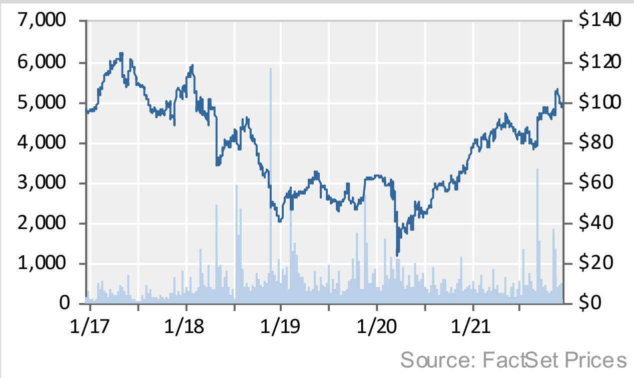
Recommendation: Hold				
Current Price	**$97.60**	---	Ticker	SPB
1 Year Bear	$84.69	*-13%*	Sh. Out. (M)	41.2
1 Year Base	**$92.85**	***-4.8%***	M.Cap. ($B)	4.2
1 Year Bull	$116.73	*20%*	EV ($B)	6.4

Manufacturing, Consumer Discretionary

Spectrum Brands Holdings, Inc.

Price History



	5Y	3Y	2Y	LTM	YTD	3M	1M
Return	1.2%	108.8	58.3%	41.0%	23.6%	5.7%	3.5%

Summary

I recommend a neutral rating with a target of $94. Spectrum has an a great chance to increase sales of its pet, home, garden and personal care products. Growth and acquisitions will help make SPB more profitable in coming years. Management is continuing to make the business more efficient through technology and e-commerce; the business looks completely different compared to 2009 during the dark bankrupcy days. The stock is fairly valued based on relative and DCF analysis.

Financials

	2017	2018	2019	2020	2021	2022F	2023F
Sales($B)	**3.7**	**3.8**	**2.4**	**2.6**	**2.9**	**3.3**	**3.5**
Gr. %	-40.4	2.8%	-35.8	7.2%	14.3%	10.2%	6.6%
v. Cons.	-	-	-	-	-	5.4%	1.8%
Industry	4.2%	3.3%	0.7%	2.6%	19.0%	6.0%	4.2%
EPS	**$8.48**	**$23.63**	**$9.78**	**$2.20**	**$4.44**	**$2.61**	**$3.16**
Gr. %	-	178%	-58.6	-77.5	101%	-41.2	21.1%
v. Cons.	-	-	-	-	-	-	-
Industry	23.1%	-8.5%	-25.2	57.4	44.5	7.0%	9.7%

Ratios

	2017	2018	2019	2020	2021	2022F	2023F
NPM	**7.4%**	**22.9%**	**20.3%**	**3.8%**	**6.3%**	**3.4%**	**3.8%**
Industry	10.4%	9.1%	8.1%	10.3%	11.1%		
ROE	-	49.3%	29.9%	6.3%	13.1%	7.4%	8.7%
Industry	12.2%	11.2%	12.2%	12.4%	12.4%		
ROA	-	4.0%	7.6%	1.9%	3.6%	2.5%	3.7%
Industry	7.7%	7.1%	6.8%	7.0%	7.0%		
A T/O	0.1	0.17	0.38	0.51	0.57	0.74	0.96
A/E	-	12.33	3.92	3.29	3.61	2.99	2.38

Valuation

	2017	2018	2019	2020	2021	2022F	2023F
P/E	4.7	3.6	-	27.3	21.0	-	-
Industry	23.63	28.28	32.62	30.35	20.24	19.04	17.34
P/S	0.68	0.5	0.86	0.89	1.40		
P/B	4.1	2.5	1.5	1.8	2.7		
P/CF	0.6	8.1	2429	8.8	14.3		
EV/EBITDA	19.1	15.3	9.0	16.5	21.2		
D/P	0.0%	2.0%	-	80.1%	36.9%		

Key Drivers

- The Sale of HHI: On September 8th, 2021, SPB sold the largest part of its business. Purchased by ASSA Abloy for $4.3 billion, the segment consists of hardware and home products. The cash earned from the sale will be used to pay off debt and invest in company acquisitions.
- Growth of Global Pet Care: Sales in the GPC segment have continuously increased over the past years due to rising pet ownership and more time spent at home during the COVID-19 pandemic.
- Global Productivity Improvement Plan: Spectrum Brands plans to work on firm efficiency and customer satisfaction, while improving margins, using projects like the GPIP.
- Rise from Bankruptcy: In 2009, SPB filed for chapter 11 bankruptcy. Debt fell from $6.6 billion in 2017 to $2.4 billion in 2021.
- Economically Defensive Debt, and Recent Sales: Sales of segments over the past three years have given SPB the cash to help repair its debt.

Valuation

Using a relative valuation approach, Spectrum Brands appears to be overvalued in comparison to the manufacturing industry. DCF analysis implies that the stock is worth $92.85. A combination of the approaches suggests that Spectrum is fairly valued, as the stock's value is about $92.85 and the shares trade at $97.60.

Risks

- Supply chain shortages and shipping costs
- Debt from previous company experiences
- Consumer trends changing rapidly
- Market saturation

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Company Overview

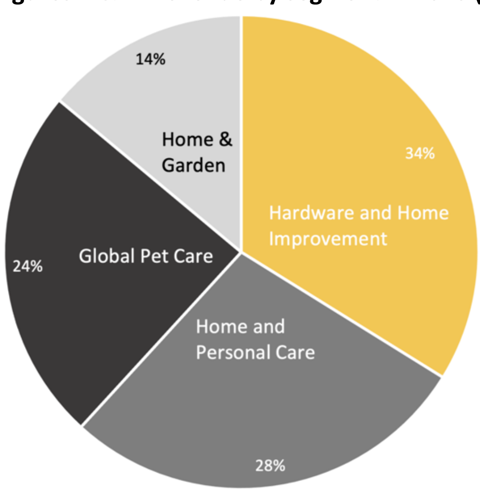
Spectrum Brands Holdings, Inc. (SPB) is made up of several smaller products and home essential companies. SPB's divisions include Hardware and Home Improvement (HHI), Home and Personal Care (HPC), Global Pet Care (GPC), and Home and Garden (H&G). Spectrum has products for all ages. Popular brands consist of Black + Decker, George Foreman, Dingo, Kwikset, and many more. SPB's products are primarily sold in North America, followed by Europe, Africa and Middle East, and Asia/Pacific. SPB is headquartered in Middleton, Wisconsin, and has multiple corporate offices located around the globe, including in Germany, Australia, Canada, and in four states (Wisconsin, Missouri, California, Florida), along with manufacturing, distribution, and sales offices in forty-five different countries. Spectrum Brands follows a business to consumer model.

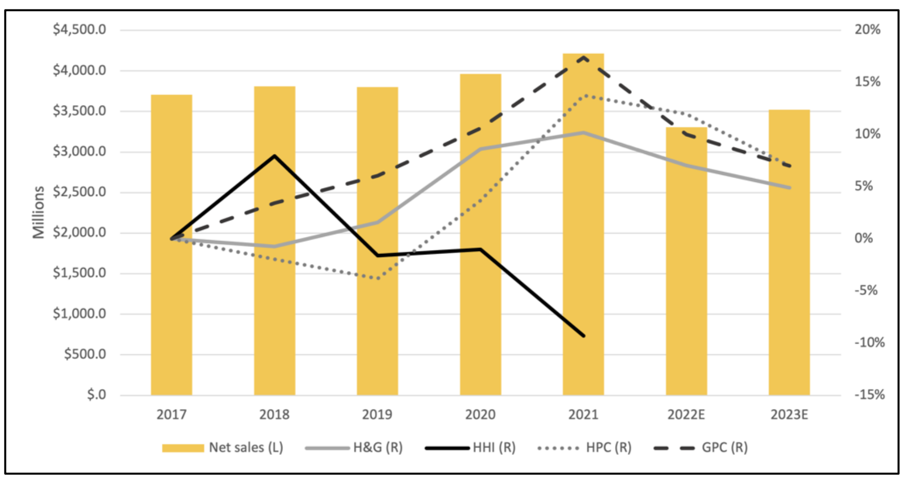
Spectrum Brands has four segments:

Although Hardware and Home Improvement is the company's largest division, Global Pet Care has had a steady growth rate of 42.5% over the past five years.

1) **Hardware and Home Improvement** sells items in categories such as security, plumbing, and hardware. HHI made up 34% of revenue in 2020 had a growth rate of -4.6% from 2017 to 2021.
2) The **Home and Personal Care** products are made up of different home appliances and personal care items. HPC made up 28% of revenue in 2020 and had a growth rate of 11.3% from 2017 to 2021.
3) **Global Pet Care** products are sold for those with furry friends. Items include companion animal products (grooming, training toys, and treats) and aquatics. GPC made up 24% of revenue in 2020 and had a growth rate of 42.5% from 2017 to 2021.
4) **Home and Garden** products are in three categories including, household, controls, and repellents. H&G made up 14% of revenue in 2020 and had a growth rate of 20.7% from 2017 to 2021.

Figures 1 & 2: Revenue by segment in 2020 (left) and total revenue (in millions) & YoY growth by segment since 2017 (right)





Source: Company reports/FactSet

Sales in the Hardware and Home Improvement segment have been slowly decreasing, but it was sold on September 8, 2021. Global Pet Care sales has helped pave the way for SPB with its continued growth over the past four years. In addition to pet care, the home and personal care products as well as home and garden products have been experiencing solid growth.

Business/Industry Drivers

Though several factors may contribute to Spectrum Brands' future success, the following are the most important business drivers:

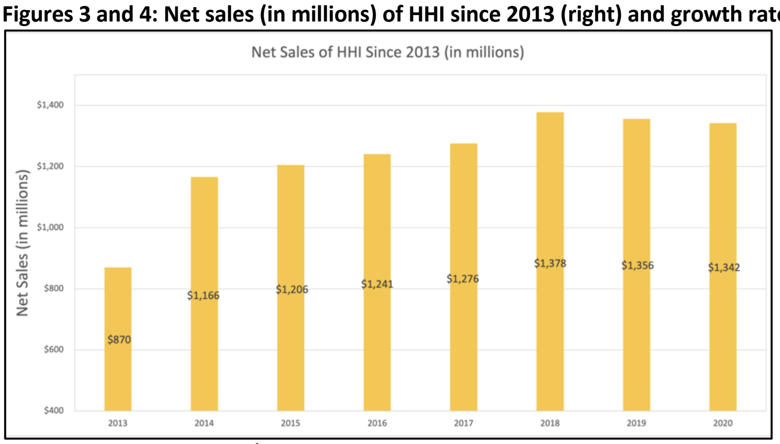
1) The Sale of HHI
2) Growth of Global Pet Care
3) Global Productivity Improvement Plan
4) The Rise from Bankruptcy
5) Economic Sensitivity

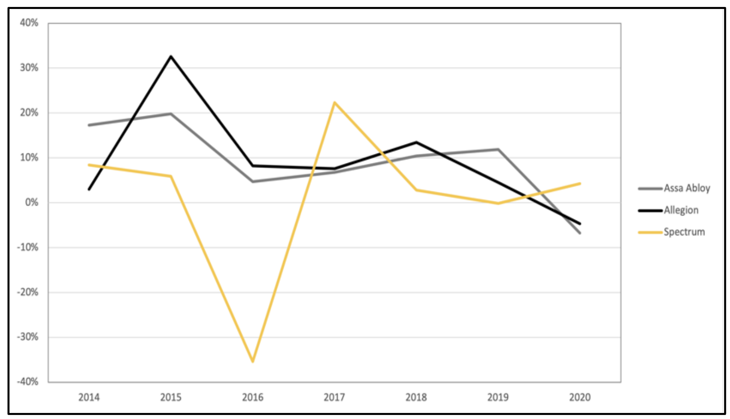
The Sale of HHI

The $4.3 billion sale represents 14x projected FY21 adjusted EBITDA.

On September 8th 2021, the company announced the sale of its Hardware and Home Improvement division. ASSA ABLOY is paying $4.3 billion in cash. Big name products within HHI consist of Kwikset, Weiser, Pfister, and many more. CEO David Maura said that the money will be used to pare down company debt and invest in growth. This will lead to acquisitions for Global Pet Care and Home and Garden, and to enhance the value of its Home and Personal Care business.

Figures 3 and 4: Net sales (in millions) of HHI since 2013 (right) and growth rate of net sales of SPB and competitors since 2014





Source: Company reports/FactSet

The hardware and home improvement business was growing rapidly, but started slowing in 2018. Q3 2021 sales rose 48.8% from the previous year, including a (46.7% organic 1y), but this was due to a shift in consumer spending on homes during covid, and may not be sustainable. Adjusted EBITDA was up 56% and GAAP operating income rose $26.1 million.

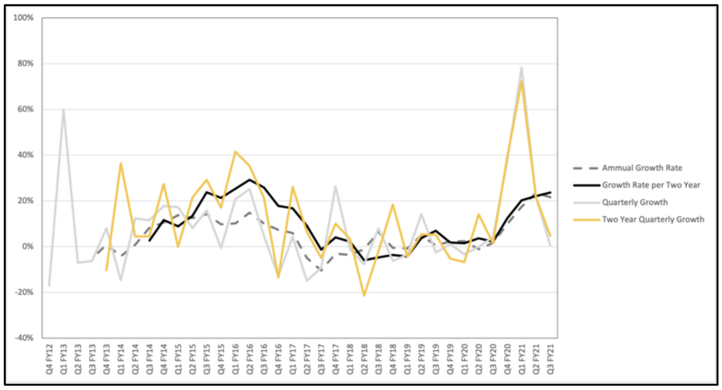
Figure 4 shows that SPB's sales growth has been volatile. The company has regularly repositioned its portfolios. It sold its auto care and battery product segments in 2016. Since the rebound in 2017, sales growth has slowed.

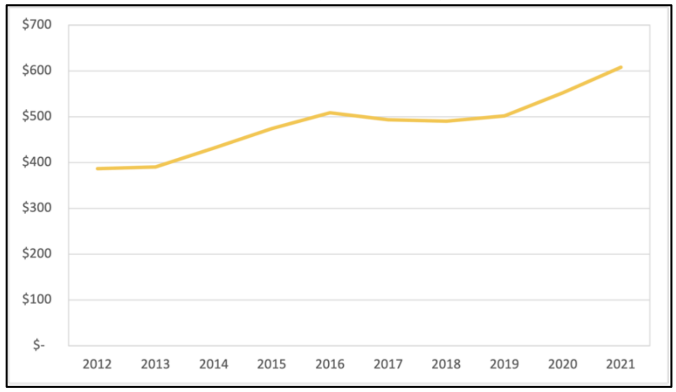
From 2013 to 2020, the HHI segment grew from $869.6 million to $1,342.1 million, or 53.4%. Since announcing the sale, the stock price jumped from $78.43 to $95.89, an 18.2% increase in just under a month. Perhaps investors believe the sale is for a good price at a peak in housing and that the proceeds are better used elsewhere.

As mentioned earlier, the money from this transaction will be used reduce company debt as well as for acquisitions in both the Global Pet Care unit and the Home and Personal Care segment. Acquisitions may help growth, but SPB plans to accelerate organic growth in these segments.

In April 2021, the Home and Garden segment acquired Rejuvenate, an industry leading household cleaning and maintenance product. Spectrum purchased its newest brand for approximately $300 million. This helped boost net sales from $82 million in Q1 2021 to $169 million in Q2, or 51.5%. Acquisitions are valuable to growth.

Figures 5 and 6: Growth Rates for Home and Garden Segment Home and Garden Sales since 2012 (in millions)





Source: FactSet

Figure 5 shows the annual growth rate, two-year annual growth rate, quarterly growth rate, and two-year quarterly growth rate of the Home and Garden segment. This vividly shows the seasonal trends, as garden sales usually peak during the warmer months, as well as jumped from the Rejuvenate acquisition. The graph also shows the upwards trend in the growth rate. After the sales of HHI, Home and Garden will be a larger part of sales so its growth will have a greater impact.

The Growth of Global Pet Care

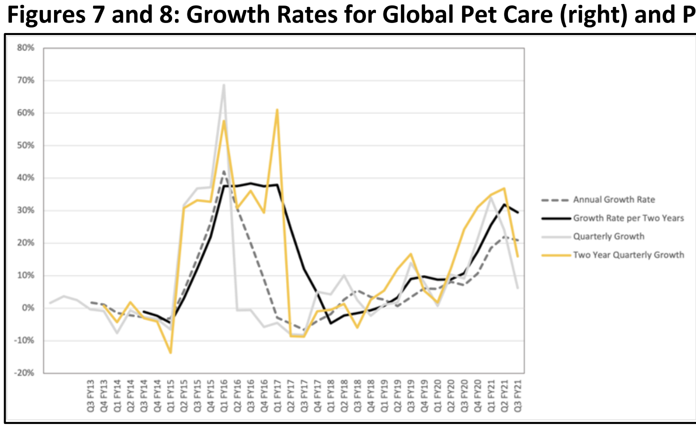
The Global Pet Care segment grew 6.5% in the last fiscal year. Owners have spent more on pets during the quarantine and now while working from home. Two major acquisitions have also helped grow sales including Omega Sea and Armitage Pet Care.

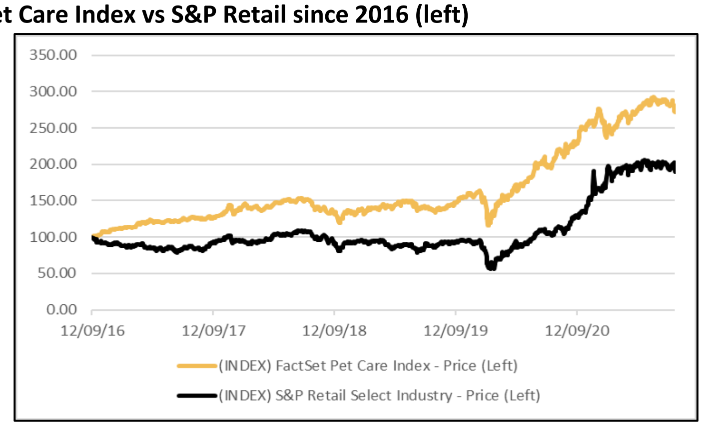
On October 26th 2020, Spectrum Brands announced the acquisition of Armitage Pet Care. Armitage Pet Care is a well-known grocery brand located in the United Kingdom. Purchased for approximately $180 million, SPB is looking to strengthen its GPC segment by increasing sales of dog chews. This investment was the perfect way to do so, with Armitage specializing in not only dog chews, but also cat chews, treats, and toys. This will also help expand international sales in Europe.

> The largest quarterly growth happened from FY20 to FY21 when net sales jumped 78% from $46M to $82M.

Omega Sea is the newest addition SPB's aquatic portfolio. On March 12th, 2020, the firm helped expand its aquatics products as well as tap into the reptile market. Paying $16.9 million for the newest addition, Omega Sea makes products such as fish food, sea salts, and supplies. SPB's president of GPC, John Pailthorp, said that the investment in Omega Sea will allow the company to leverage relationships in the US to help grow in the future. Omega joins SPB's industry leading consumer and commercial aquatics lines.

Figures 7 and 8: Growth Rates for Global Pet Care (right) and Pet Care Index vs S&P Retail since 2016 (left)

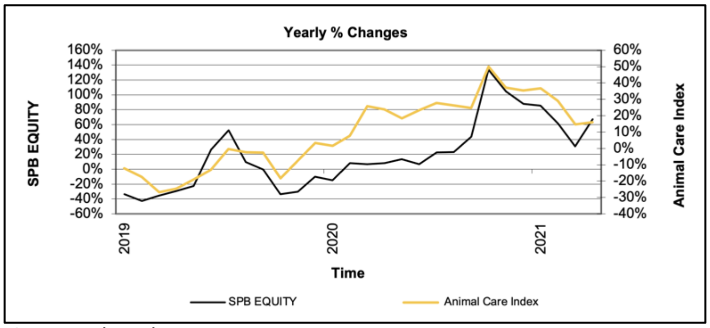


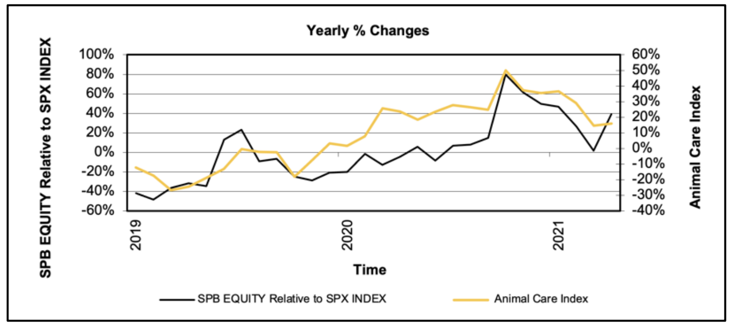


Source: FactSet

Figure seven displays the annual growth rate, two-year annual growth rate, quarterly growth rate, and two-year quarterly growth rate for the Global Pet Care segment. GPC's growth has accelerated over the past two years. Figure eight shows that pet care stocks have performed well relative to the S&P retail industry, however, appreciation slowed in 2021 which coincides with people heading back to work in the office.

Figure 9 and 10: Spectrum Brands vs Animal Care Index (left) and Spectrum Brands relative to SPX vs Animal Care Index (right)





Source: Bloomberg

Figures 9 and 10 show that SPB's stock is closely correlated with the animal care index, which implies that investors care about this business.

Global Productivity Improvement Plan

SPB is looking to improve its margins through the Global Productivity Improvement Plan (GPIP). GPIP targets improving the company's operating efficiency and effectiveness, while focusing on consumer insights and growth-enabling functions. This includes technology, marketing, research and development. Management reported that they expect savings of $200 million by the end of the 2022 fiscal year, which is $4.73 EPS. These savings will most likely be reinvested into growth initiatives and consumer insights, as well as marketing across the business to help promote its products.

When accounting for these expenses, charges get counted as "Total restructuring and related charges" and then get broken up into COGS and operating expense, appearing on the income statement. The items that add up to these expenses consist of the GPIP, GPC Edwardsville 3PL transition, SAP S4 ERP transformation and other restructuring activities.

Started in 2019, the GPIP is expected to continue through the fiscal year 2022. This project focus includes the company's continued operations post-divestiture environment and separation with Energizer, following the sales of the Global Auto Care and Global Batteries and Lighting segments. So far, the project saved $152.2 million of the expected $200 million, with $21.2 million coming in FY21.

During the year ended September 30th 2021, Spectrum transitioned its third-party logistics (3PL) at the Edwardsville, IL distribution location. This allows SPB to optimize and improve its fill rates to meet customer requirements and handle projected growth. Main costs from this project come from technology, as well as incremental and incentive-based compensation to maintain performance. Costs incurred were $11.5 million, with a projected $12.2 million to be paid and completed in the first half of the fiscal year ending September 30th 2022.

Also, during FY21, Spectrum has entered an initiative to transform its enterprise-wide operating system to SAP S4. This is a company-wide information system that will help improve the company's efficiency and productivity. This multi-year project will incur multiple costs including software configuration and implementation costs. Currently in the planning and design phase of the project, SPB has incurred $4.3 million in costs, with $13 million remaining with an anticipated completion in FY24.

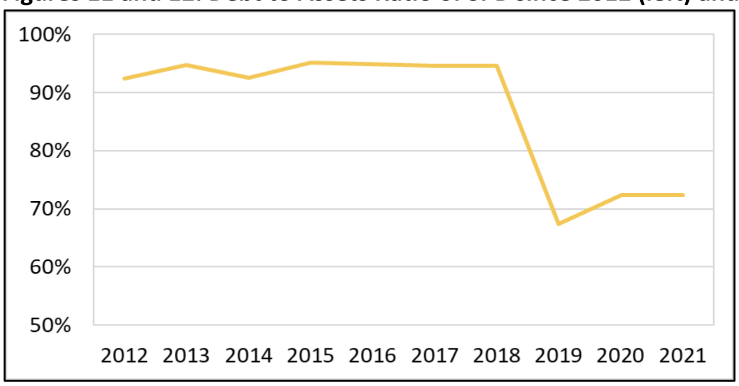
Other restructuring activities include less significant costs that help improve margins and typically are less than one-year costs. These projects are all ways to make the business more efficient, profitable, and make better use manufacturing resources. These restructuring expenses increased adjusted EBITDA 13.1% from 2020 to 2021, due to increased sales volume, productivity, and positive pricing, offset by tariffs and additional investment in marketing and advertising.

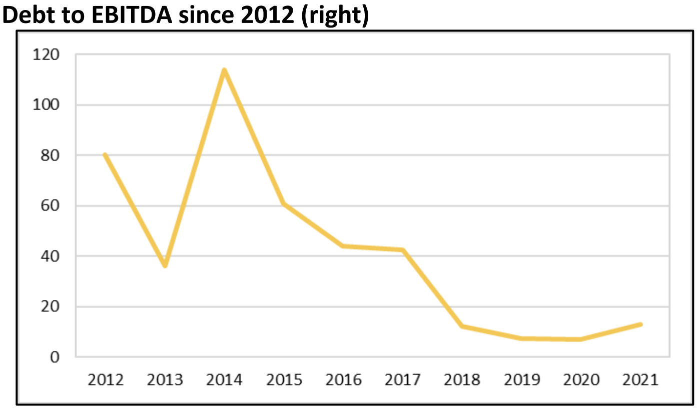
In its first quarter back from bankruptcy, Spectrum Brands' profitability was up 52%.

The Rise from Bankruptcy

In February of 2009, Spectrum Brands announced a Chapter 11 bankruptcy. With the stock price falling and the firm missing a $25.8 million interest payment, the company decided to look for a new life. Its struggles were amplified by the financial crisis in 2008, but it resulted from pressure following acquisition of garden and pet products.

Figures 11 and 12: Debt to Assets Ratio of SPB since 2012 (left) and Debt to EBITDA since 2012 (right)





Source: FactSet

Figure 11 shows SPB's the debt to assets ratio since 2012, when the company came back from bankruptcy. SPB's ratio has been hovering around 90%, dropping down to 67% in 2019, after it sold the battery business. With the sales of HHI, the company will be paring down debt to help lower that ratio further.

The decrease in debt ratio from 2018 to 2019 is due to the complete sale of its battery segment, including Rayovac, to Energizer.

Shown in figure 12 is the debt to EBITDA ratio since 2012. In 2013, Spectrum added the hardware and home improvement section of its business, which drove the ratio down due to the increased earnings. The ratio bounced back up to 114 in 2014 due to its increased debt and lower earnings but has consistently fallen since then. This is mainly due to the multiple sales and acquisitions that boosted earnings. Expect this ratio to keep dropping due to the debt being paid off from the sale of the HHI segment.

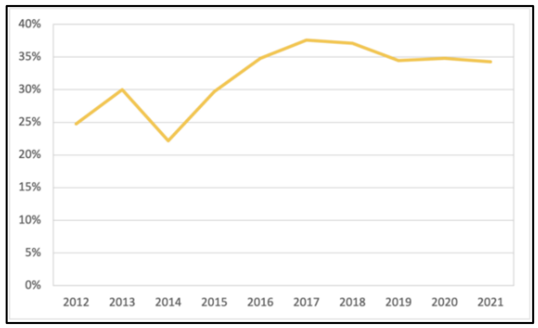
According to a letter from the firm after emerging from bankruptcy, the company presented its plan to reduce debt and issue new shares of stock, which brought SPB new life. The company reduced debt by $840 million thanks to General Electric Capital Corp that helped replace its $235 million debtor in possession financing facility.

Former shareholders lost everything, but bondholders were issued 27 million shares of new common stock and $218 million in 12% senior subordinated toggle notes. A toggle note gives the issuer the option of deferring interest payment by increasing the coupon in the future.

Figure 13 shows that SPB's profit margin has been relatively steady since 2018. The company is looking to increase this number by growing sales and stronger margins from its restructuring and related charges.

In 2019, Spectrum sold its Global Battery and Lighting segment to Energizer Holding Inc. for $2 billion. This segment included the popular Rayovac Battery, which was founded in Madison, Wisconsin 1906. This product helped make a name for Spectrum Brands. Included in the Global Battery and Lighting segment sale was Varta Battery, which will help Energizer's European sales. The firm also sold the auto care division to Energizer in 2010. This segment included popular products such as Armor All, STP, and A/C Pro Brands. This deal was valued at $1.25 billion, $937.5 million in cash and $132.5 in Energizer's equity. Both sales were used to lower company debt, as well as investments in continued operations for Spectrum's success.

Figure 13: Gross Profit Margin Since 2011



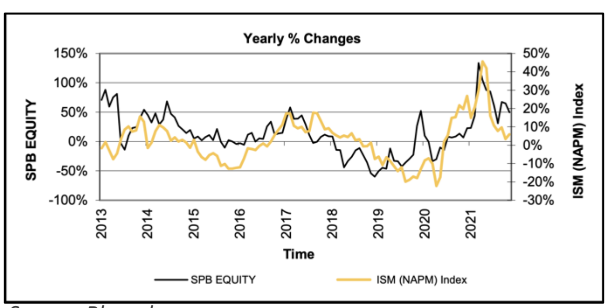
Source: Company Reports

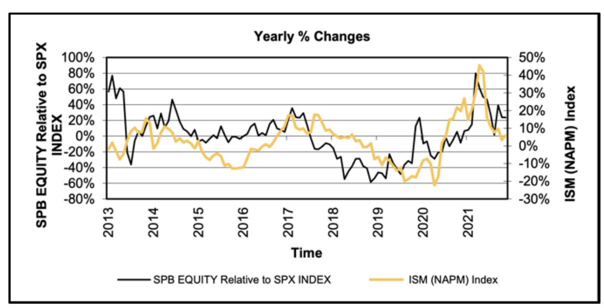
Just over twelve months after announcing their Chapter 11 bankruptcy, SPB cut its losses roughly in half. The firm also reduced its debt by $800 million and net sales grew 3% in 2009 and 5% in 2010. Spectrum later announced a merger with Russell Hobbs, which is still owned by the company today. In addition to Russell Hobbs, brands like Rayovac batteries and Hot Shot bug spray helped bring Spectrum back from the dead.

Kent Hussey, the CEO at the time, said in an interview with TheStreet, that at the end of the 2010 fiscal year EBITDA was expected to be between $430 and $440 million on about $3 billion in revenue. Hussey later said that they are looking forward to expanding its highly fragmented pet supply business, as well as home and garden, foreshadowing what was to come for SPB.

<u>Economic Sensitivity</u>

Figures 14 and 15: Spectrum Brands vs ISM (NAPM) Index (left) and Spectrum Brands relative to SPX Index vs ISM (NAPM) Index





Source: Bloomberg

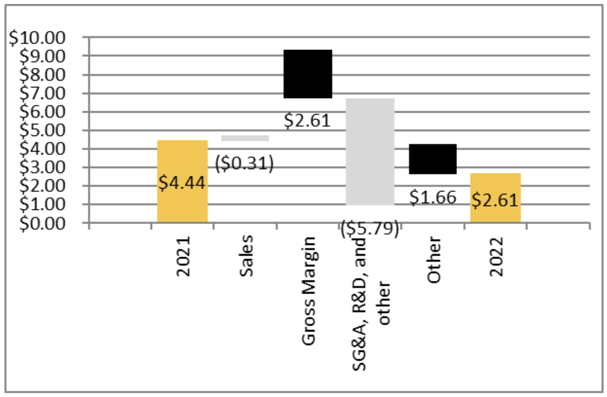
Historically, the stock has been positively correlated on absolute and relative basis to the economy as proxied by the ISM index of manufacturers. However, it was previously much more indebted and home and hardware may have been more dependent on the economic cycle than remaining businesses. These graphs show that if the economy is strong, these companies do better.

Financial Analysis

In 2018, Spectrum Brands merged with controlling shareholder HRG group, Inc, and officially changed its formal name to Spectrum Brands Holding, Inc.

I anticipate EPS to drop to $2.61 in FY 2022. Holding margins and other factors unchanged, declining sales costs EPS $0.31. Rising gross margin adds $2.61 while rising SG&A, R&D and other as a percent of sales costs $5.79. Other factors add $1.66 Sales are expected to drop slightly due to the sale of the Hardware and Home Improvement segment, but not significantly due to the future acquisitions to grow the three segments. The restructuring and other related charges will help improve gross margin.

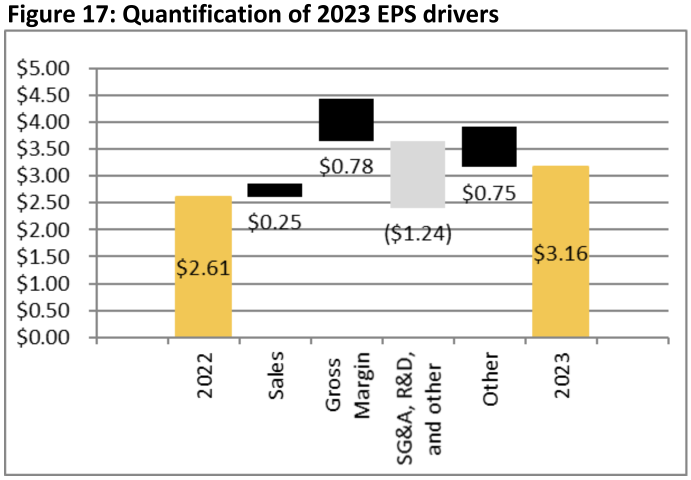
Figure 16: Quantification of 2022 EPS drivers



Source: Company Reports, IMCP

I expect 2022 EPS to increase $0.55 to $3.16. SPB will lose $1.24 as SG&A, R&D, and other rise as a percent of sales. This is due to the GPIP to help improve firm efficiency and customer satisfaction. On the other hand, it will gain $0.25 from sales growth, $0.78 from rising gross margin, and $0.75 from other. Sales growth is expected to continue in all five of its regions worldwide due to acquisitions. The company will rebound strongly from the sale of the HHI segment, after having over a year to reinvest the proceeds into its other segments.

Figure 17: Quantification of 2023 EPS drivers



Source: Company Reports, IMCP

I am slightly more optimistic than consensus estimates for both 2022 and 2023. This is mainly due to increased sales and acquisitions made over the next year with the funds from the HHI sale. This business will continue to evolve in all countries with the support from these new brands.

Figure 18: EPS and YoY growth estimates

	FY22E	FY23E
Revenue- Estimate	$3,305	$3,523
YoY Growth	10.2%	6.6%
Consensus Sales	$3,145	$3,220
YoY Growth	4.9%	2.4%
EPS-Estimate	$2.61	$3.16
YoY Growth	54.5%	20.9%
EPS-Consensus	$7.14	$5.44
YoY Growth	60.8%	-31.3%

Source: Company Reports, IMCP

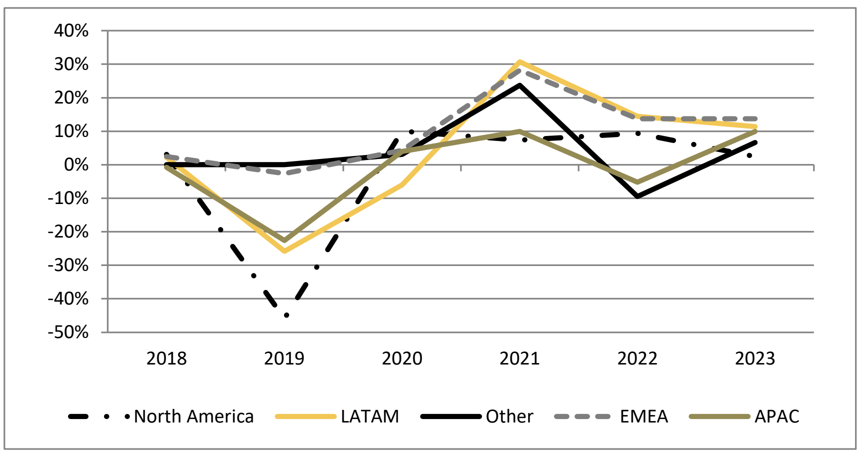
Revenues

After the sales of HHI, SPB will own 29 brands, with plans to expand on this number.

Spectrum Brands' sales has been increasing since 2017. Sales figures in figure 18 are shown without the Hardware and Home Improvement segment, since it was sold in 2021. I expect the sales to increase in the coming years due to the essential needs of pet, garden, and personal care items. I expect all regions to experience continued growth, including EMEA (Europe, Middle East, and Africa), powered by the Armitage Pet Care acquisition in 2020.

North America and LATAM (Latin America) sales will continue to grow due to higher HPC revenue. Main brands such as Black and Decker as well as George Foreman will also help drive sales for this region. E-commerce sales have also helped the LATAM market gain momentum with expanded distribution.

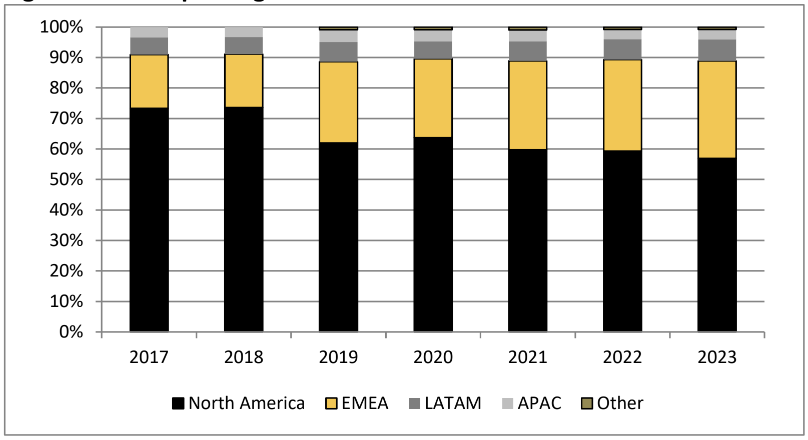
Figure 19: Spectrum Brands Growth Percentage by Region



Source: Company Reports, IMCP

SPB is looking to increase the percent of total sales in the EMEA and LATAM markets. I expect this to happen through lower sales in the North America and APAC (Asia Pacific) regions. Sales in the EMEA region increased 28.2% over the past year from $679.9 to $871.9 million. In addition to the substantial rise in EMEA sales over the last year, sales in the LATAM region rose 30.7%. LATAM sales jumped from $147.9 million in FY20 to $193.4 million in FY21. Other revenue consists of licensing and "other."

Figure 20: Sales per Region

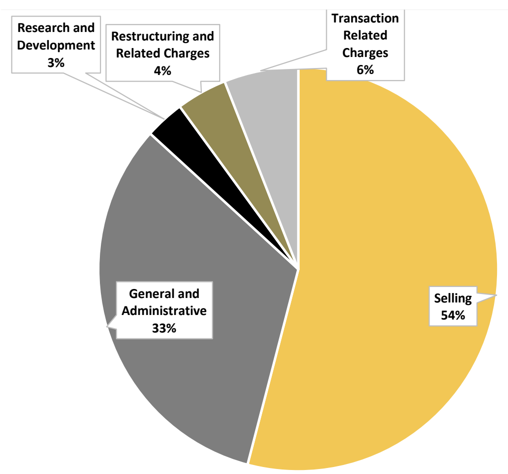


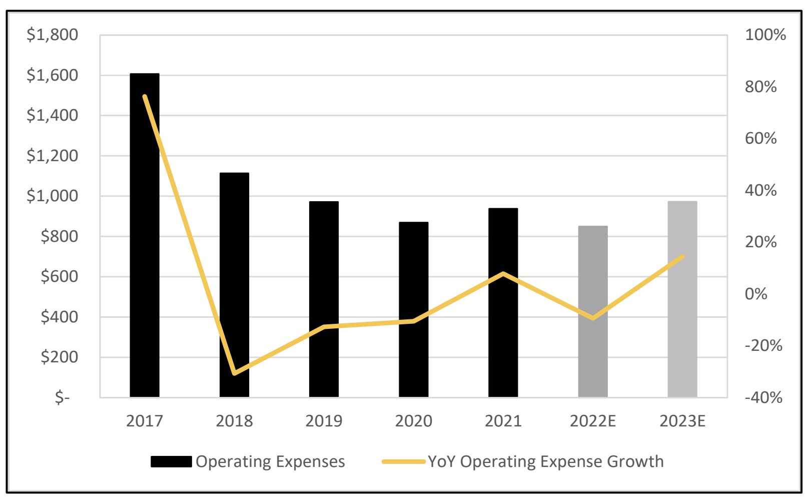
Source: Company Reports

Operating Income and Margins

Operating expenses are composed primarily of selling and general and administrative expenses. Advertising expense is broken out of SG&A, and shipping & handling expense is contained within stores and distribution expense. I expect most of the savings from SPB's profit maximizing initiatives to come out of sales expense, as SG&A has remained relatively stable as a percentage of sales and contains a baseline of overhead which cannot be reduced.

Figures 21 & 22: Composition of 2021 operating expenses (left); Operating expenses vs YoY Operating Expense Growth (right)





Source: Company Reports

Operating expenses for FY21 increased due to higher selling expenses of $78.3 million. These are attributed to higher freight and distribution costs and higher marketing and advertising spend, increased general and administrative costs of $26.3 million and increased transaction related charges of $33.2 million due to strategic acquisition and divestiture activities. This was offset by a decrease in restructuring costs of $19.4 million with a loss from the sale of Coevorden facility of $26.8 million and impairment of related intangible assets of $24.2 million in the prior year. Operating expenses for the year ended September 30, 2020 decreased due to the impairment of HPC goodwill of $116.0 million and impairment of intangible assets of $35.4 million in the *previous year* with offsets by the recognition of loss from sale of Coevorden facility of $26.8 million and impairment of related intangible assets $24.2 million.

After selling the Hardware and Home Improvement segment, SPB will cut its selling expenses due to losing their most profitable segment. This will lower other operating expenses in 2022 before they rise again in 2023. We can expect general and administrative expenses as well as research and development expenses to rise due to the work done to expand.

Operating income and adjusted EBITDA for the FY21 both rose with a lower margin due to increased sales volume and favorable foreign currency.

Figure 23: SPB Operating margins, 2020-2023E

	2020	2021	2022E	2023E
Sales	2622.1	2998.1	3304.9	3523.2
Cost of Goods Sold	1744.0	1963.5	2247.3	2353.5
Gross Income	878.1	1034.6	1057.6	1169.7
Gross Margin	*33.5%*	*34.5%*	*32.0%*	*33.2%*
Operating Expenses				
SG&A, R&D, D&A, and other	869.5	937.5	849.4	972.4
Growth	-21.9%	7.8%	-9.4%	14.5%
Operating Income	8.6	97.1	208.2	197.3
Operating Margin	0.3%	3.2%	6.3%	5.6%

Source: Company Reports

Return on Equity

Spectrum Brands had an extremely high ROE in 2019, but since has dropped more than half as margins fell. ROE is expected to bounce back over the next two years. DuPont analysis for SPB reveals that ROE is mostly driven by profit margins, but with the sale of the HHI segment, asset turnover will increase due to highly profitable assets declining more than sales. The drop in ROE and ROA from 2019 to 2020 was most likely due to the sale of the GBL and GAC to Energizer. SPB has since bounced back and doubled both margins and asset turns.

Figure 24: ROE breakdown, 2019 – 2023E

3 Stage DuPont	2019	2020	2021	2022E	2023E
Net income (cont)/sales	20%	4%	6%	9%	10%
Sales/avg assets	0.38	0.51	0.57	0.72	0.89
ROA	8%	2%	4%	6%	9%
Avg Assets/Avg Equity	3.92	3.29	3.61	2.87	2.16
ROE	30%	6%	13%	18%	19%

Source: Company Reports

I expect ROE growth in the next two years due to higher sales growth from the pet care and home and personal care products above growth in expenses. Home appliance products are becoming increasingly popular as well as pet ownership which also rose over the past year. ROA will continue to rise into 2022 and 2023. SPB is using cash from the HHI sale to pay off debt owed which will also lower its debt to asset ratio and put downward pressure on ROE, but it's a higher quality ROE.

Free Cash Flow

Figure 25: Free cash flow calculations

Free Cash Flow	2017	2018	2019	2020	2021	2022E	2023E
NOPAT	$ 630	$ (2,682)	$ (130)	$ 18	$ (130)	$ 164	$ 156
Growth		-526%	-95%	-114%	-830%	-226%	-5%
NOWC	2391	2009	520	783	1750	211	711
Net fixed assets	5814	4389	3586	3379	2427	2203	1762
Total net operating capital	$ 8,205	$ 6,398	$ 4,106	$ 4,162	$ 4,176	$ 2,414	$ 2,473
Growth		-22.0%	-35.8%	1.4%	0.3%	-42.2%	2.4%
- Change in NOWC		$ (383)	$ (1,489)	$ 263	$ 966	$ (1,539)	$ 501
- Change in NFA		$ (1,425)	$ (803)	$ (207)	$ (952)	$ (224)	$ (442)
FCFF		$ (874.4)	$ 2,161.6	$ (38.6)	$ (144.2)	$ 1,927.0	$ 96.9
Growth			-347.2%	-101.8%	273.2%	-1435.9%	-95.0%
- After-tax interest expense		$ (3,108.6)	$ 172.2	$ 70.0	$ (145.2)	$ 53.0	$ 20.9
+ Net new short-term and long-term debt		$ (1,506.2)	$ (2,510.2)	$ 358.8	$ (23.2)	$ (1,800.0)	$ -
FCFE		$ 728.0	$ (520.8)	$ 250.2	$ (22.2)	$ 74.0	$ 76.0
Growth			-171.5%	-148.0%	-108.9%	-433.3%	2.7%
Sources of cash (FCFE)		$ 728.0	$ (520.8)	$ 250.2	$ (22.2)	$ 74.0	$ 76.0
Uses of cash							
Other expense		$ (445.0)	$ (798.0)	$ (150.6)	$ (174.7)	$ -	$ -
Increase mkt sec							
Dividends		16	85.5	75.2	71.5	74	76
Change in other equity		1213.3	271	336.4	54.9	0	0
		$ 784.3	$ (441.5)	$ 261.0	$ (48.3)	$ 74.0	$ 76.0
Change in other liab		56.3	79.3	10.8	-26.1	0	0
Total		$ 728.0	$ (520.8)	$ 250.2	$ (22.2)	$ 74.0	$ 76.0

Source: Company Reports, IMCP

SPB's free cash flow has been extremely volatile over the last several years. The company paid off over four billion in debt from 2018 to 2019. These payments were made with the money received from the sale to Energizer. I forecast that Spectrum Brands will continue to pay off debt with $1.8 billion being paid off in 2022. I forecast that NOPAT will grow over the next two years. NOWC drops in 2022 with the sale, but slightly bounces back in 2023. The sales and acquisitions over time has helped drive the company towards a more profitable future. Spectrum's stock price jumped significantly higher this year, compared to the last few years, which indicated investors are optimistic.

I expect FCFF to increase dramatically in 2022 with the inflow of cash received from the HHI sale, but then drop in 2023. FCFE will increase in both 2022 and 2023, showing the firm is slowly becoming more profitable.

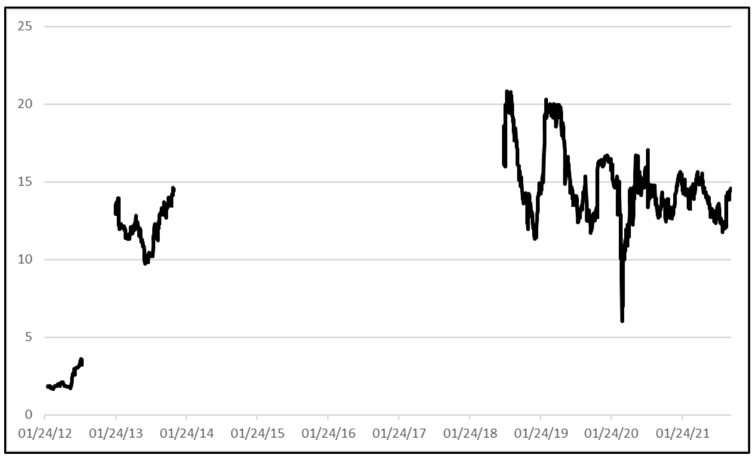
Valuation

SPB was valued using multiples and a 3-stage discounting cash flow model. Based on earnings multiples, the stock is expensive vs the market and is worth $92.85, however, due to the volatility of SPB's earnings the past few years, this metric may not be the most accurate. Relative valuation shows SPB to be slightly overvalued based on its fundamentals versus those of its peers in the manufacturing industry. DCF valuation suggests it is wort $92.85. As a result of these valuations, I value the stock at the same value.

<u>Trading History</u>

SPB is currently trading near its five-year high. This is the result of hardware and home improvement sale, but mixed Q4 earnings results. SPB's current NTM P/E is at 14.5 compared to its five-year average of 14.7. While I expect some progression towards that number in the future, I do not think that is likely to be the case in the near term. As noticed in figure 26, the gap in the data from 2013 to 2018 is due to negative earnings.

Figure 26: SPB NTM P/E since 2012



Source: FactSet

Assuming the firm maintains a 14.5 NTM P/E at the end of 2022, it should trade at $113.54 by the end of the year:

- Price = P/E x EPS = 14.5 x 3 x $2.61 = $113.54

Discounting $95.99 back to today at a 9.8% cost of equity (explained in Discounted Cash Flow section) yields a price of $86.58. Given SPB's potential for continued growth and profitability amongst its segments, this seems to be an unusually low valuation.

Acquisitions will help increase top line growth, margins, revenues and cost savings, as well as earnings per share.

Relative Valuation

Spectrum Brands is currently trading at a 2021 P/E lower than its peers, with a P/E of 14.4 compared to an average of 20.4. SPB's P/B and P/S ratios are significantly lower than those of its competitors reflecting relatively poor ROE and net margin compared to its competitors. Additionally, Spectrum's beta (1.58) is extremely high compared to its comps showing the volatility of the stock.

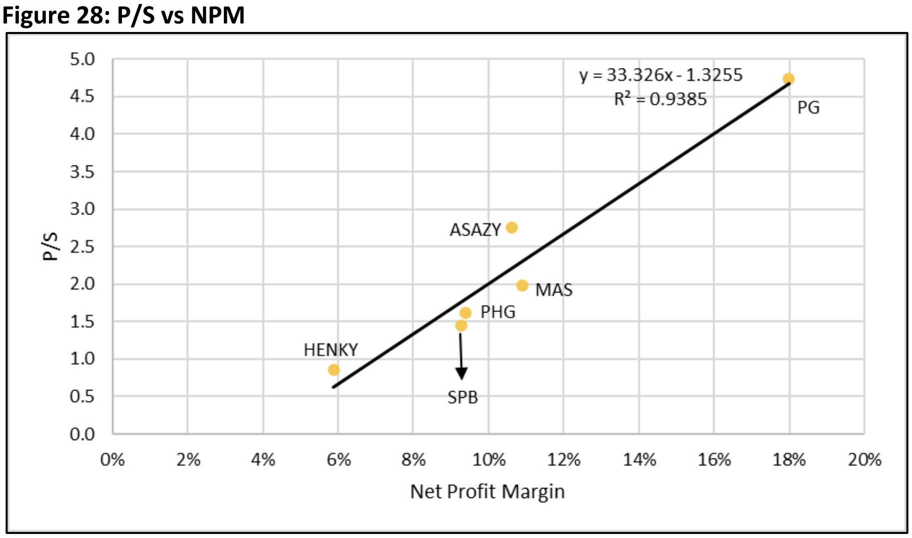
Figure 27: SPB comparable companies

Ticker	Name	Current Price	Market Value	Price Change 1 day	1 Mo	3 Mo	6 Mo	52 Wk	YTD	Earnings Growth LTG	NTM	2020	2021	2022	2023	Beta	LT Debt/ Equity	S&P Rating	LTM Dividend Yield	Payout
SPB	SPECTRUM BRND HLDG INC	$102.17	$4,345	(0.2)	9.0	26.5	14.9	51.5	29.4	18.5		43.4%	59.3%	-100.0%		1.58	172.5%	B-	1.79%	47.5%
PG	PROCTER & GAMBLE CO	$149.02	$360,621	1.1	4.2	4.7	10.5	7.5	7.1	6.6	10.6%	13.3%	10.5%	4.8%	7.8%	0.48	45.4%	A	2.38%	60.7%
HENKY	HENKEL AG & CO KGAA	$18.82	$19,555	(1.2)	(9.8)	(16.9)	(24.1)	(21.4)	(22.0)	8.3		-15.8%	1.6%	9.2%	7.0%	0.60			1.71%	
PHG	KONINKLIJKE PHILIPS NV	$35.88	$32,749	(3.4)	(24.1)	(20.2)	(36.5)	(30.5)	(33.8)	13.7		71.4%	-13.3%	8.2%	15.6%	0.76			1.86%	
ASAZY	ASSA ABLOY AB	$14.26	$30,037	1.4	(2.6)	(11.9)	(7.4)	17.2	15.7	13.8	21.3%	-6.2%	22.2%	14.5%	9.5%	0.82	33.0%		1.02%	
UNICY	UNI-CHARM CORP	$8.60	$25,628	0.2	6.8	(1.8)	8.1	(12.0)	(9.2)							0.82	33.0%		1.02%	
MAS	MASCO CORP	$67.34	$16,437	0.4	2.7	8.6	11.7	24.2	22.6	18.7	117.5%	38.7%	18.9%	11.9%	9.6%	1.28		B	1.14%	46.2%
Average			$69,910	(0.3)	(2.0)	(1.6)	(3.2)	5.2	1.4	13.3	49.8%	24.1%	16.5%	-8.6%	9.9%	0.91	71.0%		1.56%	51.5%
Median			$25,628	0.2	2.7	(1.8)	8.1	7.5	7.1	13.7	21.3%	26.0%	14.7%	8.7%	9.5%	0.82	39.2%		1.71%	47.5%
SPX	S&P 500 INDEX	$4,655		1.3	1.1	3.2	10.7	28.0	23.9			1.1%	-14.0%	33.6%	12.1%					

Ticker	Website	2022 ROE	P/B	P/E 2019	2020	2021	TTM	NTM	2022	2023	2021 NPM	2021 P/S	NM	OM	ROIC	EV/ EBIT	P/CF Current	Sales Growth NTM	STM	Book Equity
SPB	http://www.spectrumbrands.com	0.0%	2.91	18.1	13.9	14.4	28.9				9.3%	1.45	0.5%	6.1%	0.4%	35.4	14.9	-25.0%	2.4%	$35.13
PG	http://www.pg.com	31.7%	7.97	27.4	26.8	25.3	27.2	24.6	25.1	23.3	18.0%	4.74	18.8%	24.4%	20.3%	20.2	22.9	4.0%	3.6%	$18.70
HENKY	http://www.henkel.de	11.3%	1.50	16.0	17.7	16.0			13.3	12.4	5.9%	0.85	7.3%	12.0%	6.7%	16.5	13.1			$12.55
PHG	http://www.philips.com	14.5%	2.31	31.0	19.4	22.7			15.9	13.8	9.4%	1.62	6.1%	10.2%	6.6%	23.9	10.8			$15.53
ASAZY	http://www.assaabloy.com	18.2%	4.12	25.2	23.8	26.6	28.9	23.8	22.6	20.7	10.6%	2.75	10.5%	13.8%	10.5%	23.4	21.7	9.1%	8.9%	$3.46
MAS	http://www.masco.com	-802.0%	-130.14	20.7	17.2	17.7	36.8	16.9	16.2	14.8	10.9%	1.98	11.2%	18.0%	27.6%	12.7	21.9	3.4%	3.0%	-$0.52
Average		-121.0%	-18.55	23.1	19.8	20.4	30.4	21.8	18.6	17.0	10.7%	2.23	9.1%	14.1%	12.0%	22.0	17.5	-2.1%	4.5%	
Median		12.9%	2.61	22.9	18.5	20.2	28.9	23.8	16.2	14.8	10.0%	1.80	8.9%	12.9%	8.6%	21.8	18.3	3.7%	3.3%	
spx	S&P 500 INDEX			19.3	20.4	33.4			25.2	22.5										

Source: FactSet, IMCP

Figure 28: P/S vs NPM



Source: FactSet, IMCP

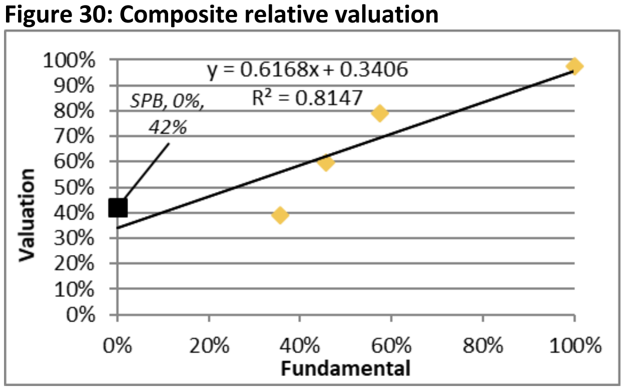
For a final comparison, I created a composite ranking of several valuation and fundamental metrics. Since the variables have different scales, each was converted to a percentile before calculating the composite score. A weight of 100% for ROE was compared to an equal weight of 50% for 2021 P/E and P/S. After eliminating Uni-Charm Corp and Masco Corp, both extreme outliers, the regression line had an R-squared of 0.81. One can see that SPB is above the line, so it is marginally expensive based on its fundamentals.

Figure 29: Composite valuation, % of range

							Fundamentals	Valuation	
						Weight	100.0%	50.0%	50.0%
Ticker	Name	Rank Diff	Diff	Target Value	Fund	Weighted Value	2022 ROE	P/E 2021	P/S
SPB	SPECTRUM BRND HLDG INC	3	-68%	-26%	0%	42%	0%	54%	31%
PG	PROCTER & GAMBLE CO	7	30%	127%	100%	97%	100%	95%	100%
HENKY	HENKEL AG & CO KGAA	6	-11%	29%	36%	39%	36%	60%	18%
PHG	KONINKLIJKE PHILIPS NV	5	-16%	44%	46%	60%	46%	85%	34%
ASAZY	ASSA ABLOY AB	4	-17%	62%	57%	79%	57%	100%	58%
UNICY	UNI-CHARM CORP	1	-3963%	-3909%	-2529%	54%	-2529%	66%	42%
MAS	MASCO CORP	2	-1959%	-1891%	-1215%	68%	-1215%	77%	59%

Source: IMCP

Figure 30: Composite relative valuation



Source: IMCP

<u>Discounted Cash Flow Analysis</u>

A three-stage discounted cash flow model was also used to value SPB.

For the purpose of this analysis, the company's cost of equity was calculated to be 9.8% using the Capital Asset Pricing Model. The underlying assumptions used in calculating this rate are as follows:

- The risk-free rate, as represented by the ten-year Treasury bond yield, is 1.5%.
- A five-year industry beta of .98 was utilized since the company has higher risk than the market.
- A long-term market rate of return of 10% was assumed, since historically, the market has generated an annual return of about 10%.

Given the above assumptions, the cost of equity is 9.8% (1.5 + .98 (10.0 – .98)).

The beta calculated was an average of SPB's comparable companies over the past five years. This is a relatively neutral beta based on the necessities of home, pet, and garden products. Home appliance businesses are relatively stable due to the continued needs of these products. This is similar to that of pet care products, although they are on the rise due to the recent influx of pet care owners. Lastly, although garden products are seasonal, that doesn't make them cyclical, and will keep these products relevant throughout each quarter. This keeps the industry beta relatively neutral.

Stage One - The model's first stage simply discounts fiscal years 2022 and 2023 free cash flow to equity (FCFE). These per share cash flows are forecasted to be -$4.70 and $10.79, respectively. Discounting these cash flows, using the cost of equity calculated above, results in a value of $6.09 per share. Thus, stage one of this discounted cash flow analysis contributes $6.09 to value.

Stage Two - Stage two of the model focuses on fiscal years 2024 to 2028. During this period, FCFE is calculated based on revenue growth, NOPAT margin and capital growth assumptions. The resulting cash flows are then discounted using the company's 9.8% cost of equity. I assume 5.1% sales growth in 2024, fluctuating up and down over the next four years to 3.5% in 2028. The ratio of NWC to sales will increase slightly to 11.5% and NFA turnover will rise from 2.00 in 2024 to 2.30 in 2028 as a result of improvements in operations. Also, the NOPAT margin is expected to rise to 7.0% in 2028 from 5.0% in 2024.

Figure 31: FCFE and discounted FCFE, 2024 – 2028

	2024	2025	2026	2027	2028
FCFE	$1.66	$4.20	$4.14	$5.04	$10.30
Discounted FCFE	$1.26	$2.88	$2.59	$2.87	$5.34

Added together, these discounted cash flows total $14.94.

Stage Three – Net income for the years 2024 – 2028 is calculated based upon the same margin and growth assumptions used to determine FCFE in stage two. EPS is expected to grow from $4.44 in 2022 to $6.27 in 2028.

Figure 32: EPS estimates for 2022 – 2028

	2022	2023	2024	2025	2026	2027	2028
EPS	$4.44	$2.61	$3.16	$3.82	$4.41	$5.37	$6.27

Stage three of the model requires an assumption regarding the company's terminal price-to-earnings ratio. For the purpose of this analysis, it is generally assumed that as a company grows larger and matures, its P/E ratio will converge near to the historical average of the S&P 500. Therefore, a P/E ratio of 21 is assumed at the end of SPB's terminal year. While this may be a high multiple at the end of 2028, one must consider what the market will price in today. A lower multiple may be better to calculate a fair value, based on recent company history and projections for the future. Although, the firm is moving its business to perhaps more stable areas and debt is much reduced.

Given the assumed terminal earnings per share of $6.59 and a price to earnings ratio of 21, a terminal value of $142.99 per share is calculated. Using the 9.8% cost of equity, this number is discounted back to a present value of $71.82.

Total Present Value – given the above assumptions and utilizing a three stage discounted cash flow model, an intrinsic value of $92.85 is calculated (6.09+ 14.94 + 71.82). Given SPB's current price of $97.60, this model indicates that the stock is slightly overvalued.

<u>Scenario Analysis</u>

Spectrum Brands is a tough company to predict due to the frequent acquisitions and divestitures, due to changes in consumer trends and behavior. It will be interesting to see what the future holds as Spectrum Brands develops its ever-changing segments and international sales. Base, bull, and bear case, scenarios are presented below.

Base Case- In the base case, sales growth was forecasted based on the recent influx of pet owners, as well as higher home and personal product sales. I expect NOPAT margin to. Additionally, I believe sales to NFA will increase because the firm will become more efficient due to programs such as the GPIP.

Figure 33: Base case estimated for 2022

Summary (using P/E multiple for terminal value)		
First stage	$6.09	Present value of first 2 year cash flow
Second stage	$14.94	Present value of year 3-7 cash flow
Third stage	$71.82	Present value of terminal value P/E
Value (P/E)	**$92.85**	

Bull Case- Assuming SPB's sales growth continues on a trajectory similar to that over the past two years, sales will be even higher. This will be powered by the GPC and HPC segments, since numbers have been growing quickly over this recent stretch. With the recent increase of pet owners, food, toys, and pet care will drive sales upwards. H&G and HPC segments will also experience high growth to add to those sales. The beta will drop to 0.9 where P/E will increase to 23. This give SPB a bullish value of $116.73.

Figure 34: Bull case estimated for 2022

Summary (using P/E multiple for terminal value)		
First stage	$6.19	Present value of first 2 year cash flow
Second stage	$12.87	Present value of year 3-7 cash flow
Third stage	$97.67	Present value of terminal value P/E
Value (P/E)	**$116.73**	

Bear Case- On the other, hand sales could drop dramatically due to a changing consumer market. With office re-openings and people spending less time at home, consumers are spending less time thinking of home essentials. Pet care sales could decline due to consumes spending less time with their furry friends. Since these consumers are spending less time at home, garden sales and home products could decrease as well. Keeping the beta the same as the bull case, 0.9, but dropping the terminal P/E to 18, a fair bear value would be $84.69.

Figure 35: Bear case estimated for 2022

Summary (using P/E multiple for terminal value)		
First stage	$6.19	Present value of first 2 year cash flow
Second stage	$15.78	Present value of year 3-7 cash flow
Third stage	$62.71	Present value of terminal value P/E
Value (P/E)	**$84.69**	

Business Risks

Although I have many reasons to be optimistic about Spectrum Brands, there are several good reasons to be conservative while thinking about investing in its stock.

Exposure to currency fluctuations:

Nearly 60% of SPB's revenues are denominated in currencies other than the dollar. Continued strength of the dollar against the Euro, British Pound, Canadian Dollar, Japanese Yen and other foreign currencies could seriously reduce gross margins.

Supply Chain Issues:

Over the past two years, issues revolving around the supply chain have made it very difficult to easily transport goods throughout the world, and Spectrum products manufactured around the globe.

Indebtedness:

Spectrum's substantial indebtedness can limit its financial and operating freedom; however, the firm has steadily reduced the debt load over the last decade.

Changes in Consumer Spending:

SPB is experiencing the growth in e-commerce sales in comparison to brick-and-mortar retail spending. If Spectrum does not successfully develop plans to adjust to the e-commerce market, sales could decline.

COVID-19:

Spectrum Brands was positively impacted by the COVID-19 pandemic as home and pet care sales rose. This is viewed as a risk due to return to work plans send homeowners back to their office, guiding them away from Spectrum products. Additionally, Covid may have negatively impacted suppliers and distributors.

Market Saturation:

Due to the nature of the industries Spectrum Brands competes in, consumers have alternatives when looking to buy products. This is except for pet care, where many of the firm's industries are relatively mature.

Appendix 1: Porter's 5 Forces

Threat of New Entrants – High

While the barriers to entry into the manufacturing industry are not extensive, it would require significant real estate or online presence to cause a major disruption in the industry. The most significant threat would be entry of a new product or significant e-commerce emergence from a competitor.

Threat of Substitutes – High

Spectrum relies on its products' brand names to help power its sales. There is no cost of switching for the consumer. This is always a major threat for this company, especially if there is a cheaper alternative.

Supplier Power - Low

Spectrum Brands does not have any long-term contacts with its suppliers; therefore, supplier power is relatively low.

Buyer Power – Very High

Consumers of SPB products have a great degree of power over retailers. There is no cost of switching between brands and there is a large number of potential substitutes. There is little urgency for consumers to buy new garden, pet care, or home/personal care products, so they are able to wait to get a better price if they are unwilling to pay what is asked.

Intensity of Competition – Very High

Spectrum lives in a very competitive market with the variety of businesses it owns. There are countless garden products, pet care items, and home and personal brands that are direct competitors to SPB. Each brand has its own unique competitor which fights for market share within their perspective industries.

Appendix 2: SWOT Analysis

Strengths	Weaknesses
Stong Brand Recognition	Debt
Segment Growth	High Inventory
Great Returns on Strategic Sales	Low Market Share
Opportunities	**Threats**
e-commerce Expansion	Consumer Trends
Expansion in Foreign Markets	Market Saturation
New Technology	Supply Chain Issues

Appendix 3: Income Statement

Income Statement (in thousands)							
Items	**Nov-17**	**Nov-18**	**Nov-19**	**Nov-20**	**Nov-21**	**Nov-22**	**Nov-23**
Sales	$3,705	$3,809	$2,446	$2,622	$2,998	$3,305	$3,523
Direct costs	1,815	2,471	1,627	1,744	1,964	2,247	2,353
Gross Margin	1,890	1,338	820	878	1,035	1,058	1,170
SG&A, R&D, D&A, and other	1,607	1,114	972	870	938	849	972
EBIT	283	224	(152)	9	97	208	197
Interest	314	260	202	34	108	67	26
EBT	(31)	(36)	(354)	(25)	(11)	141	171
Taxes	38	(463)	(52)	27	(26)	30	36
Income	(69)	427	(302)	(52)	15	111	135
Other	(342)	(445)	(798)	(151)	(175)	-	-
Net income	273	872	496	99	190	111	135
Basic Shares	32.2	36.9	50.7	44.7	42.7	42.7	42.7
Fully Diluted Shares	32.2	37.0	50.7	44.7	43.2	43.2	43.2
EPS	$8.48	$23.63	$9.78	$2.20	$4.44	$2.61	$3.16
EPS Fully Diluted	$8.48	$23.57	$9.78	$2.20	$4.39	$2.58	$3.12
DPS	$0.00	$0.43	$1.69	$1.68	$1.67	$1.73	$1.78

Appendix 4: Balance Sheets

Balance Sheet (in thousands)							
Items	**Nov-17**	**Nov-18**	**Nov-19**	**Nov-20**	**Nov-21**	**Nov-22**	**Nov-23**
Cash	270	553	627	532	188	(107)	373
Operating assets ex cash	29,766	2,806	1,033	1,197	2,726	1,508	1,608
Operating assets	30,036	3,359	1,660	1,728	2,914	1,401	1,981
Operating liabilities	27,645	1,350	1,140	945	1,164	1,191	1,270
NOWC	2,391	2,009	520	783	1,750	211	711
NOWC ex cash (NWC)	2,121	1,456	(107)	252	1,562	317	338
NFA	5,814	4,389	3,586	3,379	2,427	2,203	1,762
Invested capital	*$8,205*	*$6,398*	*$4,106*	*$4,162*	*$4,176*	*$2,414*	*$2,473*
Marketable securities	-	-	-	-	-	-	-
Total assets	*$35,850*	*$7,748*	*$5,246*	*$5,107*	*$5,340*	*$3,605*	*$3,742*
S-T and L-T debt and financing leases	$6,067	$4,561	$2,051	$2,410	$2,386	$586	$586
Other liabilities	191	247	326	337	311	311	311
Debt/equity-like securities	-	-	-	-	-	-	-
Equity	1,947	1,590	1,729	1,416	1,479	1,516	1,575
Total supplied capital	*$8,205*	*$6,398*	*$4,106*	*$4,162*	*$4,176*	*$2,414*	*$2,473*
Total liabilities and equity	*$35,850*	*$7,748*	*$5,246*	*$5,107*	*$5,340*	*$3,605*	*$3,742*

Appendix 5: Sales Forecast

Sales

Sales	$3,705.4	$3,808.7	2,446.4	$2,622.1	2,998.1	$3,305	$3,523
Growth		*2.8%*	*-35.8%*	*7.2%*	*14.3%*	*10.2%*	*6.6%*
HHI	1,276	1,378				-	-
Growth		*8.0%*	*-100.0%*			*0.0%*	*0.0%*
% of sales	*34%*	*36%*	*0%*	*0%*	*0%*	*0.0%*	*0.0%*
HPC	1,132	1,110	1,068	1,108	1,260	1,411	1,510
Growth		*-1.9%*	*-3.8%*	*3.7%*	*13.8%*	*12.0%*	*7.0%*
% of sales	*30.6%*	*29.2%*	*43.7%*	*42.2%*	*42.0%*	*2.0%*	*42.9%*
GPC	793	821	870	963	1,130	1,243	1,330
Growth		*3.4%*	*6.1%*	*10.6%*	*17.4%*	*10.0%*	*7.0%*
% of sales	*21.4%*	*21.5%*	*35.6%*	*36.7%*	*37.7%*	*37.6%*	*6.0%*
H&G	504	500	508	552	608	651	683
Growth		*-0.7%*	*1.6%*	*8.6%*	*10.2%*	*7.0%*	*5.0%*
% of sales	*13.6%*	*13.1%*	*20.8%*	*21.0%*	*20.3%*	*19.7%*	*19.4%*
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
North America	2,718	2,801	1,517	1,669	1,792	1,960	2,008
Growth		*3%*	*-46%*	*10%*	*7%*	*9.4%*	*2.5%*
% of sales	*73.3%*	*73.5%*	*62.0%*	*63.7%*	*59.8%*	*59.3%*	*57.0%*
EMEA	653	669	652	680	872	991	1,127
Growth		*2%*	*-3%*	*4%*	*28%*	*13.7%*	*13.7%*
% of sales	*17.6%*	*17.6%*	*26.6%*	*25.9%*	*29.1%*	*30.0%*	*32.0%*
LATAM	208	212	157	148	193	221	247
Growth		*2%*	*-26%*	*-6%*	*31%*	*14.5%*	*11.4%*
% of sales	*5.6%*	*5.6%*	*6.4%*	*5.6%*	*6.5%*	*6.7%*	*7.0%*
APAC	127	126	98	102	112	106	116
Growth		*-1%*	*-23%*	*4%*	*10%*	*-5.2%*	*9.9%*
% of sales	*3.4%*	*3.3%*	*4.0%*	*3.9%*	*3.7%*	*3.2%*	*3.2%*
Other	-	-	23	24	29	26	28
Growth				*3.1%*	*23.7%*	*-9.5%*	*6.6%*
% of sales	*0.0%*	*0.0%*	*0.9%*	*0.9%*	*1.0%*	*0.8%*	*0.8%*

Appendix 6: Ratios

Items	Nov-17	Nov-18	Nov-19	Nov-20	Nov-21	Nov-22	Nov-23
Profitability							
Gross margin	51.0%	35.1%	33.5%	33.5%	34.5%	32.0%	33.2%
Operating (EBIT) margin	7.6%	5.9%	-6.2%	0.3%	3.2%	6.3%	5.6%
Net profit margin	7.4%	22.9%	20.3%	3.8%	6.3%	3.4%	3.8%
Activity							
NFA (gross) turnover		0.75	0.61	0.75	1.03	1.43	1.78
Total asset turnover		0.17	0.38	0.51	0.57	0.74	0.96
Liquidity							
Op asset / op liab	1.09	2.49	1.46	1.83	2.50	1.18	1.56
NOWC Percent of sales		57.8%	51.7%	24.8%	42.2%	29.7%	13.1%
Solvency							
Debt to assets	16.9%	58.9%	39.1%	47.2%	44.7%	16.3%	15.7%
Debt to equity	311.6%	286.9%	118.6%	170.2%	161.4%	38.7%	37.2%
Other liab to assets	0.5%	3.2%	6.2%	6.6%	5.8%	8.6%	8.3%
Total debt to assets	17.5%	62.1%	45.3%	53.8%	50.5%	24.9%	24.0%
Total liabilities to assets	94.6%	79.5%	67.0%	72.3%	72.3%	57.9%	57.9%
Debt to EBIT	21.44	20.34	(13.46)	280.19	24.58	2.82	2.97
EBIT/interest	0.90	0.86	(0.76)	0.26	0.90	3.10	7.46
Debt to total net op capital	73.9%	71.3%	49.9%	57.9%	57.1%	24.3%	23.7%
ROIC							
NOPAT to sales	17.0%	-70.4%	-5.3%	0.7%	-4.3%	5.0%	4.4%
Sales to NWC		2.13	3.63	36.34	3.31	3.52	10.75
Sales to NFA		0.75	0.61	0.75	1.03	1.43	1.78
Sales to IC ex cash		0.55	0.52	0.74	0.79	1.02	1.53
Total ROIC ex cash		-38.9%	-2.8%	0.5%	-3.4%	5.1%	6.7%
NOPAT to sales	17.0%	-70.4%	-5.3%	0.7%	-4.3%	5.0%	4.4%
Sales to NOWC		1.73	1.94	4.02	2.37	3.37	7.64
Sales to NFA		0.75	0.61	0.75	1.03	1.43	1.78
Sales to IC		0.52	0.47	0.63	0.72	1.00	1.44
Total ROIC		-36.7%	-2.5%	0.4%	-3.1%	5.0%	6.4%

	Nov-17	Nov-18	Nov-19	Nov-20	Nov-21	Nov-22	Nov-23
NOPAT to sales	17.0%	-70.4%	-5.3%	0.7%	-4.3%	5.0%	4.4%
Sales to EOY NWC	1.75	2.62	(22.80)	10.42	1.92	10.42	10.42
Sales to EOY NFA	0.64	0.87	0.68	0.78	1.24	1.50	2.00
Sales to EOY IC ex cash	0.47	0.65	0.70	0.72	0.75	1.31	1.68
Total ROIC using EOY IC ex cash	7.9%	-45.9%	-3.7%	0.5%	-3.3%	6.5%	7.4%
NOPAT to sales	17.0%	-70.4%	-5.3%	0.7%	-4.3%	5.0%	4.4%
Sales to EOY NOWC	1.55	1.90	4.71	3.35	1.71	15.70	4.95
Sales to EOY NFA	0.64	0.87	0.68	0.78	1.24	1.50	2.00
Sales to EOY IC	0.45	0.60	0.60	0.63	0.72	1.37	1.42
Total ROIC using EOY IC	7.7%	-41.9%	-3.2%	0.4%	-3.1%	6.8%	6.3%
ROE							
5-stage							
EBIT / sales		5.9%	-6.2%	0.3%	3.2%	6.3%	5.6%
Sales / avg assets		0.17	0.38	0.51	0.57	0.74	0.96
EBT / EBIT		-15.9%	232.4%	-291.9%	-11.4%	67.8%	86.6%
Net income /EBT		-2442.6%	-140.0%	-392.4%	-1708.1%	79.0%	79.0%
ROA		4.0%	7.6%	1.9%	3.6%	2.5%	3.7%
Avg assets / avg equity		12.33	3.92	3.29	3.61	2.99	2.38
ROE		49.3%	29.9%	6.3%	13.1%	7.4%	8.7%
3-stage							
Net income / sales		22.9%	20.3%	3.8%	6.3%	3.4%	3.8%
Sales / avg assets		0.17	0.38	0.51	0.57	0.74	0.96
ROA		4.0%	7.6%	1.9%	3.6%	2.5%	3.7%
Avg assets / avg equity		12.33	3.92	3.29	3.61	2.99	2.38
ROE		49.3%	29.9%	6.3%	13.1%	7.4%	8.7%
Payout Ratio		1.8%	17.2%	76.3%	37.7%	66.4%	56.3%
Retention Ratio		98.2%	82.8%	23.7%	62.3%	33.6%	43.7%
Sustainable Growth Rate		48.4%	24.7%	1.5%	8.2%	2.5%	3.8%

Appendix 7: Cash Flow Statement

Cash Flow Statement	2017	2018	2019	2020	2021	2022E	2023E
NOPAT	$630	-$2,682	-$130	$18	-$130	$164	$156
Growth		*-525.9%*	*-95.2%*	*-113.7%*	*-830.2%*	*-226.2%*	*-5.2%*
NOWC	2,391	2,009	520	783	1,750	211	711
Net fixed assets	5,814	4,389	3,586	3,379	2,427	2,203	1,762
Total net operating capital	$8,205	$6,398	$4,106	$4,162	$4,176	$2,414	$2,473
Growth		*-22.0%*	*-35.8%*	*1.4%*	*0.3%*	*-42.2%*	*2.4%*
- Change in NOWC		(383)	(1,489)	263	966	(1,539)	501
- Change in NFA		(1,425)	(803)	(207)	(952)	(224)	(442)
FCFF		-$874	$2,162	-$39	-$144	$1,927	$97
Growth			*-347.2%*	*-101.8%*	*273.2%*	*-1435.9%*	*-95.0%*
- After-tax interest expense		(3,109)	172	70	(145)	53	21
+ Net new short-term and long-term debt		(1,506)	(2,510)	359	(23)	(1,800)	-
FCFE		$728	-$521	$250	-$22	$74	$76
Growth			*-171.5%*	*-148.0%*	*-108.9%*	*-433.3%*	*2.7%*
Sources of cash (FCFE)		$728	-$521	$250	-$22	$74	$76
Uses of cash							
Other expense		($445)	($798)	($151)	($175)	$0	$0
Increase mkt sec		-	-	-	-	-	-
Dividends		16	86	75	72	74	76
Change in other equity		1,213	271	336	55	(0)	(0)
		$784	($442)	$261	($48)	$74	$76
Change in other liab		56	79	11	(26)	-	-
Total		$728	($521)	$250	($22)	$74	$76

Appendix 8: 3-stage DCF Model

		Year							
			1	2	3	4	5	6	7
		First Stage			Second Stage				
Year ending January		2021	2022	2023	2024	2025	2026	2027	2028
Sales Growth		*14.3%*	*10.2%*	*6.6%*	*5.1%*	*3.6%*	*4.7%*	*5.7%*	*3.5%*
NOPAT / S		*-4.3%*	*5.0%*	*4.4%*	*5.0%*	*5.5%*	*6.3%*	*6.9%*	*7.0%*
S / NWC		*1.92*	*10.42*	*10.42*	*10.00*	*9.00*	*9.50*	*10.50*	*11.50*
S / NFA (EOY)		*1.24*	*1.50*	*2.00*	*2.00*	*2.10*	*2.10*	*2.10*	*2.30*
S / IC (EOY)		*0.75*	*1.31*	*1.68*	*1.67*	*1.70*	*1.72*	*1.75*	*1.92*
ROIC (EOY)		*-3.3%*	*6.5%*	*7.4%*	*8.3%*	*9.4%*	*10.8%*	*12.1%*	*13.4%*
ROIC (BOY)			*4.1%*	*6.2%*	*8.8%*	*9.5%*	*11.2%*	*12.5%*	*12.7%*
Share Growth		*-4.5%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Sales	$2,622	$2,998	$3,305	$3,523	$3,703	$3,836	$4,016	$4,245	$4,394
NOPAT	$18	($130)	$164	$156	$185	$211	$253	$293	$308
Growth		*-830.2%*	*-226.2%*	*-5.2%*	*18.8%*	*14.0%*	*19.9%*	*15.8%*	*5.0%*
- Change in NWC		1310	-1244	21	32	56	-3	-18	-22
NWC EOY	*252*	*1562*	*317*	*338*	*370*	*426*	*423*	*404*	*382*
Growth NWC		*520.7%*	*-79.7%*	*6.6%*	*9.5%*	*15.1%*	*-0.8%*	*-4.4%*	*-5.5%*
- Chg NFA		-952	-224	-442	90	-25	86	109	-111
NFA EOY	*3,379*	*2,427*	*2,203*	*1,762*	*1,851*	*1,827*	*1,913*	*2,022*	*1,910*
Growth NFA		*-28.2%*	*-9.2%*	*-20.0%*	*5.1%*	*-1.3%*	*4.7%*	*5.7%*	*-5.5%*
Total inv in op cap		358	-1468	-421	122	31	82	91	-133
Total net op cap		3988	2520	2100	2222	2253	2335	2426	2293
FCFF		($488)	$1,633	$577	$63	$180	$171	$202	$441
% of sales		*-16.3%*	*49.4%*	*16.4%*	*1.7%*	*4.7%*	*4.2%*	*4.8%*	*10.0%*
Growth			*-434.6%*	*-64.7%*	*-89.1%*	*184.9%*	*-5.1%*	*18.6%*	*117.9%*
- Interest (1-tax rate)		-145	53	21	22	23	24	25	26
Growth		*-307.6%*	*-136.5%*	*-60.5%*	*5.1%*	*3.6%*	*4.7%*	*5.7%*	*3.5%*
+ Net new debt		-23	-1800	0	30	22	30	38	25
Debt		2386	586	586	616	638	669	707	731
Debt / tot net op capit		*59.8%*	*23.3%*	*27.9%*	*27.7%*	*28.3%*	*28.6%*	*29.1%*	*31.9%*
FCFE w debt		($366)	($220)	$556	$71	$179	$177	$215	$440
% of sales		*-12.2%*	*-6.7%*	*15.8%*	*1.9%*	*4.7%*	*4.4%*	*5.1%*	*10.0%*
Growth			*-39.7%*	*-352.0%*	*-87.2%*	*152.3%*	*-1.3%*	*21.8%*	*104.2%*
/ No Shares	44.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7
FCFE		($8.57)	($5.16)	$13.01	$1.66	$4.20	$4.14	$5.04	$10.30
Growth			*-39.7%*	*-352.0%*	*-87.2%*	*152.3%*	*-1.3%*	*21.8%*	*104.2%*
* Discount factor			0.91	0.83	0.75	0.69	0.63	0.57	0.52
Discounted FCFE			($4.70)	$10.79	$1.26	$2.88	$2.59	$2.87	$5.34
Third Stage									
Terminal value P/E									
Net income		$190	$111	$135	$163	$188	$229	$268	$282
% of sales		*6.3%*	*3.4%*	*3.8%*	*4.4%*	*4.9%*	*5.7%*	*6.3%*	*6.4%*
EPS		$4.44	$2.61	$3.16	$3.82	$4.41	$5.37	$6.27	$6.59
Growth		*101.5%*	*-41.2%*	*21.0%*	*20.9%*	*15.4%*	*21.8%*	*16.8%*	*5.1%*
Terminal P/E									21.00
* Terminal EPS									$6.59
Terminal value									$138.45
* Discount factor									0.52
Discounted terminal value									$71.82
Summary (using P/E multiple for terminal value)									
First stage	$6.09	Present value of first 2 year cash flow							
Second stage	$14.94	Present value of year 3-7 cash flow							
Third stage	$71.82	Present value of terminal value P/E							
Value (P/E)	**$92.85**								