Costco Wholesale Corp

<table>
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<tr>
<th>Morningstar Rating</th>
<th>Last Price</th>
<th>Fair Value Estimate</th>
<th>Price/Fair Value</th>
<th>Trailing Dividend Yield %</th>
<th>Forward Dividend Yield %</th>
<th>Market Cap (Bil)</th>
<th>Industry</th>
<th>Stewardship</th>
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<tbody>
<tr>
<td>★★★</td>
<td>208.55 USD</td>
<td>192.00 USD</td>
<td>1.09</td>
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<td>91.86</td>
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**Morningstar Pillars**

<table>
<thead>
<tr>
<th>Economic Moat</th>
<th>Analyst</th>
<th>Quantitative</th>
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<tbody>
<tr>
<td>Valuation</td>
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<td>Fairly Valued</td>
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<td>Medium</td>
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<tr>
<td>Financial Health</td>
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Source: Morningstar Equity Research

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**Costco’s Competitive Advantages Remain Strong Despite a Fast-Changing Retail Landscape**

**Business Strategy and Outlook**

Zain Akbari, CFA, Eq. Analyst, 27 December 2018

Although competition is intense throughout retail, we expect Costco’s differentiated business model will keep its ability to generate outsize returns intact for the foreseeable future. Costco operates a warehouse club model, deriving about 70% of its operating income from membership fees and the rest from below-average markups on merchandise, including fuel. We estimate that in aggregate, the average markup on a Costco product is in the low teens (versus Walmart’s roughly high 20s). Further, the firm generates high sales volume and rapid inventory turnover by selling roughly 3,700 fast-turning stock-keeping units—significantly fewer than the 60,000 its competitors sell—primarily in a no-frills shopping environment. From our vantage point, the use of fresh food and gas as loss leaders should enable Costco to preserve its market share, contrasting competition from other discoun ters and online players like Amazon.

Costco boasts over $1,200 in sales per square foot versus competitors at $500 or less. Its sales strength comes alongside efficiency. Costco reduces its supply chain drag time and cost by purchasing merchandise directly for shipment to its four distribution centers. Its self-serve format reduces back-of-warehouse needs while improving service levels, contributing to the model’s efficiency.

Costco has become a one-stop shop for its 94 million loyal members, who can shop for general merchandise, groceries, fuel, and other items at its more than 780 clubs worldwide. Membership renewal and retention rates have been close to 90% globally, with the international markets slightly behind North America despite the firm’s 10% increase in membership fees in the U.S. and Canada in 2017 (consistent with Costco’s historical performance following fee hikes). We believe the high renewal rates suggest Costco benefits from a strong brand that stands for high quality and low cost; combined with its exceptional productivity, this leads to strong returns on invested capital, most recently 19% in fiscal 2018, more than double our 7% cost of capital estimate. We expect the firm will continue to generate excess returns over the next 20 years.

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**Economic Moat**

- Bulls Say
  - Costco sells goods at one of the lowest markups among retailers, which should continue to drive market share gains over time as customers continue to seek value.
  - Costco has become one-stop shop for consumers, offering general merchandise, grocery, as well as fuel, which is sold at a loss to lead to drive traffic.
  - Annual membership retention is about 90%, which we believe increases visibility into its future cash flows for both the company and investors.

- Bears Say
  - Given its 94 million cardholders, further penetration of warehouse locations could slow, particularly in the U.S.
  - The majority of the items Costco sells are bulk, which may not resonate as well with untapped consumer segments, particularly as people choose to delay the age at which they have children and opt to live in smaller, urban locations.
  - New club openings in existing markets could lead to cannibalization of sales from older locations. Further, securing suitable real estate options for 145,000-square-foot warehouse clubs can be a challenge in urban areas.

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We believe Costco has amassed a wide economic moat stemming from a cost advantage and its strong brand. Costco boasts a minimalist warehouse structure and an efficient distribution system that allows it to sell merchandise at virtually zero economic profit. Many of the items sold are not touched by human hands, removing excess cost and time from its system. Additionally, Costco sells only about 3,700 stock-keeping units, while many grocery and other mass retailers sell upwards of 60,000.

Its unique product offering (faster-turning bulk items) heightens efficiency and allows higher volume to leverage the firm’s fixed store costs, which reinforces its ability to offer lower prices and in return drives more volume because competitors have little room to compete on price. We believe Costco’s competitive advantages are evident in its ability to generate over $1,200 in sales per square foot and inventory turns at 12 times, far superior to its competitors that generate sales per square foot of $600 or less and turn items 8 times or less a year.

This self-reinforcing business model is underpinned by 94 million loyal cardmembers who pay annual fees (which drive around 70% of the firm’s operating profit annually) to access Costco’s low-price products. In our view, customer shopper frequency is likely heightened because consumers want to justify the fees they pay. We believe Costco’s competitive advantage lies not only in its brand’s strength (as customers associate the banner with low prices), but also in the pricing power that its membership fees command. For instance, the company raised its annual charges by 10% in 2012 and 2017, but member retention rates held around 90%, suggesting that cardmembers aren’t driven away by periodic hikes. Further, total cardmembers increased 4% in fiscal 2018, in line with historical averages, a testament to the value proposition the company offers and reinforcing our view that the company benefits from an intangible asset-based moat. We believe Costco’s intangible asset and cost advantages should continue to allow the company to generate returns in excess of its cost of capital for 20 years, which leads to our wide moat rating.

Fair Value & Profit Drivers
Zain Akbari, Eq. Analyst, 27 December 2018

We are raising our value estimate to $192 per share from $191, reflecting first-quarter results and the time value of money. Our valuation implies a forward fiscal 2019 price/earnings ratio of 25 times, enterprise value/EBITDA ratio of 13 times, and a free cash flow yield of 5%. Despite the fair value estimate increase, our long-term assumptions remain in place.

Costco has built a model that strikes us as insulated from the e-commerce and retail troubles that plague other retailers in its space. This gives us comfort in our unit and membership assumptions that suggest total households can exceed 75 million by the end of our forecast period from about 52 million today as total membership continues to grow 3%-5% per year. As such, we assume mid-single-digit average annual revenue growth over the medium term, which incorporates around 4% comparable-store sales and 3% square footage growth a year. This strong sales growth, along with continued high private-label penetration (at roughly 30%, according to our calculations), should allow the company to generate 3.2% average operating margins over our 10-year forecast period.

We do not make an explicit assumption behind membership retention rate or fuel margins, but we believe our outlook for the former coincides with historical rates at approximately 90%. In addition, we suspect that fuel margins will continue to run negative, on average, over our forecast period, which is embedded in our selling, general, and administrative assumptions of approximately 10% of sales. Offsetting these negative margin pressures are cost leverage and another membership fee increase, which we forecast to hit in fiscal 2024—in line with past rate increases that have come every five to six years.

Risk & Uncertainty
Zain Akbari, Eq. Analyst, 27 December 2018

Costco’s model is largely driven by its loyal base of paying members. Given that membership fees account for around 70% of the company’s operating income, we think the largest risk to Costco’s model is a disruption of this base either from external factors (customers shopping at alternative channels) or resistance borne of excessive increases in membership fees. However, member retention rates are about 90% in the U.S. and Canada and failed to materially erode during the Great Recession, which suggests to us the value customers ascribe to the warehouse club. Separately, the availability of real estate locations could begin to decline (particularly in the U.S., where the firm already maintains an established store footprint), since warehouses can only be built in certain accommodating locations. Gas price fluctuations and
foreign currency volatility could also challenge Costco’s business, especially during times of economic weakness. Lastly, given our estimate that the firm derives 30% of sales from its private-label products, Costco is exposed to erratic changes in commodity costs, and offsetting inflationary pressures with higher prices may constrain volume growth and store traffic.

Stewardship
Zain Akbari, Eq. Analyst, 01 November 2018
We commend Costco’s stewardship of shareholder capital and assign it an Exemplary rating. We believe its capital allocation has been disciplined, as evidenced by its consistent return on invested capital in the midteens, about double our 7% cost of capital estimate. We expect the firm will continue to prudently reinvest in the business while also returning excess cash to shareholders, as opposed to spending on unproductive business verticals for growth’s sake, ultimately staying within its circle of competence.

The board has 11 members, nine of whom are independent, with diverse backgrounds, including Charles Munger, vice chairman of Berkshire Hathaway. Craig Jelinek has been CEO since 2012 and has been with Costco for 30 years, with roles including president and COO and president of merchandising. We consider his experience with the company an advantage for the firm and its shareholders. The company currently splits the CEO and chairman roles between two individuals, which we like.

Compensation is well within industry norms—the CEO’s salary is roughly 11% of his total remuneration—and a majority of stock compensation is awarded based on pretax profits and other direct related goals to each person, which seems reasonable to us.

Management has developed a winning culture that promotes below-average employee turnover and above-average employee satisfaction, as the attrition rate is in the midsingle digits among employees who have been there over a year—as opposed to attrition rates of 50% or greater in the general retail industry.
Costco Wholesal Corp

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**Analyst Notes Archive**

**Target’s Strong Quarter Underpinned by Balanced, Profitable Growth; However, Shares Appear Rich**

Zain Akbari, Eq. Analyst, 22 August 2018

After its strong second-quarter earnings, we plan a mid-to-high-single-digit percentage uptick to our $5 fair value estimate for no-moat Target. Its quarterly results are consistent with strong performance across retail, so we expect to lift our short-term outlook. Still, we are wary of the long-term competitive dynamic Target faces, given its lack of differentiation in a sector with virtually no switching costs. As a result, our long-term forecast (low-single-digit top-line growth, mid-single-digit adjusted operating margins on average over the next decade) is intact.

Target posted 7% quarterly sales growth on stellar 6.5% comparable sales expansion, its best mark in 13 years. Management lifted its fiscal adjusted EPS 2018 guidance to $5.30 to $5.50 from $5.15 to $5.45, above our $5.29 mark.

We were encouraged by the quality of the results, with stores posting 4.9% quarterly comparable sales growth and comparable digital sales up 41%. Year-to-date expansion was not solely driven by promotions, with sales at Target’s everyday prices up more than $2 billion (roughly 3% of fiscal 2017 revenue) in fiscal 2018. As a result, we believe the performance to date suggests that Target’s investments in store modernization and a broader array of fulfillment options (ship-to-home, click-and-collect, delivery of purchases made in store) are bearing fruit.

Despite the progress, we are skeptical of Target’s ability to ward off competitive pressure relative to wide-moat retailers like Walmart or Costco. Without the former’s procurement leverage or the latter’s differentiated business model (permitting a limited assortment, no-frills stores, and a membership structure with high renewal rates built on low prices), we argue Target does not enjoy the degree of cost advantage that the other titans enjoy. So, we believe it has less of an ability to compete on price against brick-and-mortar rivals and Amazon and is more exposed to store experience-based competition from other peers.

**Strong End to Fiscal 2018 Reflects Costco’s Ongoing**

**Competitive Advantages, but Shares Appear Rich**

Zain Akbari, Eq. Analyst, 04 October 2018

Wide-moat Costco posted a strong end to fiscal 2018, which should lead us to lift our $175 per share valuation by a mid-single-digit percentage. Our take is more optimistic than after-hours trading (low-single-digit dip), likely due to our more conservative announcement revenue forecast. Still, the report should not alter our long-term targets, calling for mid-single-digit revenue growth and low-single-digit adjusted operating margins over the next 10 years.

Costco posted $141.6 billion in revenue and diluted EPS of $7.09, beating our $140.6 billion and $6.97 respective expectations. Management cited broad-based strength behind the 9.5% full-year comparable-store sales growth (6.8% excluding fuel and foreign exchange impacts). Comparable e-commerce expansion slowed in the fourth quarter (to 26% versus 32% for the year). However, we are encouraged that growth remains robust, with possible upside as Costco makes more big-ticket items available online that are only stocked seasonally in-store, such as patio furniture and certain home furnishings that can now be sold year-round.

We also suspect investors may be more concerned than we are by news that Costco plans to disclose a material weakness in internal control, stemming from the scope of employees and contractors granted access to reporting systems. With no indication of a mis-statement and the firm’s expectation that it will file its 10-K on time, we do not plan to alter our valuation or Exemplary stewardship rating based on this news. Nonetheless, the disclosure is a rare blemish for a management team we hold in high esteem, with a history of disciplined capital allocation and reinvestment behind Costco’s brand- and cost-based competitive advantages that has allowed it to thrive despite intense competition. The news is consistent with our contention that current sentiment incorporates a degree of perfection with which we are uncomfortable, and so we suggest investors await a more attractive entry point.

**Solid Start to Fiscal 2019 Leaves Costco Poised to Meet Our Long-term Targets, but Shares Seem Rich**

Zain Akbari, Eq. Analyst, 13 December 2018

After a strong start to fiscal 2019, we anticipate lifting our $191 per share valuation for wide-moat Costco by a low-to mid-single-digit percentage. Our top-line forecast had
### Costco Wholesale Corp (XNAS)

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<tr>
<td>08 Jan 2019</td>
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been lower than most before the report, likely explaining our more optimistic reaction than the shares’ low-single-digit percentage slide in after-hours trading. The news is unlikely to materially alter our long-term targets, calling for mid-single-digit revenue growth and low-single-digit adjusted operating margins over the next decade, nor does it alter our view that investors should await a more attractive entry point before building a position despite the considerable advantages at Costco’s disposal.

Costco posted $34.3 billion in revenue (up 10% from the first quarter of fiscal 2018) on 8.8% comparable sales growth (7.5% excluding the impact of changes in fuel prices, foreign exchange, and an accounting method change). The top-line metrics are ahead of our full-year marks (8% top-line on 5% comparable sales growth), though the nearly 30 basis points of operating margin degradation (to 2.7%) lags our flat full-year mark (at 3.2%).

We are encouraged management has been able to work with suppliers to address tariffs, with the need for corresponding price hikes mitigated by Costco’s use of its buying power and global sourcing network. With a limited range of stock-keeping units, we believe Costco can continue to take an item-by-item approach, with potential for the chain to boost the value it offers versus non-club peers that are not as well-equipped to work around the cost pressure (though we suspect Costco will also lift prices as needed). We also believe Costco’s scale will allow it to work with vendors to tailor item sizes and other attributes to hold absolute prices down. This bargaining power is a vital part of our wide moat rating, as we argue Costco can use its scale (enhanced by its concentrated assortment) to hold procurement costs down in a way that smaller rivals cannot.
Costco Wholesale Corp (COST) Q1 2019 Earnings Call May 7, 2019

There is no one analyst in which a Quantitative Fair Value Estimate and Quantitative Star Rating are attributed to; however, Mr. Lee Davidson, Head of Quantitative Research for Morningstar, Inc., is responsible for overseeing the methodology that supports the quantitative fair value. As an employee of Morningstar, Inc., Mr. Davidson is guided by Morningstar, Inc.'s Code of Ethics and Personal Securities Trading Policy in carrying out his responsibilities. For information regarding Conflicts of Interest, visit http://global.morningstar.com/equitydisclosures

Company Profile
Costco is a leading operator of warehouse clubs worldwide. At the end of fiscal 2018, Costco operated 527 membership warehouse clubs in the United States, 100 in Canada, 39 in Mexico, 29 in the United Kingdom, 26 in Japan, 15 in Korea, 13 in Taiwan, 10 in Australia, 2 in Spain, and 1 each in Iceland and France. Costco is the third-largest retailer in the United States, with over $140 billion in revenue in fiscal 2018. In the U.S., base and executive memberships cost $50 and $120 per year, respectively, and give holders access to a limited range of Interests, visit http://global.morningstar.com/equitydisclosures

Quantitative Scores
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<tr>
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Source: Morningstar Equity Research

Valuation

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<th>Country Median</th>
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<td>16.9</td>
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Profitability

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<td>Total Revenues/Employee (K)</td>
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<td>Earnings %</td>
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Financial Health

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Growth Per Share

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<th>3-Year</th>
<th>5-Year</th>
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<tr>
<td>Revenue %</td>
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<td>6.1</td>
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<tr>
<td>Operating Income %</td>
<td>9.0</td>
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<td>16.6</td>
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<tr>
<td>Dividends %</td>
<td>12.6</td>
<td>12.3</td>
<td>12.8</td>
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<tr>
<td>Book Value %</td>
<td>18.5</td>
<td>6.4</td>
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<tr>
<td>Stock Total Return %</td>
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<td>13.3</td>
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Quantitative Revenue & EPS

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<th>Quarter</th>
<th>Revenue (Bil)</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
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<tr>
<td>2019</td>
<td>144,526</td>
<td>147,939</td>
<td>151,557</td>
<td>158,100</td>
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<td>2020</td>
<td>144,526</td>
<td>147,939</td>
<td>151,557</td>
<td>158,100</td>
<td>181,753</td>
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Price vs. Quantitative Fair Value

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<th>Year</th>
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<th>2018</th>
<th>2019</th>
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<tr>
<td>Revenue Growth Year On Year %</td>
<td>20.7</td>
<td>20.7</td>
<td>20.7</td>
<td>23.4</td>
<td>26.6</td>
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<tr>
<td>Total Return</td>
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<td>147,939</td>
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Revenue Growth Year On Year %

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<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tbody>
<tr>
<td>Earnings Per Share ($)</td>
<td>1.45</td>
<td>1.59</td>
<td>1.70</td>
<td>2.35</td>
<td>7.09</td>
</tr>
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</table>

Revenue Growth Year On Year %

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<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tr>
<td>Total Return</td>
<td>3.2</td>
<td>3.7</td>
<td>4.2</td>
<td>4.7</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Morningstar Rating

Source: Morningstar Equity Research
Qualitative Equity Research Overview

At the heart of our valuation system is a detailed projection of a company’s future cash flows, resulting from our analysts’ research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. We believe this bottom-up, long-term, fundamentally based approach allows our analysts to focus on long-term business drivers, which have the greatest valuation impact, rather than short-term market noise.

Morningstar’s equity research group ("we," "our") believes that a company’s intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at an uncertainty-adjusted discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating: (1) our assessment of the firm’s economic moat, (2) our estimate of the stock’s fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our single-point star rating.

1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm’s long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define excess economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm’s cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We measure the firm’s economic moat and trend using the Morningstar Economic Moat Committee, comprised of senior members of Morningstar’s equity research department.

2. Estimated Fair Value

Combining our analysts’ financial forecasts with the firm’s economic moat helps us assess how long returns on invested capital are likely to exceed the firm’s cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working-capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes, or EBIT, and the net new investment, or NNI, to derive our annual free cash flow forecast.

Stage II: Fade

The second stage of our model is the period it will take the company’s return on new invested capital—the return on capital of the next dollar invested (RONIC)—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company’s economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBIT over the period, a normalized investment rate, average return on new invested capital, or RONIC, and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until the perpetuity stage is reached. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm’s cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity

Once a company’s marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline in investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term market-value weights.
3. Uncertainty Around That Fair Value Estimate

Morningstar’s Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts’ ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the uncertainty rating provides guidance in portfolio construction based on risk tolerance.

Our uncertainty ratings for our qualitative analysis are low, medium, high, very high, and extreme.

- Low—margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.
- Medium—margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- High—margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- Very High—margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- Extreme—margin of safety for 5-star rating is a 75% discount and for 1-star rating is 300% premium.

4. Market Price

The market prices used in this analysis and noted in the report come from exchange on which the stock is listed, which we believe is a reliable source.

For more details about our methodology, please go to https://shareholders.morningstar.com.
Other Definitions

Last Price: Price of the stock as of the close of the market of the last trading day before date of the report.

Stewardship Rating: Represents our assessment of management’s stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies’ investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they’ve had a demonstrated impact on shareholder value. Analysts assign one of three ratings: “Exemplary,” “Standard,” and “Poor.” Analysts judge stewardship from an equity holder’s perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

Quantitative Valuation: Using the below terms, intended to denote the relationship between the security’s Last Price and Morningstar’s quantitative fair value estimate for that security.

- Undervalued: Last Price is below Morningstar’s quantitative fair value estimate.
- Fairly Valued: Last Price is in line with Morningstar’s quantitative fair value estimate.
- Overvalued: Last Price is above Morningstar’s quantitative fair value estimate.

Risk Warning

Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor’s principal value will fluctuate so that, when redeemed, an investor’s shares may be worth more or less than their original cost. A security’s current investment performance may be lower or higher than the investment performance noted within the report. Morningstar’s Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

Quantitative Equity Reports Overview

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Quantitative Equity Ratings

Morningstar’s quantitative equity ratings consist of:

1. Quantitative Fair Value Estimate
2. Quantitative Star Rating
3. Quantitative Uncertainty
4. Quantitative Economic Moat
5. Quantitative Financial Moat

Quantitative Uncertainty:

Morningstar’s level of uncertainty about the accuracy of the quantitative fair value estimate. Generally, the lower the quantitative Uncertainty, the narrower the potential range of outcomes for that particular company. The rating is expressed as Low, Medium, Very High, and Extreme.

- Low: the interquartile range for possible fair values is less than 10%
- Medium: the interquartile range for possible fair values is less than 15% but greater than 10%
- High: the interquartile range for possible fair values is less than 35% but greater than 15%
- Very High: the interquartile range for possible fair values is less than 80% but greater than 35%
- Extreme: the interquartile range for possible fair values is greater than 80%

Quantitative Financial Moat:

Intended to reflect the probability that a firm will face financial distress in the near future. The calculation uses a predictive model designed to anticipate when a company may default on its financial obligations. The rating is expressed as Weak, Moderate, and Strong.

- Weak: assigned when Quantitative Financial Health < 0.2
- Moderate: assigned when Quantitative Financial Health is between 0.2 and 0.7
- Strong: assigned when Quantitative Financial Health > 0.7
Research Methodology for Valuing Companies

Other Definitions

Last Close: Price of the stock as of the close of the market of the last trading day before date of the report.

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This Report has not been made available to the issuer of the security prior to publication.

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A change in the fundamental factors underlying the quantitative equity ratings can mean that the valuation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit http://global.morningstar.com/equitydisclosures.
Costco Wholesale Corp  COST  (XNAS)

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Costco Wholesale Corp

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| ★★★               | 208.55 USD | 192.00 USD          | 1.09            | 1.07                     | 1.09                     | 91.86            | Discount Stores | Exemplary 

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