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Chewy, Inc. Case Study

NYSE: CHWY

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Chewy's Adjusted EBITDA Margin Thesis

Chewy, Inc. cannot exceed adjusted EBITDA margins of 10% without a generous model. Chewy's long-term, ten year/FY 2031 projected adjusted EBITDA margin level should be **7.72%**.

To arrive at 7.72%, I averaged two financial models that I created, one conservative (Figure A, page 4) and one generous (Figure B, page 4). The conservative model projected a 4.65% long-term adjusted EBITDA margin, while the generous model projected a 10.79% long-term adjusted EBITDA margin (Figure D, page 5).

In the conservative model, I used two-year projected revenue and operating profit data from Bloomberg L.P. To determine the cost of revenue ratios for 2021 & 2022, I divided operating profit by revenue and subtracted that number from the previous year's cost of revenue. This provided me with the gross profit ratios (which is 1 minus the cost of revenue ratio). To figure out 2021 & 2022's revenue growth rates, I subtracted the projected revenue by the previous year's revenue then divided that number by the previous year's revenue. To figure out 2023-2031's revenue growth rates, I forecasted them following the trendline to decrease starting by 4%, then 2%, then 1%, to arrive at 6% by 2031. 5.6% is the projected U.S. pet care sales market CAGR from 2021-2028.[1]

Since Bloomberg's data only projects until FY2022, I had to make multiple assumptions:

- I assumed the cost of revenue will remain stagnant at 71.24% after 2022. Since the cost of revenue decreased so minimally from 2020-2021 (2%) and 2021-2022 (1%), I set a floor on the cost of revenue for the following years.
- I assumed that Chewy's operating expenses will not increase or decrease after 2020. The operating expenses have been fluctuating between 26.7% and 33.5% over the past 5 years with 26.7% being the most recent, so I used 26.7% for the ten years projected.
- I assumed that the depreciation and amortization percentages will remain the same after 2020. Chewy's depreciation and amortization levels should not change YOY, so I kept them the same as 2020 at .5% to be conservative.

Because of these three assumptions,

- Chewy's gross profit remains the same at 28.76% after 2022 since the cost of revenue stays the same.
- Chewy's EBITDA remains the same at 2.06% after 2022 because the gross profit and operating expenses stay the same.
- Chewy's operating income remains the same at 1.57% after 2022 because the EBITDA and depreciation and amortization stay the same.

In the generous model, I used J.P. Morgan's projections of revenue growth rate, cost of revenue, and operating expenses from 2021-2023. I input these numbers into my model and projected the trend for 2023-2031. Instead of leaving the cost of revenue ratios and operating expense ratios stagnant like in the conservative model, I decreased both ratios using the same trend of J.P. Morgan's projections.[2]

These models provided projected EBITDA margins. To determine the adjusted EBITDA margins, I had to figure out how Chewy arrived at their adjusted measures. Chewy's Q1 2021 Shareholder Letter explains exactly what items they exclude from their EBITDA to get their Adjusted EBITDA; however, some of these items are not publicly available. So, instead, I calculated the average difference between the Adjusted EBITDA Margin & GAAP EBITDA Margin from Q1 2019-Q1 2021 and then added the average difference to each of my projected EBITDA margins to figure out my final Adjusted EBITDA Margins (Figure C, page 5). Therefore, I ultimately arrived at an adjusted EBITDA margin level of 7.72%.

[1] https://www.fortunebusinessinsights.com/pet-care-market-104749

[2] J. P. Morgan - 1QFY Preview: Remain Positive & Expect Upside to Numbers; Overweight & $98 PT

Pet Care Market Size

I calculated the size of the U.S. Pet Care Market in 2021 that is applicable to Chewy as $78.9 billion. To make this determination, I adjusted figures provided by The American Pet Products Association (APPA) to include only those sales relevant to Chewy. APPA determined that $109.6 billion, up from $103.6 billion in 2020, will be spent on pets in the U.S. Market in 2021.

APPA provides four categories, one that is non-applicable and three that I used in my calculations:

- Pet Food & Treats is directly applicable to Chewy at $44.1 billion.
- I adjusted Supplies, Live Animals, & OTC Medicine from $23.4 billion to $22.4 billion by removing the Live Animals category because Chewy does not sell Live Animals.
- I adjusted Vet Care & Product Sales from $32.3 billion to $12.3 billion by removing the Vet Care category (approximately $20 billion)[3] because even though Chewy has “Connect with a Vet” telehealth veterinary service, almost all veterinary services must be performed in person.

Since Chewy will have $8.9 billion in revenue in 2021, they will cut into 11.3% of the readily available $78.9 billion U.S. market.

Currently, Chewy only offers its services in the United States. If Chewy were to expand its services internationally, then they would more than double their market reach from $78.9 billion in the United States to $160.49 billion globally in 2021. (With Chewy’s current services, they reach 72% of the U.S. pet care market, and in 2021 the global pet care market is expected to be $222.93 billion).[4] The global pet care market size is expected to reach $325.74 billion by 2028, with a CAGR of 5.6% from 2021-2028.[5] In my projections, Chewy’s revenue growth rate is well above 5.6% even into 2031 (Figure A, page 4). By remaining a national company, Chewy limits more than half of their market reach. Unless Chewy targets the international market, their revenue growth rate will continue to fall.

Drivers of Growth in the Pet Care Industry

I have identified the following four trends as drivers of future growth in the pet care industry:

Humanization of Pets

More than 80% of U.S. pet owners identify their pets as family members instead of pets/companions or property.[6] Chewy’s website features hundreds of photos & articles about “Pet Families,” “Pet Parents,” “Dogfathers,” “Dog Moms,” and pets in weddings.[7] Because pets are increasingly seen as family members, pet owners splurge on expensive food, medicine, toys, and treatment.[8]

Obesity and Healthier Foods

Pet obesity rates in the U.S. have led to higher sales of healthier products, medicine, and services which are expected to outpace overall industry sales in the next few years.[9] The most recent study in 2018 shows that 59.5% of cats and 55.8% of dogs are classified as overweight or obese.[10] Chewy just announced in their Q1 2021 Letter to Shareholders that they have entered the fresh and prepared pet food space through their program, Fresh, and developed a proprietary fresh food brand, Tylee’s, for that program.[11]

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[3] https://www.veterinarypracticenews.com/americans-spent-billion-veterinary-care-2018/
[4] https://www.fortunebusinessinsights.com/pet-care-market-104749
[5] https://www.fortunebusinessinsights.com/pet-care-market-104749
[6] https://humanepro.org/page/pets-by-the-numbers
[7] https://be.chewy.com/beinspired/people-x-pets/
[8] https://www.wearewoodruff.com/blog/pets/expert-sees-us-pet-industry-growth-millennials-and-care/
[9] https://www.wearewoodruff.com/blog/pets/expert-sees-us-pet-industry-growth-millennials-and-care/
[10] https://petobesityprevention.org/2018
[11] https://s23.q4cdn.com/610444331/files/doc_financials/2021/q1/Q1-2021-Shareholder-Letter.pdf

Lower Prices and Ease

In 2020, 71% of pet owners purchased pet supplies online due to lower prices and convenience.[12] While COVID-19 explains much of this statistic, most consumers will not switch back to in-person shopping as online shopping is cheaper and easier. Chewy's sales represent this trend as 69.3% of their customer sales came from their Autoship subscription service in Q1 2021.[13]

Technology-Based Product Innovation

Technological innovations in pet products are leading to higher sales and demand in the pet care market. Currently, Chewy sells multiple types of smart doors, smart feeders, smart litter boxes, GPS/Activity trackers, and pet cameras.[14] Chewy's website reports smart pet products as a $555 million category in 2020, up 13% from 2019.[15] This trend can be expected to continue as technological innovation advances.

Chewy's Industry-Leading Pet E-Tail Business

As the largest pure-play pet e-tailer in the United States, Chewy, Inc. has 19.8 million active customers and over 70,000 products from over 2,500 brands, including proprietary ones. Chewy is a high-growth company with 35%+ growth over the past four years and 20%+ projected growth over the next two years. Their strong position in the pet market is indicated by a ~40% online market share,[16] and an ~11.3% total market share. To increase market share, Chewy is actively launching new programs, such as "Fresh" prepared food program, "Connect with a Vet" telehealth program, and "Compounding Pharmacy" Rx program. Chewy's Autoship subscription service accounts for ~69% of customer sales and guarantees repeat business, making them the most competitive pet e-tailer.

Chewy's most recent success is due to an increase in pet ownership during COVID-19. The 5.7% CAGR of pet-owning households in 2020, compared to the pre-COVID-19 CAGR of .6%, represents a ~10-year increase in pet owners packed into a single year.[17] Skeptics of Chewy's business model may believe that continued growth is not sustainable. However, these U.S. pet-owning households are not going away. The average life expectancy of dogs is 10-13 years and cats is 13-17 years. Therefore, Chewy's customers — particularly the ~69% on Autoship — will continue to sustain their growth. Yet, despite this continued growth, Chewy cannot achieve adjusted EBITDA margins above 10%. As shown in my model, Chewy's projected cost of revenue and operating costs will not decrease enough to bring EBITDA margins above 10%.

Chewy's major competitors are Amazon (NASDAQ: AMZN), Walmart (NYSE: WMT), Target (NYSE: TGT), PetCo (NASDAQ: WOOF), BarkBox (NYSE: BARK), and ZooPlus (ETR: ZO1). PetSmart and Chewy are both majority-owned by private-equity firm BC Partners. When considering financials, PetCo emerges as Chewy's main competitor. PetCo's Adjusted EBITDA Margin in 2020 was 9.88%,[18] while Chewy's Adjusted EBITDA Margin in 2020 was 1.19%. Petco's almost ten-times higher Adjusted EBITDA margin is due to significantly higher gross profits. In 2020, PetCo had a gross profit of 42.8% or $2.1 billion of their $4.9 billion in revenue, while Chewy only had a gross profit of 25.5% or $1.8 billion of their $7.1 billion in revenue. However, since PetCo operates in brick-and-mortar stores, they have higher overhead, which led to their operating expenses of 37.3% or $1.8 billion in 2020 compared to Chewy's operating expenses of 26.7% or $1.9 billion in 2020.[19] If Chewy were to increase their gross profit to a similar level of PetCo's gross profits, then they would also have a higher Adjusted EBITDA Margin. Therefore, Chewy cannot exceed adjusted EBITDA margins of 10% without a generous model. Chewy's long-term, ten year/FY 2031 projected adjusted EBITDA margin level should be 7.72%.

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[12] https://www.petfoodindustry.com/blogs/7-adventures-in-pet-food/post/9838-pet-food-e-commerce-on-steroids-in-2020-and-beyond
[13] https://s23.q4cdn.com/610444331/files/doc_financials/2021/q1/Q1-2021-Shareholder-Letter.pdf
[14] https://be.chewy.com/pet-tech-watch-2021-smart-devices-serve-up-benefits-for-you-and-your-pets/
[15] https://be.chewy.com/pet-tech-watch-2021-smart-devices-serve-up-benefits-for-you-and-your-pets/
[16] J. P. Morgan - 1QFY Preview: Remain Positive & Expect Upside to Numbers; Overweight & $98 PT
[17] https://www.fool.com/investing/2021/06/07/chewy-q1-earnings-preview-what-want-to-know/
[18] https://www.sec.gov/Archives/edgar/data/1826470/000119312521002588/d62974ds1a.htm
[19] Bloomberg L.P.

Figure A

Conservative Ratios	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue Growth Rate		133.7%	67.9%	37.2%	47.4%	25.7%	20.4%	16%	14%	12%	10%	10%	8%	7%	6%	6%
Cost of Revenue (Excluding Depr.)	83.4%	82.5%	79.8%	76.4%	74.5%	72.34%	71.24%	71.24%	71.24%	71.24%	71.24%	71.24%	71.24%	71.24%	71.24%	71.24%
Gross Profit	16.6%	17.5%	20.2%	23.6%	25.5%	27.66%	28.76%	28.76%	28.76%	28.76%	28.76%	28.76%	28.76%	28.76%	28.76%	28.76%
Operating Expenses	28.6%	33.5%	27.8%	28.8%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	26.7%
EBITDA	-11.9%	-16.1%	-7.6%	-5.2%	-1.2%	0.96%	2.06%	2.06%	2.06%	2.06%	2.06%	2.06%	2.06%	2.06%	2.06%	2.06%
Adj. EBITDA	-9.34%	-13.47%	-4.99%	-2.60%	1.36%	3.55%	4.65%	4.65%	4.65%	4.65%	4.65%	4.65%	4.65%	4.65%	4.65%	4.65%
Depreciation & Amortization	0.6%	0.6%	0.7%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Operating Income	-12.5%	-16.6%	-8.2%	-5.8%	-1.7%	0.46%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%	1.57%

Figure B

Generous Ratios	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue Growth Rate		133.7%	67.9%	37.2%	47.4%	25%	24%	21%	19%	17%	14%	12%	10%	8%	6%	6%
Cost of Revenue (Excluding Depr.)	83.4%	82.5%	79.8%	76.4%	74.5%	74.10%	74.00%	73.50%	73.20%	73.00%	72.50%	72.10%	71.80%	71.50%	71.10%	70.80%
Gross Profit	16.6%	17.5%	20.2%	23.6%	25.5%	25.90%	26.00%	26.50%	26.80%	27.00%	27.50%	27.90%	28.20%	28.50%	28.90%	29.20%
Operating Expenses	28.6%	33.5%	27.8%	28.8%	26.7%	26.1%	24.9%	23.8%	23.3%	23.0%	22.5%	22.0%	21.8%	21.4%	21.2%	21.0%
EBITDA	-11.9%	-16.1%	-7.6%	-5.2%	-1.2%	-0.20%	1.10%	2.70%	3.50%	4.00%	5.00%	5.90%	6.45%	7.10%	7.70%	8.20%
Adj. EBITDA	-9.3%	-13.5%	-5%	-2.6%	1.4%	2.4%	3.7%	5.3%	6.1%	6.6%	7.6%	8.5%	9.04%	9.69%	10.3%	10.79%
Depreciation &Amortization	0.6%	0.6%	0.7%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Operating Income	-12.5%	-16.6%	-8.2%	-5.8%	-1.7%	-0.70%	0.60%	2.20%	3.00%	3.50%	4.50%	5.40%	5.95%	6.60%	7.20%	7.70%

Figure C

Fiscal Quarter & Year	Adjusted EBITDA Margin	EBITDA Margin (GAAP)	Difference
Q1 2019	-1.42%	-5.20%	-3.78%
Q2 2019	-2.53%	-4.88%	-2.35%
Q3 2019	-2.46%	-4.20%	-1.74%
Q4 2019	-0.43%	-3.56%	-3.13%
Q1 2020	0.21%	-3.49%	-3.70%
Q2 2020	0.91%	-2.28%	-3.19%
Q3 2020	0.31%	-0.84%	-1.15%
Q4 2020	2.97%	0.53%	-2.44%
Q1 2021	3.62%	1.77%	-1.85%
		Average:	-2.59%

Figure D