | 643 | 4,224 | 2,908 |
| Supplemental schedule of cash flow data |  |  |  |  |  |  |
| Cash paid for income taxes | 1,001 | 869 | 1,186 | 953 | 1,185 | 1,388 |
| Cash paid for interest | 86 | 109 | 117 | 123 | 131 | 155 |

