

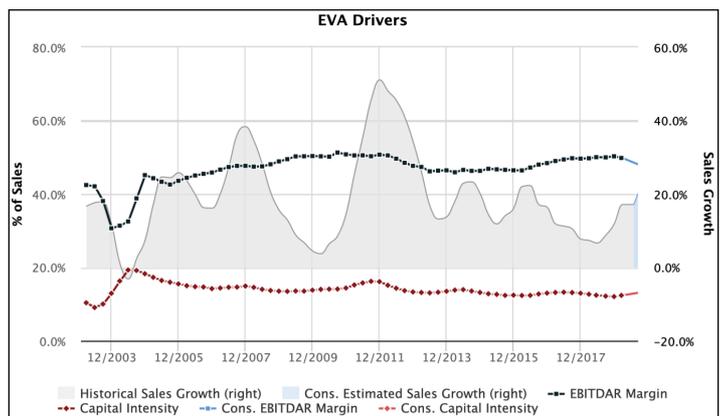
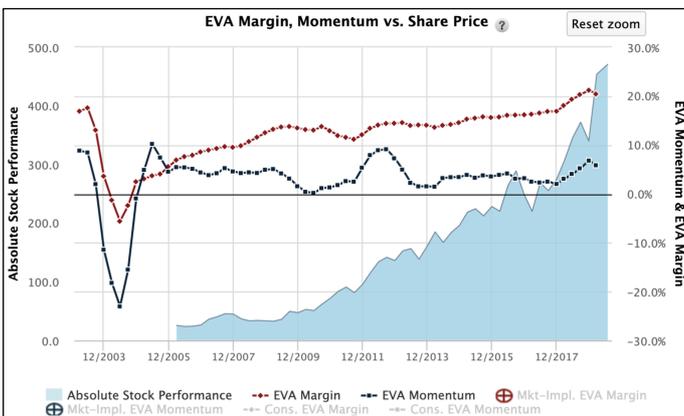
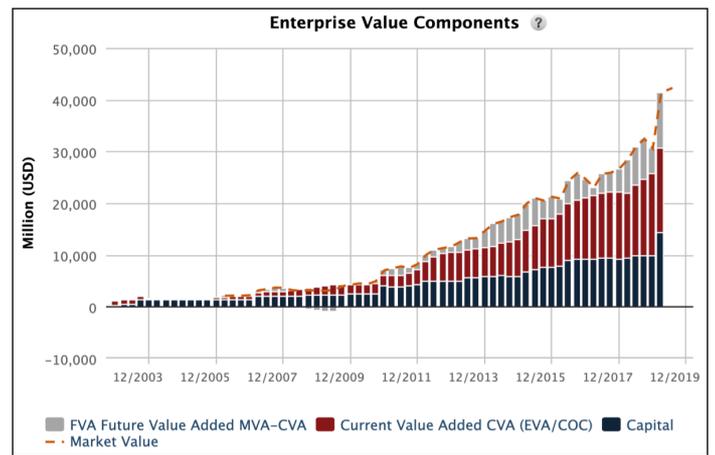
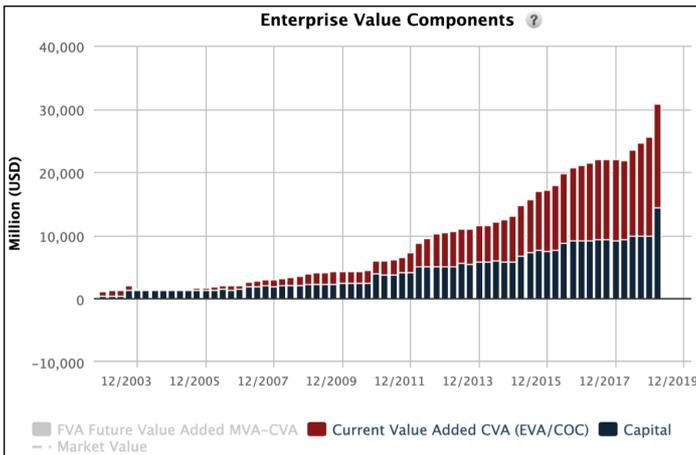
Transdigm Group (TDG)

Oct 13th, 2019

Moat Category Reinvestment Moat	Fair Value Estimate -	Price \$524.78	Enterprise Value \$46.4bn
Moat Type Intangibles: Intellectual Property Switching Costs - Regulatory	Economic Moat Wide	Stewardship Rating Exemplary	Market Cap \$28.0bn

What does it do: “TransDigm manufactures products for electronic, power, fluid, and mechanical motion control onboard commercial and military aircraft and helicopters. It also supplies products used for cabin structures, lighting, laminates, pallets, and a host of other applications. In fiscal 2018, the company generated about \$3.8 billion of sales, with 70% coming from commercial aerospace customers and

30% from defense customers, noting that the latter is increasing as a percentage of sales.” (Source: Morningstar)



Source: www.evaexpress.com

Past 10-year performance metrics

Profitability	TGD's exceptionally strong return on capital and it combine for a first rate, 90th percentile P score									
	011TFQ3	2012TFQ3	2013TFQ3	2014TFQ3	2015TFQ3	2016TFQ3	2017TFQ3	2018TFQ3	2019TFQ3	
1 Sales	1,086	1,581	1,847	2,270	2,540	3,106	3,456	3,686	4,897	
2 EBITDAR (EBITDA+Rent+R&D+Ad+Etc)	549	784	853	1,057	1,187	1,466	1,707	1,845	2,281	
3 NOPAT (Net Operating Profit After Tax)	319	461	506	618	705	868	997	1,193	1,534	
4 Capital (Net Operating Assets)	3,765	4,965	5,485	5,885	7,227	8,830	9,343	9,786	14,467	
5 Return on Capital (ROC) (NOPAT/Capital)	9.7%	10.6%	10.1%	10.9%	11.4%	11.3%	11.0%	12.8%	13.3%	
6 Cost of Capital (COC)	5.9%	5.5%	5.0%	5.3%	5.1%	4.8%	4.7%	5.2%	5.6%	
7 EVA (ROC-COC) x Capital)	124	221	256	316	391	496	569	711	891	
9 EVA Spread (EVA/Capital = ROC-COC)	3.8%	5.1%	5.1%	5.6%	6.3%	6.5%	6.3%	7.6%	7.7%	
10 EVA Margin (EVA/Sales)	11.4%	14.0%	13.9%	13.9%	15.4%	16.0%	16.5%	19.3%	18.2%	
11 EBITDAR Margin (EBITDAR/Sales)	50.5%	49.6%	46.2%	46.6%	46.7%	47.2%	49.4%	50.1%	46.6%	
12 Sales Growth	35.5%	45.5%	16.9%	22.9%	11.9%	22.3%	11.3%	6.7%	32.9%	
13 EVA Momentum (ΔEVA/Sales)	2.6%	8.9%	2.3%	3.2%	3.3%	4.2%	2.3%	4.1%	4.9%	
14 EVA Momentum (ΔEVA/Capital)	0.9%	3.0%	0.8%	1.2%	1.3%	1.7%	0.9%	1.6%	1.9%	
15 3 Year Trend (ΔEVA/Capital)	0.7%	1.5%	1.7%	1.5%	1.1%	1.4%	1.3%	1.4%	1.5%	
16 Last Quarter (ΔEVA/Capital)	1.6%	3.1%	-0.6%	2.0%	1.2%	1.6%	1.2%	2.7%	1.3%	

Source: www.evaexpress.com

Figures in USD millions.

Industry observations

Life Cycle Stage	Mature	Regulation Level	Heavy
Revenue Volatility	Medium	Technology Change	High
Capital Intensity	Medium	Barriers to Entry	High
Industry Assistance	Medium	Industry Globalization	High
Concentration Level	Medium	Competition Level	Medium

Source: www.ibisworld.com

Wide Moat Checklists

Competitive Strengths	Does TDG have it?	Evidence
Product or service is needed or desired (and will continue to do so)	<input checked="" type="checkbox"/>	The products made by Transdigm are essential for aircraft manufacturers, and will continue to remain so.
Product is perceived by its customers to have no close substitute	<input checked="" type="checkbox"/>	Transdigm claims its niche market to be relatively fragmented with several competitors for many of the products and services they provide. Players are based in the US and internationally. That said, Transdigm's wide economic moat rests on intangible assets in the form of intellectual property on its products, particularly in the aftermarket where this IP effectively blocks competitors.
Product is not subject to price regulation	<input checked="" type="checkbox"/>	Industry is heavily regulated, with strict FAA certification policies. However, industry is not price regulated.
Strong barriers to entry	<input checked="" type="checkbox"/>	Barriers to entry are formidable for potential entrants. High start-up costs, high demand for skilled labour that consistently deliver leading edge technology to improve products, substantial investments in R&D, and regulations governing licensing of manufacturers.
Loyal customers	<input checked="" type="checkbox"/>	Transdigm creates high switching costs, creating strong customer lock-in and allowing Transdigm to have pricing power over clients. Once the FAA certify an aircraft, it also certifies the materials inside the aircraft, which includes Transdigm's parts. This effectively creates Switching Costs since a customer would have to re-certify the aircraft with the introduction of every new part. This is very costly in both time and resources. In addition, it is difficult for a competitor to price undercut Transdigm for two reasons. One, the parts make up a small percentage of total cost for manufacturers. Two, the cost of failure of parts, along with the lengthy certification process would not make economical sense.
Low risk of technological obsolescence	<input type="checkbox"/>	The pace of technological change in High in the industry, and players have to continuously innovate better, safer and more economical products.
Abundant growth possibilities	<input type="checkbox"/>	The industry lifecycle is in its Mature phase. That said, Transdigm has grown sales 5x over the last 10 years. More research is required to know how the competitors are performing compared to Transdigm, and where the growth lies for the future of the industry and the company.
Limited capital requirements	<input type="checkbox"/>	Capital intensity levels are Moderate for the industry. Manufacturing facilities require significant amounts of investment, especially because production lines are so sophisticated and complex.
Significant and growing free cash flows (and EVAs)	<input type="checkbox"/>	More research required.