

Gentherm Incorporated (THRM)

January 19, 2015

Company Overview

Gentherm Incorporated designs, develops, and manufactures thermal management technologies and cable systems worldwide. It operates through three segments: Climate Controlled Seats (CCS), Advanced Technology, and W.E.T. The CCS segment offers products with variable temperature seat climate control systems for individualized thermal comfort to automobile passengers. It also provides automotive heated and cooled cup holders, and heated and cooled mattress products. This segment sells its products primarily to automobile and light truck original equipment manufacturers (OEMs), or their tier one suppliers. The Advanced Technology segment is engaged in the advanced research and development activities to improve the efficiency of thermoelectric devices, as well as to develop, market, and distribute products based on these new technologies. The W.E.T. segment manufactures automotive seat comfort systems, specialized automotive cable systems, and other non-automotive product solutions. Its automotive seat comfort products include automotive seat heaters, climate comfort systems, and steering wheel heater systems.

Valuation

Current Price	\$	37.67
NCAV	\$	1.43
Total Net Reprod. Cost	\$	12.49
Earnings Power Value (EPV)	\$	9.30
Discounted Cash Flow (DCF)	\$	30.03
EBIT Multiple Valuation	\$	30.67
Katzenelson Absolute PE	\$	35.11
Ben Graham Formula	\$	46.30

Key Statistics

Mkt Cap (\$M)	\$	1,344.82
Enterprise Value (\$M) TTM	\$	1,395.95
52 Wk High	\$	52.29
52 Wk Low	\$	22.84
% off 52Wk Low		64.9%

Cash Flows

Free Cash Flow		
5 yr FCF Growth		55.5%
10 yr FCF Growth		32.7%

Effectiveness

CROIC		11.4%
Avg		
FCF/S		5.0%
Avg		
ROA		4.1%
Avg		
ROE		14.6%
Avg		

Efficiency

Receivables Turnover (TTM)	5.9
Inventory Turnover (TTM)	7.5
Days Sales Outstanding (TTM)	68.1

Selected Financial Statements

(In Millions, Except per Share Amounts)

	2009	2010	2011	2012	2013	TTM/Latest
Revenue	\$ 61	\$ 112	\$ 370	\$ 555	\$ 662	\$ 788
Gross Profit	\$ 16	\$ 33	\$ 95	\$ 142	\$ 175	\$ 229
Margin %	25.87%	29.13%	25.70%	25.57%	26.40%	29.05%
R&D	\$ 6	\$ 10	\$ 30	\$ 41	\$ 50	\$ 56
Margin %	9.84%	8.59%	8.04%	7.38%	7.53%	7.08%
Operating Income	\$ 1	\$ 12	\$ 18	\$ 36	\$ 50	\$ 17
Margin %	1.49%	10.79%	4.82%	6.50%	7.49%	2.21%
Net Income	\$ 1	\$ 10	\$ 10	\$ 18	\$ 34	\$ 61
Margin %	1.19%	8.85%	2.61%	3.22%	5.11%	7.77%
Earnings Per Share						
Basic	\$ 0.03	\$ 0.46	\$ 0.43	\$ 0.63	\$ 1.00	\$ 1.75
Diluted	\$ 0.03	\$ 0.44	\$ 0.41	\$ 0.62	\$ 0.99	\$ 1.72

Weighted Average Diluted Shares Outstanding

	21.77	22.50	23.46	28.86	34.12	36.27
Dividends Per Share	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Cash From Operating Activities	\$ 4	\$ 12	\$ 34	\$ 37	\$ 60	\$ 77

(Dollars in Millions)

Net Property, Plants & Equipment	\$ 3	\$ 4	\$ 45	\$ 55	\$ 79	\$ 89
Total Assets	\$ 62	\$ 79	\$ 375	\$ 439	\$ 482	\$ 558
Long-term Debt	\$ -	\$ -	\$ 62	\$ 40	\$ 61	\$ 90
Stockholders' Equity	\$ 48	\$ 58	\$ 61	\$ 162	\$ 232	\$ 280



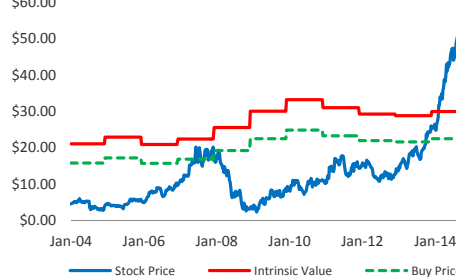
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Figures in Millions except per share values



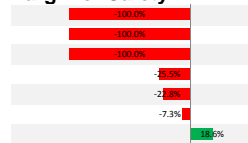
Price vs DCF Intrinsic Value



Fundamental Ratios

	2012	2013	TTM
P/E	22.92	25.64	21.92
P/E (cash adjusted)	19.66	24.02	20.87
EV/EBITDA	6.92	10.75	11.28
EV/EBIT	12.54	17.97	15.68
P/S	0.74	1.31	1.73
P/BV	2.53	3.74	4.88
P/Tang BV	9.94	7.06	7.92
P/CF	5.89	9.78	12.33
P/FCF	40.66	36.23	31.20
FCF/S	1.8%	3.6%	5.6%
FCF Yield	2.5%	2.8%	3.2%
Magic Earnings Yield	8.0%	5.6%	6.4%
ROE	11.0%	14.6%	21.9%
ROA	4.1%	7.0%	11.0%
ROIC	12.5%	12.0%	17.0%
CROIC	4.6%	7.6%	11.7%
Current Ratio	2.07	1.76	2.17
Total Debt/Equity Ratio	0.35	0.35	0.34
Inventory Turnover	8.25	8.26	7.48

Margin of Safety



Company Stats

Industry: Auto Parts	
Earnings Date	30-Oct-14
Shares Outstanding	36
Shares Float	35
Insider Ownership	1.50%
Insider Transactions	-37.5%
Institutional Owners	91.3%
Float Short	2.7%
Short Ratio	1.9
Piotroski (TTM)	7
Altman (MRQ)	4.0
Beneish (TTM)	-2.9

Margins & Profitability

Gross	
Gross Margin	29.0%
Operating	
Operating Margin	11.6%
Net Profit	
Net Margin	7.8%

Financial Strength (MRQ)

Current Ratio(MRQ)	2.2
Quick Ratio(MRQ)	1.7
LTD/Eq(MRQ)	0.3
Tot D/Eq(MRQ)	0.3

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM	5YR Min	Median	5YR Max
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Financial Statistics & Ratios

Valuation Ratios

Color Coding

P/E		57.33	5.17	57.32	50.25	23.78	281.25	24.78	35.00	22.92	25.64	21.92	21.92	25.21	281.25
P/E (cash adjusted)		50.15	4.49	53.19	46.85	16.68	241.99	21.13	32.53	19.66	24.02	20.87	19.66	22.57	241.99
EV/EBITDA		43.14	27.41	31.14	41.34	10.03	74.39	15.57	9.36	6.92	10.75	11.28	6.92	11.01	74.39
EV/EBIT		58.95	27.02	30.11	39.07	10.81	286.57	17.12	22.42	12.54	17.97	15.68	12.54	17.55	286.57
P/S		1.86	2.39	3.98	5.82	1.33	3.34	2.19	0.91	0.74	1.31	1.73	0.74	1.52	3.34
P/BV		5.93	2.99	6.07	8.68	1.88	4.22	4.29	5.58	2.53	3.74	4.88	2.53	4.25	5.58
P/Tang BV		6.13	3.04	6.23	9.26	2.02	4.57	4.66	-5.01	9.94	7.06	7.92	-5.01	5.86	9.94
P/CF		28.91	4.59	47.31	34.07	15.78	111.23	21.12	8.39	5.89	9.78	12.33	5.89	11.05	111.23
P/FCF		25.51	40.89	61.04	38.81	26.66	75.90	23.31	14.35	40.66	36.23	31.20	14.35	33.71	75.90
FCF/S		7.3%	5.9%	6.5%	15.0%	5.0%	4.4%	9.4%	6.4%	1.8%	3.6%	5.6%	1.8%	5.0%	9.4%
FCF Yield		3.9%	2.4%	1.6%	2.6%	3.8%	1.3%	4.3%	7.0%	2.5%	2.8%	3.2%	1.3%	3.0%	7.0%
Magic Formula Earnings Yield		1.7%	3.7%	3.3%	2.6%	9.3%	0.3%	5.8%	4.5%	8.0%	5.6%	6.4%	0.3%	5.7%	8.0%
ROE		10.3%	57.8%	10.6%	17.3%	7.9%	1.5%	17.3%	15.9%	11.0%	14.6%	21.9%	1.5%	15.3%	21.9%
ROA		6.5%	44.4%	8.3%	13.2%	6.8%	1.2%	12.5%	2.6%	4.1%	7.0%	11.0%	1.2%	5.5%	12.5%
ROIC		9.4%	57.8%	10.6%	17.3%	7.9%	0.6%	16.3%	10.0%	12.5%	12.0%	17.0%	0.6%	12.3%	17.0%
CROIC		21.1%	7.3%	9.9%	22.4%	7.1%	5.6%	18.4%	17.2%	4.6%	7.6%	11.7%	4.6%	9.6%	18.4%
GPA (Gross Profitability to Assets)		52.2%	28.6%	38.9%	38.1%	35.2%	25.3%	41.2%	25.3%	32.3%	36.3%	41.1%	25.3%	34.3%	41.2%
Book to Market		16.9%	33.5%	16.5%	11.5%	53.1%	23.7%	23.3%	17.9%	39.5%	26.8%	20.5%	17.9%	23.5%	39.5%

Solvency

Quick Ratio		2.53	2.67	3.26	3.21	4.88	3.19	2.91	1.18	1.61	1.34	1.68	1.18	1.64	3.19
Current Ratio		2.91	3.02	3.77	3.38	5.25	3.37	3.23	1.59	2.07	1.76	2.17	1.59	2.12	3.37
Total Debt/Equity Ratio		0.10	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.35	0.35	0.34	0.00	0.35	1.26
Long Term Debt/Equity Ratio		0.10	0.00	0.00	0.00	0.00	0.00	0.00	1.02	0.25	0.26	0.32	0.00	0.25	1.02
Short Term Debt/Equity Ratio		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.11	0.09	0.02	0.00	0.05	0.24

Efficiency Ratios

Asset Turnover		2.01	0.96	1.19	1.14	1.21	0.98	1.42	0.99	1.26	1.37	1.41	0.98	1.32	1.42
Cash % of Revenue		23.2%	31.7%	28.7%	39.4%	39.8%	46.6%	32.3%	6.5%	10.5%	8.3%	8.3%	6.5%	9.4%	46.6%
Receivables % of Revenue		14.6%	22.1%	18.4%	18.3%	13.0%	24.7%	16.9%	22.3%	18.4%	17.9%	18.7%	16.9%	18.5%	24.7%
SG&A % of Revenue		16.8%	15.3%	15.1%	13.4%	11.3%	14.5%	9.7%	11.4%	11.7%	11.0%	10.4%	9.7%	11.2%	14.5%
R&D % of Revenue		6.8%	7.4%	6.7%	8.0%	10.7%	9.8%	8.6%	8.0%	7.4%	7.5%	7.1%	7.1%	7.8%	9.8%

Liquidity Ratios

Days Sales Outstanding		53.1	80.6	67.3	67.0	47.6	90.3	61.5	81.4	67.3	65.2	68.1	61.50	67.67	90.30
Days Inventory Outstanding		28.7	39.5	46.8	19.1	21.4	20.5	31.3	61.6	47.5	48.1	48.8	20.53	47.80	61.60
Days Payable Outstanding		48.2	77.5	60.1	74.5	31.3	82.6	70.0	56.5	37.6	46.2	48.0	37.56	52.29	82.61
Cash Conversion Cycle		33.6	42.6	53.9	11.6	37.6	28.2	22.8	86.4	77.2	67.1	68.8	22.79	67.96	86.44
Receivables Turnover		6.87	5.65	5.88	6.06	6.37	5.22	6.61	7.29	6.01	6.00	5.94	5.22	6.01	7.29
Inventory Turnover		12.73	10.87	9.63	12.84	18.55	17.43	17.01	10.33	8.25	8.26	7.48	7.48	9.30	17.43
Average Age of Inventory (Days)		28.66	33.58	37.89	28.42	19.67	20.94	21.46	35.33	44.23	44.18	48.79	20.94	39.76	48.79
Intangibles % of Book Value		3.3%	1.9%	2.5%	6.3%	7.0%	7.7%	8.1%	211.3%	74.5%	47.1%	38.4%	7.7%	42.7%	211.3%
Inventory % of Revenue		5.8%	7.6%	8.6%	3.5%	4.2%	4.2%	6.1%	12.5%	9.7%	9.7%	9.5%	4.2%	9.6%	12.5%

Capital Structure Ratios

LT-Debt as % of Invested Capital		9.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	45.1%	18.2%	19.4%	24.0%	0.0%	18.8%	45.1%
ST-Debt as % of Invested Capital		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.6%	7.9%	6.8%	1.3%	0.0%	4.1%	10.6%
LT-Debt as % of Total Debt		100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	80.9%	69.8%	74.0%	94.9%	0.0%	71.9%	94.9%
ST-Debt as % of Total Debt		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.1%	30.2%	26.0%	5.1%	0.0%	12.1%	30.2%
Total Debt % of Total Assets		6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.3%	13.0%	17.1%	17.0%	0.0%	15.0%	20.3%
Working Capital % of Price		15.8%	18.3%	11.8%	8.2%	35.9%	16.5%	19.2%	19.5%	30.5%	13.5%	13.0%	13.0%	17.8%	30.5%

Quality Scores

Piotroski F Score		6.00	6.00	7.00	6.00	7.00	5.00	7.00	3.00	7.00	6.00	7.00	3.00	6.50	7.00
Altman Z Score (Original)		2.97	5.71	13.82	18.01	7.95	9.43	8.91	1.91	2.71	4.13	3.97	1.91	4.05	9.43
Altman Z Score (Revised)		0.91	9.12	23.79	31.50	13.89	16.71	15.63	2.38	3.85	6.03	7.86	2.38	6.94	16.71
Beneish M Score (5 Variable)		-	6.76	-3.05	-2.83	-2.88	-2.18	-2.97	1.31	-2.82	-2.89	-2.87	-2.97	-2.85	1.31
Beneish M Score (8 Variable)		-	6.28	-2.57	-2.90	-2.60	-2.25	-2.45	0.86	-2.34	-2.69	-2.46	-2.69	-2.39	0.86

Enter Ticker

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Figures in Millions except per share values

Earnings Quality Check with Accrual Analysis

Earnings growth due to accrual growth is not sustainable. This is like cookie jar accounting where a company "borrows" earnings from the future to make earnings look good today.

Balance sheet accrual can indicate whether capital is being used properly. A company with high accruals can come from acquiring or merging with companies which expands the asset base. Low balance sheet accrual companies tend to shrink their balance sheet through spin offs, share repurchases or large write offs. In these situations, it is usually removing bad performing assets or returning money to shareholders which is always a good use of capital.

High accruals indicate that the company has expanded its asset base rapidly.

Companies with high balance sheet accruals tend to have higher sales growth than low balance sheet accrual companies.

High balance sheet accruals also have a higher ROE.

Remember that maintaining a high sales growth or high ROE is difficult unless you have an entrenched moat. Such companies revert to the mean and disappoint..

Companies with low balance sheet accruals tend to have below average returns on equity. Analysts expect the company to lag.

Color Coding: **Green** = safe zone, **Yellow** = ratio is getting into warning zone, **Red** = Danger zone. Ratios are too high or low. Requires check.

More reading:

<http://tinyurl.com/6p394ap>

<http://tinyurl.com/7ucpoe2>

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM/MRQ
Balance Sheet Accrual Ratio	-	91.1%	11.9%	29.9%	-71.2%	29.5%	15.3%	114.0%	34.8%	47.1%	17.6%
Cash Flow Accrual Ratio	-	96.6%	9.0%	26.8%	-76.2%	22.4%	26.4%	127.0%	12.0%	27.9%	17.9%
Sloan Accrual Ratio	32.8%	48.6%	6.2%	17.3%	-44.4%	8.3%	9.5%	24.4%	3.7%	12.2%	9.1%
Earnings	\$ 0.07	\$ 1.03	\$ 0.17	\$ 0.33	\$ 0.16	\$ 0.03	\$ 0.44	\$ 0.41	\$ 0.62	\$ 0.99	\$ 1.72
Stock Price	\$ 4.1	\$ 5.3	\$ 9.7	\$ 16.4	\$ 3.8	\$ 9.3	\$ 11.0	\$ 14.4	\$ 14.2	\$ 25.4	\$ 37.7
Total Assets	\$ 16.3	\$ 37.3	\$ 42.4	\$ 56.0	\$ 52.6	\$ 62.4	\$ 79.4	\$ 374.9	\$ 439.2	\$ 481.9	\$ 557.7
Cash & Equivalent	\$ 1.1	\$ 1.4	\$ 2.4	\$ 1.2	\$ 25.3	\$ 21.7	\$ 26.6	\$ 23.8	\$ 58.2	\$ 54.9	\$ 65.2
Total Liabilities	\$ 6.1	\$ 8.6	\$ 9.2	\$ 13.3	\$ 7.6	\$ 14.1	\$ 21.9	\$ 314.3	\$ 277.4	\$ 249.8	\$ 277.6
Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14.6	\$ 17.2	\$ 21.4	\$ 4.8
Long Term Debt	\$ 1.1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 61.7	\$ 39.7	\$ 60.9	\$ 90.0
Net Operating Assets (NOA)	\$ 10.2	\$ 27.3	\$ 30.7	\$ 41.5	\$ 19.7	\$ 26.6	\$ 31.0	\$ 113.0	\$ 160.6	\$ 259.5	\$ 309.7
Net Income	\$ 1.1	\$ 16.5	\$ 3.5	\$ 7.4	\$ 3.6	\$ 0.7	\$ 10.0	\$ 9.7	\$ 17.9	\$ 33.8	\$ 61.2
CFO	\$ 3.0	\$ 2.5	\$ 4.8	\$ 14.2	\$ 5.5	\$ 4.3	\$ 12.4	\$ 34.2	\$ 36.9	\$ 59.8	\$ 76.6
CFI	\$ (7.3)	\$ (4.1)	\$ (3.9)	\$ (16.5)	\$ 21.4	\$ (8.7)	\$ (10.0)	\$ (116.0)	\$ (35.4)	\$ (84.7)	\$ (66.2)
Balance Sheet Aggregate Accrual	\$ -	\$ 17.1	\$ 3.4	\$ 10.8	\$ (21.8)	\$ 6.8	\$ 4.4	\$ 82.0	\$ 47.6	\$ 98.9	\$ 50.2
Cash Flow Aggregate Accrual	\$ -	\$ 18.1	\$ 2.6	\$ 9.7	\$ (23.3)	\$ 5.2	\$ 7.6	\$ 91.4	\$ 16.4	\$ 58.7	\$ 50.8

Piotroski Score

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM
Piotroski F Scores	6	6	7	6	7	5	7	3	7	6	7
Piotroski 1: Net Income	1	1	1	1	1	1	1	1	1	1	1
Piotroski 2: Operating Cash Flow	1	1	1	1	1	1	1	1	1	1	1
Piotroski 3: Return on Assets	1	1	0	1	0	0	1	0	1	1	1
Piotroski 4: Quality of Earnings	1	0	1	1	1	1	1	1	1	1	1
Piotroski 5: LT Debt vs Assets	1	1	1	1	1	1	1	0	1	0	0
Piotroski 6: Current Ratio	1	1	1	0	1	0	0	0	1	0	1
Piotroski 7: Shares Outstanding	0	0	0	0	1	1	0	0	0	0	0
Piotroski 8: Gross Margin	0	1	1	1	0	0	1	0	0	1	1
Piotroski 9: Asset Turnover	0	0	1	0	1	0	1	0	1	1	1

Altman Z Score

The Z-score formula may be used to predict the probability that a firm will go into bankruptcy within two years.

Z-scores are used to predict corporate defaults and an easy-to-calculate control measure for the financial distress status of companies in academic studies. The Z-score uses multiple corporate income and balance sheet values to measure the financial health of a company.

The main problem with the Altman Z formula is that the formula is not suited for many industries. Industries that operate with high leverage, such as radio and utilities will show a higher risk of bankruptcy.

Also, industries with negative working capital, such as many retail and restaurant companies will also exhibit the same high level of bankruptcy.

(Wikipedia http://en.wikipedia.org/wiki/Z-Score_Financial_Analysis_Tool)

$$Z = 1.2 \cdot X_1 + 1.4 \cdot X_2 + 3.3 \cdot X_3 + 0.6 \cdot X_4 + 1.0 \cdot X_5$$

There is also a revised Altman Z score which is adjusted for non manufacturing corporations. The revised formula is:

$$Z = 6.56 \cdot X_1 + 3.26 \cdot X_2 + 6.72 \cdot X_3 + 1.05 \cdot X_4$$

X_1 = Working Capital/Total Assets

X_2 = Retained Earnings/Total Assets

X_3 = EBITDA/Total Assets

X_4 = Market Value of Equity/Total Liabilities

X_5 = Net Sales/Total Assets

	2004	2005	2006	2007	Annual 2008	2009	2010	2011	2012	2013	MRQ Q3	MRQ
Working Capital	\$ 9.6	\$ 15.6	\$ 23.8	\$ 30.5	\$ 30.5	\$ 33.5	\$ 47.2	\$ 66.0	\$ 124.9	\$ 116.8	\$ 177.3	
Total Assets	\$ 16.3	\$ 37.3	\$ 42.4	\$ 56.0	\$ 52.6	\$ 62.4	\$ 79.4	\$ 374.9	\$ 439.2	\$ 481.9	\$ 557.7	
Total Liabilities	\$ 6.1	\$ 8.6	\$ 9.2	\$ 13.3	\$ 7.6	\$ 14.1	\$ 21.9	\$ 314.3	\$ 277.4	\$ 249.8	\$ 277.6	
Retained Earnings	\$ (69.5)	\$ (53.0)	\$ (49.4)	\$ (42.1)	\$ (38.5)	\$ (37.8)	\$ (27.8)	\$ (28.5)	\$ (17.4)	\$ 14.8	\$ 65.1	
EBITDA	\$ 1.1	\$ 3.1	\$ 6.2	\$ 8.8	\$ 5.5	\$ 0.6	\$ 12.3	\$ 19.4	\$ 36.8	\$ 49.8	\$ 25.0	
Market Value of Equity	\$ 60.7	\$ 85.6	\$ 201.4	\$ 370.6	\$ 84.8	\$ 203.3	\$ 246.6	\$ 338.0	\$ 409.6	\$ 867.1	\$ 1,344.8	
Net Sales	\$ 32.7	\$ 35.7	\$ 50.6	\$ 63.6	\$ 63.6	\$ 60.9	\$ 112.4	\$ 369.6	\$ 555.0	\$ 662.1	\$ 206.0	
Normal Altman Z Score	2.97	5.71	13.82	18.01	7.95	9.43	8.91	1.91	2.71	4.13	3.97	
Revised Altman Z Score	0.91	9.12	23.79	31.50	13.89	16.71	15.63	2.38	3.85	6.03	7.86	

	Altman Z Score		Revised Altman Z Score	
	Annual	MRQ	Annual	MRQ
X1	0.24	0.32		
X2	0.03	0.12		
X3	0.10	0.04		
X4	3.47	4.85		
X5	1.37	0.37		
	4.13	3.97	6.03	7.86

Original Altman Z Score

When Z is 3.0 or more, the firm is most likely safe based on the financial data. However, be careful to double check as fraud, economic downturns and other factors could cause unexpected reversals.

When Z is 2.7 to 3.0, the company is probably safe from bankruptcy, but this is in the grey area and caution should be taken.

When Z is 1.8 to 2.7, the company is likely to be bankrupt within 2 years. This is the lower portion of the grey area and a dramatic turnaround of the company is needed.

When Z is below 1.8, the company is highly likely to be bankrupt. If a company is generating lower than 1.8, serious studies must be performed to ensure the company can survive.

Revised Altman Z Score

When Z is 2.6 or more, the firm is most likely safe based on the financial data. However, be careful to double check as fraud, economic downturns and other factors could cause unexpected reversals.

When Z is 1.1 to 2.6, the company is probably safe from bankruptcy, but this is in the grey area and caution should be taken.

When Z is below 1.1, the company is highly likely to be bankrupt. If a company is generating lower than 1.8, serious studies must be performed to ensure the company can survive.

The Beneish Model - M Score Variables

DSRI = Days' Sales in Receivables Index. Measured as the ratio of days' sales in receivables in year t to year t-1. A large increase in DSR could be indicative of revenue inflation.

GMI = Gross Margin Index. Measured as the ratio of gross margin in year t-1 to gross margin in year t. Gross margin has deteriorated when this index is above 1. A firm with poorer prospects is more likely to manipulate earnings.

AQI = Asset Quality Index. Asset quality is measured as the ratio of non-current assets other than plant, property and equipment to total assets. AQI is the ratio of asset quality in year t to year t-1.

SGI = Sales Growth Index. Ratio of sales in year t to sales in year t-1. Sales growth is not itself a measure of manipulation. However, growth companies are likely to find themselves under pressure to manipulate in order to keep up appearances.

DEPI = Depreciation Index. Measured as the ratio of the rate of depreciation in year t-1 to the corresponding rate in year t. DEPI greater than 1 indicates that assets are being depreciated at a slower rate. This suggests that the firm might be revising useful asset life assumptions upwards, or adopting a new method that is income friendly.

SGAI = Sales, General and Administrative expenses Index. The ratio of SGA expenses in year t relative to year t-1.

LVGI = Leverage Index. The ratio of total debt to total assets in year t relative to year t-1. An LVGI >1 indicates an increase in leverage

TATA - Total Accruals to Total Assets. Total accruals calculated as the change in working capital accounts other than cash less depreciation.

The Beneish M Score Formula

The eight variables are then weighted together according to the following:

$$M = -4.84 + 0.92 \cdot DSRI + 0.528 \cdot GMI + 0.404 \cdot AQI + 0.892 \cdot SGI + 0.115 \cdot DEPI - 0.172 \cdot SGA I + 4.679 \cdot TATA - 0.327 \cdot LVGI$$

A score greater than -1.78 indicates a strong likelihood of a firm being a manipulator. In his out of sample tests, Beneish found that he could correctly identify 76% of manipulators, whilst only incorrectly identifying 17.5% of non-manipulators.

The 5 Variable Version of the Beneish Model

The five variable version excludes SGA I, DEPI and LEVI which were not significant in the original Beneish model.

$$M = -6.065 + 0.823 \cdot DSRI + 0.906 \cdot GMI + 0.593 \cdot AQI + 0.717 \cdot SGI + 0.107 \cdot DEPI$$

A score greater than -1.78 indicates a strong likelihood of a firm being a manipulator.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM
M Score - 5 Variable	-	6.76	-3.05	-2.83	-2.88	-2.18	-2.97	1.31	-2.82	-2.89	-2.87
M Score - 8 Variable	-	6.28	-2.57	-2.90	-2.60	-2.25	-2.45	0.86	-2.34	-2.69	-2.46
DSRI	-	1.52	0.83	1.00	0.71	1.90	0.68	1.32	0.83	0.97	1.04
GMI	-	0.87	0.92	0.97	1.15	1.13	0.89	1.13	1.00	0.97	0.91
AQI	-	16.65	0.56	0.81	1.31	0.90	0.47	4.76	0.80	0.85	0.91
SGI	-	1.09	1.42	1.26	1.00	0.96	1.84	3.29	1.50	1.19	1.19
DEPI	-	1.19	1.38	1.40	0.58	0.80	1.24	0.72	0.96	1.26	1.06
SGAI	-	0.91	0.99	0.89	0.84	1.29	0.67	1.17	1.03	0.94	0.94
TATA	-	0.38	-0.03	-0.12	-0.04	-0.06	-0.04	-0.06	-0.03	-0.05	-0.03
LVGI	-	0.56	0.97	1.13	0.59	1.67	1.18	1.73	0.77	1.24	0.97

DuPont Analysis

Full tutorial, example and discussion of how the DuPont analysis is used is provided on the blog.

<http://www.oldschoolvalue.com/blog/accounting/duPont-analysis-model-spreadsheet/>

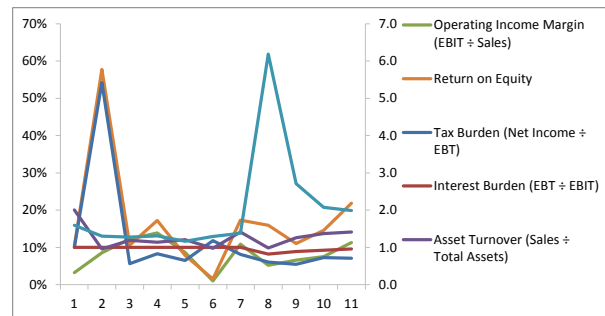
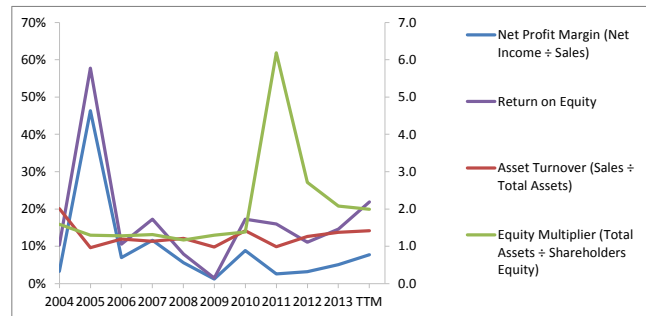
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM
Revenue	\$ 32.7	\$ 35.7	\$ 50.6	\$ 63.6	\$ 63.6	\$ 60.9	\$ 112.4	\$ 369.6	\$ 555.0	\$ 662.1	\$ 788.4
EBIT	\$ 1.1	\$ 3.1	\$ 6.2	\$ 8.8	\$ 5.5	\$ 0.6	\$ 12.3	\$ 19.4	\$ 36.8	\$ 49.8	\$ 89.0
EBT	\$ 1.1	\$ 3.1	\$ 6.2	\$ 8.8	\$ 5.5	\$ 0.6	\$ 12.3	\$ 15.9	\$ 32.7	\$ 46.2	\$ 85.6
Interest Expense	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3.5	\$ 4.1	\$ 3.5	\$ 3.4
Income Tax	\$ -	\$ (13.5)	\$ 2.7	\$ 1.5	\$ 1.9	\$ 0.3	\$ 2.9	\$ 4.7	\$ 8.4	\$ 11.1	\$ 24.4
Net Income	\$ 1.1	\$ 16.5	\$ 3.5	\$ 7.4	\$ 3.6	\$ 0.7	\$ 10.0	\$ 9.7	\$ 17.9	\$ 33.8	\$ 61.2
Total Assets	\$ 16.3	\$ 37.3	\$ 42.4	\$ 56.0	\$ 52.6	\$ 62.4	\$ 79.4	\$ 374.9	\$ 439.2	\$ 481.9	\$ 557.7
Shareholders Equity	\$ 10.2	\$ 28.7	\$ 33.2	\$ 42.7	\$ 45.0	\$ 48.2	\$ 57.5	\$ 60.6	\$ 161.8	\$ 232.1	\$ 280.1

Three-Step DuPont Model:

Net Profit Margin (Net Income ÷ Sales)	3.2%	46.3%	6.9%	11.6%	5.6%	1.2%	8.9%	2.6%	3.2%	5.1%	7.8%
Asset Turnover (Sales ÷ Total Assets)	2.01	0.96	1.19	1.14	1.21	0.98	1.42	0.99	1.26	1.37	1.41
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.59	1.30	1.28	1.31	1.17	1.29	1.38	6.19	2.71	2.08	1.99
Return on Equity	10.3%	57.8%	10.6%	17.3%	7.9%	1.5%	17.3%	15.9%	11.0%	14.6%	21.9%

Five-Step DuPont Model:

Tax Burden (Net Income ÷ EBT)	1.00	5.42	0.57	0.83	0.65	1.19	0.81	0.61	0.55	0.73	0.72
Interest Burden (EBT ÷ EBIT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.89	0.93	0.96
Operating Income Margin (EBIT ÷ Sales)	3.2%	8.5%	12.3%	13.9%	8.6%	1.0%	10.9%	5.2%	6.6%	7.5%	11.3%
Asset Turnover (Sales ÷ Total Assets)	2.01	0.96	1.19	1.14	1.21	0.98	1.42	0.99	1.26	1.37	1.41
Equity Multiplier (Total Assets ÷ Shareholders Equity)	1.59	1.30	1.28	1.31	1.17	1.29	1.38	6.19	2.71	2.08	1.99
Return on Equity	10.3%	57.8%	10.6%	17.3%	7.9%	1.5%	17.3%	15.9%	11.0%	14.6%	21.9%



Gentherm Incorporated (THRM)

1/19/2015

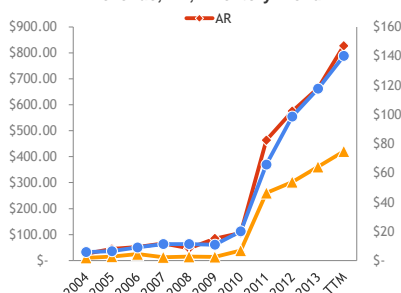
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Fiscal Comparisons	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM
Revenue										
% difference	9.3%	41.6%	25.7%	0.0%	-4.2%	84.5%	228.8%	50.2%	19.3%	19.1%
Accounts receivable										
% difference	65.7%	18.2%	25.1%	-29.0%	81.8%	25.7%	335.0%	24.1%	15.7%	24.3%
Inventories, raw materials										
% difference	16.8%	-65.4%	-49.8%	-42.6%	-100.0%	-	#####	-2.7%	19.5%	36.7%
Inventories, work in progress										
% difference	-	-	-	-	-	-	-	-1.4%	16.4%	50.9%
Inventories, purchased components										
% difference	-	-	-	-	-	-	-	-	-	-
Inventories, finished goods										
% difference	193.2%	354.0%	-49.1%	29.7%	3.6%	158.0%	125.4%	55.8%	19.8%	-11.9%
Inventories, other										
% difference	-	-	-	-	-	-	-	-	-	-
Inventories Total										
% difference	42.7%	61.1%	-49.2%	19.0%	-3.8%	168.6%	579.0%	16.0%	19.5%	16.5%

Q4 - 12/31/2013 comparisons	2011	2012	2013
Revenue			
% difference	353.1%	13.1%	23.0%
Accounts receivable			
% difference	335.0%	24.1%	15.7%
Inventories, raw materials			
% difference	#####	-2.7%	19.5%
Inventories, work in progress			
% difference	-	-1.4%	16.4%
Inventories, purchased components			
% difference	-	-	-
Inventories, finished goods			
% difference	125.4%	55.8%	19.8%
Inventories, other			
% difference	-	-	-
Inventories Total			
% difference	579.0%	16.0%	19.5%

Revenue, AR, Inventory Trend



Q1 - 3/31/2014 comparisons	2012	2013	2014
Revenue			
% difference	261.8%	14.3%	31.0%
Accounts receivable			
% difference	250.4%	20.1%	28.8%
Inventories, raw materials			
% difference	-	-15.6%	61.3%
Inventories, work in progress			
% difference	-	24.8%	-1.8%
Inventories, purchased components			
% difference	-	-	-
Inventories, finished goods			
% difference	-	39.6%	-13.5%
Inventories, other			
% difference	-100.0%	-	-
Inventories Total			
% difference	585.5%	4.0%	25.6%

How to Analyze Receivables & Inventor

For any company that sells products, a careful look at the correlation between sales, accounts receivables and inventories is crucial.

By using this analysis model you can see the relationship between the rise in revenue, accounts receivables and inventories.

Best scenario is when growth in revenue, accounts receivables and inventory all go up in sync. If accounts receivables or inventories rise quicker than revenue, watch out.

When raw materials advances more rapidly than the work-in-progress and finished goods components, the company is receiving many new orders and an inventory buildup is necessary. The company will <http://go>

Q2 - 6/30/2014 comparisons	2012	2013	2014
Revenue			
% difference	76.5%	17.9%	28.4%
Accounts receivable			
% difference	18.7%	20.6%	28.2%
Inventories, raw materials			
% difference	-	12.3%	34.1%
Inventories, work in progress			
% difference	-	23.3%	9.2%
Inventories, purchased components			
% difference	-	-	-
Inventories, finished goods			
% difference	-	37.4%	2.5%
Inventories, other			
% difference	-100.0%	-	-
Inventories Total			
% difference	3.5%	21.2%	21.0%

Q3 - 9/30/2014 comparisons	2012	2013	2014
Revenue			
% difference	12.3%	21.4%	20.3%
Accounts receivable			
% difference	11.9%	21.1%	20.2%
Inventories, raw materials			
% difference	-	18.1%	30.5%
Inventories, work in progress			
% difference	-	12.6%	58.9%
Inventories, purchased components			
% difference	-	-	-
Inventories, finished goods			
% difference	-	27.3%	-1.6%
Inventories, other			
% difference	-100.0%	-	-
Inventories Total			
% difference	4.3%	21.2%	19.1%

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You can get a list of competitors from
<https://www.google.com/finance?q=THRM>

THRM

Manually Enter Competitor into Yellow Cells

	JCI	LEA	DLPH						
Company	Gentherm Incorporated	Johnson Controls Inc.	Lear Corp.	Delphi Automotive PLC					
Sector	Consumer Goods	Consumer Goods	Consumer Goods	Consumer Goods					
Industry	Auto Parts	Auto Parts	Auto Parts	Auto Parts					
Country	USA	USA	USA	United Kingdom					
Earnings Date	30-Oct-2014	22-Jan-2015	30-Jan-2015	2-Feb-2015					
Price	\$37.67	\$45.39	\$95.09	\$66.59					
Market Cap	\$1,344.82	\$30,301.91	\$7,536.83	\$19,715.97					
Change	4.29%	0.98%	1.81%	-0.82%					
Volume	207,727	4,165,602	703,895	3,601,546					
Change from Open	4.55%	1.29%	2.16%	-0.63%					
Gap	-0.25%	-0.31%	-0.34%	-0.19%					
50-Day High	-10.29%	-10.38%	-4.80%	-11.07%					
50-Day Low	15.77%	2.41%	6.45%	0.06%					
52-Week High	-27.96%	-11.15%	-8.14%	-11.07%					
52-Week Low	64.93%	18.24%	34.04%	15.65%					
P/E	22.16	21.31	16.14	15.56					
Forward P/E	17.59	11.01	9.93	11.73					
PEG	0.89	1.66	0.75	1.07					
P/S	1.71	0.71	0.43	1.16					
P/B	4.77	2.67	2.47	6.87					
P/Cash	20.63	74.09	8.64	19.22					
P/Free Cash Flow	30.70	49.51	23.06	23.87					
Dividend Yield	0.00%	2.29%	0.84%	1.50%					
Payout Ratio	0.00%	48.60%	12.90%	21.40%					
EPS (ttm)	1.70	\$2.13	\$5.89	\$4.28					
EPS growth this year	141.00%	35.90%	-61.20%	16.80%					
EPS growth next year	14.67%	14.21%	20.61%	12.13%					
EPS growth past 5 years	42.50%	41.70%	25.50%	-16.40%					
EPS growth next 5 years	25.00%	12.80%	21.43%	14.57%					
Sales growth past 5 years	59.80%	8.50%	3.60%	-0.40%					
EPS growth quarter over quarter	100.00%	475.00%	24.60%	17.20%					
Sales growth quarter over quarter	20.30%	2.60%	8.00%	3.20%					
Return on Assets	11.70%	3.80%	5.50%	11.70%					
Return on Equity	23.60%	10.50%	15.60%	43.90%					
Return on Investment	12.20%	9.60%	11.80%	26.10%					
Current Ratio	2.20	1.10	1.30	1.50					
Quick Ratio	1.70	0.90	1.10	1.20					
LT Debt/Equity	0.32	0.56	0.35	0.84					
Total Debt/Equity	0.34	0.59	0.35	0.85					
Gross Margin	29.00%	15.50%	8.60%	18.30%					
Operating Margin	11.60%	5.40%	5.00%	11.40%					
Profit Margin	7.80%	2.80%	2.80%	7.70%					
Shares Outstanding	35.70	667.59	79.26	296.08					
Shares Float	35.03	666.17	79.10	294.94					
Insider Ownership	1.50%	0.10%	2.98%	0.10%					
Insider Transactions	-37.52%	-2.79%	0.00%	-17.38%					
Institutional Ownership	91.30%	80.10%	96.70%	94.20%					
Institutional Transactions	0.14%	-0.02%	0.07%	0.26%					
Float Short	2.73%	1.26%	0.59%	0.80%					
Short Ratio	1.9	2.3	0.7	1.3					
Performance (Week)	0.72%	-2.93%	-0.68%	-5.09%					
Performance (Month)	10.50%	1.09%	3.92%	-4.16%					
Performance (Quarter)	-4.63%	12.16%	17.90%	7.20%					
Performance (Half Year)	-20.29%	-6.74%	-0.98%	-2.25%					
Performance (Year)	49.48%	-9.82%	19.27%	8.22%					
Performance (YTD)	2.87%	-6.10%	-3.05%	-8.43%					
Beta	1.84	1.70	1.36	0.00					
Average True Range	1.55	1.06	2.35	1.51					
Volatility (Week)	3.94%	2.40%	2.83%	2.54%					
Volatility (Month)	3.81%	1.95%	2.05%	1.96%					
20-Day Simple Moving Average	0.94%	-3.84%	-1.34%	-6.49%					
50-Day Simple Moving Average	-0.61%	-5.70%	0.07%	-6.58%					
200-Day Simple Moving Average	-9.45%	-3.39%	3.99%	-2.31%					
Relative Strength Index (14)	51.68	38.27	48.95	31.95					
Analyst Recom	1.80	2.40	2.10	1.80					
Average Volume	497.77	3,587.05	694.32	1,775.24					
Relative Volume	0.42	1.16	1.01	2.03					

Gentherm Incorporated (THRM)
1/19/2015

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Shares Out.	M.O.S	Growth	Discount %	Terminal %	Select FCF	Adjust 2013 FCF
35.70	25%	15.0%	9.0%	2%	FCF	\$45.0
		15.0%				
Current Price	Fair Value	Buy Under	Actual M.O.S	52 Wk High	52 Wk Low	
\$37.67	\$ 30.03	\$22.52	0%	\$52.29	\$22.84	

old school value

Figures in Millions except per share values

Fiscal Year	Trend	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM
Cash Flow Data												
Cash from Operations		\$3.0	\$2.5	\$4.8	\$14.2	\$5.5	\$4.3	\$12.4	\$34.2	\$36.9	\$59.8	\$76.6
Capex		(\$0.7)	(\$0.4)	(\$1.5)	(\$4.7)	(\$2.4)	(\$1.6)	(\$1.8)	(\$10.7)	(\$26.8)	(\$35.9)	(\$32.8)
Cash Flow		\$2.1	\$18.6	\$4.3	\$10.9	\$5.4	\$1.8	\$11.7	\$40.3	\$69.6	\$88.7	\$110.9
Free Cash Flow		\$2.4	\$2.1	\$3.3	\$9.6	\$3.2	\$2.7	\$10.6	\$23.6	\$10.1	\$45.0	\$43.8
YOY% Change			-12.1%	57.7%	189.4%	-66.7%	-15.7%	294.8%	122.7%	-57.2%	346.8%	-2.7%

Margins												
Gross Margin		26.0%	29.8%	32.6%	33.5%	29.1%	25.9%	29.1%	25.7%	25.6%	26.4%	29.0%
Operating Margin		2.4%	7.2%	10.9%	12.1%	7.2%	1.5%	10.8%	4.8%	6.5%	7.5%	2.2%
Net Margin		3.2%	46.3%	6.9%	11.6%	5.6%	1.2%	8.9%	2.6%	3.2%	5.1%	7.8%

EPS & Tax												
Diluted EPS		\$0.07	\$1.03	\$0.17	\$0.33	\$0.16	\$0.03	\$0.44	\$0.41	\$0.62	\$0.99	\$1.72
Tax Rate		0.0%	-441.9%	43.4%	16.6%	35.2%	53.4%	23.8%	29.4%	25.6%	24.0%	28.5%

Efficiency & Profitability												
CROIC		21.1%	7.3%	9.9%	22.4%	7.1%	5.6%	18.4%	17.2%	4.6%	7.6%	11.7%
FCF/Sales		7.3%	5.9%	6.5%	15.0%	5.0%	4.4%	9.4%	6.8%	1.8%	3.6%	5.6%
Inventory Turnover		12.7	10.9	9.6	12.8	18.6	17.4	17.0	10.3	8.3	8.3	7.5
Return On Assets (ROA)		6.5%	44.4%	8.3%	13.2%	6.8%	1.2%	12.5%	2.6%	4.1%	7.0%	11.0%
Return On Equity (ROE)		10.3%	57.8%	10.6%	17.3%	7.9%	1.5%	17.3%	15.9%	11.0%	14.6%	21.9%

Debt Related												
Debt to Equity		59.1%	30.0%	27.8%	31.1%	16.8%	29.3%	38.0%	518.7%	171.4%	107.6%	99.1%
Capitalization Ratio		9.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.4%	19.7%	20.8%	24.3%
FCF to Total Debt		226.7%							30.9%	17.7%	29.1%	46.2%
FCF to Short Term Debt									161.7%	58.5%	111.6%	909.3%
FCF to Long Term Debt		226.7%							38.2%	25.3%	39.3%	48.7%

5 Year Multi-Year Performance

	2008-2012	2009-2013	2008-2011	2009-2012	2010-2013	2008-2010	2009-2011	2010-2012	2011-2013	Median
Tang Shareholder Equity	12.0%	35.2%	0.0%	14.0%	41.1%	12.4%	0.0%	11.7%	0.0%	12.0%
Free Cash Flow	33.4%	72.9%	95.0%	55.5%	31.3%	82.4%	196.5%	-2.4%	0.8%	55.5%
CROIC	7.1%	7.6%	12.1%	11.4%	12.4%	7.1%	17.2%	17.2%	7.6%	11.4%
FCF/Sales	5.0%	4.4%	5.7%	5.4%	5.0%	5.0%	6.4%	6.4%	3.6%	5.0%
ROA	4.1%	4.1%	4.7%	3.3%	5.5%	6.8%	2.6%	4.1%	4.1%	4.1%
ROE	11.0%	14.6%	11.9%	13.5%	15.3%	7.9%	15.9%	15.9%	14.6%	14.6%
Gross Margin	25.9%	25.9%	27.5%	25.8%	26.0%	29.1%	25.9%	25.7%	25.7%	25.9%
Operating Margin	6.5%	6.5%	6.0%	5.7%	7.0%	7.2%	4.8%	6.5%	6.5%	6.5%
Net Margin	3.2%	3.2%	4.1%	2.9%	4.2%	5.6%	2.6%	3.2%	3.2%	3.2%
Revenue Growth	71.9%	81.6%	79.8%	108.8%	80.6%	32.9%	146.3%	122.2%	33.8%	80.6%
Earnings Growth	40.4%	133.7%	37.2%	165.2%	30.9%	66.6%	252.1%	18.3%	55.1%	55.1%
Cash from Ops Growth	60.6%	93.6%	83.4%	105.4%	69.0%	49.5%	183.7%	72.5%	32.2%	72.5%

10 Year Multi-Year Performance

	2004-2011	2005-2012	2006-2013	2004-2009	2005-2010	2006-2011	2007-2012	2008-2013	2004-2013	Median
Tang Shareholder Equity	0.0%	12.9%	24.3%	35.1%	13.5%	0.0%	10.5%	28.8%	35.1%	13.5%
Free Cash Flow	38.7%	25.2%	32.7%	2.4%	38.3%	48.2%	1.1%	49.7%	29.2%	32.7%
CROIC	13.6%	8.6%	8.8%	8.6%	8.6%	13.6%	12.1%	7.3%	7.6%	8.6%
FCF/Sales	6.4%	6.1%	5.7%	6.2%	6.2%	6.4%	5.7%	4.7%	6.1%	6.1%
ROA	7.5%	7.5%	6.9%	7.5%	10.4%	7.5%	5.4%	5.4%	6.9%	7.5%
ROE	13.3%	13.5%	12.8%	10.5%	13.9%	13.3%	13.5%	12.8%	12.8%	13.3%
Gross Margin	29.1%	29.1%	27.8%	29.5%	29.5%	29.1%	27.5%	26.1%	27.8%	29.1%
Operating Margin	7.2%	7.2%	7.3%	7.2%	9.0%	9.0%	6.8%	6.8%	7.2%	7.2%
Net Margin	6.3%	6.3%	5.4%	6.3%	7.9%	6.3%	4.4%	4.2%	5.4%	6.3%
Revenue Growth	41.4%	48.0%	44.4%	13.2%	25.8%	48.8%	54.2%	59.8%	39.7%	44.4%
Earnings Growth	28.3%	-7.0%	28.7%	-14.3%	-15.5%	19.4%	13.7%	44.1%	33.9%	19.4%
Cash from Ops Growth	41.4%	46.7%	43.3%	7.0%	37.5%	48.0%	21.0%	60.9%	39.3%	41.4%

Projection of future Free Cash Flow

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Yearly Growth Input Field										
15%	\$51.75	\$59.51	\$68.44	\$77.68	\$88.17	\$100.07	\$113.58	\$127.38	\$142.85	\$160.21
Terminal Growth										
2%	\$ 163.41	\$ 166.68	\$ 170.02	\$ 173.42	\$ 176.88	\$ 180.42	\$ 184.03	\$ 187.71	\$ 191.46	\$ 195.29

Calculation

Total Cash	\$ 65.17
MAX(0,Current Liabilities-Current A	\$ -
Excess Cash	\$ 65.17
Adding some Intangibles	\$ -
Interest Bearing Debt	\$53.43
Present Value	\$ 1,072.00
Shares Outstanding	35.701
Per Share Value	\$ 30.03
Desired Margin of Safety	25%
Purchase Price	\$ 22.52
Current Price	\$ 37.67
Margin of Safety	0%

Sensitivity Matrix: Growth vs Discount Rate

		Discount Rates				
		7%	8%	9%	10%	11%
Growth Rates	11%	\$ 28.10	\$ 25.66	\$ 23.51	\$ 21.61	\$ 19.93
	13%	\$ 31.90	\$ 29.06	\$ 26.56	\$ 24.36	\$ 22.42
	15%	\$ 36.21	\$ 32.92	\$ 30.03	\$ 27.48	\$ 25.23
	17%	\$ 41.10	\$ 37.29	\$ 33.95	\$ 31.01	\$ 28.42
	19%	\$ 46.65	\$ 42.25	\$ 38.40	\$ 35.00	\$ 32.01

Sensitivity Matrix: Margin of Safety %

		Discount Rates				
		7%	8%	9%	10%	11%
Growth Rates	11%	-34.1%	-46.8%	-60.3%	-74.3%	-89.0%
	13%	-18.1%	-29.6%	-41.8%	-54.6%	-68.0%
	15%	-4.0%	-14.4%	-25.5%	-37.1%	-49.3%
	17%	8.4%	-1.0%	-10.9%	-21.5%	-32.6%
	19%	19.3%	10.8%	1.9%	-7.6%	-17.7%

Variable Fields

Intangibles% add to DCF	0%
Decay Rate (Yr4E-Yr7E)	10%
Extra Decay (Yr8E-Yr10E)	10%

Gentherm Incorporated (THRM)

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Figures in Millions except per share values

Shares Out.	M.O.S	Growth	Projection	EPS	Corp Bond
35.70	25%	15.0%	Analyst Estimate	\$1.87	3.91
		15.0%			

Current Price	Intrinsic \$	Buy Under	Actual M.O.S	52 Wk High	52 Wk Low
\$37.67	\$46.30	\$34.72	19%	\$52.29	\$22.84

	2008-2012	2009-2013	2008-2011	2009-2012	2010-2013	2008-2010	2009-2011	2010-2012	2011-2013	Median
5 Yr EPS Growth	40.4%	133.7%	37.2%	165.2%	30.9%	66.6%	252.1%	18.3%	55.1%	55.1%

	2004-2011	2005-2012	2006-2013	2004-2009	2005-2010	2006-2011	2007-2012	2008-2013	Median
10 Yr EPS Growth	28.3%	-7.0%	28.7%	-14.3%	-15.5%	19.4%	13.7%	44.1%	19.4%

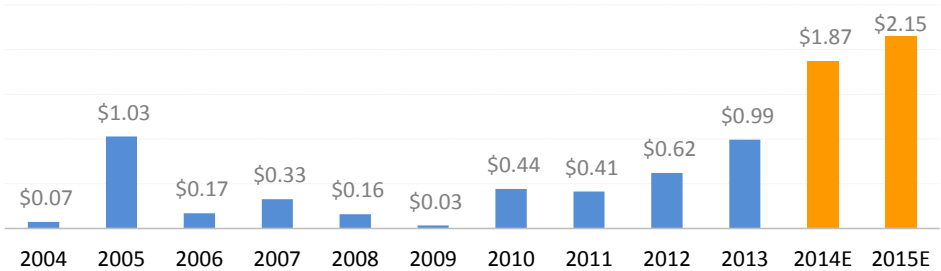
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	TTM
Diltued EPS	\$ 0.07	\$ 1.03	\$ 0.17	\$ 0.33	\$ 0.16	\$ 0.03	\$ 0.44	\$ 0.41	\$ 0.62	\$ 0.99	\$ 1.72
	2014E	2015E									
Forecast Method	\$ 0.65	\$ 0.75									
Linear Regression Method	\$ 0.55	\$ 0.63									
Normalized Margins Metho	\$ 1.23	\$ 1.41									
Analyst Estimate	\$ 1.87	\$ 2.14									

Graham Value Calculation

Normal Earnings	\$ 1.87
Growth Rate	15.00%
Corp Bond Rate	3.91
Per Share Value	\$ 46.30
MOS	25%
Purchase Price	\$ 34.72
Current Price	\$37.67
Actual Discount	19%

Graham's Sensitivity Matrix

Growth Sensivity Incremen	10%
EPS Sensivity Increments	10%



		EPS				
		\$ 1.50	\$ 1.68	\$ 1.87	\$ 2.06	\$ 2.24
Growth	12.0%	\$ 31.99	\$ 35.98	\$ 39.98	\$ 43.98	\$ 47.98
	13.5%	\$ 34.51	\$ 38.83	\$ 43.14	\$ 47.45	\$ 51.77
	15.0%	\$ 37.04	\$ 41.67	\$ 46.30	\$ 50.93	\$ 55.55
	16.5%	\$ 39.56	\$ 44.51	\$ 49.45	\$ 54.40	\$ 59.34
	19.8%	\$ 45.12	\$ 50.76	\$ 56.40	\$ 62.04	\$ 67.68

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Normalized Rev Period	Projection	EPS
3YR	Analyst Estimate	\$1.87

%old scl

Figures in Millions



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Current Price	Conservative	Normal	Aggressive
\$37.67 M.o.S	\$24.37 0.0%	\$30.67 0.0%	\$34.88 0.0%

For Each Operating Segment ⁽¹⁾

	Conservative	Normal Case	Aggressive
Normalized Revenue Estimate ⁽²⁾	1,427.3	\$1,427.3	1,427.3
Manual Input for Revenue			
Projected Normalized Operating Margin ⁽³⁾	5.3%	5.3%	5.3%
Manual Input for Margins			
Operating Income Estimate (EBIT)	75.0	75.0	75.0
Valuation Multiple ⁽⁴⁾	12x	15x	17x
Estimate Value of Operating Segment	899.8	1,124.7	1,274.7

Cash & Equiv on Balance Sheet	65.2	65.2	65.2
Manual Input for Cash & Equiv			
Total Value of business + cash	965.0	1,189.9	1,339.9
Less Total Debt	94.8	94.8	94.8
Manual Input for Total Debt			
Less Off Balance Sheet Debt ⁽⁵⁾	0.0		0.0
Less Net Pension/Retirement/Workers Comp	0.0		0.0
Estimated Fair Value of Equity	870.2	1,095.1	1,245.1
Shares Outstanding	35.70	35.70	35.70
Current Price	\$37.67	\$37.67	\$37.67
Estimated Fair Value per Share	\$24.37	\$30.67	\$34.88
Margin of Safety	0%	0%	0%
Price/Intrinsic Value Ratio ⁽⁶⁾	1.5	1.2	1.1

How to Use

Enter values in the yellow boxes.

Make sure to keep your denominations consistent. E.g. use millions for rev & shares outstanding.

Do not use millions for revenue and thousands for shares outstanding.

Calculator Input Explanations

(1) For Each Operating Segment:

EBIT multiple calculation can be used for sum of the parts valuation.

Perform the same step for each part of the operating business and then sum it up to get the total value.

(2) Normalized Revenue Estimate

To get a normalized value, take the average or median across multiple years.

(3) Projected Normalized Operating Margin

Enter the operating margin for each scenario.

(4) Valuation Multiple

Enter the EBIT multiple that you wish to use for each scenario. Look at comparable industry and competitors.

(5) Less Off Balance Sheet Debt

These are liabilities that are not found in the balance sheet. It can be found in the footnotes of the annual report. A quick way to search for this is to do a find for the term "off balance sheet" or "off-balance sheet" in the financial statements.

(6) Price/Intrinsic Value Ratio

The lower the better. Simply price divided by the calculated intrinsic value of equity.

Gentherm Incorporated

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Current EPS Exp Growth	Dividend Yield	Business Safety	Financial Safety	Earnings Safety
15%	0.00%	Above Average	Excellent	Excellent
Expected PE		14 of 20 pts	19 of 20 pts	16 of 20 pts
17				

%old school value

Katsenelson Absolute PE

	Current Price	Fair Value	Fair Value PE	Current PE	FV Exp Grth	M.O.S		
	\$37.67	\$35.11	20.43	17.00	22%	0%		
Determine Business Risk	2009	2010	2011	2012	2013	TTM	AVERAGE	STDEV
ROE	1.50%	17.29%	15.94%	11.04%	14.57%	21.87%	13.7%	6.9%
Consistency/quality check		1	0	0	1	1	3	
ROA	1.16%	12.53%	2.58%	4.07%	7.02%	10.98%	6.4%	4.6%
Consistency/quality check		1	0	1	1	1	4	
CROIC	5.55%	18.38%	17.21%	4.60%	7.61%	11.68%	10.8%	5.9%
Consistency/quality check		1	1	0	0	1	3	
Intangibles % of Book Value	7.73%	8.09%	211.34%	74.53%	47.07%	38.39%	64.5%	76.2%
Consistency/quality check		1	0	1	1	1	4	
Business Risk Factor:	14 pts out of 20	Above Average 4% Factor					14	0.0%

Determine Financial Risk	2009	2010	2011	2012	2013	TTM	AVERAGE	STDEV
Current Ratio	3.37	3.23	1.59	2.07	1.76	2.17	2.36	0.75
Consistency/quality check		1	1	1	1	1	5	
Total Debt/Equity Ratio	0.00	0.00	1.26	0.35	0.35	0.34	0.38	0.46
Consistency/quality check		1	0	1	1	1	4	
Short Term Debt/Equity Ratio	0.00	0.00	0.24	0.11	0.09	0.02	0.08	0.09
Consistency/quality check		1	1	1	1	1	5	
FCF to Total Debt			30.89%	17.69%	29.07%	46.20%	31.0%	11.7%
Consistency/quality check		1	1	1	1	1	5	
Financial Risk Factor:	19 pts out of 20	Excellent 9% Factor					19	0.0%

Determine Earnings Predictability	2009	2010	2011	2012	2013	TTM	AVERAGE	STDEV
Gross Margin	25.87%	29.13%	25.70%	25.57%	26.40%	29.05%	27.0%	1.7%
Consistency/quality check		1	0	0	1	1	3	
Net Margin	1.19%	8.85%	2.61%	3.22%	5.11%	7.77%	4.8%	3.0%
Consistency/quality check		1	0	1	1	1	4	
Earnings	\$0.03	\$0.44	\$0.41	\$0.62	\$0.99	\$1.72	0.70	0.59
Consistency/quality check		1	0	1	1	1	4	
Cash from Ops	\$4.25	\$12.39	\$34.23	\$36.87	\$59.79	\$76.63	\$37.36	27.48
Consistency/quality check		1	1	1	1	1	5	
Earnings Predict. Factor:	16 pts out of 20	Excellent 6% Factor					16	0.0%

Katsenelson Absolute PE Valuation Model

Earnings Growth	15.00%	17.00
Dividend Yield	0.00%	0.00
		=
Adjusted Base PE		17.00
Business Risk	Above Average [1 + (1 - 0.96)]	x
Premium/Discount Factor:	0.96	x
Financial Risk	Excellent [1 + (1 - 0.91)]	x
Premium/Discount Factor:	0.91	x
Earnings Predictability	Excellent [1 + (1 - 0.94)]	=
Premium/Discount Factor:	0.94	=
Adjusted Fair Value PE	22%	20.43

P/E	Exp EPS Grwth Rate
7.00	0%
7.65	1%
8.30	2%
8.95	3%
9.60	4%
10.25	5%
10.90	6%
11.55	7%
12.20	8%
12.85	9%
13.50	10%
14.15	11%
14.80	12%
15.45	13%
16.10	14%
16.75	15%
17.40	16%
17.90	17%
18.40	18%
18.90	19%
19.40	20%
19.90	21%
20.40	22%
20.90	23%
21.40	24%
21.90	25%

Δ0.65

Δ0.50

Dividend Yield	Add'l P/E Points
0.0%	0.0
0.1%	0.5
0.5%	0.5
1.0%	1.0
1.5%	1.5
2.0%	2.0
2.5%	2.5
3.0%	3.0
3.5%	3.5
4.0%	4.0
4.5%	4.5
5.0%	5.0
5.5%	5.5
6.0%	6.0
6.5%	6.5
10.0%	10.0

Gentherm Incorporated

(THRM)

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Asset Valuation Section

Data: Asset Valuation

Shares Outstanding	35.7
Balance Sheet Assets	\$ 538.3
Adjusted Assets	\$ 538.3
Total Liabilities	\$ 277.6
Total Equity	\$ 280.1
Average SGA %	11.7%
Marketing/Brand Value	\$ 77.3
R&D Value	\$ 64.3
Cash Needed for Business	\$ 7.9
Interest Bearing Debt	\$ 94.8
Non Interest Bearing Debt	\$ 182.1
Excess Cash	\$ 51.9

Calculation: Asset Valuation

	Total	Per Share
Tangible BV	\$ 153.24	\$ 4.29
Adjusted BV	\$ 260.78	\$ 7.30
NCAV	\$ 51.12	\$ 1.43
Reprod. Cost of Assets	\$ 679.91	\$ 19.04
Reprod. Cost of Assets BV	\$ 402.36	\$ 11.27
Total Net Reprod. Cost	\$ 445.89	\$ 12.49

Quarterly numbers based on:

Adjustments:

Assets

	Book Value	Fixed BV	Multiplier	Reproduction Asset Value
Cash & Equivalents	\$ 65.2			\$ 65.2
Marketable Securities	\$ -			\$ -
Accounts Receivable	\$ 147.1			\$ 147.1
Other Receivable	\$ -			\$ -
Net Receivables	\$ 147.1			\$ 147.1
<i>Inventories: Raw Materials</i>	\$ 46.2			
<i>Inventories: Work in Progress</i>	\$ 4.3			
<i>Inventories: Purchased Components</i>	\$ -			
<i>Inventories: Finished Goods</i>	\$ 24.3			
<i>Inventories: Other</i>	\$ -			
Inventories -- Total	\$ 74.8			\$ 74.8
Prepaid Expenses	\$ 31.4			\$ 31.4
Current Deferred Income Taxes	\$ 10.1			\$ 10.1
Other Current Assets	\$ 0.1			\$ 0.1
Total Current Assets	\$ 328.7			\$ 328.7
Goodwill, Net	\$ 30.3			\$ 30.3
Intangibles, Net	\$ 77.3			\$ 77.3
Intangibles	\$ 107.5			\$ 107.5
Property/Plant/Equipment - Net	\$ 88.8			\$ 88.8
Other Long Term Assets, Total	\$ 13.4			\$ 13.4
Total Assets	\$ 538.3			\$ 538.3

Figures in Millions except per share values

Shares Out.	Main. Capex	Normalized Income	Discount Rate	R&D Years	SG&A %	%old school value
35.70	\$18.00	\$51.27	9%	3	25%	
	\$18.00					

Current Price	EPV	Net Reproduction Value	EPV MOS	NCAV	52 Wk High	52 Wk Low
\$37.67	\$9.30	\$12.49	0.0%	\$1.43	\$52.29	\$22.84

EPV Valuation Section

Values for Normalized Income

TTM Free Cash Flow	\$ 43.8
Avg Normalized Income	\$ 42.7
Med Normalized Income	\$ 41.7
Avg Adj. Income 5 yrs	\$ 33.5
TTM Adjusted Income	\$ 94.7

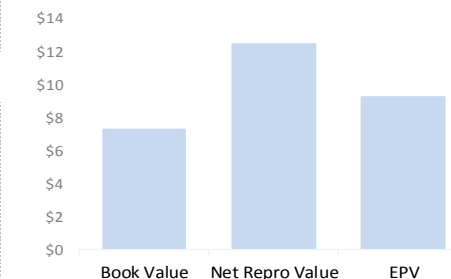
EPV > Net Repro Value = Moat exists

EPV = Net Repro Value = No Moat

EPV < Net Repro Value = Value Destroyer

Data: EPV

Cost of Capital	9.0%
Normalized Adjusted Income	\$ 51.3
Average Maintenance Capex	\$ 18.0
Interest Bearing Debt	\$ 94.8
1% of sales	\$ 7.9
Cash & Equiv	\$ 65.2
Cash - Debt	\$ (37.5)
Shares	35.70



Calculation: EPV

Cost of Capital Rates	EPV	Per Share	+ Cash - Debt	Per Share
5%	\$ 665.4	\$ 18.64	\$ 627.9	\$ 17.59
7%	\$ 475.3	\$ 13.31	\$ 437.8	\$ 12.26
9%	\$ 369.7	\$ 10.35	\$ 332.1	\$ 9.30
11%	\$ 302.4	\$ 8.47	\$ 264.9	\$ 7.42
13%	\$ 255.9	\$ 7.17	\$ 218.4	\$ 6.12

Adjustments:

Liabilities & Equity

	Book Value	Fixed BV	Multiplier	Reproduction Liability Value
Accounts Payable	\$ 73.6			\$ 73.6
Accrued Expenses	\$ -			\$ -
Accrued Liabilities	\$ 69.3			\$ 69.3
Notes Payable/Short Term Debt	\$ 4.8			\$ 4.8
Current Port. of LT Debt/Capital Leases	\$ -			\$ -
Other Current Liabilities	\$ 2.9			\$ 2.9
Total Current Liabilities	\$ 150.7			\$ 150.7
Long-Term Debt	\$ 90.0			\$ 90.0
Capital Lease Obligations	\$ -			\$ -
Deferred Income Taxes	\$ 19.3			\$ 19.3
Total Other Liabilities	\$ 16.9			\$ 16.9
Total Liabilities	\$ 277.6			\$ 277.6
Common Stock Equity	\$ 280.1			\$ 280.1
Retained Earnings	\$ 65.1			\$ 65.1
Total Capitalization	\$ 370.1			\$ 370.1
Total Equity	\$ 280.1			\$ 280.1
Total Liabilities & Equity	\$ 557.7			\$ 557.7

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