



Analysts: Zoe Knapke, Isabella Duarte, Hailey Davis,  
Bridget Parsells

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS  
**STUDENT-MANAGED  
INVESTMENT FUND**

# GENTHERM

NASDAQ: THRM    Current Price: \$42    Intrinsic Value: \$56    Target Price: \$72    Return: 32%

## Recommendation

**BUY**

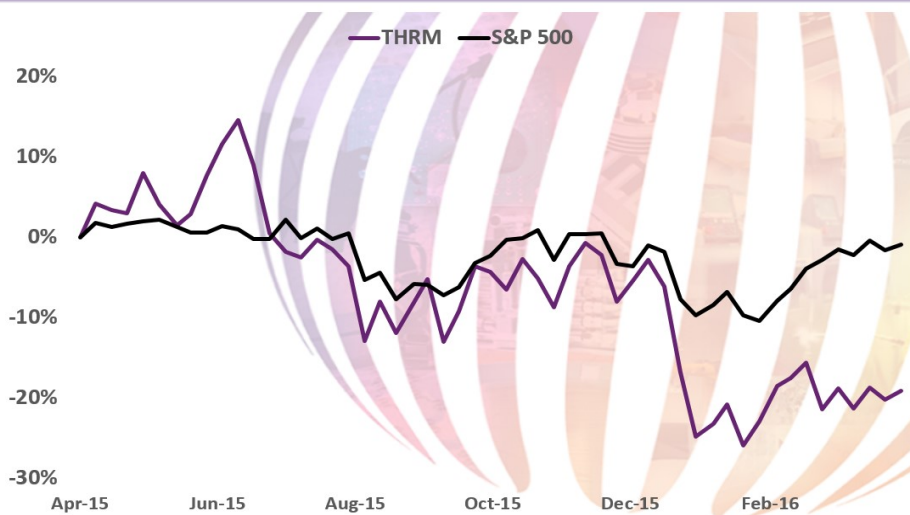
## Key Statistics

Sector: Consumer Goods  
Industry: Auto Parts  
Market Cap: 1.57B  
52 Week High: \$57.95  
52 Week Low: \$35.27  
Trailing P/E: 16.51x  
Forward P/E: 14.61x  
P/S: 1.81x  
EV/EBITDA: 9.8x  
Beta: 1.5  
ROE: 28.12%

## Company Overview

Gentherm Incorporated designs, develops, manufactures, and sells thermal management technologies and cable systems. The Automotive segment manufactures seat comfort systems, specialized cable systems, and other automotive and non-automotive thermal convenience products. The Industrial segment develops thermoelectric generators for applications in natural gas well and pipeline protection systems and remote power generation.

## One Year Price Performance



## Investment Thesis

- Overreaction within the markets caused Gentherm's stock to drop in excess of 30% from its high in June 2015
- Underappreciated high-margin automotive Climate Controlled Seats (CCS) growth opportunities
- Healthy cash flows allow Gentherm to continue to heavily invest in R&D and increase its ROIC

## Catalysts

- New thermoelectric technology products add to top-line revenue growth
- Penetration into other industries increase the diversification of Gentherm's customer base



# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS  
STUDENT-MANAGED  
INVESTMENT FUND

## Investment Thesis

### Overreaction within the markets caused Gentherm's stock to drop in excess of 30%

Within last few years Gentherm has seen year-over-year quarterly growth between 10%-15%, with this year's fourth quarter having 3.4% revenue growth over the previous year. This is likely a driving factor in Gentherm's 37% decline from its all-time high last June. However, this stationary top-line growth can be attributed to the impact of a strong U.S. dollar relative to other currencies in which Gentherm conducts a large part of its business. Non-U.S. operations account for 54% of Gentherm's total operations and Gentherm had not thoroughly hedged its foreign exchange exposure, so the weakening of the Euro and other currencies had a significant impact on its operations. In the last quarter of 2015, Gentherm recognized revenues only 3.4% higher than the equivalent period in 2014 despite seeing increased sales volumes in virtually all of Gentherm's markets and products, with actual revenues growing 11%. There has been an overreaction as investors think Gentherm's growth was 3.4%, when it was actually 11%. Gentherm's management has stated that they will take additional measures to efficiently hedge against currency fluctuations.

### Underappreciated high-margin automotive CCS growth opportunities

While Gentherm's CCS products are typically found in luxury vehicles, advancements in its Thermoelectric Devices Technology (TED) have lowered the price of these components and allow them to be placed in mid-priced vehicles. This will increase top-line growth and margins as Gentherm has not penetrated this market.

Gentherm's revenues are highly dependent on its high-margin CCS and traditional heated seat products, which account for 43% and 39% of the company's total sales, respectively. Advancements in its TED technology have aided in lowering costs and played a major role in the rapid multiplication of these products. Gentherm is expanding its footprint outside of the U.S. and foreign sales are expected to increase as a result.

Gentherm's CCS products are higher margin than its other products and its CCS revenue grows faster than its total sales, creating a more favorable product mix for Gentherm in each consecutive period, driving margin growth.





# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS  
STUDENT-MANAGED  
INVESTMENT FUND

## Investment Thesis Continued

### Healthy cash flows allow Gentherm to continue to heavily invest in R&D and increase its ROIC

Gentherm will maintain its strong revenue growth as its CCS products are adopted by more OEMs, and as it expands into quickly growing areas of the automotive thermal comfort market. Gentherm has one of the highest ROIC's in the industry as a result of its R&D capabilities and initiative, current holding a 22% ROIC.

Gentherm has produced over 400 patents on its technologies as a result of its intensive R&D, deterring any prospective entrants into the automotive thermal comfort market. Gentherm focuses on its internal and external R&D activities in order to further develop new and improved products and technologies. It is consistently working on refining its in-depth knowledge of thermal management systems and establishing these products to function. The optimization of energy and production efficiencies will improve the effectiveness of its products.

Another goal of Gentherm's operations is the R&D of new technologies in order to improve the effectiveness of its current TEDs, as well as to create entirely new products. These products have a high growth potential and have the opportunity to become a significant portion of its business in the future. Its R&D is just one of many factors attributable to Gentherm maintaining its position as a global leader and producer of ground-breaking thermal management technologies and obtaining contracts.

## Growth Catalysts

### New thermoelectric technology products add to top-line revenue growth

Gentherm produces a wide array of thermoelectric technologies. Most of its products are moderately new and have yet to gain substantial market penetration. Gentherm's new products include thermally controlled cup holders, consoles, armrests, heated steering wheels, and thermal battery management. Gentherm's heated steering wheel sales grew 13% year-over-year, making up 5% of total sales in 2015. Thermal battery management is a growth catalyst for Gentherm because as more cars become increasingly electrified, OEMs will be looking to increase the efficiency and lifespan of their vehicle batteries. Gentherm recently won a five-year contract worth \$25 million to supply an OEM with its battery management system, with Gentherm beating competitors in the deal due to its own TED technology. We see the continued momentum in Gentherm's new technology going forward.



# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS

STUDENT-MANAGED  
INVESTMENT FUND

## Growth Catalysts Continued

### Penetration into other industries increases diversification of Gentherm's customer base

Gentherm states that part of its strategy will be to look for other industries in which its thermoelectric technology can have additional benefits to help drive top-line growth. Gentherm has recently entered into a deal with Mattress Firm, the largest mattress store in the U.S., to launch its new Climate Controlled Sleep Systems (CCSS) utilizing its TED technology. Gentherm's CCSS will be applied in the Atmos mattress, which is the best selling in its class.

## Business Model

Gentherm maintains its leadership in thermal management technologies for application in automotive and other markets by anticipating the needs of its customers and cost effectively integrating new demands into its existing array of products. Thus, the Gentherm's main focus is on R&D to constantly introduce new products and technologies and enhance current ones. Through both internal and external research and development programs, Gentherm is able to introduce new products by leveraging existing technologies. As an example, Gentherm is able to make heated car seats, a once expensive technology, now affordable to mid-priced vehicles with its proprietary TED technology. Another key point to Gentherm's business model is that it leverages its global product development and production capabilities to streamline the delivery of services to its customers and offer enhanced local support. Thus, its R&D is conducted in its global headquarters, while product development occurs in local facilities to target the demands and support its customers.

Gentherm markets its products primarily to automotive manufacturers and its first-tier suppliers, explaining the attractiveness of its products to consumers and economic benefits to these customers, such as high profitability. If the manufacturers are interested, they then direct Gentherm to work with their suppliers who then become Gentherm's direct customers by incorporating its products into their designs.

**INSPIRING  
EFFICIENCY**





# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS  
STUDENT-MANAGED  
INVESTMENT FUND

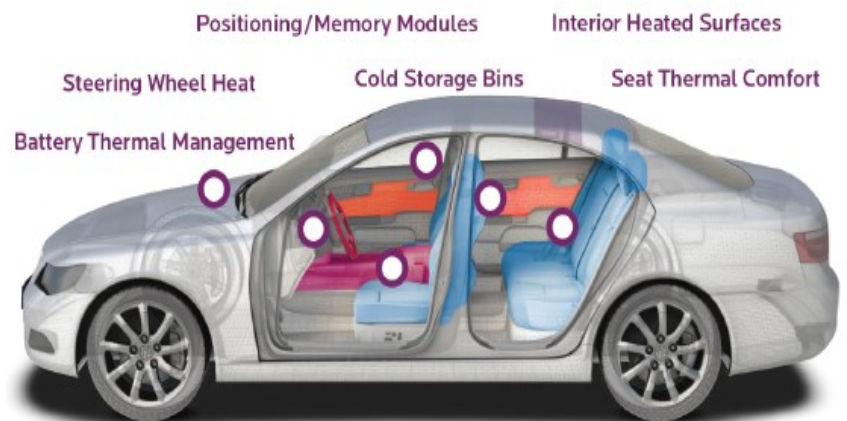
## Segments and Products

### Automotive

The automotive segment is comprised of automotive seat comfort systems, specialized automotive cable systems and other automotive and non-automotive thermal convenience products. The automotive seat comfort systems include seat heaters, variable temperature CCS designed to provide individualized thermal comfort to automobile passengers, and integrated electronic components, such as blowers and electronic control units. Specialized automotive cable system products include ready-made wire harnesses and related wiring products.

**Automotive products:** *Climate Control Seats, heated seats, heated and cooled cup holders, thermal storage bins, heated steering wheels, heated doors and armrests and Battery Thermal Management (BTM).*

**Non-automotive products:** *heated and cooled mattresses that use the company's patented Climate Control Sleep System and furniture.*



### Industrial

The Industrial segment represents Gentherm's remote power generation systems business for industrial applications and its advanced research and product development division, which is engaged in projects to improve the efficiency of thermal management technologies and to develop, market, and distribute products based on these new technologies.

**Remote Power Generation:** *Gentherm's generation systems use the company's TEG (thermoelectric generator) technologies to deliver reliable power for long-term unattended operation in geographically remote applications that are critical to its customers' operations, such as wellhead automation, valve automation and cathodic protection of pipelines.*

**Sponsored Research:** *Gentherm is consistently selected by government and non-government organizations to lead developments of new products and technologies based on the company's proprietary thermal management technologies. As an example, Gentherm has recently been selected by the U.S. Navy to lead the development of an energy efficient, portable patient warming system.*



# GENTHERM

## Consumers, Customers and End Users

Gentherm primarily supplies products from its seat comfort, thermal convenience, interior comfort and its automobile cable system technology businesses to automotive manufacturers and their first-tier suppliers. Gentherm also supplies heated and cooled mattresses to the largest mattress and specialty bed retailer in North America, Mattress Firm. In addition, the recently acquired GPT sells TEG systems to oil companies for natural gas pipeline protection and other remote power generation applications.

For 2015, most of Gentherm’s sales came from its largest three customers, Johnson Controls, Lear Corporation, and Bosch Automotive. Revenues from Johnson Controls and Lear Corporation represent sales from its seat comfort, thermal convenience and interior comfort products. Revenues from Bosch Automotive represent sales from its automobile cable system technology and are used primarily in the production of automotive oxygen sensors.

Costs and commitments are incurred well in advance of the receipt of orders and resulting revenues from customers. This is partially due to automotive manufacturers requiring the design, coordination and testing of proposed new components and sub-systems in advance. Below are Gentherm’s main customers and the revenues allocated to each car manufacturer in 2015:



Car manufacturer	% of Rev. 2015
General Motors	18%
Ford Motor Company	13
Hyundai	12
Volkswagen	10
Fiat Chrysler Automobiles	10
BMW	6
Renault/Nissan	6
Toyota Motor Corporation	4
Honda	4
Daimler	4
Jaguar/ Land Rover	3
Other	10
Total	100%

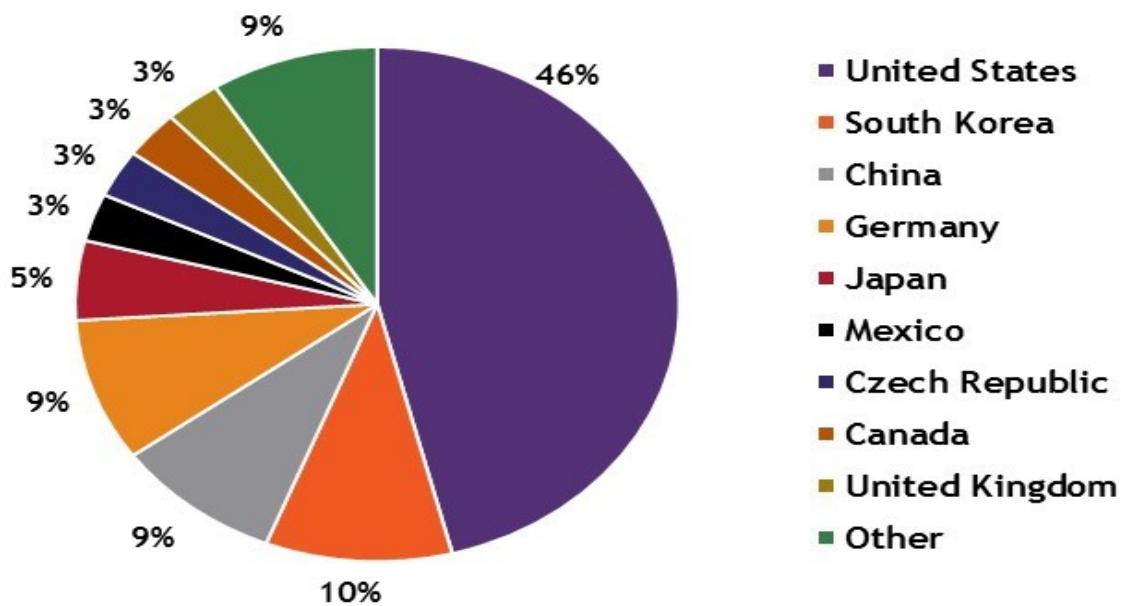


# GENTHERM

## Sales by Region

The revenue by country below are based on shipment destination, not necessarily where its products are sold. Gentherm has locations in twelve countries and has more than 10,000 employees. Its locations dealing in development, production, and customer service are within close proximity to customers. European manufacturing operations are located at its Hungarian, Macedonian and Ukrainian sites. In North America, its production sites are in Mexico and Canada. In Asia, it has production facilities in China, and Vietnam and an electronics production facility in China. Gentherm is reducing the number of components they outsource to contract manufacturers by continuing to grow its in-house manufacturing capabilities.

**Revenue by country**



## Areas of operation - Development, production & customer service

### EUROPE

Odeizhausen, Germany  
West Midlands, United Kingdom  
Vynohradiv, Ukraine  
Pillsszentivan, Hungary  
Ta'Xbiex, Malta

### ASIA

Langfang, China  
Shanghai, China  
Tokyo, Japan  
Nagoya, Japan  
Anyang, South Korea  
Hong Kong, Hong Kong  
Tinh Hà Nam, Vietnam

### AMERICA

Northville, USA  
Azusa, USA  
Del Rio, USA  
Windsor, Canada  
Acuna, Mexico  
Alberta, Canada  
Houston, USA





# GENTHERM

## Competition

Gentherm currently has no direct competitors since it acquired W.E.T. Automotive Systems AG, the only significant competition in the heating and cooled spaces in 2011. The acquisition of W.E.T. further increased Gentherm's patent portfolio and has created a formidable economic moat for the company. This puts Gentherm in a great position because if suppliers want the heating and cooling technology, they have to go through Gentherm. While GNTX has better margins in a similar space, we identified THRM as a better investment opportunity with gross margins, operating margins, free cash flow, and revenue growth growing twice as fast as GNTX. Also, GNTX's products are only placed in high-end luxury vehicles while THRM is penetrating the mid-priced vehicles.

Competitor Analysis				
	THRM	GNTX	CTS	MOD
Market Cap	1.52B	4.48B	526.10M	512.27M
ROIC	23%	17%	2%	6%
Qrtly Rev Growth	12%	16%	-7%	-10%
Gross Margin	32%	39%	33%	17%
Operating Margin	14%	30%	13%	4%
Profit Margin	11%	20%	1.80%	-1%
ROE	28%	19%	2%	-2%
ROA	16%	15%	1%	-1%
EPS	2.62	1.08	0.21	-0.26
P/E	15.94	14.4	76.5	-
P/S	1.73	2.85	1.35	0.36
PEG	0.61	2.85	1.32	1.11
Analyst Coverage	4	10	3	2
Sales Growth Est. 2016	10%	9%	2.80%	-8.50%
Sales Growth Est. 2017	10%	7%	5.40%	1.30%

## Competitive Moat

The biggest competitive advantage for Gentherm is the size of its patent portfolio that restricts competitors from creating a similar heating and cooling system. As of December 2015, Gentherm held 471 issued patents, of which 197 were U.S. and 274 were non U.S. 343 patents are directed to climate control products and thermoelectric technologies, and 100 patents directed at heating elements.

The barriers to entry in the auto parts industry are increasing as large-scale auto part production requires advanced manufacturing facilities, which have high-setup costs. Also, it requires large R&D expenditures for patent protection. Therefore, Gentherm is in an attractive position given its patent portfolio and large cash balance to continue to invest in R&D, expand operations, and grow its network of customers.

In 2011, Gentherm acquired its direct competitor, W.E.T. Automotive Systems AG, which allow Gentherm to decrease legal fees, increase its patent portfolio and enable Gentherm to manufacture its products using W.E.T.'s infrastructure.

### Some of Gentherm's proprietary technologies

**TED:** solid state circuit with the capability to produce hot and cold thermal conditions

**TEG:** converts thermal energy into electrical power. Gentherm is focusing on R&D to increase the efficiency of this process by improving design and adapting new materials, better suited for TEG commercialization.

**Carbotex:** Gentherm's carbon fiber woven lattice technology improves resistive heater technologies.

**Climate Control Seats:** uses one or more TEDs to generate heating or cooling.





# GENTHERM

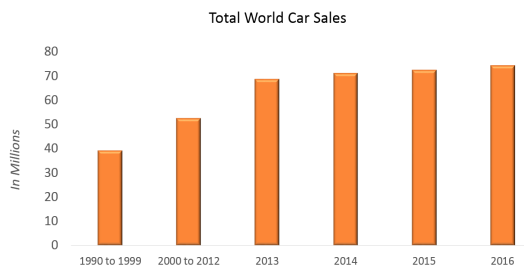
## Industry

Gentherm operates in and is affected mainly by the automotive HVAC industry (heating, ventilating and air conditioning). However, the company is also broadly affected by the automotive industry in general and by the thermal management industry.

The Automotive HVAC market in the Americas is forecasted to grow at a CAGR of 7.87% through 2019, and an increase in demand for automotive heating systems is among the major drivers of the automotive thermal system market. The demand

for luxury cars in the Asian Pacific and European regions, as well as increasing environmental concerns globally and pushes for decreases in vehicles emissions are also drivers of the automotive thermal market.

Climate controlled seats were before only available on luxury cars, and today they are in mid-priced vehicles,



appealing to a wider population. This is expected to continue drive growth in the market, since luxury car brands account for about 10% to 15% of the overall automobile market opposed to mid-priced vehicles which account for 50%. The still small penetration of climate controlled seats in mid-priced vehicles indicates that there is a lot of growth in such a niche automotive market.

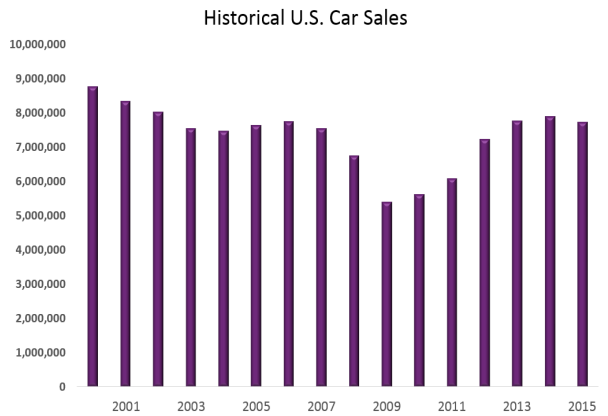
Gentherm also makes cable systems to connect various electricity uses throughout vehicles, which is also a growing market due to an increase in demand for “connected cars”. Revenue from connectivity in the automotive industry is expected to grow at a CAGR of 18.15% by 2020, with hardware being the fastest growing segment. Research indicates that by 2020 27.75% of cars will be “connected”, compared to a penetration rate of only 9.35% now.

There is an expected increase in demand for heated and ventilated chairs in the global office furnishing market, in which people are looking for more comfort while working. Furthermore, heating and cooling a workplace can account for 45% of a company’s annual electric usage. Temperature-controlled furniture will help to decrease such spending, since the need for general heating and cooling will be reduced.

## Auto Market

North America and Europe are expected to see production output levels rise again in 2016. In addition, improvements in a number of key emerging markets lead to an estimated 3.2% growth globally in 2016.

During 2015, a number of emerging markets has stalled as a result of volatility, however all major regions are expected to see output grow in 2016.



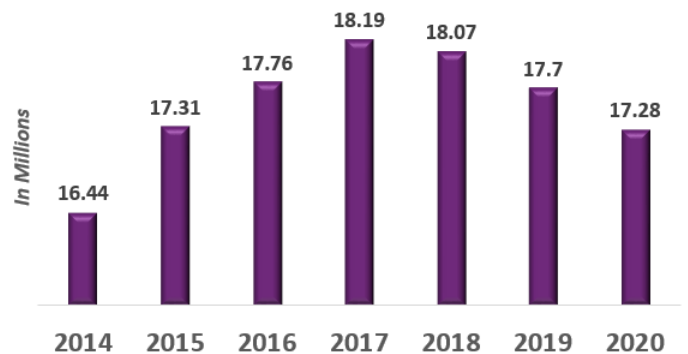


## Industry Continued

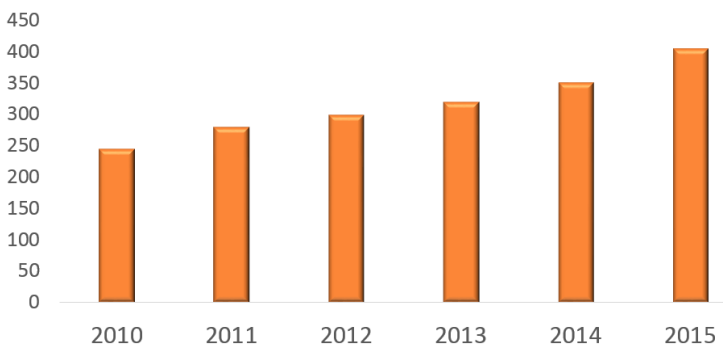
### U.S. auto market

The U.S. auto market has seen growth in a combination of low interest rates and low gas prices, allowing the market momentum to remain strong. Buying conditions are forecasted to remain strong, even with interest rates expected to increase slightly, allowing the market to continue to grow in our investment horizon. The strengthening U.S. economy and stronger employment are estimated to take the U.S. auto market sales to over 18 million units over our investment horizon.

### IHS U.S. Sales Forecast



### Global luxury car market size (in billion euros)



### Europe auto market

Western Europe is expected to see an auto market growth of 2.5%-3% due to the recovery last year being well above expectations. In Spain, payback is expected after eight consecutive scrapping incentives in recent years comes to an end. Despite the political and economic troubles in the EU, the fundamentals are solid for global demand. Forecasted auto sales in Europe will grow by 1.7%

and surpass 21 million units of production in 2016 after 3.3% growth in 2015. Western Europe is expected to grow by 2.4% with support from the ongoing recovery in domestic markets and exports to the buoyant U.S. market.

### Chinese auto market

Optimism for sales activity in the Chinese market has increased dramatically since the government announced measures to reduce the vehicle purchase tax on smaller cars. Despite a slowing economy, IHS Automotive expects light vehicle sales growth to increase 5%-6% in 2015, which will add more than 1.3 million units of additional sales.

### NAFTA region

The NAFTA region should demonstrate continual growth in 2016 as the domestic U.S. market reaches new peaks and key investments continue at a number of European and Asian manufacturers. Opportunities in other countries are enhanced by new, globally-focused products. The outlook is for growth to accelerate and production levels to exceed 18 million units.



# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS  
STUDENT-MANAGED  
INVESTMENT FUND

## Risks

### Economic and industry factors impacting the automotive industry

The Automotive segment represents a large majority of its revenues and the demand for automotive products is directly related to automotive vehicle production. The automotive industry is vulnerable to labor disputes, fuel prices, regulatory requirements, trade agreements, government initiatives and the availability and cost of credit. Disruptions in the global economy and volatility in the financial markets could cause lower levels of liquidity, increased borrowing rates, increased rates of default and bankruptcy, lower consumer and business spending, and lower consumer net worth.

Automotive sales are highly cyclical and depend on economic conditions, as well as on consumer spending and preferences. In particular, automotive manufacturers and suppliers in Europe have been suffering difficulties over the past few years from a weakened economy, tightening credit markets and volatility of the Euro. A slow-down in the developing Asian economy growth rate could also affect the demand for cars.

### Inability to market and sell additional products to other industries

Gentherm is investing capital and utilizing key employees to improve and develop existing products and research technologies to be used in a wide range of industries. As it expands into new markets, Gentherm will face new sources of competition from existing manufacturers with established customer bases and greater brand recognition. However, non-automotive applications currently represent a small portion of total revenues.

### Lower oil prices impacting the Global Power Technologies business

A large portion of GPT products are sold to companies in the oil and gas industry. The number of new pipelines and wells may be adversely affected by lower oil and gas commodity prices. Recently, the price of oil has experienced significant price declines. If the price of oil is fairly low, the number of new oil explorations and installations could be significantly reduced. Conversely, lower oil prices fuel demand for automobiles.

### Intense competition within the automotive industry

The automotive component industry is subject to intense competition. Business is awarded to the supplier that can offer the most favorable blend of cost, quality, timely delivery, innovation and service. In order to keep up with competition, the business will require extensive capital expenditures in product development, manufacturing and management information systems. Gentherm's products have earned a reputation for delivering highly reliable power as well as the ability to design and support custom solutions that integrate directly with an application's existing infrastructure.



# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS

STUDENT-MANAGED  
INVESTMENT FUND

## Management

### **Daniel R. Coker**

*President and Chief Executive Officer*



Dan Coker has more than 25 years of experience in marketing, new product development, operations, and general management in the automotive industry. Coker was appointed President and Chief Executive Officer in March of 2003. Prior to becoming President and CEO, Coker had served as VP of Sales and Marketing since March of 1996 when he joined Gentherm. From 1986 to 1995, he worked as VP and General Manager of North American Operations for ArvinMeritor, a \$7 billion automotive Tier 1 supplier.

### **Barry Steele**

*VP, Chief Financial Officer & Treasurer*



Barry Steele has more than 15 years of automotive industry and public accounting experience. Since 1997, Steele has served in a number of senior financial management positions, including CFO for Sterling Heights. Prior to his work with Advanced Accessory Systems, he was with PricewaterhouseCoopers LLP. Steele graduated summa cum laude from Hillsdale College earning a Bachelor of Science degree in Business Administration with a major in Accounting.

### **Darren A. Schumacher, Ph.D.**

*VP, Product Development*



Darren Schumacher has worked in product development and engineering for several companies including Bosch and SPX. Darren graduated with a Ph.D., MSE and BSE in Aerospace Engineering from the University of Michigan. He also has an MBA from Regis University in Colorado.

### **Ryan Gaul**

*VP, Business Development*



Ryan Gaul has spent his entire professional career with Gentherm, serving roles in Gentherm's locations in North America, Europe and Asia. He started his career in IT, and moved into roles of increasing responsibility within the Information Technology organization, finally serving as CIO from 2005-2009. In 2009, he took over as Managing Director of Operations for Gentherm's Asia business. He has been VP of Business Development since 2014.



# GENTHERM

## Valuation

### Free Cash Flow to Equity Model

	2016	2017	2018	2019	2020	Term Val
EPS	\$2.64	\$2.90	\$3.16	\$3.43	\$3.66	\$71.83
Deprc / Sh	\$1.25	\$1.39	\$1.54	\$1.69	\$1.83	
Cap Ex / Sh	-\$0.35	-\$0.40	-\$0.44	-\$0.42	-\$0.41	
NWC / Sh	-\$0.86	-\$1.18	-\$1.50	-\$1.90	-\$2.32	
FCFE	\$2.68	\$2.71	\$2.76	\$2.79	\$2.76	
PV of FCFE	\$2.38	\$2.41	\$2.19	\$1.97	\$46.98	

Intrinsic Value	\$55.94
Current Price	\$42.51
% to fair value	32%

<b>Shares Out</b>
36,475

Discount Rate	
Risk Free	2.05%
Beta	1.70
MRP	6.0%
<b>CAPM</b>	<b>12.25%</b>

### FCFE Model Sensitivity Analysis

		Discount rate						
		15.25%	14.25%	13.25%	12.25%	11.25%	10.25%	9.25%
Terminal Value	66.73	48.52	49.86	51.26	52.73	54.26	55.86	57.54
	68.43	49.48	50.86	52.30	53.80	55.37	57.01	58.73
	70.13	50.45	51.86	53.33	54.87	56.48	58.16	59.92
	71.83	51.41	52.85	54.36	55.94	57.59	59.31	61.12
	73.53	52.37	53.85	55.40	57.01	58.70	60.46	62.31
	75.23	53.34	54.85	56.43	58.08	59.81	61.61	63.50
	76.93	54.30	55.85	57.46	59.15	60.92	62.76	64.70
	Case:	Bear	Base	Bull				
% to fair value	25%	32%	38%					



# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS

## STUDENT-MANAGED INVESTMENT FUND

### Valuation Continued

EV/EBITDA Valuation	2016			2017			2018			2019			2020		
	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull	Bear	Base	Bull
Automotive	\$870,295	\$886,506	\$902,718	\$947,836	\$965,566	\$983,296	\$1,032,336	\$1,051,647	\$1,070,959	\$1,107,426	1,128,459	\$1,149,492	\$1,180,966	1,203,535	\$1,226,105
Growth	7%	9%	11%	7%	9%	11%	7%	9%	11%	5%	7%	9%	5%	7%	9%
Industrial	\$54,666	\$55,583	\$56,501	\$64,910	\$66,022	\$67,133	\$76,621	\$77,942	\$79,262	\$89,938	91,497	\$93,056	\$99,988	101,818	\$103,647
Growth	19%	21%	23%	17%	19%	21%	16%	18%	20%	15%	17%	19%	9%	11%	13%
<b>Total Revenues</b>	<b>\$924,961</b>	<b>\$942,090</b>	<b>\$959,218</b>	<b>\$1,012,746</b>	<b>\$1,031,588</b>	<b>\$1,050,430</b>	<b>\$1,108,957</b>	<b>\$1,129,589</b>	<b>\$1,150,221</b>	<b>\$1,197,364</b>	<b>\$1,219,956</b>	<b>\$1,242,548</b>	<b>\$1,280,954</b>	<b>\$1,305,353</b>	<b>\$1,329,752</b>
Operating Income	\$110,070	\$130,950	\$152,516	\$120,922	\$143,803	\$167,439	\$131,744	\$156,787	\$182,655	\$142,606	\$169,696	\$197,689	\$152,305	\$181,314	\$211,298
Margin	12%	14%	16%	12%	14%	16%	12%	14%	16%	12%	14%	16%	12%	14%	16%
Depreciation	\$45,577	\$45,577	\$45,577	\$50,619	\$50,619	\$50,619	\$56,209	\$56,209	\$56,209	\$61,549	\$61,549	\$61,549	\$66,759	\$66,759	\$66,759
<b>EBITDA</b>	<b>\$155,647</b>	<b>\$176,527</b>	<b>\$198,092</b>	<b>\$171,541</b>	<b>\$194,423</b>	<b>\$218,058</b>	<b>\$187,953</b>	<b>\$212,996</b>	<b>\$238,864</b>	<b>\$204,155</b>	<b>\$231,245</b>	<b>\$259,238</b>	<b>\$219,065</b>	<b>\$248,073</b>	<b>\$278,057</b>
EV/EBITDA Multiple	7	9	11	7.2	9.2	11.2	7.2	9.2	11.2	7.2	9.2	11.2	7.5	9.5	11.5
<b>Enterprise Value</b>	<b>\$1,089,529</b>	<b>\$1,588,744</b>	<b>\$2,179,016</b>	<b>\$1,235,097</b>	<b>\$1,788,689</b>	<b>\$2,442,248</b>	<b>\$1,353,261</b>	<b>\$1,959,561</b>	<b>\$2,675,276</b>	<b>\$1,469,914</b>	<b>\$2,127,450</b>	<b>\$2,903,466</b>	<b>\$1,642,985</b>	<b>\$2,356,691</b>	<b>\$3,197,654</b>
Less Debt	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832	\$92,832
Plus Cash	\$162,190	\$162,190	\$162,190	\$191,098	\$191,098	\$191,098	\$230,130	\$230,130	\$230,130	\$285,158	\$285,158	\$285,158	\$356,190	\$356,190	\$356,190
<b>Market Cap</b>	<b>\$1,158,887</b>	<b>\$1,658,102</b>	<b>\$2,248,374</b>	<b>\$1,333,363</b>	<b>\$1,886,955</b>	<b>\$2,540,514</b>	<b>\$1,490,559</b>	<b>\$2,096,859</b>	<b>\$2,812,573</b>	<b>\$1,662,240</b>	<b>\$2,319,776</b>	<b>\$3,095,792</b>	<b>\$1,906,343</b>	<b>\$2,620,049</b>	<b>\$3,461,012</b>
Shares Outstanding	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475	36,475
Equity Value Per Share	\$31.77	\$45.46	\$61.64	\$36.56	\$51.73	\$69.65	\$40.87	\$57.49	\$77.11	\$45.57	\$63.60	\$84.87	\$52.26	\$71.83	\$94.89

EV/EBITDA Multiple Price Target 2020 Analysis								
		EBITDA						
		233,073	238,073	243,073	248,073	253,073	258,073	263,073
EV/EBITDA Multiple	8.0	58.34	59.44	60.53	61.63	62.73	63.82	64.92
	8.5	61.53	62.70	63.87	65.03	66.20	67.36	68.53
	9.0	64.73	65.96	67.20	68.43	69.66	70.90	72.13
	9.5	67.92	69.23	70.53	71.83	73.13	74.44	75.74
	10.0	71.12	72.49	73.86	75.23	76.60	77.97	79.34
	10.5	74.31	75.75	77.19	78.63	80.07	81.51	82.95
	11.0	77.51	79.02	80.53	82.03	83.54	85.05	86.56
Expected return	Bear	Base	Bull					
Annualized return	9.59%	11.06%	12.50%					



# GENTHERM

## Valuation Continued

Price/Earnings Expansion Model					
	2016	2017	2018	2019	2020
EPS	\$2.64	\$2.90	\$3.16	\$3.43	\$3.66
P/E	16.00	16.80	17.64	18.52	19.45
<b>Price</b>	<b>\$42.24</b>	<b>\$48.71</b>	<b>\$55.75</b>	<b>\$63.46</b>	<b>\$71.28</b>

Price/Earnings Constant Model					
	2016	2017	2018	2019	2020
EPS	\$2.64	\$2.90	\$3.16	\$3.43	\$3.66
P/E	16.00	16.00	16.00	16.00	16.00
<b>Price</b>	<b>\$42.24</b>	<b>\$46.39</b>	<b>\$50.57</b>	<b>\$54.82</b>	<b>\$58.64</b>

Price/Earnings Contraction Model					
	2016	2017	2018	2019	2020
EPS	\$2.64	\$2.90	\$3.16	\$3.43	\$3.66
P/E	16.00	15.52	15.05	14.60	14.16
<b>Price</b>	<b>\$42.24</b>	<b>\$45.00</b>	<b>\$47.58</b>	<b>\$50.03</b>	<b>\$51.91</b>

P/E Expansion 2020 Price Target Sensitivity Analysis								
		EPS						
		2.91	3.16	3.41	3.66	3.91	4.16	4.41
P/E Multiple	18.70	54.50	59.18	63.85	68.53	73.20	77.88	82.55
	18.95	55.23	59.97	64.71	69.44	74.18	78.92	83.66
	19.20	55.96	60.76	65.56	70.36	75.16	79.96	84.76
	19.45	56.69	61.55	66.41	71.28	76.14	81.00	85.86
	19.70	57.42	62.34	67.27	72.19	77.12	82.04	86.97
	19.95	58.15	63.14	68.12	73.11	78.10	83.08	88.07
	20.20	58.88	63.93	68.98	74.03	79.08	84.12	89.17
	Expected return	Bear	Base	Bull				
Annualized return	11.44%	13.79%	16.06%					



# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS

STUDENT-MANAGED  
INVESTMENT FUND

## Valuation Continued

Income Statement	2012	2013	2014	2015	2016P	2017P	2018P	2019P	2020P
Automotive	554,979	662,082	787,065	810,567	886,506	965,566	1,051,647	1,128,459	1,203,535
Industrial	0	0	24,235	45,878	55,583	66,022	77,942	91,497	101,818
<b>Product revenues</b>	<b>\$554,979</b>	<b>\$662,082</b>	<b>\$811,300</b>	<b>\$856,445</b>	<b>\$942,090</b>	<b>\$1,031,588</b>	<b>\$1,129,589</b>	<b>\$1,219,956</b>	<b>\$1,305,353</b>
Cost of sales	413,052	487,320	569,618	580,066	637,795	696,322	762,472	821,030	878,502
<b>Gross margin</b>	<b>141,927</b>	<b>174,762</b>	<b>241,682</b>	<b>276,379</b>	<b>304,295</b>	<b>335,266</b>	<b>367,116</b>	<b>398,926</b>	<b>426,850</b>
<b>Operating costs and expenses:</b>									
Research and development expenses	43,189	52,197	66,411	69,211	78,193	85,622	94,885	102,476	110,955
Reimbursed research and development expenses	-2,239	-2,324	-8,885	-9,607	-11,305	-12,792	-14,459	-15,981	-18,144
Net research and development expenses	40,950	49,873	57,526	59,604	66,888	72,830	80,427	86,495	92,811
Acquisition transaction expenses		2,414	1,075	0	0	0	0	0	0
Selling, general and administrative expenses	64,321	72,091	84,647	95,456	106,456	118,633	129,903	142,735	152,726
<b>Total operating costs and expenses</b>	<b>105,271</b>	<b>124,378</b>	<b>143,248</b>	<b>155,060</b>	<b>173,344</b>	<b>191,463</b>	<b>210,329</b>	<b>229,230</b>	<b>245,537</b>
<b>Operating income</b>	<b>36,656</b>	<b>50,384</b>	<b>98,434</b>	<b>121,319</b>	<b>130,950</b>	<b>143,803</b>	<b>156,787</b>	<b>169,696</b>	<b>181,314</b>
Interest expense	-4,136	-3,543	-3,262	-2,610	-2,871	-3,144	-3,442	-3,442	-3,442
Debt retirement expense	0	0	-1,370	0	0	0	0	0	0
Revaluation of derivatives (loss) gain	-2,292	1,006	-518	-1,102	-1,212	-1,327	-1,453	-1,453	-1,453
Gain on settlement of lawsuit	0	0	0	9,949	0	0	0	0	0
Foreign currency (loss) gain	2,201	-2,228	-218	1,121	1,233	1,350	1,479	1,479	1,479
Gain (loss) from equity investment	-82	436	785	0	0	0	0	0	0
Other income	325	175	370	261	287	314	344	344	344
<b>Earnings before income tax</b>	<b>32,672</b>	<b>46,230</b>	<b>94,221</b>	<b>128,938</b>	<b>128,387</b>	<b>140,997</b>	<b>153,714</b>	<b>166,623</b>	<b>178,240</b>
Income tax expense	8,351	11,097	24,102	33,545	32,097	35,249	38,428	41,656	44,560
<b>Net income</b>	<b>24,321</b>	<b>35,133</b>	<b>70,119</b>	<b>95,393</b>	<b>96,291</b>	<b>105,748</b>	<b>115,285</b>	<b>124,967</b>	<b>133,680</b>
Basic earnings per share	\$0.86	\$0.96	\$1.98	\$2.65	\$2.67	\$2.93	\$3.20	\$3.47	\$3.71
Diluted earnings per share	\$0.84	\$0.94	\$1.95	\$2.62	\$2.64	\$2.90	\$3.16	\$3.43	\$3.66
Weighted average number of shares basic	28,353	33,653	35,412	36,031	36,031	36,031	36,031	36,031	36,031
Weighted average number of shares diluted	28,862	34,124	36,049	36,475	36,475	36,475	36,475	36,475	36,475

Common Size Income Statement	2012	2013	2014	2015	2016P	2017P	2018P	2019P	2020P
Automotive	100.0%	100.0%	97.0%	94.6%	94.1%	93.6%	93.1%	92.5%	92.2%
Industrial	0.0%	0.0%	3.0%	5.4%	5.9%	6.4%	6.9%	7.5%	7.8%
<b>Product revenues</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Cost of sales	74.4%	73.6%	70.2%	68.0%	67.7%	67.5%	67.5%	67.3%	67.3%
<b>Gross margin</b>	<b>25.6%</b>	<b>26.4%</b>	<b>29.8%</b>	<b>32.3%</b>	<b>32.3%</b>	<b>32.5%</b>	<b>32.5%</b>	<b>32.7%</b>	<b>32.7%</b>
Research and development expenses	7.8%	7.9%	8.2%	8.1%	8.3%	8.3%	8.4%	8.4%	8.5%
Reimbursed research and development expenses	-0.4%	-0.4%	-1.1%	-1.1%	-1.2%	-1.2%	-1.3%	-1.3%	-1.4%
Net research and development expenses	7.4%	7.5%	7.1%	7.0%	7.1%	7.1%	7.1%	7.1%	7.1%
Acquisition transaction expenses	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Selling, general and administrative expenses	11.6%	10.9%	10.4%	11.1%	11.3%	11.5%	11.5%	11.7%	11.7%
<b>Total operating costs and expenses</b>	<b>19.0%</b>	<b>18.8%</b>	<b>17.7%</b>	<b>18.1%</b>	<b>18.4%</b>	<b>18.6%</b>	<b>18.6%</b>	<b>18.8%</b>	<b>18.8%</b>
<b>Operating income</b>	<b>6.6%</b>	<b>7.6%</b>	<b>12.1%</b>	<b>14.2%</b>	<b>13.9%</b>	<b>13.9%</b>	<b>13.9%</b>	<b>13.9%</b>	<b>13.9%</b>
Interest expense	-0.7%	-0.5%	-0.4%	-0.3%	-0.3%	-0.3%	-0.3%	-0.3%	-0.3%
Debt retirement expense	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revaluation of derivatives (loss) gain	-0.4%	0.2%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Foreign currency (loss) gain	0.4%	-0.3%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Gain (loss) from equity investment	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other income	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Earnings before income tax</b>	<b>5.9%</b>	<b>7.0%</b>	<b>11.6%</b>	<b>15.1%</b>	<b>13.6%</b>	<b>13.7%</b>	<b>13.6%</b>	<b>13.7%</b>	<b>13.7%</b>
Income tax expense	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
<b>Net income</b>	<b>4.4%</b>	<b>5.3%</b>	<b>8.6%</b>	<b>11.1%</b>	<b>10.2%</b>	<b>10.3%</b>	<b>10.2%</b>	<b>11.1%</b>	<b>11.8%</b>





# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS

STUDENT-MANAGED  
INVESTMENT FUND

## Valuation Continued

Consolidated Balance Sheets	2013	2014	2015	2016P	2017P	2018P	2019P	2020P
<b>Current Assets:</b>								
Excess cash				51,149	98,318	141,833	181,385	214,604
Cash & cash equivalents	\$54,885	\$85,700	\$144,479	162,190	191,098	230,130	285,158	356,190
Accounts receivable	118,283	136,183	142,610	156,871	171,774	188,092	203,140	217,359
Inventory	64,217	77,643	84,183	92,561	101,055	110,655	119,153	127,494
Derivative financial instruments	67	145	0	0	0	0	0	0
Deferred income tax assets	10,616	6,247	6,716	7,388	8,089	8,858	9,567	10,236
Prepaid expenses and other assets	21,864	29,107	42,620	46,882	51,336	56,213	60,710	64,959
<b>Total current assets</b>	<b>269,932</b>	<b>335,025</b>	<b>420,608</b>	<b>517,041</b>	<b>621,670</b>	<b>735,781</b>	<b>859,112</b>	<b>990,843</b>
Property and equipment, net	79,234	91,727	119,157	131,893	146,485	162,661	178,114	193,192
Goodwill	25,809	30,398	27,765	27,765	27,765	27,765	27,765	27,765
Other intangible assets	83,431	68,129	48,461	48,461	48,461	48,461	48,461	48,461
Deferred financing costs	1,072	406	310	310	310	310	310	310
Deferred income tax assets	7,103	18,843	22,094	24,303	26,612	29,140	31,472	33,675
Derivative financial instruments	1,969	1,345	0	0	0	0	0	0
Other non-current assets	13,373	8,404	8,403	9,044	9,697	10,166	10,614	10,965
<b>Total assets</b>	<b>481,923</b>	<b>554,277</b>	<b>646,798</b>	<b>758,817</b>	<b>881,001</b>	<b>1,014,284</b>	<b>1,155,847</b>	<b>1,305,211</b>
<b>Current Liabilities:</b>								
Accounts payable	61,662	71,434	77,115	84,827	92,885	101,709	109,846	117,535
Accrued liabilities	66,783	68,387	60,823	66,905	73,261	80,221	86,639	92,704
Current maturities of long-term debt	21,439	5,306	4,909	4,909	4,909	4,909	4,909	4,909
Derivative financial instruments	2,552	2,466	725	725	725	725	725	725
Deferred income tax liabilities	710		211	211	211	211	211	211
<b>Total current liabilities</b>	<b>153,146</b>	<b>147,593</b>	<b>143,783</b>	<b>157,577</b>	<b>171,991</b>	<b>187,775</b>	<b>202,330</b>	<b>216,084</b>
Pension benefit obligation	6,868	6,706	6,545	6,545	6,545	6,545	6,545	6,545
Other Liabilities	1,601	2,788	5,026	5,529	6,054	6,629	7,159	7,660
Long-term debt, less current maturities	60,881	85,469	92,832	92,832	92,832	92,832	92,832	92,832
Derivative financial instruments	9,358	6,698	0	0	0	0	0	0
Deferred tax liabilities	17,975	10,804	14,321	15,753	17,250	18,888	20,399	21,827
<b>Total liabilities</b>	<b>249,829</b>	<b>260,058</b>	<b>262,507</b>	<b>278,236</b>	<b>294,672</b>	<b>312,670</b>	<b>329,265</b>	<b>344,948</b>
<b>Common Stock:</b>								
No par value	232,067	243,255	256,919	256,919	256,919	256,919	256,919	256,919
Paid-in capital	-9,582	-8,224	-1,282	-1,282	-1,282	-1,282	-1,282	-1,282
Accumulated other comprehensive income	-5,203	-25,743	-51,670	-51,670	-51,670	-51,670	-51,670	-51,670
Accumulated earnings	14,812	84,931	180,324	276,615	382,362	497,648	622,615	756,295
<b>Total shareholders equity</b>	<b>232,094</b>	<b>294,219</b>	<b>384,291</b>	<b>480,582</b>	<b>586,329</b>	<b>701,615</b>	<b>826,582</b>	<b>960,262</b>
<b>Total liabilities and shareholders equity</b>	<b>481,923</b>	<b>554,277</b>	<b>646,798</b>	<b>758,817</b>	<b>881,001</b>	<b>1,014,284</b>	<b>1,155,847</b>	<b>1,305,210</b>



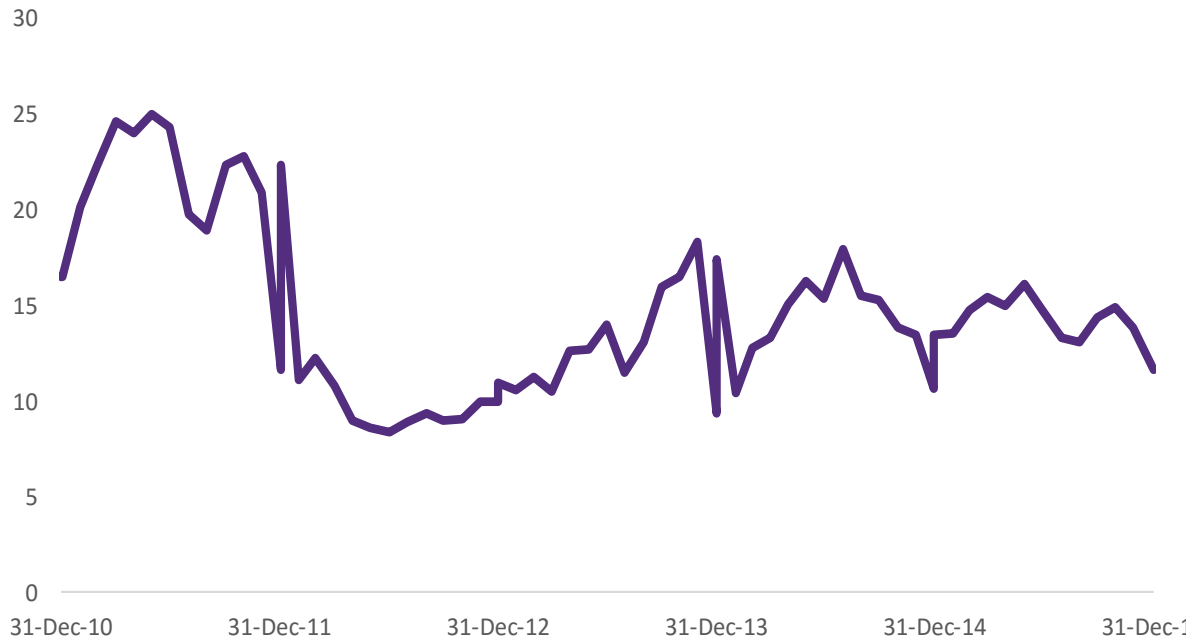
# GENTHERM

UNIVERSITY OF SOUTH FLORIDA  
MUMA COLLEGE OF BUSINESS

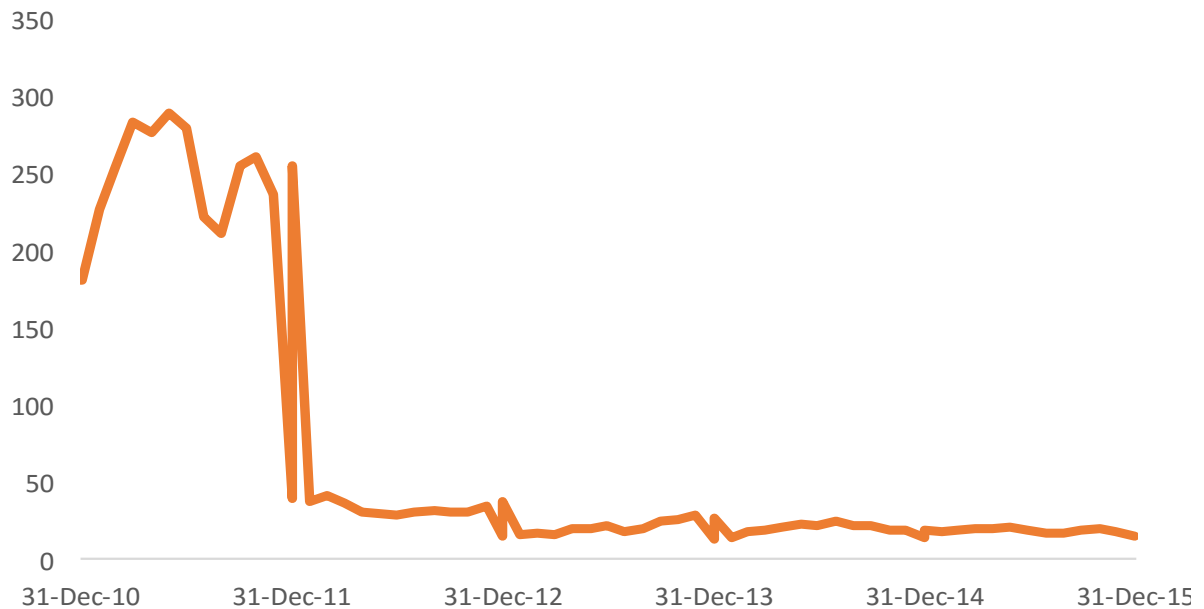
STUDENT-MANAGED  
INVESTMENT FUND

Valuation Continued

### 5-Year Historical EV/EBITDA



### Five-Year Historical P/E



## Valuation Continued

### FCFE

We used a free cash flow to equity model to value Gentherm today, deriving a terminal value of \$71.83 from our EV/EBITDA model. The model implies the stock is roughly 32% undervalued in our base case scenario. The model has assumptions based on our expectations of the firm, its competitors, and the industry landscape:

- Bottom line growth is driven by its high-margin automotive CCS products
- Healthy cash flows allow Gentherm to continue to heavily invest in R&D and increase its ROIC
- Using a 60-month regression, we arrive at a beta of 1.8. In the long term, all stocks eventually merge toward a beta of 1, therefore we decrease the beta slightly to 1.7 to calculate an appropriate discount rate

We conduct a scenario analysis on our free cash flow to equity model to account for changes in discount rates and terminal values. Even in our most conservative scenario, Gentherm is 25% undervalued.

### EV/EBITDA

We use multiple valuation methods to arrive at a target price for 2020. The first model we use is an EV/EBITDA model. We have the EV/EBITDA multiple expanding over our five year investment horizon. At 9.5 times EBITDA in 2020, Gentherm will have a market cap of roughly \$2.6 billion and an equity value per share of \$71.83. We conduct an EV/EBITDA scenario analysis on the multiple to account for different scenarios that Gentherm could face in 2020.

### P/E model

Additionally, we used a P/E model. Using three different P/E multiple models, we gauge the probable returns for Gentherm over a five year investment horizon. Gentherm's P/E is currently approximately 16 times.

- In the most optimistic scenario with expectations for a higher multiple, we expect a 2020 price target of \$71.28
- Assuming a constant multiple and base case earnings growth, we expect a price target of \$58.64
- Our analysis suggests that Gentherm offers a favorable risk-reward investment, with a conservative price target of \$51.91

We conduct a scenario analysis on our P/E expansion model to account for changes in EPS as well as the multiple.