

# Krause Fund Research Fall 2018

Consumer Staples



Costco Wholesale (COST)

November 8, 2018

Recommendation: **HOLD**

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**Current Price:** \$238.70  
**Target Price Range:** \$230-240

## COSTCO COST-NO

**Company Overview**

Costco Wholesale (COST) operates 762 membership warehouses in the United States, Canada, Puerto Rico, the United Kingdom, Mexico and Spain. Costco prides itself on offering a low maintenance shopping experience with consistently low prices on a number of name brand and private label products, such as its Kirkland Signature brand.

**Stock Performance Highlights**

52-week Range \$167.06 - \$245.16  
Beta 1.0546

**Share Highlights**

Market Capitalization \$102.852b  
Shares Outstanding 438.52m  
EPS \$7.15  
P/E Ratio (TTM) 33.10  
Dividend Yield 0.89%  
Dividend Payout Ratio 29.93%

**Company Performance Highlights**

ROA 8.24%  
ROE 24.26%  
Operating Margin 3.24%  
Net Profit Margin 2.30%

**Financial Ratios**

Current Ratio 1.02  
Debt to Equity 2.12  
Total Asset Turnover 3.59

We recommend a hold rating for Costco Wholesale because of the stability of the Consumer Staples Sector, specifically due to the necessity of the food and staples retailing industry. Costco's historically consistent returns are expected to continue and mimic the defensive nature of the sector.

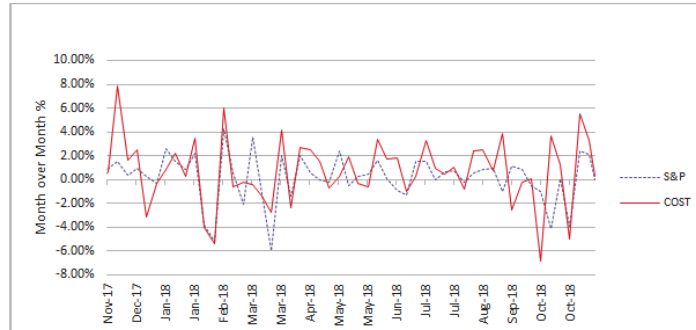
**Drivers of Thesis**

- Costco Wholesale is predicted to remain steady in the coming years as the economy grows. We believe that Costco will outperform compared to its competitors due to the company's unique market strategy.
- We forecast net sales to increase by 7.6% while membership revenues will grow 13% year over year, which is a meaningful driver to its overall bottom line.
- The increasing consumer confidence provides Costco with a unique advantage to further increase its membership revenue.
- Costco has continually proven to not only outperform its competitors but also maintain positive growth rates even with the rise of Amazon.

**Risks of Thesis**

- We believe Costco's low gross margins pose a threat to the company's overall profits if sales were to decrease significantly.
- The industry will not provide high market returns when there is healthy market growth like we are currently seeing.
- The rising competition in the food and staples industry is growing at a much faster rate from other non-traditional retailers. This is putting pressure on Costco to modernize and expand its technological presence.

**One Year Stock Performance**



(Source: Yahoo Finance)

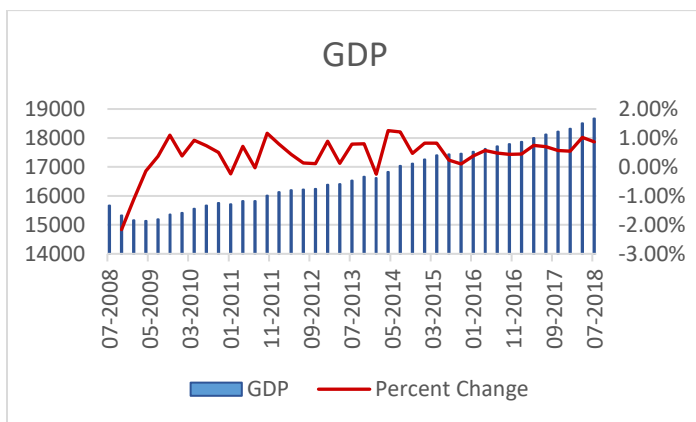
## EXECUTIVE SUMMARY

Our team of analysts is issuing a HOLD rating for Costco Wholesale Corporation (COST). We arrived at this conclusion after taking into account key economic, industry and company specific factors. We expect Costco to continue to increase its stable returns and increase its membership revenue; however, we do not believe that the company will grow faster than this relatively stable industry, which is growing at 7.75%. <sup>xvi</sup>

## ECONOMIC ANALYSIS

### Gross Domestic Product (GDP)

Gross Domestic Product is the total value of goods and services produced in the United States during a specified time period. With an increasing GDP, it signals that the economy as a whole is expanding. This also can be an indicator that consumer spending is increasing, which grows the sector. GDP is particularly important when analyzing the Consumer Staples sector because 70% of the GDP equation is determined by personal consumption expenditures, or consumer spending. <sup>vlix</sup> GDP is currently at 3.5% as of third quarter 2018. This has decreased from 4.2% as of the prior quarter. <sup>xliv</sup>



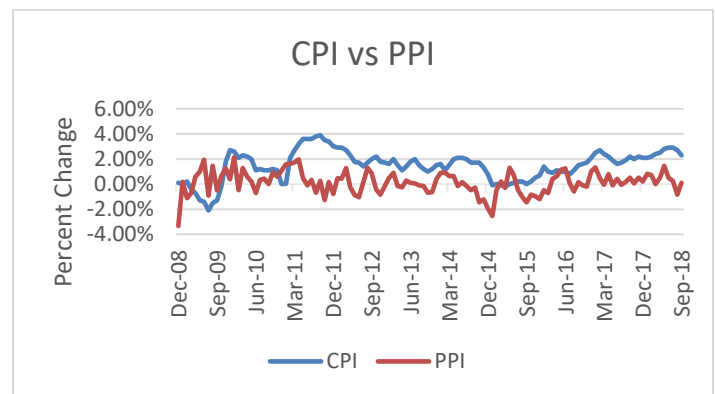
(Source: St. Louis Fed)

In the short-term, we forecast an increase of the growth rate of 0.3%, from 3.5 to 3.8% in the next quarter. In the next five years, we expect the GDP growth rate to decrease to 3.0%. With the current geopolitical climate, we can foresee a continuous growth with corrections after strong periods.

Consumer spending and general stock performance continue to show correlation throughout history and is expected to in the future. A strong GDP will increase consumer spending, thus further strengthening the overall economy. With the expected continuous growth, we will see a healthy unemployment rate and inflation rate.

### Inflation

Inflation is the rate at which prices are rising as it relates to purchasing power. With rising inflation, the prices for goods and services become more expensive and the value of money in consumers' pockets decreases. Inflation is an important indicator to consider when valuing the Consumer Staples industry because in order for this sector to prosper, it requires a certain level of inflation. <sup>vlix</sup> The inflation rate is currently at 2.9%, however, we are forecasting inflation to drop slightly to 2.5%. A slightly lower rate will help the consumer staples sector continue to grow because it gives consumers more incentive to purchase products. Two ways to measure inflation, at the retail level, are the Consumer Price Index and Producer Price Index. <sup>xix</sup>



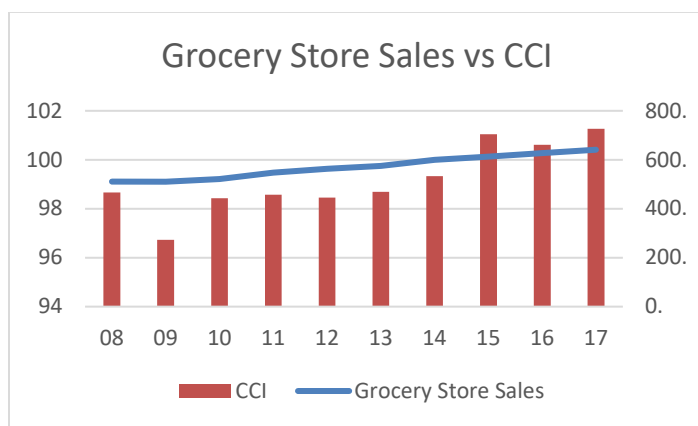
(Source: BLS)

The Consumer Price Index (CPI) is the change of the average price of a fixed amount of consumer products. The change in this basket of products represents the consumer rate of inflation and shows how prices are affecting consumers in the market. CPI is an important indicator for the Consumer Staples sector because this sector holds many essentials for consumers. The current CPI growth percent change is a positive 2.3% over a 12 month period as of October 2018. We can see that the CPI percentage change is increasing from 2017 by 0.1%. An increasing CPI indicates that inflation is increasing and the goods and services cost more from the consumer perspective.

The Producer Price Index (PPI) measures the average change in prices over time for a fixed set of consumer products from the producer’s perspective. The PPI is especially important to the Consumer Staples sector because the more the producers are experiencing price increases, the more it will trickle down to the consumer’s buying price. The current PPI is at 204.3, which is consistent with the CPI, as well as inflation. <sup>vii</sup> In the short term, we forecast the PPI to decrease slightly to 203.0, due to the decrease in inflation. While this decrease is a measure of inflation, the impact is minimal to consumers, as they will buy the products regardless. In the long run, however, we forecast PPI to steady out.

### **Consumer Confidence Survey**

The Consumer Confidence Survey provides an insight into consumers and their overall optimism regarding the economy. A higher consumer confidence index correlates with an increase in consumer spending thus higher sales. Consumer Confidence is currently at 137.5, as of October 2018, which is up from the previous month. <sup>xiv</sup> We can assume that consumer confidence will continue to increase, primarily because of employment growth. In the short term, we predict the CCI remaining around 139.2. In the long run, we forecast the CCI to continue to grow positively as well, following the growth of the economy.

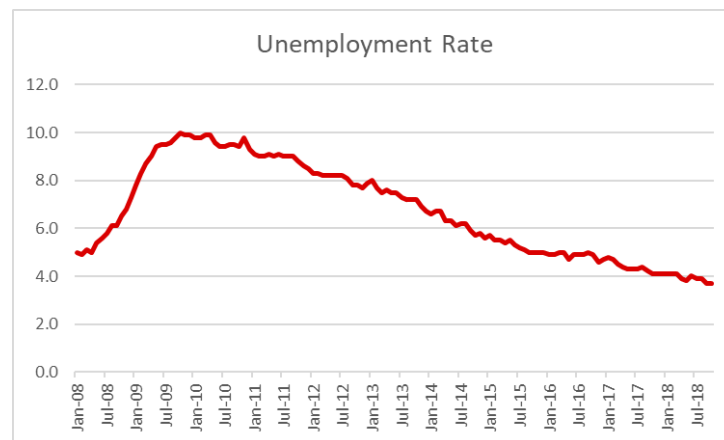


(Source: Statista, OECD Data)

### **Unemployment**

As the unemployment rate decreases in the U.S., consumers are able to buy more consumer goods, higher quality name brands and higher margin products. However, due to the nature of consumer staples, we believe the unemployment rate has little to no effect on the outcome of the overall industry. If consumer wages are decreasing and unemployment is

rising, consumers will opt to buy cheaper and lower margin products. <sup>li</sup> Currently, as of October 2018, it held constant at 3.7%, and we saw little change in the number of unemployed people.<sup>ix</sup> We have seen a steady decrease in the unemployment rate since 2008. In the short term, we foresee the unemployment rate will continue to fall slightly, down to 3.6%. This is due to consistent growth in overall company earnings and an increased number of job opportunities. Historically, this low rate has been unsustainable and we predict the market will correct itself in the next 12-18 months and rise roughly to 4.2%.



(Source: BLS)

### **Tariffs & Trade**

Trade tensions with Mexico, Canada and China could negatively impact the economy, as we are seeing prices rise for inputs such as soybeans, corn and aluminum. These price increases will be absorbed by the consumer through increased prices of products. The Consumer Staples sector will be affected directly due to the increased cost of aluminum, which will significantly impact the cost of beverages. Additionally, the tariff on steel will cause the cost of development to increase as price of materials increase, like the steel beams needed to maintain the structural integrity of the buildings for certain companies like Costco.

Historically, we have not seen this type of trade constriction. The United States followed a free trade agreement with other countries, allowing for tariffs and trade have a limited impact on the market. We believe that the markets have responded and reacted to this news and have adjusted accordingly. In the short term, we believe that tariffs will continue to impact the market as more are put in place. However, in the long

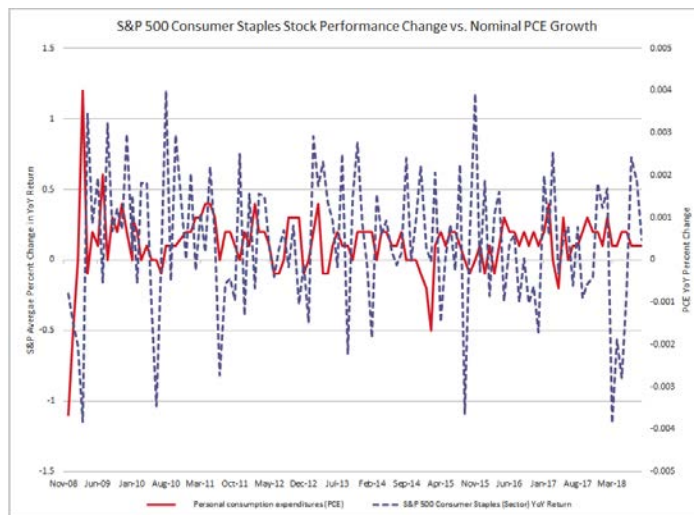
run, we foresee the tariffs not continuing, thus not impacting the market.

### **Interest Rates**

The federal funds rate is the benchmark for lending rates and influences most aspects of the economy including inflation, growth, and unemployment. Recently, the FOMC has raised interest rates from 2.0% to 2.25%, thereby increasing the cost of borrowing. <sup>liv</sup> They are expected to continue to increase their rates to combat inflation and reduce the current money supply.

### **Capital Market Outlook**

Based on our research of economic variables impacting the economic sector, we believe that companies in this sector will see positive returns and experience slight moderate growth. Consumer Staples, as a sector, is not as volatile and is defensive in nature, thus we believe that this trend will continue well into the future. <sup>xxxiv</sup>



(Source: Yahoo! Finance)

Historically, this sector is not as sensitive to market volatility, therefore we do not foresee a large impact from an economic downturn or boom, as the products from this sector are consumer necessities.

## **INDUSTRY ANALYSIS**

### **Industry Analysis**

The food and staples retailing industry within the Consumer Staples sector is made up of drug retail, food distributors, food retail and hypermarkets & supercenters. Product lines within this include grocery stores, pharmacies, convenience stores and consumer

goods companies. Hypermarkets & supercenters make up 44% of the total industry, with food retail following behind at 39%. <sup>vlix</sup>

### **Industry Trends**

#### **New Initiatives**

##### *Online Grocery:*

As consumers in the United States grow more comfortable with technology, online grocery shopping is becoming more prominent. We see this with the growth and popularity of Amazon.com and Walmart online grocery. The online grocery industry has grown at a rate of 13.6% between the years of 2013 and 2018 and has a revenue stream of 25.7 billion per year. <sup>lv</sup>

As of 2016, Costco began to offer online grocery shopping and a two-day or same-day delivery service, depending on location and the types of products being ordered in the United States. <sup>lvi</sup> This could lead to a growth in sales or an increase in number of memberships due to the ease and demand for online grocery and delivery.

##### *Health Food Market:*

Consumers' demand for healthy and environmentally friendly foods increased by 6.4% in 2017 and we foresee this trend continuing. Organic and healthy food alternatives made up 5.5% of all food sold in the United States in 2017. <sup>xxxix</sup> Food and staples retailing companies are adapting to this trend by increasing the amount of fresh and healthy foods they provide to consumers, as much of the shopping for these healthy foods is occurring in traditional grocery stores. <sup>iii</sup>

### **Porter's Five Forces**

#### *Threat of Competition: High*

The Food and Staples retailing sub industry is competitive due to the limited homogenous nature, leaving retailers to compete through price, promotion and specialized product offerings. Retailers are now differentiating themselves by offering private label brands to entice consumers looking for affordable options, like Costco's Kirkland brand. Mass and discounted retailers hold a position of power within this subindustry as they leverage economies of scale. Moreover, consumers are turning towards mass and discounted retailers, like Walmart and Costco, for their efficiency and reliability. <sup>viii</sup>



### *Threat of New Entrants: Moderate*

This industry is moderately easy to enter due to its large fragmentation. This is seen through the three largest retailers only accounting for a third of the revenue in the industry. However, the large portion of invested capital required for start-up proves difficult to those who cannot secure the proper financing. Other barriers to entry include the increasing cost of operation and pre-existing supplier relationships. There has been an increase in niche retailers who specialize in organic and gluten-free products. <sup>viii</sup>

### *Market Share based on Revenue*

<b>COST</b>	<b>13.1%</b>
<b>TGT</b>	<b>6.38%</b>
<b>WMT</b>	<b>5.4%</b>

(Source: CSI Market)

### *Threat of Substitutes: Moderate*

The threat of substitution for the industry as a whole is slightly moderate. There is no direct substitute for Food Retailing because it is a staple. Food and Staples Retailing is a necessity and people will not stray from the products themselves. The biggest threat of substitution is consumers' choice to eat at home versus eating away from home. <sup>xix</sup> In the last 12 months, there was a 2.6% increase in consumers eating away from home. <sup>viii</sup>

### *Bargaining Power of Suppliers: Moderate*

Within this industry, the bargaining power of supplier is moderate due to the number of suppliers in the market and a limited number of buyers. This power ratio proves beneficial to buyers because they are able to negotiate on price. Additionally, there is a high cost of switching suppliers, therefore making it more attractive to stay with the same supplier or supply chain. One exception to this principle is specialty food retailers. Their products come from locally sourced and organic suppliers which are costlier and less abundant. <sup>xviii</sup>

### *Bargaining Power of Buyers: Moderate*

Costco's buyers are made up of members who purchase the membership because they want bulk items at low prices. The members, as a group, have high bargaining power, whereas on an individual basis they are not as powerful. Costco cares about the membership complaints and listens to them, but the loss of individual members won't affect the bottom line.

### *Competitors:*

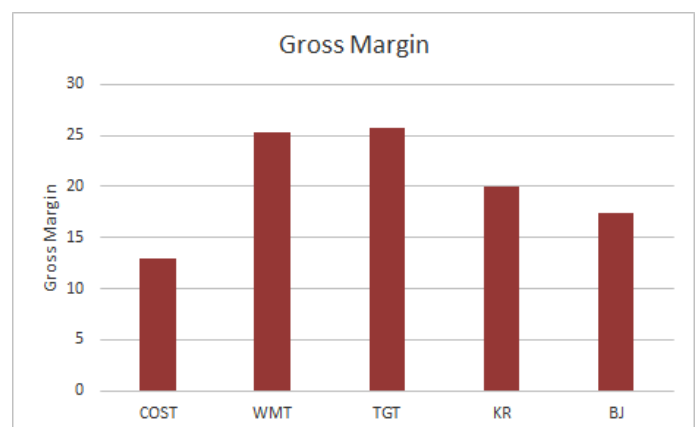
Current competitors in the food and staples retailing industry consist of late-stage mature firms. They are the companies that will see more growth opportunities and have less volatility with commodity prices. <sup>i</sup> Costco is unlike traditional wholesalers and retailers due to its profitable membership program that allows the company to bring in additional revenue while lowering its margins.

Based on the current macroeconomic variables in the United States and the specific factors impacting the Consumer Staples sector, we believe that companies in this sector will continue to provide positive returns

### *Gross Margin:*

Gross margin is important to consider when analyzing the food and staples retailing industry because in order to remain competitive, companies must find ways to lower their cost of goods sold in order to sell at the lowest price possible. Costco's gross margin as of FY 2018 was 13.01, which is relatively low in comparison to its top competitors. <sup>lvi</sup> It can be assumed that this low gross margin is due to Costco's low cost structure. In efforts to increase product turnover, Costco's gross margins are mainly linked to its membership fees.

We expect Costco's current downward trend of margins to continue into 2019 resulting in a 0.08% change, but ultimately increase in the following years as revenue grows.

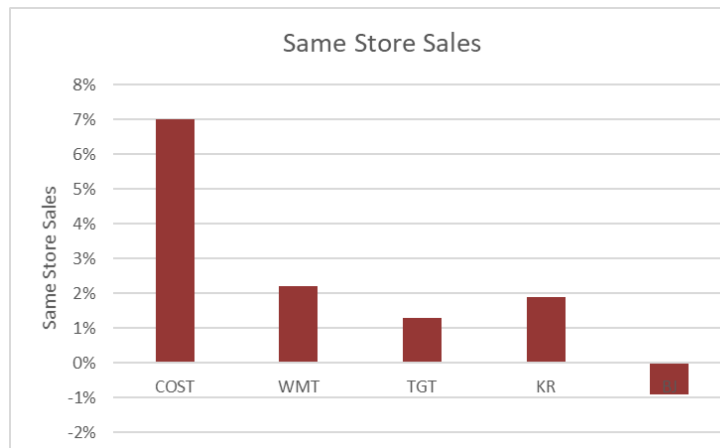


(Source: FactSet)

### *Same Store Sales:*

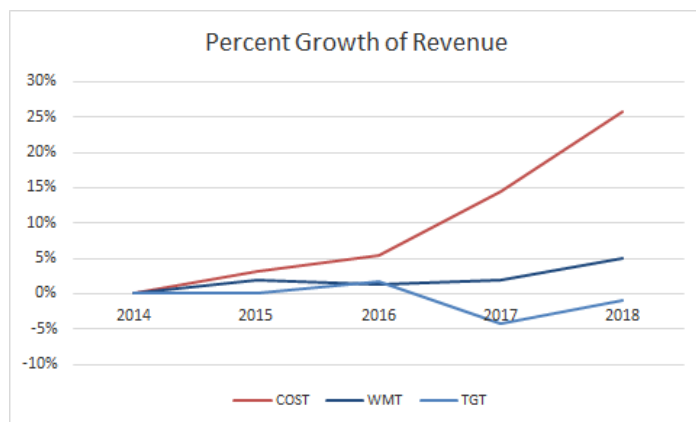
Same store sales evaluate a single store that has been opened within a year and that total dollar amount of sales. This percentage indicates the percentage

increase or decrease from a given time period. <sup>xl</sup> Costco has a higher percentage of same store sales compared to its top competitors. This major spike is attributed to Costco's low pricing model and heavy foot traffic. One of the main draws to Costco is the diversity within its offerings. Ranging from the food court to insurance to clothing, Costco is able to add product lines and business segments into the stores as the company sees demand. All of these factors increase not only the sheer number of people in its warehouses on any given day, but increase the same store sales.



(Source: FactSet)

Costco's primary competitors, including Walmart and Target, have a more traditional retail strategy and cannot compete with Costco's all-inclusive culture, which provides them with lower revenues.



(Source: FactSet)

### Key Investment Positives/Negatives

#### *Positives:*

The defensive nature of the Consumer Staples Sector will withstand the variability of the market. Further, the Food and Staples Retailing industry has grown 12.85% YTD, which is surpassing the S&P 500 YTD growth of 1.97%. <sup>xxv</sup> This is quite unusual when the

economy is exceeding expectations; however, with the large variability the market has seen in the last six months, this sector has remained consistent.

#### *Negatives:*

Historically, this sector has continuously underperformed during times of strong economic growth. With our current economic outlook, we foresee this sector to not continue to outperform the market, as it has currently both YTD and the past year.

## COMPANY ANALYSIS

### Business Description

Costco was originally founded under the name "Price Club", operating as a business to business supplier. After realizing that there was more money in the Business to Consumer realm, they rebranded and opened their first warehouse in Seattle, Washington in 1983. Costco became the first company to grow to \$3 billion sales in less than six years. <sup>xvi</sup>

Costco prides itself on having low maintenance membership warehouse operations that offer low prices on a selection of name brand and private label products, like Costco Signature Brand and Kirkland Signature. Costco is able to keep lower gross margins compared to its competitors and other retailers by having a high sales volume and a high inventory turnover. To do this, Costco carries around 4,000 SKU's (stock keeping units), as opposed to traditional retailers who typically carry close to 30,000 SKU's. <sup>lvi</sup>

### Marketing Strategy

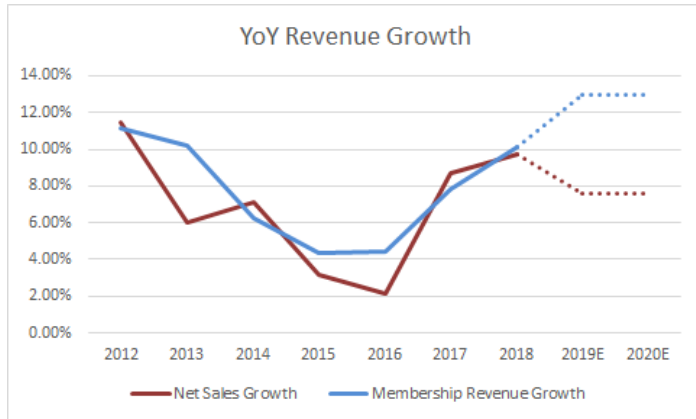
Costco's marketing strategy is to be a membership company first, and a retailer second. With Costco's permanently capped margins and lower SKU's, it is able to increase its buying power, thus lowering prices beyond competition.

### Corporate Strategy

#### *Membership:*

Costco offers two types of memberships: gold star and business. Gold star memberships are available to individuals, whereas business memberships are limited to businesses and members have the option to add on additional card holders. Gold star members have the option to upgrade to the executive membership for an additional \$60 per year. The cost of these two memberships is the same, at \$60 per year. <sup>lvi</sup>

Costco's main membership strategy is to increase its retention rate while increasing new annual memberships. Costco has been able to keep a consistent membership renewal rate of 87.3% in the United States. <sup>lvi</sup> This is slightly less in comparison to Amazon Prime's renewal rate, which is at 90%. <sup>xxix</sup>



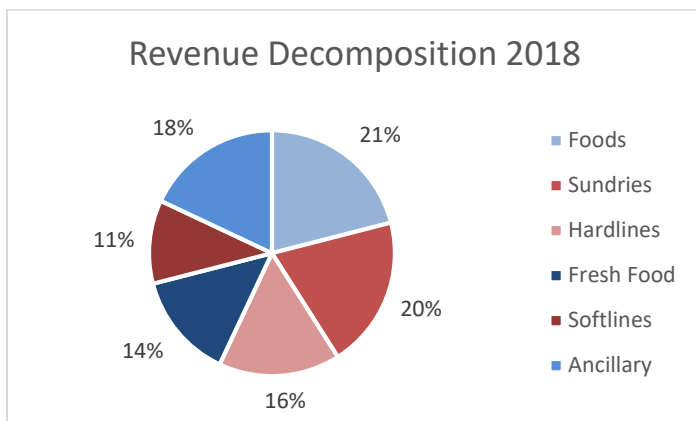
(Source: Costco 10-K)

Costco, in the past year, has increased its annual membership fees in the U.S and Canada for the Gold Star and Business by \$5, up to \$60/year. The Executive membership also increased from \$110 to \$120. With this increase in fees, we expect to see a spike in its profits. <sup>lvi</sup>

**Products & Markets**

*Product Lines:*

Costco Wholesale operates in a wide variety of product lines and segments, ranging from fresh foods to insurance offerings. Costco's six revenue segments include Ancillary, Soft Lines, Fresh Foods, Foods, Sundries, and Hardlines.



(Costco 2018 10-K)

*Ancillary*

Ancillary made up 18% of Costco's total revenue for Fiscal Year 2018, and we have seen stability in this segment line over the past 5 years. Ancillary consists primarily of its gasoline and pharmacy businesses. Costco operated 567 gas stations at the end of 2018. Additionally, Costco offers optical dispensing centers, food courts and hearing aid centers. Costco utilizes this segment to drive up the number of shoppers who frequent the stores.

*Food and Sundries*

Costco's food and sundries business is comprised of dry food, packaged food, grocery, snack food, alcoholic & nonalcoholic beverages, and cleaning supplies. This segment of revenue is a part of the core merchandising category and makes up 41% of its revenue. These two segments, along with fresh foods, are the most common among traditional retailers.

*Fresh Foods*

This segment is comprised of meat, produce, deli, and bakery and makes up 14% of total revenue. This, like Food and Sundries, is a part of the core merchandising category. Over the past five years, we have seen that Costco has slightly increased this segment to keep up with the trend of healthy and organic food.

*Product Market:*

Costco currently operates in 762 warehouses total, and plans to increase this number to 769 by the end of 2018. <sup>lvi</sup> Costco operated 235 warehouses internationally, with Canada being the biggest country at 100 warehouses. Costco's total warehouse square footage at the end of fiscal year 2018 was 110.7 million. In the United States this is comprised of 77.5 million square feet, followed by Canada at 13.9 million square feet. We expect this expansion to continue as the economy continues to grow.



Continental U.S. only

(Source: Red Lion Data)

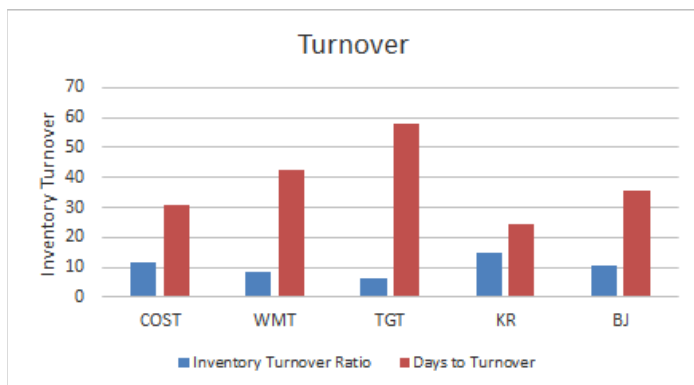
### Significant Customers:

Costco heavily relies on its United States and Canadian operations, which made up 87% and 83% of net sales and operating revenue in 2017, respectively. Furthermore, California sales make up 30% of net sales in the United States, making it the highest sales per state. California also has a higher volume of warehouses compared to other areas in the United States as it is heavily populated, therefore accounting for a higher percentage of net sales.

### Marketing Strategy:

Costco's marketing strategy is simple: sell fewer items to promote discounts and drive up sales. Costco is able to offer bulk and wholesale discounts consistently and continue to provide value. Costco has permanently capped its margins, so members can justify paying a premium for a membership. <sup>lvi</sup>

Costco is able to reduce costs through volume purchasing, minimum handling, and efficient distribution. With these lower merchandising costs, the company is able to maintain the low prices for its good quality and limited selection of a variety of merchandise. The rapid turnover rate and high sales prove that the unusually low gross margin operations are still able to turn a profit.



(Source: Factset)

Costco limits the sizes, models and colors of the items it carries to products that are in high demand and are usually selling fast. They do this at prices that are consistently lower than their competitors. Because of Costco's reputation of low prices for good, quality items, the company is able to attract shoppers without much promotion or advertisement.

### New Initiatives:

#### Trucking

Costco is developing its new initiative "Truck of the Future" intended to combat its transportation costs by maximizing efficacies in its delivery fleets by reducing body weight, which improves payload capacity. <sup>x</sup> As of December 2017, the company had field-tested these new vehicles that showed great potential for the coming years. Additionally, Costco's Business Delivery Centers have implemented procedures regarding its refrigerated trucks that will reduce carbon emissions by using shore power and eliminating diesel generators. This will reduce Costco's emission output by 70% as well as save money on fuel.

#### Alternative Method of Transportation

The Commute Trip Reduction has been in place for over 20 years in offices across the country and was put into place to promote ride sharing. The amount of vanpools has grown from 18 to 76. Additionally, Costco subsidizes employees who vanpool or purchase bus passes regularly, further promoting alternative methods of transportation. There are also eight electric vehicle charging stations that result in a reduction of 24,874 pounds of greenhouse gases. <sup>x</sup>

#### Merchandising Process and Suppliers

Costco has low manufacturing costs because it purchases most of its inventory directly from manufacturers and routes the inventory directly to each individual warehouse. This eliminates additional costs from multi-step distribution channels. Through logistical analysis of state weight restrictions and length oversize permits, Costco is able to reduce costs associated with transportation. Costco has been able to utilize specialized equipment for heavier loads and geographic barrier.

Costco has significant supplier relationships with Apple, P&G and Samsung Electronics, totaling 781 million, 700 million and 400 million respectively. Costco has distribution centers all over the United States, and the centers are not concentrated in one specific area. <sup>v</sup>

### Catalysts for Growth/Change

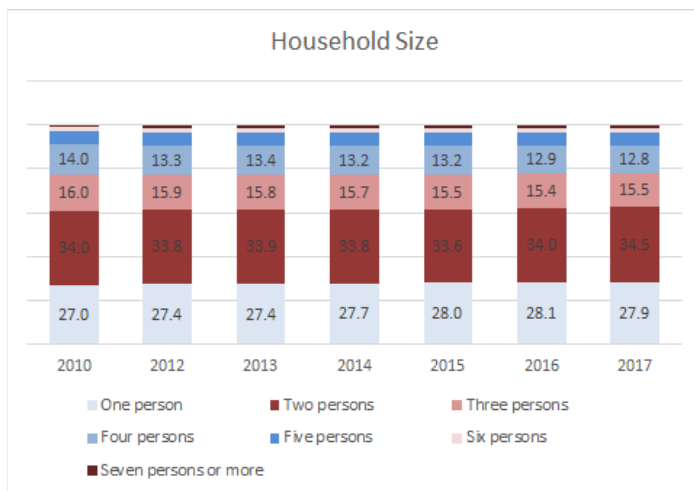
#### Private Label:

While a downturn market proves beneficial to the consumer staples sector, it would also act as a change catalyst for Costco. During hard times, consumers turn to off-brand products, like Kirkland. Consumers will



also be more apt to buy in bulk and therefore turn to Costco in efforts to save money. These changes will provide higher revenues and greater profits for Costco.

*Change in Household Size:*



(Source: Statista)

Historically, larger households are attracted to wholesalers like Costco as a way to get consumer staples at cheaper prices. That being said, we believe that households are going to either remain constant in size or decrease in the long term, as younger generations mature and start families of their own. In the short term, we don't predict a major change in the average household size. If household size were to decrease, Costco could see a decline in popularity, as families won't have to buy in bulk.

*Urban Concentration:*

Costco's concentration in urban areas could pose an issue to the company. That is, if people stop urbanizing and move to rural areas, Costco would need to change its business plan to grow in more rural markets to gain a more competitive approach.

**S.W.O.T Analysis:**

Strengths:

*Store Network:* Costco has stores across the United States and around the world, which allows further utilization of its operational synergies, such as its transportation network, distribution centers and ability to better serve its customers.

*Membership Services:* Costco offers services to members that traditional retailers do not offer like pharmacies, food courts, and insurance. Acting as a one stop shop, one membership at Costco can offer

more than what traditional grocers can offer. Since the membership fee is a flat annual rate, Costco is able to appeal to consumers through the low fee and encourage them to retain their membership year after year.

*Pricing Strategy:* Due to a low number of SKU's and capped margins, Costco has shown that it is able to consistently offer low prices for quality goods and services. While its gross margin is low, Costco is able to maintain profits through high turnover rates, membership renewals, and supplier relations.

Weakness:

*California Operations:* Costco is extremely dependent on its California operations, which make up 30% of its total United States revenue. This heavy dependency can lead to issues in the event of a natural disaster, such as earthquakes and wildfires. Costco would see severe damages to not only the warehouses, but also its overall revenue and sales. lvi

*New Stores:* Costco could have missed or poorly executed store opening plans that could decrease productivity and ultimately decrease the influx of revenue on opening day. Additionally, the company faces the risk of cannibalization when opening new stores that draw preexisting customers and sales away from original locations.

Opportunities:

*Private Labels:* Private labels are gaining momentum, as we have seen an increase in the demand for these products. Private label sales has grown 16.6% in 2016, and this trend is continuing into the future. Costco will be able to capitalize on this trend by expanding its Kirkland Signature brand.

*Growth in Rural Areas:* As cities start to face overcrowding issues, people may move away from those urban areas. This movement into rural areas would give Costco the opportunity to grow into different geographic locations and avoid cannibalization.

Threats:

*Laws and Regulations:* When expanding into new areas, Costco could face laws and regulations on zoning. Additionally, Costco could see push back from local citizens who do not support the idea of opening a new warehouse.

*Amazon.com:* Over the past few years, Amazon.com has increased 30% in net revenue, as of 2018. <sup>liii</sup> Amazon has become increasingly popular because it offers low-price and convenient products right to the consumer's door. Furthermore, Amazon recently acquired Whole Foods Market, indicating its initiation and growth into the food retailing industry. Amazon will continue to add new initiatives and opportunities for growth that traditional food retailers have never thought of.



(Source: Statista)

## VALUATION ANALYSIS

### **Key Assumptions:**

#### *Revenue Decomposition:*

When analyzing Costco's revenue decomposition, we predicted revenue to grow at 8% based on our analysis of historical trends and assumptions of increasing memberships, membership revenue and store openings. We forecasted the number of stores, number of memberships, and sales.

#### *Number of Stores:*

We based our store growth on our estimated growth of Real GDP growth of 3.1%. As the economy continues to grow, we expect Costco to follow suit. We estimated that there will be an addition of 20 stores in the United States and Canada in the upcoming year, due to the fact that they have averaged 20 new stores per year.

#### *Membership Growth and Average Membership Fee:*

Based on its membership initiatives and year over year growth rates, we have predicted a steady growth of the number of memberships within a given year of 5.9%. In the last year, Costco increased its annual membership fees from \$55 to \$60. In order to retain the

loyalty of its customers, we do not foresee an increase in membership fees for the next few years.

#### *Sales per Store:*

Different margins, different products and more efficient technology being integrated with new store developments will increase sales and decrease costs. With the increase in stores, we predict the average sales per store would increase while Costco conducts a strict analysis of the land to minimize cannibalism and maximize sales.

#### *Revenue per Store:*

With new stores being introduced into new areas around the United States and Canada, memberships for Costco will increase. The increase in revenue will be due to the new membership fee revenue and new shoppers, which will subsequently increase the average revenue per store.

#### *Net Sales Growth:*

With the additional growth of GDP and the organic growth of Costco, we predicted the net sales would grow by 7.60% on average for the coming years. Based on historical trends and positive GDP growth that feeds into consumer confidence, we believe that this high growth rate will continue over the next five years.

#### *Membership Revenue:*

We forecast that membership revenue will increase 10% year over year due to the strong retention rates as well as store expansions.

#### *Merchandising Costs:*

Due to Costco's high turnover rate and historical trend, we believe that merchandising costs will continue at about 89.09% of net sales. The consistent nature of its turnover model leads us to believe there will not be fluctuation of these merchandising costs in the next five years.

#### *Selling, General, and Administrative Expenses:*

The increase in gas prices due to supply shortage and overseas relations are expected to increase net sales for Costco and ultimately will decrease the gross margin and the SGA expenses as a percentage of net sales. Therefore, we have decided to grow the SGA expenses year over year by 5.81%, based on the average historical growth rate and our estimate of rising gas price and costs of ancillary services.

### *Pre-Opening Expenses:*

We expect new warehouses to continue to open in the next coming years, thus the expenses incurred while opening these warehouses and startup operations will increase year over year. We also expect the average pre-opening expenses to increase per new store as it has historically. These expenses may increase efficiency in the long run but will cost more upfront. Therefore, we predict pre-opening expenses to increase year over year by 11.68%.

### *Building and Improvements:*

We estimate that in the next five years, there will be a decrease in buildings and improvements. This is because of improvements in technology and building structures, resulting in improvements in the infrastructure in the new buildings, thus requiring fewer improvements. We estimate a constant growth in relation to the new warehouses that will be established in the new fiscal year.

### *Long-Term Debt:*

We chose to forecast our LT debt as a percentage of our non-cash assets. Debt is not a large portion of the total liabilities and much of Costco's long-term debt comes from senior notes that are dependent on market conditions. We have estimated the future long-term debt to continue along the average of 17% of the current non-cash assets.

### **Weighted Average Cost of Capital:**

#### *Cost of Equity:*

We estimated the Cost of Equity by using the Capital Asset Pricing Model (CAPM). To find the risk free rate, we looked at the yield to maturity on the 10-year U.S. Treasury bond, which came out to be 3.24%. To estimate the risk premium, we chose to look at Damodaran's estimate of the risk premium. <sup>xxii</sup> As of November 1st, 2018, Damodaran estimates the risk premium to be 5.32%. The beta was derived from the Bloomberg Terminal by looking at the monthly and weekly betas over the past five years. The average of these betas is 1.0546. After taking these variables into account, we determined the cost of equity to be 8.85%.

#### *Cost of Debt:*

To find the estimated cost of debt, we took the risk-free rate of 3.24% and added a default spread based on its rating of A+ of 0.90% to get 4.14%. <sup>xxii</sup> Costco's debt rating currently sits at an A+ or an Aa3 which implies that it is above investment grade and a safe measure

of debt. After looking at these variables, we calculated the pre-tax cost of debt to be 4.14%. After factoring in the marginal tax rate of 21%, we arrived at an after-tax cost of debt of 3.03%

#### *WACC:*

We estimate the Weighted Average Cost of Capital for Costco to be 7.95%. We arrived at this number by multiplying our cost of equity of 8.85% by our weight of Costco's equity of 83.96% and multiplying the after-tax cost of debt of 3.03% by the weight of Costco's debt, 16.04%.

### **Discounted Cash Flows and Economic Profit Model:**

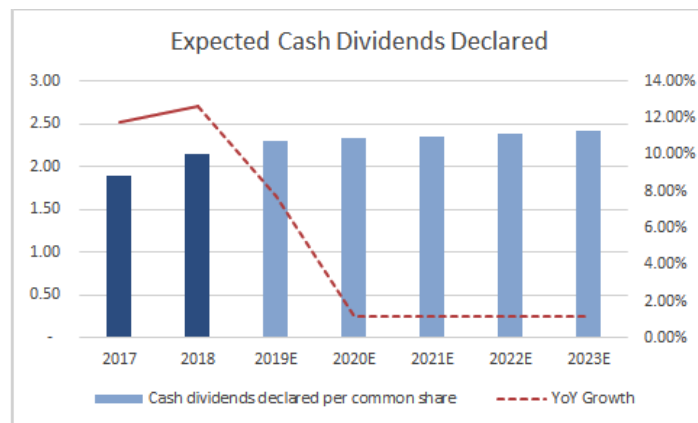
The intrinsic stock price of Costco was calculated through the the Discounted Cash Flows (DCF) model and the Economic Profit (EP) model. After considering the economic, financial and strategic factors, we determined that the DCF and EP models were the most accurate representation of the firm's true value. The DCF model identifies and uses the key value drivers of net operating profit less adjusted taxes (NOPLAT) and capital expenditures to calculate the future cash flows (FCF) for the next 5 years. The EP model uses the NOPLAT and beginning invested capital to find the EP. For our models, we assumed a terminal growth value of 3.0% given the defensive nature of the industry. Both of these models are then adjusted appropriately to compute the final intrinsic value for the partial year of value of \$236.14.

We chose the DCF and EP model as the primary target price for our assumptions as these models come from drivers that factor a variety of important line items specific to the company. We were able to utilize our forecasted SG&A expenses and capital expenditures that greatly impact the operations and profits of Costco.

### **Dividend Discount Model:**

Our Dividend Discount Model yielded an adjusted intrinsic stock price of \$291.56. This price was adjusted from the intrinsic price of \$287.51. To come to this price conclusion, we have estimated the payout of dividends to continue to increase due to the fact that Costco is growing overall and will have excess cash that can be returned to the shareholders in the form of dividends. We forecast Costco will continue to offer dividends of roughly 30% of its net income per common share attributable to Costco. This would lead

to an initial spike of 7.76% but will steady out to a year over year average growth rate of 1.13% over the next 4 years.

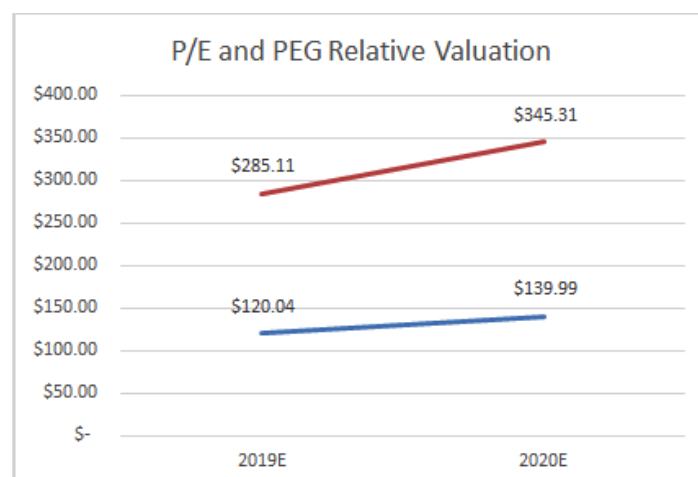


(Source: Forecasted Data)

We do not believe that this valuation model is an accurate representation of the intrinsic value of Costco's stock due to Costco's past history of paying out special dividends, as we did not forecast these special dividends.

**Relative P/E Valuation:**

For the relative valuation model, we took into account Costco's four main competitors, Walmart, Target, Kroger and BJs Wholesale and analyzed its P/E Ratio, PEG Ratio, Price to Sales Ratio and Price to Book Value. We feel that Amazon acts as an outlier as a comparable firm and therefore was excluded from the relative valuation model. One of Costco's most important aspects of its revenue stream, however, comes from its membership fees. The P/E ratio and other key indicators are far too large to compare. Amazon's Prime membership is the only membership strategy that compares to Costco's.



(Source: Forecasted Data)

We do not believe that the relative valuation method is the best because the competitors we listed are not comparable. When choosing Costco's competitors, we looked at the retail sector and not solely companies that offered memberships or offered any ancillary lines of business like Costco does.

**Sensitivity Analysis:**

*Beta vs Risk Premium:*

The risk premium measures the business risk of the company, or the stability of the free cash flows. Costco has not historically had steady free cash flows, so an increase in instability in the future will cause the risk premium to increase, thereby causing the intrinsic value of the stock to decrease. The slight increase of risk from 5.32% to 5.36% will cause a \$2 decrease to the intrinsic value. While past reports have shown volatility in free cash flows, Costco has always had enough to manage the small amount of debt it holds.

*Beta vs Risk-Free Rate:*

When analyzing the risk-free rate against beta, we are able to understand the impacts that rising inflation has on the expected price of Costco. If the risk-free rate were to increase due to rising pressures from inflation by 0.05%, we would expect the price for Costco to decrease from \$236 to \$233. Because the risk-free affects the WACC overall, we would then see an increase in the interest rates established by lenders because of the limited supply of money, therefore reducing purchasing power. These factors would cause a decrease in the WACC and thus, a decrease in Costco's stock price. Since the risk-free rate affects the overall WACC, we would see an increase in loan rates due to investors limiting the money supply and therefore reducing the purchasing power. Because of these factors, the WACC would decrease and through the DCF model, Costco's stock would decrease.

*Sales Growth vs COGS:*

Since Costco's gross margin is lower than its competitors within the industry, we felt analyzing the sales growth against the cost of goods sold would show the importance of maintaining the tight margin. As sales growth increases, the stock price will increase, which adds value to the company. Adversely, as the cost of goods sold increases as a percentage of net sales, we see a steady decline in the price. As shown through our sensitivity analysis, if both the growth rate and cost of goods sold were to increase by 0.4%, the



stock price would increase more than \$9 to \$225. We could see this growth in sales from the organic growth of the company. Cost of goods sold could increase a percent of sales due to price increases from suppliers and other geopolitical impacts that have trickled down into its costs.

*COGS vs SGA:*

COGS and SGA are the largest expenses for Costco and therefore, have a major impact on its operating income. Our forecasted model has both accounts as a direct percentage of net sales. Because we believe the company will continue to lower its costs and increase margins, this sensitivity analysis allows us to better understand what will happen if those cost cutting measures are not met. If these costs increase in the coming years more than what is forecasted due to changes in price structure, inflation, and general maintenance increases, we would see a decrease in the intrinsic value of the stock by 1-3%. In order to maintain its low price structure and still make a profit, Costco must continue to reduce these major expenses.

*WACC vs CV NOPLAT Growth:*

The NOPLAT growth rate is a perpetual value that accounts for roughly 90% of Costco's intrinsic value. As it increases by a hundredth of a percent, the value of the stock greatly increases. The cost of borrowing does not have as much affect over Costco's final value as the company is not heavily dependent on debt, which makes up 17% of its total assets. Our CV NOPLAT growth rate was based on our GDP outlook but altered slightly due to the strong correlation to the CPI. If we were to increase the assumed growth rate to signify the longevity growth for Costco and decrease the WACC by increasing debt financing, Costco would experience an overall increase in its intrinsic value significantly.

## IMPORTANT DISCLAIMER

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## REFERENCES

- i. Agnese, J. (2018, February 12). Food & Staples Retailing - Industry Overview. Retrieved September 9, 2018, from NetAdvantage: CFRA Equity Research.
- ii. Agnese, J. (2018, May 8). Food Products - Industry Overview. Retrieved September 9, 2018, from NetAdvantage: CFRA Equity Research.
- iii. Baumgartner, M. (2018, September). Consumers Demand Healthy Foods. Retrieved October/November, 2018, from <https://abcnews.go.com/Business/story?id=87739&page=1>
- iv. Baumgartner, M. (n.d.). Consumers Demand Healthy Foods. Retrieved November, 2018, from <https://abcnews.go.com/Business/story?id=87739&page=1>
- v. Bloomberg Terminal Search Financial Analysis to Custom Report.
- vi. Bureau of Labor Statistics. (2018). U.S. Producer Price Index for finished goods: 12-month change 2017/18 | Statistic. Retrieved October/November, 2018, from <https://www.statista.com/statistics/215922/12-month-percent-changes-in-the-ppi-for-finished-goods-in-the-us/>
- vii. Bureau of Labor Statistics. (2018). USA - annual changes of the Producer Price Index (PPI) 1990-2017 | Timeline. Retrieved October/November, 2018, from <https://www.statista.com/statistics/193966/annual-changes-of-the-producer-price-index-for-commodities-in-the-us-since-1990/>
- viii. Bureau of Labor Statistics. (2018, November). Bureau of Labor Statistics Data. Retrieved October/November, 2018, from [https://data.bls.gov/timeseries/CUUR0000SA0?output\\_view=pct\\_12mths](https://data.bls.gov/timeseries/CUUR0000SA0?output_view=pct_12mths)
- ix. Bureau of Labor Statistics. (2018, October). The Employment Situation - October 2018. Retrieved October/November, 2018, from <https://www.bls.gov/news.release/pdf/empsit.pdf>
- x. C. (2018, September). Sustainability. Retrieved October/November, 2018, from <https://www.costco.com/sustainability-support.html>
- xi. Carlson, B. (2017, April 26). How Markets Respond to Tax Reform. Retrieved from <https://www.bloomberg.com/view/articles/2017-04-26/how-markets-respond-to-tax-reform>
- xii. Classification Development Branch. (2010, November 02). US Census Bureau Site North American Industry Classification System main page. Retrieved September 11, 2018, from <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=312&search=2017> NAICS Search
- xiii. CNBC. (2018, September 06). Walgreens to supply Kaleo's allergy shots as EpiPen shortage drags. Retrieved September 6, 2018, from <https://www.cnbc.com/2018/09/06/reuters-america-walgreens-to-supply-kaleos-allergy-shots-as-epipen-shortage-drags.html>
- xiv. Consumer Confidence Index® | The Conference Board. (n.d.). Retrieved from <https://www.conference-board.org/data/consumerconfidence.cfm>
- xv. Costco Corporate. (n.d.). Buildings: Costco. Retrieved September/October, 2018, from <https://www.costco.com/sustainability-buildings.html>
- xvi. Costco Corporate. (n.d.). FAQs. Retrieved October/November, 2018, from <https://www.costco.com/costco-grocery-faq.html>
- xvii. Costco Store Map. (n.d.). Retrieved October/November, 2018, from <https://www.redliondata.com/costco-store-map/>
- xviii. COST's Competition by Segment and its Market Share. (n.d.). Retrieved from <https://csimarket.com/stocks/competitionSEG2.php?code=COST>
- xix. CPI Home. (2018, September). Retrieved October/November, 2018, from <https://www.bls.gov/cpi/>
- xx. CPI Home. (n.d.). Retrieved from <https://www.bls.gov/cpi/>
- xxi. Current US Inflation Rates: 2008-2018. (2018, August 10). Retrieved from <https://www.usinflationcalculator.com/inflation/current-inflation-rates/>
- xxii. Damodaran, A. (2018, January). Ratings, Interest Coverage Ratios and Default Spread. Retrieved October/November, 2018, from [http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/ratings.htm](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ratings.htm)
- xxiii. Distribution of U.S. households by size 1970-2017 | Statistic. (n.d.). Retrieved October/November, 2018, from <https://www.statista.com/statistics/242189/distribution-of-households-in-the-us-by-household-size/>
- xxiv. F. (2018). Consumer Price Index, 1913-. Retrieved October/November, 2018, from <https://www.minneapolisfed.org/community/financial-and-economic-education/cpi-calculator-information/consumer-price-index-and-inflation-rates-1913>
- xxv. Fidelity Staff. (n.d.). Food & Staples Retailing. Retrieved November, 2018, from [https://eresearch.fidelity.com/eresearch/markets\\_sectors/sectors/industries.jhtml?tab=learn&industry=301010](https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/industries.jhtml?tab=learn&industry=301010)
- xxvi. Fidelity Staff. (n.d.). Food & Staples Retailing. Retrieved October/November, 2018, from [https://eresearch.fidelity.com/eresearch/markets\\_sectors/sectors/industries.jhtml?tab=learn&industry=301010](https://eresearch.fidelity.com/eresearch/markets_sectors/sectors/industries.jhtml?tab=learn&industry=301010)
- xxvii. Food & Staples Retailing Industry sector. (n.d.). Retrieved September 6, 2018, from <https://www.cmdportal.com/public/publicarticles.aspx?id=61E4C715C3FE48FE>
- xxviii. Guattery, M. (July 2018). Supermarkets & Grocery Stores in the US. IBISWorld
- xxix. Kochkodin, B. (2018, April). Amazon Prime's Membership and Retention Are Higher Than Costco's. Retrieved October/November, 2018, from <https://www.bloomberg.com/news/articles/2018-04-19/amazon-prime-s-membership-and-retention-are-higher-than-costco-s>
- xxx. Langager, C. (2017, December 14). What Are the Components of a Risk Premium? Retrieved from

- https://www.investopedia.com/ask/answers/05/compon  
entsriskpremium.asp
- xxxi. Latest PPI News Releases. (n.d.). Retrieved from  
https://www.bls.gov/PPI/
- xxxii. Leading indicators - Consumer confidence index (CCI)  
- OECD Data. (2018, October). Retrieved  
October/November, 2018, from  
https://data.oecd.org/leadind/consumer-confidence-  
index-cci.htm
- xxxiii. Looking at the Market. (n.d.). Retrieved November,  
2018, from https://marketrealist.com/2015/10/krogers-  
store-formats-and-product-offerings
- xxxiv. Maverick, J. (2018, June 04). Which economic factors  
most affect the demand for consumer goods? Retrieved  
from  
https://www.investopedia.com/ask/answers/042815/whi-  
ch-economic-factors-most-affect-demand-consumer-  
goods.asp
- xxxv. Noonan, R. (n.d.). (U.S., U.S. Department of  
Commerce, Economic and Statistics Administration).  
Retrieved September 6, 2018, from  
http://www.esa.doc.gov/sites/default/files/foodbeverage  
tobaccoindustryprofile\_1.pdf
- xxxvi. Page, V. (2015, July 07). Costco's Business Model Is  
Smarter Than You Think. Retrieved  
September/October, 2018, from  
https://www.investopedia.com/articles/investing/07071  
5/costcos-business-model-smarter-you-think.asp
- xxxvii. Producer Price Index for All Commodities. (2018,  
August 09). Retrieved from  
https://fred.stlouisfed.org/series/PPIACO
- xxxviii. Sales growth of organic foods slips to 6.4% in 2017.  
(n.d.). Retrieved from  
https://www.foodbusinessnews.net/articles/11853-sales-  
growth-of-organic-foods-slips-to-64-in-2017
- xxxix. Sales growth of organic foods slips to 6.4% in 2017.  
(n.d.). Retrieved November, 2018, from  
https://www.foodbusinessnews.net/articles/11853-sales-  
growth-of-organic-foods-slips-to-64-in-2017
- xl. Staff, I. (2018, January 22). Same-Store Sales.  
Retrieved October/November, 2018, from  
https://www.investopedia.com/terms/s/samestoresales.a  
sp
- xli. Staff, I. (2018, October 20). Federal Funds Rate.  
Retrieved October/November, 2018, from  
https://www.investopedia.com/terms/f/federalfundrate.  
asp
- xlii. Team, T. (2018, February 02). Amazon Continues To  
Impress With Rapid Growth. Retrieved from  
https://www.forbes.com/sites/greatspeculations/2018/02  
/02/amazon-continues-to-impress-with-rapid-  
growth/#3f018ab35cbb
- xliv. The U.S. Government Staff. (2018). U.S. Economy at a  
Glance. Retrieved October/November, 2018, from  
https://www.bea.gov/news/glance
- xliv. U.S. Economy at a Glance. (n.d.). Retrieved from  
https://www.bea.gov/news/glance
- xliv. United States Economy at a Glance. (n.d.). Retrieved  
from https://www.bls.gov/eag/eag.us.htm
- xlvi. United States Inflation Rate | 1914-2018 | Data | Chart |  
Calendar. (n.d.). Retrieved from  
https://tradingeconomics.com/united-states/inflation-cpi
- xlvii. United States Unemployment Rate | 1948-2018 | Data |  
Chart | Calendar. (n.d.). Retrieved from  
https://tradingeconomics.com/united-  
states/unemployment-rate
- xlviii. Wessell, R. (2018, July 10). Consumer Staples Sector:  
Overview and Funds. Retrieved September 6, 2018,  
from https://www.valuepenguin.com/sectors/consumer-  
staples
- xliv. i Fisher Investments, Cannivet, M., & Teufel, A. S.  
(2009). Fishers Investments on Consumer Staples.  
Hoboken, NJ: John Wiley & Sons, Inc.
- i. Economic Data, Monetary Rates, Economic Education.  
(n.d.). Retrieved from https://www.stlouisfed.org/
- ii. Staff, I. (2018, October 20). Unemployment. Retrieved  
from  
https://www.investopedia.com/terms/u/unemployment.a  
s
- lii. FINRA Trace Database
- liii. Factset Company/Security, Industry Quick Screen
- liv. Baldwin, J. G. (2018, November 08). The Impact of a  
Fed Interest Rate Hike. Retrieved from  
https://www.investopedia.com/articles/investing/01061  
6/impact-fed-interest-rate-hike.asp
- iv. Hyland, R. (2018, October). Online Grocery Sales in  
the US. IBISWorld
- lvi. United States Securities and Exchange Commission.  
Costco Wholesale. 2018 Form 10K.

## Costco

### *Key Assumptions of Valuation Model*

Ticker Symbol	COST
Current Share Price	\$238.70
Current Model Date	11/8/2018
FY End (month/day)	Sep. 3
Pre-Tax Cost of Debt	4.14%
Beta	1.0546
Risk-Free Rate	3.24%
Equity Risk Premium	5.32%
CV Growth of NOPLAT	3.00%
CV Growth of EPS	2.50%
CV ROIC	27.37%
Current Dividend Yield	0.85%
Marginal Tax Rate	21%
Effective Tax Rate	22%
WACC	7.95%
Shares Outstanding	463.86
Cost of Equity	8.36%
DCF Share Price	236.14



**Costco***Revenue Decomposition*

<i>Fiscal Years Ending Sep. 3</i>	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
Foods	25536.06	26496.12	29071.14	31280.55	33657.87	36215.87	38968.27	41929.86
Sundries	23214.60	25234.40	26302.46	28301.45	30452.36	32766.74	35257.01	37936.54
Hardlines	18571.68	20187.52	22149.44	23832.80	25644.09	27593.04	29690.11	31946.56
Fresh Foods	16250.22	17664.08	20765.10	22343.25	24041.33	25868.48	27834.48	29949.90
Softlines	12768.03	13878.92	15227.74	16385.05	17630.31	18970.22	20411.95	21963.26
Ancillary	20893.14	22710.96	24918.12	26811.90	28849.60	31042.17	33401.38	35939.88
Number of Stores	715	741	762	785.622	809.976282	835.0855467	860.9731987	887.6633679
Sales per Store	162.3398601	170.2726046	181.671916	189.6013401	197.8768593	206.5135796	215.5272664	224.9343731
Revenue per Store	166.0405594	174.122807	185.7952756	194.1206382	202.8301152	211.9424634	221.4774494	231.4559122
Number of Memberships (thousands)	86700	90300	94300	99864	105756	111995	118603	125601
Avg. Membership Fee	55	60	60	60	60	60	65	66
Membership Revenue	4768500	5418000	5658000	5991822	6345339.498	6719714.528	7709192.493	8289635.386
<b>Growth Percentage</b>								
Membership fees	2.24%	-0.88%	0.44%	2.30%	2.30%	2.30%	2.30%	2.30%
Foods	2.12%	3.76%	9.72%	7.60%	7.60%	7.60%	7.60%	7.60%
Sundries	2.12%	8.70%	4.23%	7.60%	7.60%	7.60%	7.60%	7.60%
Hardlines	2.12%	8.70%	9.72%	7.60%	7.60%	7.60%	7.60%	7.60%
Fresh Foods	2.12%	8.70%	17.56%	7.60%	7.60%	7.60%	7.60%	7.60%
Softlines	2.12%	8.70%	9.72%	7.60%	7.60%	7.60%	7.60%	7.60%
Ancillary	2.12%	8.70%	9.72%	7.60%	7.60%	7.60%	7.60%	7.60%
Number of Stores	4.23%	3.64%	2.83%	3.10%	3.10%	3.10%	3.10%	3.10%
Sales per Store	-2.02%	4.89%	6.69%	4.36%	4.36%	4.36%	4.36%	4.36%
Revenue per Store	-1.98%	4.87%	6.70%	4.48%	4.49%	4.49%	4.50%	4.51%
Number of Memberships (thousands)	6.64%	4.15%	4.43%	5.90%	5.90%	5.90%	5.90%	5.90%
Avg. Membership Fee	0.00%	9.09%	0.00%	0.00%	0.00%	0.00%	8.33%	1.54%
Membership Revenue	6.64%	13.62%	4.43%	5.90%	5.90%	5.90%	14.73%	7.53%

**Costco**

*Income Statement*

<i>Fiscal Years Ending Sep. 3</i>	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
<b>REVENUE</b>								
Net sales	\$ 116,073.00	\$ 126,172.00	\$ 138,434.00	\$ 148,954.98	\$ 160,275.56	\$ 172,456.51	\$ 185,563.20	\$ 199,666.00
Membership fees	\$ 2,646.00	\$ 2,853.00	\$ 3,142.00	\$ 3,550.46	\$ 4,012.02	\$ 4,533.58	\$ 5,122.95	\$ 5,788.93
<b>Total revenue</b>	<b>\$ 118,719.00</b>	<b>\$ 129,025.00</b>	<b>\$ 141,576.00</b>	<b>\$ 152,505.44</b>	<b>\$ 164,287.58</b>	<b>\$ 176,990.09</b>	<b>\$ 190,686.15</b>	<b>\$ 205,454.93</b>
<b>OPERATING EXPENSES</b>								
Merchandise costs	\$ 102,901.00	\$ 111,882.00	\$ 123,152.00	\$ 132,704.00	\$ 142,789.50	\$ 153,641.50	\$ 165,318.25	\$ 177,882.44
Depreciation and ammortization	\$ 1,255.00	\$ 1,370.00	\$ 1,437.00	\$ 1,537.00	\$ 1,615.44	\$ 1,698.65	\$ 1,786.95	\$ 1,880.70
Selling, general & administrative expenses	\$ 10,813.00	\$ 11,580.00	\$ 12,409.00	\$ 13,129.96	\$ 13,892.81	\$ 14,699.99	\$ 15,554.06	\$ 16,457.75
Preopening expenses	\$ 78.00	\$ 82.00	\$ 68.00	\$ 75.94	\$ 84.81	\$ 94.72	\$ 105.78	\$ 118.14
<b>Operating income</b>	<b>\$ 3,672.00</b>	<b>\$ 4,111.00</b>	<b>\$ 4,480.00</b>	<b>\$ 5,058.54</b>	<b>\$ 5,905.02</b>	<b>\$ 6,855.23</b>	<b>\$ 7,921.10</b>	<b>\$ 9,115.91</b>
<b>OTHER INCOME (EXPENSE)</b>								
Interest expense	\$ 133.00	\$ 134.00	\$ 159.00	\$ 182.11	\$ 212.58	\$ 246.79	\$ 285.16	\$ 328.17
Interest income and other, net	\$ 80.00	\$ 62.00	\$ 121.00	\$ 135.57	\$ 158.25	\$ 183.72	\$ 212.29	\$ 244.31
<b>Income before income taxes</b>	<b>\$ 3,619.00</b>	<b>\$ 4,039.00</b>	<b>\$ 4,442.00</b>	<b>\$ 5,012.00</b>	<b>\$ 5,850.69</b>	<b>\$ 6,792.17</b>	<b>\$ 7,848.23</b>	<b>\$ 9,032.04</b>
Provison for income taxes	\$ 1,243.00	\$ 1,325.00	\$ 1,263.00	\$ 1,052.52	\$ 1,228.65	\$ 1,426.35	\$ 1,648.13	\$ 1,896.73
Net income (loss) including noncontrolling interests	\$ 2,376.00	\$ 2,714.00	\$ 3,179.00	\$ 3,959.48	\$ 4,622.05	\$ 5,365.81	\$ 6,200.10	\$ 7,135.31
Net loss (income) attributable to noncontrolling interests	\$ (26.00)	\$ (35.00)	\$ (45.00)	\$ (66.27)	\$ (77.36)	\$ (89.80)	\$ (103.77)	\$ (119.42)
<b>Net income attributable to Costco Wholesale Corp</b>	<b>\$ 2,350.00</b>	<b>\$ 2,679.00</b>	<b>\$ 3,134.00</b>	<b>\$ 3,893.21</b>	<b>\$ 4,544.69</b>	<b>\$ 5,276.01</b>	<b>\$ 6,096.33</b>	<b>\$ 7,015.89</b>
Number of shares outstanding	437.52	437.20	438.52	443.48	448.49	453.55	458.68	463.86
Cash dividends declared per common share	1.70	8.90	9.10	2.31	2.33	2.36	2.39	2.41
<b>NET INCOME PER COMMON SHARE ATTRIBUTABLE TO COSTCO</b>								
Basic	5.36	6.11	7.15	8.78	10.13	11.63	13.29	15.12
<b>CASH DIVIDENDS DECLARED PER COMMON SHARE</b>	<b>1.70</b>	<b>1.90</b>	<b>2.14</b>	<b>2.31</b>	<b>2.33</b>	<b>2.36</b>	<b>2.39</b>	<b>2.41</b>
Special Cash dividends declared per common share	-	7.00						

Costco

Balance Sheet

Fiscal Years Ending Sep. 3	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
<b>ASSETS</b>								
<b>CURRENT ASSETS</b>								
Cash & cash equivalents	\$ 3,379.00	\$ 4,546.00	\$ 6,055.00	\$ 8,278.68	\$ 12,819.74	\$ 19,030.54	\$ 22,630.52	\$ 29,863.56
Short-term investments	\$ 1,350.00	\$ 1,233.00	\$ 1,204.00	\$ 1,233.62	\$ 1,263.97	\$ 1,295.06	\$ 1,326.92	\$ 1,359.56
Receivables, net	\$ 1,252.00	\$ 1,432.00	\$ 1,669.00	\$ 1,489.55	\$ 1,602.76	\$ 1,724.57	\$ 1,855.63	\$ 1,996.66
Merchandise inventories	\$ 8,969.00	\$ 9,834.00	\$ 11,040.00	\$ 11,380.16	\$ 12,245.05	\$ 13,175.68	\$ 14,177.03	\$ 15,254.48
Other current assets	\$ 268.00	\$ 272.00	\$ 321.00	\$ 328.22	\$ 335.61	\$ 343.16	\$ 350.88	\$ 358.77
<b>Total current assets</b>	<b>\$ 15,218.00</b>	<b>\$ 17,317.00</b>	<b>\$ 20,289.00</b>	<b>\$ 22,710.23</b>	<b>\$ 28,267.12</b>	<b>\$ 35,569.00</b>	<b>\$ 40,340.98</b>	<b>\$ 48,833.04</b>
<b>PROPERTY AND EQUIPMENT</b>								
Land	\$ 5,395.00	\$ 5,690.00	\$ 6,193.00	\$ 6,405.06	\$ 6,891.85	\$ 7,415.63	\$ 7,979.22	\$ 8,585.64
Buildings & improvements	\$ 13,994.00	\$ 15,127.00	\$ 16,107.00	\$ 17,266.42	\$ 17,801.68	\$ 18,353.53	\$ 18,922.49	\$ 19,509.09
Equipment & fixtures	\$ 6,077.00	\$ 6,681.00	\$ 7,274.00	\$ 7,447.75	\$ 8,013.78	\$ 8,622.83	\$ 9,278.16	\$ 9,983.30
Construction in progress	\$ 701.00	\$ 843.00	\$ 1,140.00	\$ 1,307.01	\$ 1,373.71	\$ 1,444.46	\$ 1,519.55	\$ 1,599.28
Less accumulated depreciation & amortization	\$ (9,124.00)	\$ (10,180.00)	\$ (11,033.00)	\$ (11,266.24)	\$ (11,841.17)	\$ (12,451.09)	\$ (13,098.36)	\$ (13,785.56)
Net property & equipment	\$ 17,043.00	\$ 18,161.00	\$ 19,687.00	\$ 21,160.00	\$ 22,239.84	\$ 23,385.36	\$ 24,601.06	\$ 25,891.74
<b>Other assets</b>	<b>\$ 902.00</b>	<b>\$ 869.00</b>	<b>\$ 860.00</b>	<b>\$ 926.84</b>	<b>\$ 1,016.89</b>	<b>\$ 1,169.59</b>	<b>\$ 1,364.81</b>	<b>\$ 1,505.17</b>
<b>Total assets</b>	<b>\$ 33,163.00</b>	<b>\$ 36,347.00</b>	<b>\$ 40,830.00</b>	<b>\$ 44,797.08</b>	<b>\$ 51,523.85</b>	<b>\$ 60,123.95</b>	<b>\$ 66,306.85</b>	<b>\$ 76,229.94</b>
<b>LIABILITIES AND EQUITY</b>								
<b>CURRENT LIABILITIES</b>								
Accounts payable	\$ 7,612.00	\$ 9,608.00	\$ 11,237.00	\$ 11,152.56	\$ 12,000.15	\$ 12,912.16	\$ 13,893.49	\$ 14,949.39
Current portion long-term debt	\$ 1,100.00	\$ 86.00	\$ -	\$ 232.00	\$ 757.25	\$ 2,271.75	\$ 384.25	\$ 1,152.75
Accrued salaries & benefits	\$ 2,629.00	\$ 2,703.00	\$ 2,994.00	\$ 2,979.10	\$ 3,205.51	\$ 3,449.13	\$ 3,711.26	\$ 3,993.32
Accrued member rewards	\$ 869.00	\$ 961.00	\$ 1,057.00	\$ 1,242.66	\$ 1,404.21	\$ 1,586.75	\$ 1,793.03	\$ 2,026.13
Deferred membership fees	\$ 1,362.00	\$ 1,498.00	\$ 1,624.00	\$ 1,830.97	\$ 2,069.00	\$ 2,337.97	\$ 2,641.90	\$ 2,985.35
Other current liabilities	\$ 2,317.00	\$ 2,639.00	\$ 3,014.00	\$ 3,081.82	\$ 3,151.16	\$ 3,222.06	\$ 3,294.55	\$ 3,368.68
<b>Total current liabilities</b>	<b>\$ 15,575.00</b>	<b>\$ 17,495.00</b>	<b>\$ 19,926.00</b>	<b>\$ 20,519.11</b>	<b>\$ 22,587.27</b>	<b>\$ 25,779.82</b>	<b>\$ 25,718.49</b>	<b>\$ 28,475.62</b>
Long-term debt, excluding current portion	\$ 4,061.00	\$ 6,573.00	\$ 6,487.00	\$ 6,208.13	\$ 6,579.70	\$ 6,985.88	\$ 7,424.98	\$ 7,882.28
<b>Other liabilities</b>	<b>\$ 1,195.00</b>	<b>\$ 1,200.00</b>	<b>\$ 1,314.00</b>	<b>\$ 1,314.00</b>	<b>\$ 1,314.00</b>	<b>\$ 1,314.00</b>	<b>\$ 1,314.00</b>	<b>\$ 1,314.00</b>
<b>Total liabilities</b>	<b>\$ 20,831.00</b>	<b>\$ 25,268.00</b>	<b>\$ 27,727.00</b>	<b>\$ 28,041.23</b>	<b>\$ 30,480.97</b>	<b>\$ 34,079.70</b>	<b>\$ 34,457.47</b>	<b>\$ 37,671.91</b>
<b>EQUITY</b>								
Common Equity	\$ 5,492.00	\$ 5,804.00	\$ 6,111.00	\$ 6,850.75	\$ 7,590.51	\$ 8,330.26	\$ 9,070.02	\$ 9,809.77
Accumulated other comprehensive income (loss)	\$ (1,099.00)	\$ (1,014.00)	\$ (1,199.00)	\$ (1,199.00)	\$ (1,199.00)	\$ (1,199.00)	\$ (1,199.00)	\$ (1,199.00)
Retained earnings	\$ 7,686.00	\$ 5,988.00	\$ 7,887.00	\$ 10,757.53	\$ 14,256.29	\$ 18,462.60	\$ 23,464.92	\$ 29,361.94
<b>Total Costco Wholesale Corp stockholders' equity</b>	<b>\$ 12,079.00</b>	<b>\$ 10,778.00</b>	<b>\$ 12,799.00</b>	<b>\$ 16,409.28</b>	<b>\$ 20,647.80</b>	<b>\$ 25,593.86</b>	<b>\$ 31,335.94</b>	<b>\$ 37,972.71</b>
Noncontrolling interests	\$ 253.00	\$ 301.00	\$ 304.00	\$ 346.56	\$ 395.08	\$ 450.39	\$ 513.44	\$ 585.33
<b>Total equity</b>	<b>\$ 12,332.00</b>	<b>\$ 11,079.00</b>	<b>\$ 13,103.00</b>	<b>\$ 16,755.84</b>	<b>\$ 21,042.88</b>	<b>\$ 26,044.25</b>	<b>\$ 31,849.38</b>	<b>\$ 38,558.04</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>\$ 33,163.00</b>	<b>\$ 36,347.00</b>	<b>\$ 40,830.00</b>	<b>\$ 44,797.08</b>	<b>\$ 51,523.85</b>	<b>\$ 60,123.95</b>	<b>\$ 66,306.85</b>	<b>\$ 76,229.94</b>

**Costco***Cash Flow Statement*

<i>Fiscal Years Ending Sep. 3</i>	2016	2017	2018
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Net income (loss) including noncontrolling interests	\$ 2,376.00	\$ 2,714.00	\$ 3,179.00
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:			
Depreciation & amortization	\$ 1,255.00	\$ 1,370.00	\$ 1,437.00
Stock-based compensation	\$ 459.00	\$ 514.00	\$ 544.00
Excess tax benefit on stock-based awards	\$ (74.00)	\$ (38.00)	\$ -
Other non-cash operating activities, net	\$ 17.00	\$ 24.00	\$ (6.00)
Deferred income taxes	\$ 269.00	\$ (29.00)	\$ (49.00)
Changes in operating assets and liabilities:			
Merchandise inventories	\$ (25.00)	\$ (894.00)	\$ (1,313.00)
Accounts payable	\$ (1,532.00)	\$ 2,258.00	\$ 1,591.00
Other operating assets & liabilities, net	\$ 547.00	\$ 807.00	\$ 421.00
Net cash flows from operating activities	<u>\$ 3,292.00</u>	<u>\$ 6,726.00</u>	<u>\$ 5,774.00</u>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>			
Purchases of short-term investments	\$ (1,432.00)	\$ (1,279.00)	\$ (1,060.00)
Maturities & sales of short-term investments	\$ 1,709.00	\$ 1,385.00	\$ 1,078.00
Additions to property & equipment	\$ (2,649.00)	\$ (2,502.00)	\$ (2,969.00)
Other investing activities, net	\$ 27.00	\$ 30.00	\$ 4.00
Net cash flows from investing activities	<u>\$ (2,345.00)</u>	<u>\$ (2,366.00)</u>	<u>\$ (2,947.00)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Changes in bank checks outstanding	\$ 81.00	\$ (236.00)	\$ 80.00
Repayments of short-term borrowings	\$ (106.00)	-	-
Proceeds from short-term borrowings	\$ 106.00	-	-
Proceeds from issuance of long-term debt	\$ 185.00	\$ 3,782.00	-
Repayments of long-term debt	\$ (1,288.00)	\$ (2,200.00)	\$ (86.00)
Minimum tax withholdings on stock-based awards	\$ (220.00)	\$ (202.00)	\$ (217.00)
Excess tax benefits on stock-based awards	\$ 74.00	\$ 38.00	-
Repurchases of common stock	\$ (486.00)	\$ (469.00)	\$ (328.00)
Cash dividend payments	\$ (746.00)	\$ (3,904.00)	\$ (689.00)
Other financing activities, net	\$ (19.00)	\$ (27.00)	\$ (41.00)
Net cash flows from financing activities	<u>\$ (2,419.00)</u>	<u>\$ (3,218.00)</u>	<u>\$ (1,281.00)</u>
<b>Effect of exchange rate changes on cash &amp; cash equivalents</b>	<u>\$ 50.00</u>	<u>\$ 25.00</u>	<u>\$ (37.00)</u>
Net increase (decrease) in cash & cash equivalents	<u>\$ (1,422.00)</u>	<u>\$ 1,167.00</u>	<u>\$ 1,509.00</u>
<b>Cash &amp; cash equivalents, beginning of year</b>	<u>\$ 4,801.00</u>	<u>\$ 3,379.00</u>	<u>\$ 4,546.00</u>
<b>Cash &amp; cash equivalents, end of year</b>	<u>\$ 3,379.00</u>	<u>\$ 4,546.00</u>	<u>\$ 6,055.00</u>



**Costco***Cash Flow Statement*

<i>Fiscal Years Ending Sep. 3</i>	2019E	2020E	2021E	2022E	2023E
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>					
Net Income	\$ 3,893.21	\$ 4,544.69	\$ 5,276.01	\$ 6,096.33	\$ 7,015.89
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:					
Add: Depreciation and Ammortization	\$ 233.24	\$ 574.94	\$ 609.91	\$ 647.28	\$ 687.20
<b>Changes in working capital accounts:</b>					
Increases in Recievables	\$ 179.45	\$ (113.21)	\$ (121.81)	\$ (131.07)	\$ (141.03)
Increases in Merchandise Inventories	\$ (340.16)	\$ (864.89)	\$ (930.62)	\$ (1,001.35)	\$ (1,077.45)
Increase in Other Current Assets	\$ (7.22)	\$ (7.39)	\$ (7.55)	\$ (7.72)	\$ (7.89)
Increase in Accounts Payable	\$ (84.44)	\$ 847.59	\$ 912.01	\$ 981.32	\$ 1,055.91
Increase in Accrued Compensation	\$ 170.76	\$ 387.96	\$ 426.17	\$ 468.41	\$ 515.15
Increase in Other Current Liabilities	\$ 67.82	\$ 69.34	\$ 70.90	\$ 72.50	\$ 74.13
Increase in Deferred Revenue	\$ 206.97	\$ 238.03	\$ 268.97	\$ 303.94	\$ 343.45
<b>Net Cash Provided by Operating Activities</b>	<b>\$ 4,319.62</b>	<b>\$ 5,677.06</b>	<b>\$ 6,503.98</b>	<b>\$ 7,429.64</b>	<b>\$ 8,465.34</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>					
Increase (Decrease) in Short-Term Investments	\$ (29.62)	\$ (30.35)	\$ (31.09)	\$ (31.86)	\$ (32.64)
Capital Expenditures	\$ (1,712.24)	\$ (1,654.77)	\$ (1,755.44)	\$ (1,862.97)	\$ (1,977.88)
(Increase) Decrease in Other Assets	\$ (66.84)	\$ (90.05)	\$ (152.70)	\$ (195.22)	\$ (140.35)
<b>Net Cash Used for Investing Activities</b>	<b>\$ (1,808.70)</b>	<b>\$ (1,775.17)</b>	<b>\$ (1,939.23)</b>	<b>\$ (2,090.05)</b>	<b>\$ (2,150.87)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>					
Payments of Notes Payable and Long Term Debt	\$ (278.87)	\$ 371.57	\$ 406.18	\$ 439.10	\$ 457.31
Payments of Current Portion of Long Term Debt	\$ 232.00	\$ 525.25	\$ 1,514.50	\$ (1,887.50)	\$ 768.50
Repurchase of Common Stock					
Payment of Dividends	\$ (1,022.69)	\$ (1,045.93)	\$ (1,069.70)	\$ (1,094.01)	\$ (1,118.88)
Proceeds from Issuance of Common Stock	\$ 739.75	\$ 739.75	\$ 739.75	\$ 739.75	\$ 739.75
<b>Net Cash Provided by Financing Activities</b>	<b>\$ (329.80)</b>	<b>\$ 590.65</b>	<b>\$ 1,590.74</b>	<b>\$ (1,802.66)</b>	<b>\$ 846.69</b>
Change in non-controlling interest	\$ 42.56	\$ 48.52	\$ 55.31	\$ 63.05	\$ 71.88
Net Increase (Decrease) in Cash	\$ 2,223.68	\$ 4,541.06	\$ 6,210.80	\$ 3,599.98	\$ 7,233.04
<b>Cash &amp; cash equivalents, beginning of year</b>	<b>\$ 6,055.00</b>	<b>\$ 8,278.68</b>	<b>\$ 12,819.74</b>	<b>\$ 19,030.54</b>	<b>\$ 22,630.52</b>
<b>Cash &amp; cash equivalents, end of year</b>	<b>\$ 8,278.68</b>	<b>\$ 12,819.74</b>	<b>\$ 19,030.54</b>	<b>\$ 22,630.52</b>	<b>\$ 29,863.56</b>

**Costco***Common Size Income Statement*

<i>Fiscal Years Ending Sep. 3</i>	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
<b>REVENUE</b>								
Net sales	97.77%	97.79%	97.78%	97.67%	97.56%	97.44%	97.31%	104.71%
Membership fees	2.23%	2.21%	2.22%	2.33%	2.44%	2.56%	2.69%	3.04%
<b>Total revenue</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>107.75%</b>
<b>OPERATING EXPENSES</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
Merchandise costs	86.68%	86.71%	86.99%	87.02%	86.91%	86.81%	86.70%	93.29%
Selling, general & administrative expenses	1.06%	1.06%	1.02%	1.01%	0.98%	0.96%	0.94%	0.99%
Preopening expenses	9.11%	8.98%	8.76%	8.61%	8.46%	8.31%	8.16%	8.63%
<b>Operating income</b>	<b>0.07%</b>	<b>0.06%</b>	<b>0.05%</b>	<b>0.05%</b>	<b>0.05%</b>	<b>0.05%</b>	<b>0.06%</b>	<b>0.06%</b>
<b>OTHER INCOME (EXPENSE)</b>	<b>3.09%</b>	<b>3.19%</b>	<b>3.16%</b>	<b>3.32%</b>	<b>3.59%</b>	<b>3.87%</b>	<b>4.15%</b>	<b>4.78%</b>
Interest expense	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Interest income, net	0.11%	0.10%	0.11%	0.12%	0.13%	0.14%	0.15%	0.17%
<b>Income before income taxes</b>	<b>0.07%</b>	<b>0.05%</b>	<b>0.09%</b>	<b>0.09%</b>	<b>0.10%</b>	<b>0.10%</b>	<b>0.11%</b>	<b>0.13%</b>
Provision for income taxes	3.05%	3.13%	3.14%	3.29%	3.56%	3.84%	4.12%	4.74%
Net income (loss) including noncontrolling interests	1.05%	1.03%	0.89%	0.69%	0.75%	0.81%	0.86%	0.99%
Net loss (income) attributable to noncontrolling interests	2.00%	2.10%	2.25%	2.60%	2.81%	3.03%	3.25%	3.74%
<b>Net income attributable to Costco Wholesale Corp</b>	<b>-0.02%</b>	<b>-0.03%</b>	<b>-0.03%</b>	<b>-0.04%</b>	<b>-0.05%</b>	<b>-0.05%</b>	<b>-0.05%</b>	<b>-0.06%</b>

**Costco**

*Common Size Balance Sheet*

<i>Fiscal Years Ending Sep. 3</i>	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
<b>ASSETS</b>								
<b>CURRENT ASSETS</b>								
Cash & cash equivalents	2.91%	3.60%	4.37%	5.56%	8.00%	11.03%	12.20%	16.09%
Short-term investments	1.16%	0.98%	0.87%	0.83%	0.79%	0.75%	0.72%	0.73%
Receivables, net	1.08%	1.13%	1.21%	1.00%	1.00%	1.00%	1.00%	1.08%
Merchandise inventories	7.73%	7.79%	7.97%	7.64%	7.64%	7.64%	7.64%	8.22%
Other current assets	0.23%	0.22%	0.23%	0.22%	0.21%	0.20%	0.19%	0.19%
<b>Total current assets</b>	<b>13.11%</b>	<b>13.72%</b>	<b>14.66%</b>	<b>15.25%</b>	<b>17.64%</b>	<b>20.62%</b>	<b>21.74%</b>	<b>26.32%</b>
<b>PROPERTY AND EQUIPMENT</b>								
Land	4.65%	4.51%	4.47%	4.30%	4.30%	4.30%	4.30%	4.63%
Buildings & improvements	12.06%	11.99%	11.64%	11.59%	11.11%	10.64%	10.20%	10.51%
Equipment & fixtures	5.24%	5.30%	5.25%	5.00%	5.00%	5.00%	5.00%	5.38%
Construction in progress	0.60%	0.67%	0.82%	0.88%	0.86%	0.84%	0.82%	0.86%
Less accumulated depreciation & amortization	-7.86%	-8.07%	-7.97%	-7.56%	-7.39%	-7.22%	-7.06%	-7.43%
Net property & equipment	14.68%	14.39%	14.22%	14.21%	13.88%	13.56%	13.26%	13.95%
<b>Other assets</b>	<b>0.78%</b>	<b>0.69%</b>	<b>0.62%</b>	<b>0.62%</b>	<b>0.63%</b>	<b>0.68%</b>	<b>0.74%</b>	<b>0.81%</b>
<b>Total assets</b>	<b>28.57%</b>	<b>28.81%</b>	<b>29.49%</b>	<b>30.07%</b>	<b>32.15%</b>	<b>34.86%</b>	<b>35.73%</b>	<b>41.08%</b>
<b>LIABILITIES AND EQUITY</b>								
<b>CURRENT LIABILITIES</b>								
Accounts payable	6.56%	7.62%	8.12%	7.49%	7.49%	7.49%	7.49%	8.06%
Current portion long-term debt	0.95%	0.07%	0.00%	0.16%	0.47%	1.32%	0.21%	0.62%
Accrued salaries & benefits	2.26%	2.14%	2.16%	2.00%	2.00%	2.00%	2.00%	2.15%
Accrued member rewards	0.75%	0.76%	0.76%	0.83%	0.88%	0.92%	0.97%	1.09%
Deferred membership fees	1.17%	1.19%	1.17%	1.23%	1.29%	1.36%	1.42%	1.61%
Other current liabilities	2.00%	2.09%	2.18%	2.07%	1.97%	1.87%	1.78%	1.82%
<b>Total current liabilities</b>	<b>13.42%</b>	<b>13.87%</b>	<b>14.39%</b>	<b>13.78%</b>	<b>14.09%</b>	<b>14.95%</b>	<b>13.86%</b>	<b>15.35%</b>
<b>Long-term debt, excluding current portion</b>	<b>3.50%</b>	<b>5.21%</b>	<b>4.69%</b>	<b>4.17%</b>	<b>4.11%</b>	<b>4.05%</b>	<b>4.00%</b>	<b>4.25%</b>
<b>Other liabilities</b>	<b>1.03%</b>	<b>0.95%</b>	<b>0.95%</b>	<b>0.88%</b>	<b>0.82%</b>	<b>0.76%</b>	<b>0.71%</b>	<b>0.71%</b>
<b>Total liabilities</b>	<b>17.95%</b>	<b>20.03%</b>	<b>20.03%</b>	<b>18.83%</b>	<b>19.02%</b>	<b>19.76%</b>	<b>18.57%</b>	<b>20.30%</b>
<b>EQUITY</b>								
Additional paid-in capital	4.73%	4.60%	4.41%	4.60%	4.74%	4.83%	4.89%	5.29%
Accumulated other comprehensive income (loss)	-0.95%	-0.80%	-0.87%	-0.80%	-0.75%	-0.70%	-0.65%	-0.65%
Retained earnings	6.62%	4.75%	5.70%	7.22%	8.89%	10.71%	12.65%	15.82%
<b>Total Costco Wholesale Corp stockholders' equity</b>	<b>10.41%</b>	<b>8.54%</b>	<b>9.25%</b>	<b>11.02%</b>	<b>12.88%</b>	<b>14.84%</b>	<b>16.89%</b>	<b>20.46%</b>
Noncontrolling interests	0.22%	0.24%	0.22%	0.23%	0.25%	0.26%	0.28%	0.32%
<b>Total equity</b>	<b>10.62%</b>	<b>8.78%</b>	<b>9.47%</b>	<b>11.25%</b>	<b>13.13%</b>	<b>15.10%</b>	<b>17.16%</b>	<b>20.78%</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>28.57%</b>	<b>28.81%</b>	<b>29.49%</b>	<b>30.07%</b>	<b>32.15%</b>	<b>34.86%</b>	<b>35.73%</b>	<b>41.08%</b>



## Costco

### *Weighted Average Cost of Capital (WACC) Estimation*

Risk Free Rate	3.24%
Risk Premium	5.32%
Beta	1.0546
<b>Cost of Equity</b>	<b>8.85%</b>

#### **Cost of Debt**

Pre-Tax Cost of Debt	4.14%
Marginal Tax Rate	21.00%
<b>After-Tax Cost of Debt</b>	<b>3.27%</b>

#### **Value of Equity**

Share Price	\$238.70
Shares Outstanding	438.52
<b>Value of Equity</b>	<b>\$104,674.72</b>

#### **Value of Debt**

BV of Short-Term Debt	\$ 11,237.00
BV of Long-Term Debt	\$ 6,487.00
PV of Operating Leases	\$ 2,270.63
<b>Value of Debt</b>	<b>\$ 19,994.63</b>

#### **Weights**

Equity	83.96%
Debt	16.04%

#### **WACC Calculation**

Cost of Equity	8.85%
Weight of Equity	83.96%
After-Tax Cost of Debt	3.27%
Weight of Debt	16.04%
<b>WACC</b>	<b>7.95%</b>

**Costco**

Value Driver Estimation

Fiscal Years Ending Sep. 3	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
<b>NOPLAT</b>	<b>2789.93</b>	<b>2857.96</b>	<b>3388.81</b>	<b>4157.49</b>	<b>4838.86</b>	<b>5603.52</b>	<b>6461.03</b>	<b>7422.07</b>
Sales	118719.00	129025.00	141576.00	152505.44	164287.58	176990.09	190686.15	205454.93
COGS	102901.00	111882.00	123152.00	132704.00	142789.50	153641.50	165318.25	177882.44
SGA	10813.00	11580.00	12409.00	13129.96	13892.81	14699.99	15554.06	16457.75
Depreciation and Amortization	1255.00	1370.00	1437.00	1537.00	1615.44	1698.65	1786.95	1880.70
+Implied Interest on Operating Leases	85.39	90.19	93.99	96.81	99.71	102.70	105.78	108.96
<b>EBITA</b>	<b>3835.39</b>	<b>4283.19</b>	<b>4671.99</b>	<b>5231.29</b>	<b>6089.54</b>	<b>7052.65</b>	<b>8132.67</b>	<b>9343.00</b>
Income Tax Provision	1243.00	1325.00	1263.00	1052.52	1228.65	1426.35	1648.13	1896.73
Tax Shield on Interest Expense	49.08	48.64	33.39	38.24	44.64	51.83	59.88	68.92
Tax on Interest (or Investment Income)	15.13	18.15	25.41	28.47	33.23	38.58	44.58	51.30
Tax Shield on Interest on Operating Lease	31.51	32.74	20.96	21.59	22.24	22.90	23.59	24.30
<b>Less: Adjusted Taxes</b>	<b>1308.46</b>	<b>1388.23</b>	<b>1291.94</b>	<b>1083.88</b>	<b>1262.29</b>	<b>1462.50</b>	<b>1687.02</b>	<b>1938.64</b>
Deferred Tax Liability Previous Year	95.00 -168.00	58.00 95.00	66.76 58.00	76.85 66.76	88.46 76.85	101.83 88.46	117.22 101.83	134.93 117.22
<b>Plus: Deferred Taxes</b>	<b>263.00</b>	<b>-37.00</b>	<b>8.76</b>	<b>10.09</b>	<b>11.61</b>	<b>13.37</b>	<b>15.39</b>	<b>17.71</b>
<b>Invested Capital (IC)</b>	<b>20428.23</b>	<b>20595.15</b>	<b>21774.65</b>	<b>23572.88</b>	<b>24664.45</b>	<b>25853.21</b>	<b>27118.23</b>	<b>28361.89</b>
Normal Cash (3%)	3482.19	3785.16	4153.02	4468.65	4808.27	5173.70	5566.90	5989.98
Account Receivables	1252.00	1432.00	1669.00	1489.55	1602.76	1724.57	1855.63	1996.66
Inventory	8969.00	9834.00	11040.00	11380.16	12245.05	13175.68	14177.03	15254.48
Prepaid expenses	0	0	0.00	0.00	0.00	0.00	0.00	1.00
Other current assets	268	272.00	321.00	328.22	335.61	343.16	350.88	358.77
Accounts Payable	7612	9608	11237.00	11152.56	12000.15	12912.16	13893.49	14949.39
Accrued Expense	3498	3664	4051.00	4221.76	4609.72	5035.88	5504.30	6019.45
Deferred revenue	1362	1498	1624.00	1830.97	2069.00	2337.97	2641.90	2985.35
Operating Working Capital	1499.19	553.16	271.02	461.29	312.81	131.08	-89.25	-353.29
<b>Plus: Net PPE</b>	<b>17043.00</b>	<b>18161.00</b>	<b>19687.00</b>	<b>21160.00</b>	<b>22239.84</b>	<b>23385.36</b>	<b>24601.06</b>	<b>25891.74</b>
<b>Plus: PV of Operating Leases</b>	<b>2179</b>	<b>2212</b>	<b>2270.63</b>	<b>2338.75</b>	<b>2408.91</b>	<b>2481.18</b>	<b>2555.61</b>	<b>2632.28</b>
Other Assets	\$ 902.00	\$ 869.00	860.00	926.84	1016.89	1169.59	1364.81	1505.17
<b>Plus: Other Long-Term Operating Assets</b>	<b>902</b>	<b>869</b>	<b>860.00</b>	<b>926.84</b>	<b>1016.89</b>	<b>1169.59</b>	<b>1364.81</b>	<b>1505.17</b>
<b>Less: Other Long Term Operating Liabilities</b>	<b>1195.00</b>	<b>1200.00</b>	<b>1314.00</b>	<b>1314.00</b>	<b>1314.00</b>	<b>1314.00</b>	<b>1314.00</b>	<b>1314.00</b>
<b>ROIC</b>	<b>15.15%</b>	<b>13.99%</b>	<b>16.45%</b>	<b>19.09%</b>	<b>20.53%</b>	<b>22.72%</b>	<b>24.99%</b>	<b>27.37%</b>
Beg. Inv Cap	\$18,412.96	\$20,428.23	20595.15	21774.65	23572.88	24664.45	25853.21	27118.23
NOPLAT	2789.93	2857.96	3388.81	4157.49	4838.86	5603.52	6461.03	7422.07
<b>EP</b>	<b>1112.51</b>	<b>996.95</b>	<b>1547.60</b>	<b>2425.37</b>	<b>2963.69</b>	<b>3641.51</b>	<b>4404.46</b>	<b>5264.87</b>
Beg Inv Capital	\$18,412.96	\$20,428.23	20595.15	21774.65	23572.88	24664.45	25853.21	27118.23
(ROIC-WACC)	6.04%	4.88%	7.51%	11.14%	12.57%	14.76%	17.04%	19.41%
<b>FCF</b>	<b>774.66</b>	<b>2691.04</b>	<b>2209.31</b>	<b>2359.26</b>	<b>3747.29</b>	<b>4414.76</b>	<b>5196.01</b>	<b>6178.41</b>
NOPLAT	2789.93	2857.96	3388.81	4157.49	4838.86	5603.52	6461.03	7422.07
End Inv Cap - Beg Inv Cap	\$2,015.28	\$166.92	\$1,179.50	\$1,798.23	\$1,091.57	\$1,188.75	\$1,265.02	\$1,243.66



**Costco***Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models*

## Key Inputs:

CV Growth	3.00%
CV ROIC	27.37%
WACC	7.95%
Cost of Equity	8.36%
Dividend Yield	0.85%

<i>Fiscal Years Ending Sep. 3</i>	2018	2019E	2020E	2021E	2022E	2023E
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**DCF Model**

NOPLAT	\$	4,157.49	\$	4,838.86	\$	5,603.52	\$	6,461.03	\$	7,422.07
-CapEx	\$	1,798.23	\$	1,091.57	\$	1,188.75	\$	1,265.02	\$	1,243.66
FCF	\$	2,359.26	\$	3,747.29	\$	4,414.76	\$	5,196.01	\$	6,178.41
CV of FCF									\$	133,376.44
CF to Discount	\$	2,359.26	\$	3,747.29	\$	4,414.76	\$	5,196.01	\$	133,376.44
Period to Discount		1		2		3		4		4
Discount Factor		1.08		1.17		1.26		1.36		1.36
PV of CF	\$	2,185.42	\$	3,215.39	\$	3,508.99	\$	3,825.62	\$	98,199.98

Value of Operating Assets	\$	110,935.40
Plus: Excess Cash	\$	1,901.98
Less: Current Debt	\$	-
Less: Long Term Debt	\$	6,487.00
Less: Other Liabilities	\$	1,314.00
Less: PV of Operating Leases	\$	2,270.63
Less: ESOP's	\$	663.34
<b>Value of Equity</b>	\$	102,102.41
Share Outstanding		438.52
<b>Intrinsic Stock Price at t=0</b>	\$	232.83
<b>Partial Year Adjusted Intrinsic Stock Price</b>	\$	236.14

**EP Model**

NOPLAT	\$	4,157.49	\$	4,838.86	\$	5,603.52	\$	6,461.03	\$	7,422.07
Beg IC.	\$	21,774.65	\$	23,572.88	\$	24,664.45	\$	25,853.21	\$	27,118.23
ROIC		19.09%		20.53%		22.72%		24.99%		27.37%
WACC		7.95%		7.95%		7.95%		7.95%		7.95%
EP	\$	2,425.37	\$	2,963.69	\$	3,641.51	\$	4,404.46	\$	5,264.87
CV of EP									\$	106,258.20

## Discounting:

Beg IC	\$	21,774.65								
EP	\$	2,425.37	\$	2,963.69	\$	3,641.51	\$	4,404.46	\$	5,264.87
Periods to Discount		1		2		3		4		4
WACC		7.95%		7.95%		7.95%		7.95%		7.95%
Discounted EP	\$	2,246.65	\$	2,543.01	\$	2,894.38	\$	3,242.84	\$	78,233.86
PV of EP	\$	89,160.75								

Value of Operating Assets	\$	110,935.40
Plus: Excess Cash	\$	1,901.98
Less: Current Debt	\$	-
Less: Long Term Debt	\$	6,487.00
Less: Other Liabilities	\$	1,314.00
Less: PV of Operating Leases	\$	2,270.63
Less: ESOP's	\$	663.34
<b>Value of Equity</b>	\$	102,102.41
Share Outstanding		438.52
<b>Intrinsic Stock Price at t=0</b>	\$	232.83
<b>Partial Year Adjusted Intrinsic Stock Price</b>	\$	236.14



Relative Valuation Models

Ticker	Company	Price	EPS		P/E		Est. 5yr			Price to Sales		Price/Book Value	
			2019E	2020E	19	20	EPS gr.	PEG 19	PEG 20	2019E	2020E	2019E	2020E
WMT	Walmart Inc	\$101.16	\$4.79	\$4.68	21.12	21.62	4.2	5.06	5.18	\$0.20	\$0.19	4.1	4.1
TGT	Target	\$84.54	\$5.41	\$5.63	15.63	15.02	8.0	1.95	1.88	\$1.13	\$1.10	3.9	3.7
KR	Kroger	\$28.53	\$2.12	\$2.24	13.46	12.74	6.5	2.06	1.95	\$0.23	\$0.23	3.2	2.9
BJ	BJ's Wholesale Club Hol	\$21.19	\$1.25	\$1.47	16.95	14.41	41.4	0.41	0.35	\$1.64	\$1.59	-	-
Average					<b>16.79</b>	<b>15.95</b>		<b>2.37</b>	<b>2.34</b>	\$0.80	\$0.78	3.73	3.57
COST	Costco	\$238.70	\$7.15	\$8.78	33.38	27.19	16.82	1.99	1.62	0.54	0.61	7.00	5.90

Implied Relative Value:

P/E (EPS19)	\$ 120.04
P/E (EPS20)	\$ 139.99
PEG (EPS19)	\$ 285.11
PEG (EPS20)	\$ 345.31

## Costco

### Key Management Ratios

<i>Fiscal Years Ending</i>	2016	2017	2018	2019E	2020E	2021E	2022E	2023E
<b>Liquidity Ratios</b>								
Current Ratio (Current Assets/Current Liabilities)	0.98	0.99	1.02	1.11	1.25	1.38	1.57	1.71
Quick Ratio (Cash Equivalents +AR / Current Liabilities)	0.30	0.34	0.39	0.48	0.64	0.81	0.95	1.12
Cash Ratio (Cash & Cash Equivalents / Current Liabilities)	0.22	0.26	0.30	0.40	0.57	0.74	0.88	1.05
<b>Activity or Asset-Management Ratios</b>								
Total Asset Turnover (Sales/ Average Total Assets)	3.49	3.63	3.59	3.48	3.33	3.09	2.94	2.80
Fixed Asset Turnover (Sales/Fixed Assets)	6.81	6.95	7.03	7.04	7.21	7.37	7.54	7.71
Inventory Turnover (COGS/Average Inventory)	11.51	11.90	11.80	11.84	12.09	12.09	12.09	12.09
<b>Financial Leverage Ratios</b>								
Debt-to-Equity Ratio (Total Liabilities/Stockholder Equity)	1.69	2.28	2.12	1.67	1.45	1.31	1.08	0.98
Equity Ratio (Total Equity/ Total Assets)	37.19%	30.48%	32.09%	37.40%	40.84%	43.32%	48.03%	50.58%
Debt Ratio (Total Debt/ Total Assets)	15.56%	18.32%	15.89%	14.38%	14.24%	15.40%	11.78%	11.85%
<b>Profitability Ratios</b>								
Gross Margin (Gross Profits/Sales)	13.63%	13.59%	13.31%	13.29%	13.41%	13.54%	13.67%	13.81%
Operating Margin (Operating Income/Sales)	3.16%	3.26%	3.24%	3.40%	3.68%	3.98%	4.27%	4.57%
Net Profit Margin (Net Income/Sales)	2.05%	2.15%	2.30%	2.66%	2.88%	3.11%	3.34%	3.57%
Return on Assets (Net Income/Avg Total Assets)	7.13%	7.81%	8.24%	9.25%	9.60%	9.61%	9.81%	10.01%
Return on Equity (Net Income/ Stockholders Equity)	19.27%	24.50%	24.26%	23.63%	21.96%	20.60%	19.47%	18.51%
<b>Payout Policy Ratios</b>								
Payout Ratios (Dividend/EPS)	31.72%	31.10%	29.93%	26.27%	23.01%	20.27%	17.95%	15.95%



## VALUATION OF OPTIONS GRANTED IN ESOP

Ticker Symbol	COST
Current Stock Price	\$238.70
Risk Free Rate	3.24%
Current Dividend Yield	0.85%
Annualized St. Dev. of Stock Returns	18.19%

Range of Outstanding Options	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)	B-S Option Price	Value of Options Granted
Range 1 (2017)	7,578	156.19	1.60	\$ 87.53	\$ 663,338
Total	7,578	\$ 156.19	1.60	\$ 90.70	<b>\$ 663,338</b>



**Present Value of Operating Lease Obligations (2018)**

Fiscal Years Ending Sep. 3	Operating Leases
2019	227
2020	214
2021	193
2022	183
2023	175
Thereafter	2215
Total Minimum Payments	3207
Less: Interest	936
PV of Minimum Payments	2271

**Capitalization of Operating Leases**

Pre-Tax Cost of Debt	4.14%
Number Years Implied by Year 6 Payment	12.7

Year	Lease Commitment	PV Lease Payment
1	227	218.0
2	214	197.3
3	193	170.9
4	183	155.6
5	175	142.9
6 & beyond	175	1386.0
PV of Minimum Payments		2270.6

**Present Value of Operating Lease Obligations (2017)**

Fiscal Years Ending Sep. 3	Operating Leases
2018	216
2019	223
2020	206
2021	177
2022	168
Thereafter	2123
Total Minimum Payments	3113
Less: Interest	901
PV of Minimum Payments	2212

**Capitalization of Operating Leases**

Pre-Tax Cost of Debt	4.14%
Number Years Implied by Year 6 Payment	12.6

Year	Lease Commitment	PV Lease Payment
1	216	207.4
2	223	205.6
3	206	182.4
4	177	150.5
5	168	137.2
6 & beyond	168	1328.9
PV of Minimum Payments		2212.0

**Present Value of Operating Lease Obligations (2016)**

Fiscal Years Ending Sep. 3	Operating Leases
2017	200
2018	195
2019	184
2020	171
2021	166
Thereafter	2204
Total Minimum Payments	3120
Less: Interest	941
PV of Minimum Payments	2179

**Capitalization of Operating Leases**

Pre-Tax Cost of Debt	4.14%
Number Years Implied by Year 6 Payment	13.3

Year	Lease Commitment	PV Lease Payment
1	200	192.1
2	195	179.8
3	184	162.9
4	171	145.4
5	166	135.5
6 & beyond	166	1363.3
PV of Minimum Payments		2179.0

## Effects of ESOP Exercise and Share Repurchases on Common Stock Balance Sheet Account and Number of Shares Outsta

Number of Options Outstanding (shares):	7,578
Average Time to Maturity (years):	1.60
Expected Annual Number of Options Exercised:	4,736

Current Average Strike Price:	\$ 156.19
Cost of Equity:	8.36%
Current Stock Price:	\$238.70

	2019E	2020E	2021E	2022E	2023E
Increase in Shares Outstanding:	4,736	2,842	0	0	0
Average Strike Price:	\$ 156.19	\$ 156.19	\$ -	\$ -	\$ -
<b>Increase in Common Stock Account:</b>	<b>739,755</b>	<b>443,853</b>	-	-	-
Common Stock Repurchases	0	0	0	0	0
Expected Price of Repurchased Shares:	\$ 238.70	\$ 258.66	\$ 280.29	\$ 303.73	\$ 329.13
<b>Number of Shares Repurchased:</b>	-	-	-	-	-
Shares Outstanding (beginning of the year)	437,204,000	437,208,736	437,211,578	437,211,578	437,211,578
Plus: Shares Issued Through ESOP	4,736	2,842	0	0	0
Less: Shares Repurchased in Treasury	-	-	-	-	-
<b>Shares Outstanding (end of the year)</b>	<b>437,208,736</b>	<b>437,211,578</b>	<b>437,211,578</b>	<b>437,211,578</b>	<b>437,211,578</b>