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Ford Motor Company's Financial Analysis

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Ford Motor Company

F / NYSE

Investment Recommendation: Hold

PRICE: 9.41 USD S&P 500: 2,760.17 DJIA: 25,538.46 RUSSELL 2000: 1,533.27

- Ford distributed more than USD 15 billion to the shareholders since 2012
- F-Series franchise marked its 41st year as America's best-selling pickup
- In 2017, Ford sold approximately 6,607,000 vehicles throughout the world

Valuation	2017 A	2018 E	2019 E
EPS	1.90	1.60	1.66
P/E	4.90	6.16	6.51
CFPS	4.32	3.95	4.29
P/CFPS	2.07	2.50	2.52

Market Capitalization	Stock Data		
Equity Market Cap (USD):	37.43B	52-Week Range (USD):	8.17 – 13.48
Enterprise Value (USD):	166.27B	12-Month Stock Performance:	- 22.23%
Shares Outstanding (M):	3973.35	Dividend Yield:	6.57%
Estimated Float (M):	3.9B	Book Value Per Share (USD):	8.79
6-mo Avg. Daily Volume (M):	1.136	Beta:	1.2

Company Quick View:

Location: *One American Road
Dearborn, MI 48126
United States*

Industry: *Motor vehicles & car bodies SIC 3711 /Automobile Manufacturing NAICS 336111*

Description: *Ford Motor Company is an American automobile company with its base in Dearborn, Michigan, suburb of Detroit. Ford' core operations include the activities of designing along with manufacturing, financing, marketing as well as servicing a wide range of cars, trucks, SUVs, and even luxury vehicles. The company manufactures and distributes a wide range of vehicles marketed under Ford and Lincoln brands across six continents.*

Key Products & Services: *Products: Automobiles, Luxury Vehicles, Commercial Vehicles, and Automotive Parts; Services: Automotive Finance, Vehicle leasing, and Vehicle Service*

Website: *http://www.ford.com*

Analyst: *Azbayar Enkhbayar*



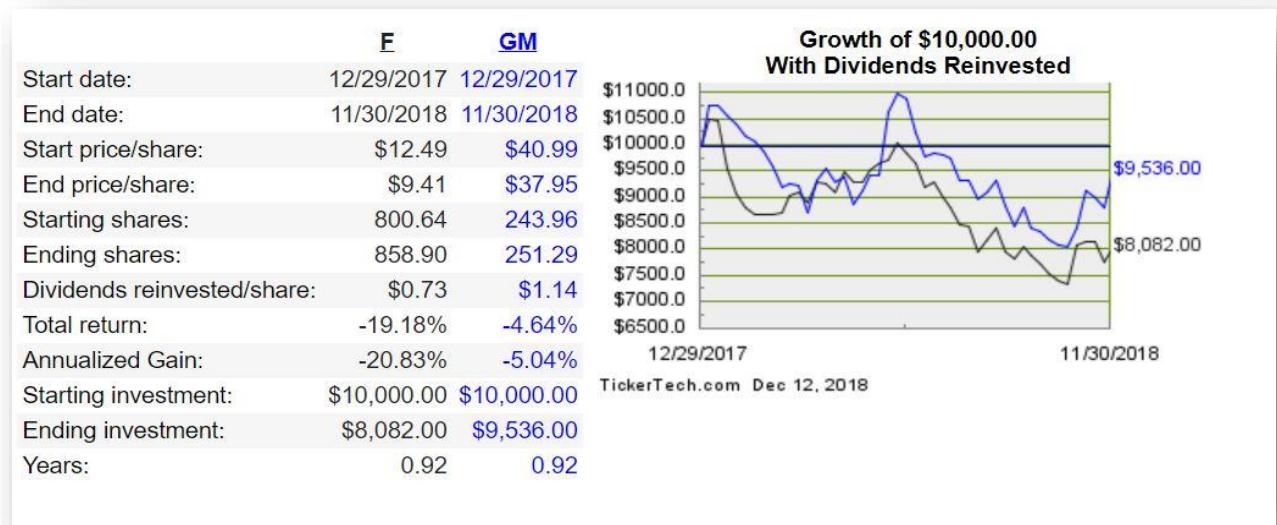
STOCK PRICE PERFORMANCE

Figure 1: Ford's Five-year Stock Price Performance



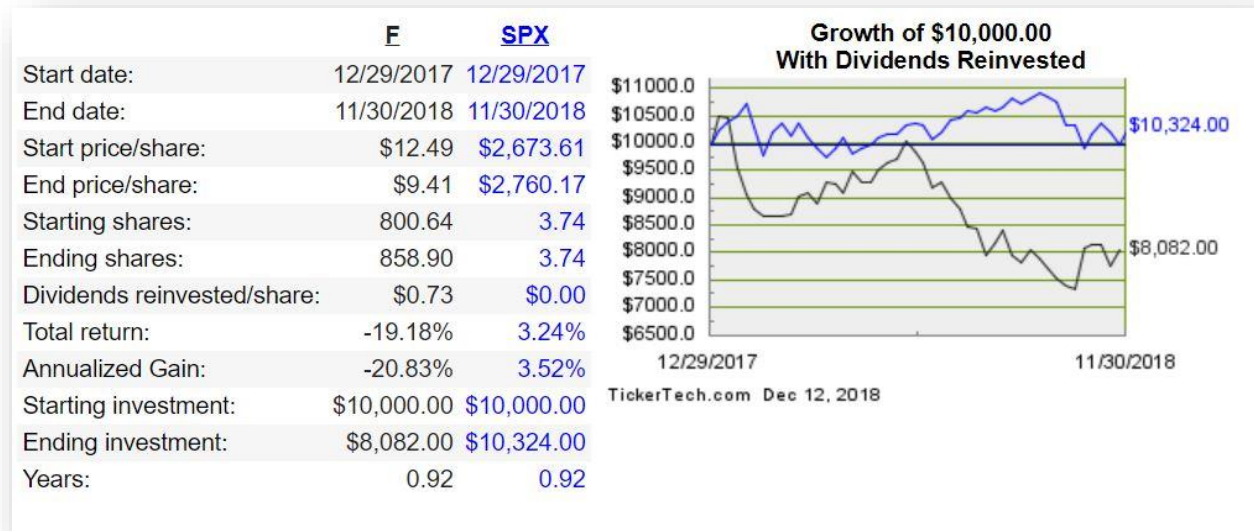
Source: Yahoo Finance November 2018

Figure 2: Ford Total Return Chart vs GM



Source: <https://www.ytdreturn.com/ford/>

Figure 3: Ford Total Return Chart vs S&P 500



Source: <https://www.ytdreturn.com/ford/>

Ford stock significantly underperformed the S&P 500 over the past year: total return -19.18 percent of Ford vs. 3.24 percent of the Index. On the other hand, General Motors (benchmark) exhibited a total return of -4.64 percent over the past year. Ford's stock price dropped from USD 12.49 to USD 9.41. Part of this price behavior might be due to company-specific events such as the 2017 CEO change, restructured cost plan under the new CEO, and complete change of company's production structure in the North American region, reducing passenger car lines to only Mustang and Focus.

INVESTMENT SUMMARY

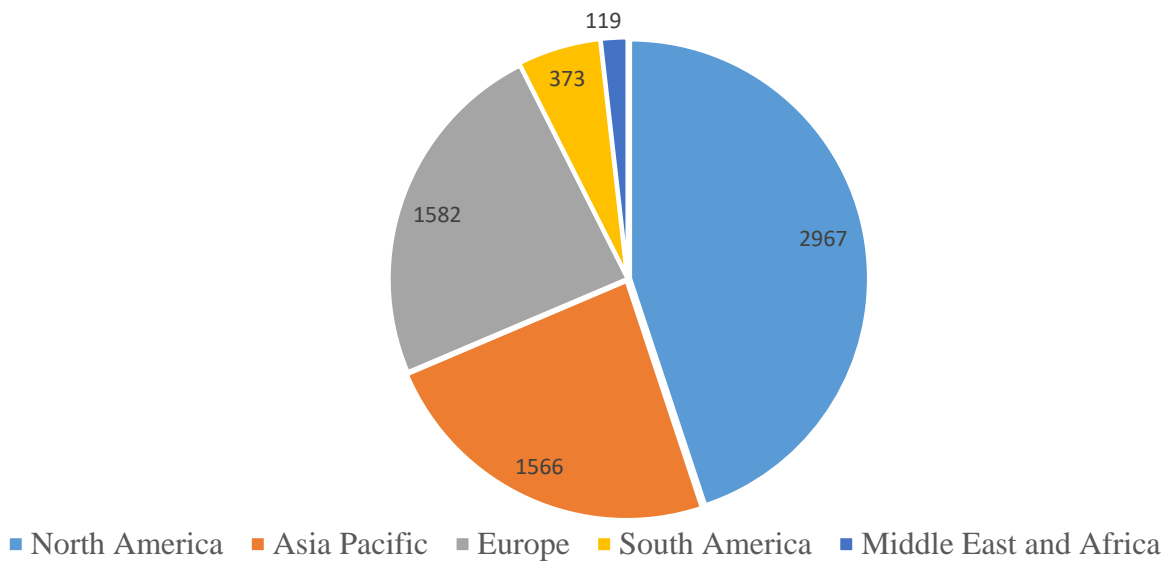
The goals and objectives of this financial report are to value the common stock of Ford Motor Company and provide a recommendation to buy, sell, or hold. Quantitative and qualitative data about Ford Motor Company, its competitors, and the markets it operates in were analyzed for this report. A discounted cash flow model was used to forecast future free cash flows. The model estimated Ford's common stock to be fairly valued at USD 9.81 per share. This is higher than the current price of \$9.41 and a hold recommendation is made.

The company generated USD 156 billion in revenues for the fiscal year ended December 2017, which accounts for an increase of 3.39 percent over the previous fiscal year. In the Letter from the Executive Chairman, William Clay Ford said that Ford has earned its eighth consecutive year of solid earnings and positive operating cash flow. Ford also distributed more than USD 15 billion to the shareholders since 2012.

COMPANY DESCRIPTION

Ford Motor Company (Ford and ‘the company’) is an American automobile company with its base in Dearborn, Michigan, suburb of Detroit. Henry Ford started the Ford Motor Company on the 16th of June, 1903 and its core operations include the activities of designing along with manufacturing, financing, marketing as well as servicing a wide range of cars, trucks, SUVs, and even luxury vehicles. The company manufactures and distributes a wide range of vehicles marketed under Ford and Lincoln brands across six continents. Ford primarily operates five geographic segments: North America, Europe, South America, Middle East and Africa, and Asia Pacific. In 2017, Ford sold approximately 6,607,000 vehicles (wholesale) throughout the world.

Figure 4. Wholesales by region in 2017 (in thousands of units)



Source: Ford's 2017 Annual Report

The company's operating activity consists of four operating segments: Automotive, Financial Services, Ford Smart Mobility LLC, and Central Treasury Operations. The Automotive segment deals in the process of selling, developing, manufacturing, designing, distribution of Ford and Lincoln brand vehicles, as well as their accessories and service parts. In 2017, the Automotive segment reported revenues of approximately USD 145.65 billion, which accounted for 92.9 percent of the company's total revenue.

The financial segment comprises wholly owned subsidiary Ford Motor Credit Company, LLC. The credit segment offers varieties of credit along with financial products to automotive dealers and through these dealers to other retailers. Through this arrangement, the company draws its revenue from retail installment payments as well as lease contract payments. In 2017, the Financial Services segment reported revenues of approximately USD 11.11 billion, which accounted for 7.1 percent of the company's total revenue.

History

Henry Ford started the Ford Motor Company with 12 investors in 1903. The model A was Ford's first car. Five years later, in 1908, the company launched its unique innovation, Model T. Model T was one of the best-selling vehicles of all time and the most famous car in the world. In 1913, Ford introduced the world's first moving assembly line to auto production. Ford acquired Lincoln Motor Company in 1922, branching out into luxury cars. It also stopped production of the Model T and redesigned the Model A in 1927. In 1956, Ford went public with the largest stock issue of all time: 10.2 million shares. The company established Ford Europe in 1967. Throughout the 1960s, 1970s, and 1980s, Ford continued to expand in Europe and Asia. Ford acquired Aston Martin Lagonda and Hertz Rent-a-Car in 1987, the same year Henry Ford II died. Ford acquired several European brands including Jaguar, Land Rover, and Volvo from 1987 to 1999. These acquisitions proved to be highly non-profitable for Ford Motors, as it struggled to develop these brands in return for the huge investment. Besides, its failure in building the European brands, Ford had to sell two of its well-performing brands, Jaguar and Land Rover, to Tata in the year 2008. In the same year, Volvo was sold for USD 1.8 billion to Geely a (Chinese carmaker).

Strategy

Ford Motor Company has a goal in its future to provide the most trusted vehicles that will improve people's everyday lives by reducing congestion, avoiding accidents and reducing emissions. To achieve this goal, Ford is investing heavily in the technology to transform the company for the future. Ford is partnering with major delivery companies such as Walmart, Domino's, Lyft and Postmates to develop pilot projects using self-driving vehicles. Ford also recently announced a joint venture with Zotye, the Chinese automobile manufacturer to develop and manufacture all-electric vehicles. This will expand the electric vehicle lineup by 40 vehicles globally: these will include 16 full battery vehicles by 2022. Due to this investment plan, Ford will increase its planned investments in electrification by USD 11 billion by 2022. According to the company's quarterly earnings call, CEO Jim Hackett said that Ford is reducing the passenger car lineup to just two models to save money and make the company more competitive in the industry. Ford will only continue their production of the Mustang sports car and Focus Active crossover for the U.S market.

Product

Ford Motor Company sells a wide range of automobiles under the Ford brand worldwide, and an additional range of luxury automobiles under the Lincoln brand in the United States. Ford's main product lines are as follows: The Family of Ford Cars, The Family of Crossovers and SUVs, The Family of Trucks and Vans, and Lincoln luxury vehicles.

Table 1. All models in each product lines

The Family of Ford Cars	The Family of Crossovers and SUVs	The Family of Trucks and Vans	Lincoln luxury vehicles
FIESTA	ECOSPORT	F-150	MKC
FOCUS	ESCAPE	SUPER DUTY	Nautilus
FUSION	EDGE	F-150 RAPTOR	MKT
C-MAX Hybrid	EXPLORER	TRANSIT	Navigator
MUSTANG	EXPEDITION	TRANSIT CONNECT	Continental
TAURUS	FLEX		MKX

Source: Ford's 2017 Annual Report

Ford sells all of their vehicles, parts, and accessories through distributors and dealerships as listed in Table 2.

Table 2. Number of Dealerships by brands at December 31, 2017.

Brand	Number of Dealerships
Ford	10,345
Ford-Lincoln (combined)	820
Lincoln	263
Total	11,428

Source: Ford's 2017 Annual Report

North American consumers prefer crossovers, trucks, and SUVs to small cars and sedans. With Ford being the bestselling brand in the U.S. for 8 straight years and 41 years for its F-Series pickup truck (Ford's Annual 10K), Ford estimates that SUVs could make up half of the entire U.S. industry's retail markets by 2020. Ford is shifting its USD 7 billion investment to SUVs instead of small cars.

Table 3. U.S. Wholesales by Type

Type	U.S. Wholesales
Trucks	1,114,304
SUVs	869,725
Cars	581,754
Total Vehicles	2,565,783

Source: Ford's 2017 Annual Report

INDUSTRY ANALYSIS

Industry rivalry or competition has been the most crucial concern for Ford Motor Company as per the Five Forces analysis. The company has been able to maintain its leading position in the global automobile industry by modifying and improving its business strategies so that it is able to resolve the identified issues of Five Forces analysis. Based on the identified external situation and issues in the global automobile industry, Ford needs to establish its policies and approaches. Thus, competition or competitive rivalry is the most decisive external force for a company within the automobile industry. The following sections indicate the intensity of Porter's Five Forces analysis in the global automobile industry.

Competitive Rivalry or Competition with Ford (High)

This is mostly to gain the leading position in various aspects such as market share, sales volume, revenue collection, profit earning, and enhanced brand image among others. Ford experiences highly intense competition from its rival companies in the global automobile industry. In this industry, the companies compete extensively with one another rather than opting for exit. Moreover, with the gradual course of time, the number of companies in the industry is increasing, which, in turn, enhanced the competitive rivalry. The competitors of Ford are highly aggressive in their approach. The aggressiveness of the competitors is evident from their rapid technological innovation and marketing practices among others. The degree of competition is high, as all the companies are highly competitive. Technological innovation is the most crucial aspect, which contributes to the increased competitiveness in the industry. Many of the companies implement effective strategies so that their customers do not switch to other competitors. In the context of Ford, a competitor such as General Motors creates a significant competitive threat to the organization. Thus, Ford needs to address all the possible threats from the competitors. Ford cannot ignore any of its competitors in the industry. It aims to sustain and ensure growth in the respective market. A decision to ignore the competitive business environment can result in loss of market share.

Bargaining Power of Ford's Suppliers (Weak)

The bargaining power of suppliers towards Ford is weak. This is owing to the reason that Ford conducts vertical backward integration, which, in turn, reduces the dependency on the external suppliers. Ford manufactures some of the parts for its automobiles. In order to reduce the suppliers' power, the company needs to reflect more self-dependency. Although the suppliers' power is low, the company should ensure that it does not increase in the future. The reason behind this is that high suppliers' power increases the cost of the company, thus reducing the profitability and competitive advantages.

Ford's Threat of Substitutes or Substitution (High)

This external force implies the extent to which substitutes of a product influence the company and the respective industry. Ford experiences a high level of substitution threat in the industry. The reason is the availability of various forms of public transportation in many urban areas. However, this can be mitigated by delivering quality performance. Ford has been highly focused in conducting innovation, which is particularly apparent after the appointment of Mulally as the

CEO. The integration of technology has improved safety measures relating to the automobiles. Besides, not all the substitute products of the company are of good quality. Thus, the company addresses the issue by offering quality products to its customers in terms of quality, safety, and style. The company has also been effective in engaging the customers. This has reduced the threat of substitution to a certain level.

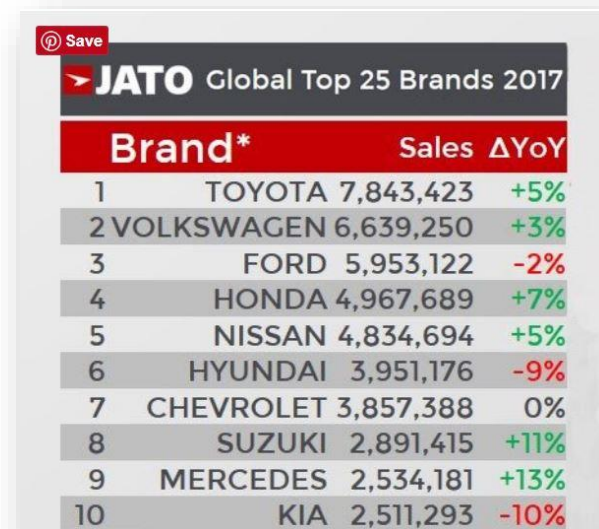
Ford's Threat of New Entrants or New Entry (Weak)

In the automobile industry, the barriers to new entry are extremely high due to the need for greater investment and technical knowledge. Thus, comparatively, a smaller number of companies are associated with the automobile industry. The investment required for brand development and marketing is extremely high. A new entrant company will make large investment in its supply chain network. This is all true in terms of customer service and this research and development. Additionally, most of entrepreneurs are unable to enter this industry. Therefore, this leads to a reduction in the overall threat towards Ford. Besides, brand image is an essential factor in the industry for gaining higher sales as well as profits. Ford has a good brand image and presence throughout the world, reducing the threat of new entrants and ultimately competitors.

PEER ANALYSIS

Ford faces great competition from existing companies around the world, which include General Motors, Tesla, Toyota Corporation, Volkswagen Group, and Daimler AG among others. These companies have been penetrating the market using their ability to make low-priced, fuel efficient products. Ford is able to satisfy customers with the help of its experts focused on manufacturing quality products. In terms of the global market share of automobiles, Ford Motor Company is ranked 3rd with car sales of approximately 5,953,000 in 2017 (Global car sales analysis 2017).

Figure 5. Show Global Top 25 Brands 2017



JATO Global Top 25 Brands 2017			
	Brand*	Sales	ΔYoY
1	TOYOTA	7,843,423	+5%
2	VOLKSWAGEN	6,639,250	+3%
3	FORD	5,953,122	-2%
4	HONDA	4,967,689	+7%
5	NISSAN	4,834,694	+5%
6	HYUNDAI	3,951,176	-9%
7	CHEVROLET	3,857,388	0%
8	SUZUKI	2,891,415	+11%
9	MERCEDES	2,534,181	+13%
10	KIA	2,511,293	-10%

Source: <http://carsalesbase.com/global-car-sales-2017/>

Table 4. Peer Analysis

Company	Ticker Symbol	Market Cap	PE ratio	P/ BV	EV/ EBITDA	Debt/Assets	ROA	ROE
Ford Motor Co.	F	37.43B	6.07	1.02	12.06	0.86	3.09%	23.73%
General Motors	GM	53.56B	72.70	1.40	6.66	0.84	-2.05%	-9.80%
Tesla	TSLA	60.19B	N/A	13.34	110.17	0.85	-7.64%	-43.63%
Toyota	TM	176.22B	7.43	0.98	7.90	0.62	5.04%	13.40%
Volkswagen Group	VWAPY	84.33B	5.57	0.64	11.02	0.74	2.73%	11.27%
Daimler AG	DMLRY	61.12B	5.72	0.81	11.00	0.75	4.22%	17.26%

Source: Mergent Online November 30, 2018

General Motors (GM)

General Motors (GM) was formed in 1908 and headquartered in Detroit Michigan. It is the one of the biggest automobile manufacturer in the world. GM had revenue of USD 146 billion with net income of USD 819 million as of 09/30/2018. The company has around four hundred facilities with over 180,000 employees around the world. GM recently announced that the company is closing five facilities in North America where it manufactures sedans by the end of 2019, and will be focusing on creating self-driving, electric cars in the future.

Tesla Inc

Tesla Inc., the electric carmaker, was established in 2003, in Palo Alto, California. The company has one manufacturing location in Fremont, California where it makes Model S, Model X, and Model 3 electric vehicles. Tesla Inc had revenue of USD 17.524 billion with a negative USD 1,791 million net income as of September 2018. The company started advertising the Model 3 overseas and foresees China as a key market for electric car sales.

Toyota Motor Corporation (Toyota)

Toyota Motor Corporation was founded in 1937, at Toyota-shi Japan. Toyota has about 370,000 employees in over 190 countries. In addition to, cars, SUVs, and trucks, the company manufactures parts and accessories as well. Toyota Motor Corporation produces vehicles under the Toyota brand, Hino, Lexus, Ranz, and Daihatsu. The company's estimated annual revenue is USD 277 billion with net income of USD 24 billion.

Volkswagen Group

Volkswagen was established in 1947 at Wolfsburg, Germany, and is one of the top automobile manufacturing company in the world. The company includes various brands from European companies such as Volkswagen, Audi, SEAT, SKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Scania and MAN, and employs over 630,000 employees worldwide. Volkswagen's annual revenue was USD 277 billion with net income of \$13 billion.

Daimler AG

The Daimler group is one of the biggest producers of premium cars and commercial vehicles. Daimler auto-manufacturing company was formed in 1926 at Stuttgart, Germany. The company has 15 production locations where around 3.3 million cars are manufactured every year. The

Daimler group employs about 290,000 employees around the world. Mercedes-Benz, Mercedes-AMG, Maybach, and Smart are top-selling car brands of the Daimler AG.

Daimler AG's annual revenue was USD 197 billion with net income of USD 13 billion.

MANGEMENT BACKGROUND AND PERFORMANCE

Ford's Board of Directors has established five committees: Audit, Compensation, Finance, Nominating and Governance, and Sustainability and Innovation. These committees provide the structure that helps the Board in its corporate decisions. The Board of Directors in Ford (see table 5) is formed from 14 Directors, and their main responsibilities are to serve the interests of the shareholders.

Table 5. Board of Directors

Name (Age)	Position	Compensation
William Clay Ford, Jr. (a) (60)	Executive Chairman and Chairman of the Board	USD 15,626,099
James P. Hackett (b) (63)	President and Chief Executive Officer	USD 16,731,724
Stephen G. Butler (70)	Director Audit, Corporate Governance & Nominating	USD 434,520
Kimberly A. Casiano (60)	Director Environmental Policy, Audit, Corporate Governance & Nominating, Corporate Sustainability	USD 386,199
Anthony F. Earley, Jr. (69)	Director Corporate Sustainability, Compensation, Corporate Governance & Nominating	USD 403,906
Edsel B. Ford II (69)	Director Environmental Policy, Corporate Sustainability, Finance	USD 998,956
William W. Helman IV (60)	Director Finance, Corporate Governance & Nominating, Corporate Sustainability	USD 347,848
William E. Kennard (61)	Director Finance, Corporate Governance & Nominating, Corporate Sustainability	USD 374,294
John C. Lechleiter (64)	Director Compensation, Corporate Governance & Nominating	USD 394,389
Ellen R. Marram (71)	Director Corporate Sustainability, Environmental Policy, Corporate Governance & Nominating, Compensation	USD 423,530
John L. Thornton (64)	Director Compensation, Finance, Corporate Governance & Nominating	USD 344,632
John B. Veihmeyer (63)	Director Corporate Governance & Nominating, Audit	USD 29,470

Lynn M. Vojvodich (50)	Director Corporate Sustainability, Corporate Governance & Nominating, Audit	USD 259,677
John S. Weinberg (61)	Director Finance, Corporate Sustainability, Corporate Governance & Nominating	USD 350,071

Source: Mergent Online November 30, 2018

Key Executives

William Clay Ford

Executive Chairman

William Clay Ford, the great-grandson of company founder Henry Ford, has been the executive chairman of Ford Motor Company since 2006. He is also Vice Chairman of the Detroit Lions, Inc., Chairman of the Detroit Economic Club, Trustee of the Henry Ford Museum, and is a member of the Board of Business Leaders for Michigan. Mr. Ford graduated from Princeton University with his bachelor degree in Arts, and earned his master's degree from Massachusetts Institute of Technology in management.

He joined Ford Motor Company in 1988 as a Director. He served as Chair of the Finance Committee (1995-2001) and Chief Executive Officer of Ford (2001-2006). He was elected as a Chairman of the Board of Directors in January 1999.

James Patrick Hackett

President and Chief Executive Officer

James Patrick Hackett, has been President and Chief Executive Officer and director of Ford Motor Company since May 2017. He is also a Director of Business Leaders for Michigan, Trustee of Northwestern Mutual Life Insurance Company, of NML Variable Annuity Account A since 2000, and a Director of Fifth Third Bank. He has served as a Director of Ford Motor Company since May 2017. Mr. Hackett holds Bachelor's degree in Finance from University of Michigan. Mr. Hackett was a member of the Ford Motor Company Board of Directors (2013-2016).

James D. Farley

Executive Vice President and President, Global Markets

James D. Farley, Jr. has been executive vice president and president of Global Markets, Ford Motor Company, since June 2017. He manages Ford's business units around the world including The Americas, Europe, Middle East & Africa and Asia Pacific. He holds bachelor's degrees in economics and computer science from Georgetown University of Washington, D.C, and MBA from University of California, Los Angeles. Mr. Farey served as Group Vice President and General Manager of Lexus, and Group Vice President and General Manager Toyota Division marketing before he joined Ford Motor Company in 2007.

Joseph R. Hinrichs***Executive Vice President and President, Global Operations***

Joseph R. Hinrichs has served as Executive Vice President of Ford Motor Company and President, Global Operations since May 2017. Before he was appointed to this role, he has served in several important roles in Ford Motor Company such as: Executive Vice President of Ford and President, The Americas since December 1, 2012, group vice president and president of Asia Pacific and Africa beginning in December 2009, chairman and CEO of Ford China from November 2010 to December 2011, and group vice president, Global Manufacturing and Labor Affairs. He holds a bachelor's degree in electrical engineering from the University of Dayton, Ohio in 1989, and master's degree in business administration from the Harvard Business School in 1994.

Marcy Klevorn***Executive Vice President and President, Mobility***

Marcy Klevorn is executive vice president and president of Mobility, Ford Motor Company since June 2017. Since she joined Ford in 1983, she worked in various positions within Ford IT and Ford Credit through 2004, and served as a Product Lifecycle Management global director in 2005, Enterprise Defragmentation director in 2006, as IT Director for Ford of Europe in 2011, Director, Office of the CIO in 2013, and group vice president, Information Technology and Chief Information Officer in January 2015. Klevorn earned a bachelor's degree in business from the University of Michigan, Stephen M. Ross School of Business, Ann Arbor, Michigan.

SHAREHOLDER ANALYSIS

Ford Motor Company had outstanding 3,900 million shares of Common Stock and 70 million shares of Class B Stock as of June 30, 2017. The total market value of all the shares is USD 43.64 billion. The largest shareholders are made up of institutional investors, with 55.97 percent of the holdings. A total of 1,246 institutional shareholders collectively hold USD 20,576,697,729 shares. The largest institutional shareholder is Vanguard Group Inc, with 7.26 percent of the shares outstanding.

Table 6. Top-ten Institutional Investors

Rank	Institution Name	Total Shares	% of Shares Outstanding
1	Vanguard group inc	283,365,090	7.26%
2	Blackrock inc.	263,258,334	6.75%
3	Newport trust co	186,611,338	4.78%
4	State street corp	173,959,130	4.48%
5	Franklin resources inc	62,573,799	1.60%
6	Geode capital management llc	48,392,909	1.24%
7	J p morgan chase & co	44,165,171	1.13%
8	Pzena investment management llc	40,804,784	1.05%
9	Northern trust corp	40,532,088	1.04%
10	Dimensional fund advisors inc	39,672,426	1.02%

Source: Mergent Online November 30, 2018

Ford has 77 insider investors, who make up 0.67 percent of total holdings. The largest insider shareholder is William Clay Ford with 8,078,227 shares outstanding. Alan R Mulally holds 6,181,865 shares outstanding and Mark Fields holds 1,574,789 shares outstanding.

Table 7. Top-five Insider Investors

Rank	Name	Relation	Direct Date	Shares
1	Ford, William Clay	Director	03/04/2005	8,078,227
2	Mulally, Alan R	President and CEO, Director	03/05/2014	6,181,865
3	Fields, Mark	President and CEO, Director	04/04/2016	1,574,789
4	Hinrichs, Joseph R	Executive Vice President	03/04/2018	645,155
5	Shanks, Robert L	Executive Vice President-CFO	03/04/2018	628,769

Source: Mergent Online November 30, 2018

INVESTMENT RISK

Increasing price competition and declining demand could arise as a result of rapid evolution of customers' preferences and unique wants. Price competition could arise from currency fluctuations and the industry's increasing capacity. When consumers' preference shift such as preferring small light cars instead of trucks and SUVs, the company may suffer reduced sales and revenue as a result. Another risk is geopolitical, economic protectionist trade policies that the company may face in some of its foreign market. For instance, US White House policy on China's exports could hurt trade in this new emerging market for Ford Motors due to trade restrictions. Instability within the Euro zone as a result of Brexit may also weaken the company's European market.

Another risk that the company could face is the dependence on government tax incentives for sustained manufacturing and production. With the slightest change in government incentives, the company could be forced to reduce its operations especially in sectors and regions where the government incentives are relatively significant (Ford Motor Co., 2017). Moreover, the company may face some legal issues concerning labor relations and safety compliance of their cars. Defective cars could lead to either lawsuits for non-compliance to safety regulations or expensive recalls that could cost the company in settlement fees. Lastly, credit access and credit rating are another risk that the company could contend with. The company's credit segment faces stiff competition from banks and other financial institutions which could reduce the company's credit profitability (Ford Motors Co., 2017).

FINANCIAL RATIO ANALYSIS

Productivity Ratios

The fixed asset turnover ratio tells an investor how effectively a company is using its fixed assets to generate revenues. The average fixed asset turnover ratios of 3.99x and 3.07x indicate that

Ford and GM's fixed asset investments help generate 3.99 and 3.07 times revenue, respectively. This means that Ford has been efficient at generating revenue from such investments. Ford shows an average of 1.62 times lower ratio of Days' Sales in Receivables (DSO) compared to GM within the same time period. Thus, a high DSO number shows that GM is selling its product to customers on credit and taking longer to collect payment.

Ford lacked in Accounts Receivable Turnover which is twice less than GM shows. GM is more effectively processing credit. Ford has a conservative policy regarding its extension of credit which can be a good thing for customers who are more likely to take a long time in paying their debts.

The inventory turnover ratio examines how efficient a company was in turning around its inventory. Ford's average inventory turnover was 17.53 times whereas GM's was at 11.86 times a year. A higher inventory turnover is better as it shows Ford is more efficient in managing their inventories.

Days' sale in inventory (DSI) tells an investor how many days a company takes to sell its inventory. GM takes 37.59 days in comparison with Ford which takes 26.49 days to sell off its inventory.

Liquidity Ratios

The current ratio of Ford shows a promising result of 1.15 in 2017. A high ratio indicates a high level of liquidity and less chance of a cash squeeze. The current ratio of GM is 0.89 in 2017, which suggests that GM may have a risky strategy that could cause liquidity problems for the company in terms of liquidation. It indicates that if GM liquidated all its current assets at the recorded value, it would only be able to cover 89% of its current liabilities. Moreover, a current ratio that is too high, may indicate that the company is carrying too much inventory, allowing accounts receivables to balloon with lax payment collection standards or simply holding too much in cash.

The cash ratio of Ford averages of 1.20x within the time period, which suggests that the firm can cover all of its current liabilities with its cash and short-term marketable securities. Conversely, GM suffered in paying off its current liabilities due to its low cash ratio averaging at only .53x, meaning the firm can cover only 53% of its current liabilities with its cash and short-term marketable securities.

The quick ratio of Ford averages of 1.32 in the last five years, which indicates that a company has the ability to meet its short-term obligations using its quick current assets. On the other hand, GM's average quick ratio is 0.82 in the last five years, which tells that GM cannot currently pay back its current liabilities. The higher quick ratio means that the company has more current assets to satisfy current liability needs.

Financial Risk (Leverage Ratios)

Leverage ratios measure a company's ability to meet its longer-term obligations. For instance, the interest coverage ratio, also known as times interest earned, measures a company's cash flows generated compared to its interest payments. The average interest coverage ratio of 8.20x and 14.31x indicate that Ford and GM's 'EBIT are 8.20 and 14.31 times its interest obligations for the period, respectively. The higher the figure, the less chance a company has of failing to meet its debt repayment obligations. A high figure means that a company is generating strong earnings compared to its interest obligations.

Another important ratio of debt-to-equity varies over the period. A ratio of 6.06x indicates that Ford uses a high amount of debt compared to its equity and means the company is considered more risky to creditors and investors. Moreover, it should have been appropriate if the lower the debt-to-equity ratio Ford held, the more conservative the financial structure of the company.

The debt-to-assets ratio indicates whether a company has sufficient funds to pay its debt. Since this ratio represents long-term debt paying ability, the lower the better. The average debt-to-assets ratios of 0.87 and 0.78 indicates that Ford and GM have no significant risk to borrow in the future.

Profitability Ratios

Gross Profit Margin (GPM) measures a firm's ability to translate sales into a profit. Ford outperformed GM in gross profit margin performance, averaging 20.8 percent and 17.7 percent, respectively. This result suggests that for every USD 1 of revenue generated by Ford and GM, respectively, this translates into USD 0.2080 and USD 0.1770 into profit respectively. Ford is more capable of controlling direct cost and then generating a higher gross profit.

Return on Assets (ROA) measure how efficiently a firm utilizes its assets. A high ratio means that the company is able to efficiently generate earnings using its assets. Ford has an average ROA of 2.80 percent for the period 2013-2017. GM had a higher average ROA than Ford in the last five years at 3.41 percent.

The Return on Equity (ROE) measures the level of income attributed to shareholders against the investment that shareholders put into the firm. Ford has ROE of 21.83% percent while GM's ROE was -10.89 percent in 2017 due to GM's a high deferred income tax expense resulting from negative net income for the year.

FINANCIAL PERFORMANCE AND PROJECTIONS

According to Ford's income statement, the company's net profit has experienced different shifts over the financial periods. Ford posted its highest income of USD 7,602 million in 2017. In 2014, the company reported the lowest income of USD 3,187 million. This shift in performance could result from different production methods and marketing trends affecting the company. Ford's total costs as a percentage of net sales were lowest in 2017 which reflects a more efficient

cost management and ability to generate higher income. Ford's average net income as a percentage of net sales is 3.98 percent for the last five years.

Ford has consistently had strong and increasing cash flows from operating activities, and has generated positive net cash flows for 4 out of the last 5 years. Ford's dividend cash payouts have been growing at a steady and predictable rate for the last 5 years, which is expected with their dividend policy.

Based on last five years of financial data, Ford's revenue is projected to increase 3.3 percent on average in future years.

VALUATION

A discounted free cash flow (DCF) model was used to value the equity of Ford. The company's future years of financial statements were estimated, and the forecasted free cash flows were discounted at the company's estimated WACC. Inputs for the DCF model were projected using the company's historical financial data, annual reports, current market conditions and forecasts. Due to restructuring by Ford to reduce production to mainly SUV lines and trucks in the North America region, all the future revenue projections are based upon Ford's average revenue growth of the last five years.

The cash flows forecasted in the model were discounted using Ford's estimated WACC. In this model, the estimated capital structure is set at 40 percent weight on debt. Cost of equity was calculated using the CAPM model. The 10-year treasury rate was adjusted increasing to estimate a risk-free rate of 3 percent since the rates are expected to rise. Ford's beta shows volatile numbers from the financial stock sites Yahoo!Finance, Reuters, and Mergent Online. An industry beta average of 1.2 was calculated in the model (Damodaran, 2018). The historical market risk premium was also adjusted to 6% due to rising interest rates (Damodaran, 2018).

Based on these rates along with the capital structure of the firm calculates Ford's WACC of 8.93 percent. The inclusion of all the measures into the DCF model produced a value of Ford's common stock of Fords of USD 9.81. Based on this valuation and details from the financial analysis, I recommend hold shares in Ford Motor Company.

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Ford Motor Co. (DE) (NYS: F)*In thousands of USD*

Income Statement	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Sales	\$ 149,558	\$ 151,800	\$ 156,776	\$ 161,915	\$ 167,223	\$ 172,704	\$ 178,365	\$ 184,212
Costs of goods sold (COGS)	\$ 116,048	\$ 117,561	\$ 122,210	\$ 125,805	\$ 129,929	\$ 134,188	\$ 138,587	\$ 143,130
Sales, general and administrative expense (SGA)	\$ 17,870	\$ 21,100	\$ 20,631	\$ 21,907	\$ 22,625	\$ 23,366	\$ 24,132	\$ 24,923
Depreciation	\$ 7,993	\$ 9,023	\$ 9,122	\$ 9,536	\$ 9,848	\$ 10,171	\$ 10,505	\$ 10,849
Operating profit	\$ 7,647	\$ 4,116	\$ 4,813	\$ 4,667	\$ 4,820	\$ 4,978	\$ 5,142	\$ 5,310
Interest expense	\$ 773	\$ 894	\$ 1,133	\$ 1,712	\$ 940	\$ 972	\$ 1,006	\$ 1,041
Interest income	\$ -	\$ -	\$ -	\$ 765	\$ -	\$ -	\$ -	\$ -
Nonoperating income (Expense)	\$ 3,531	\$ 3,804	\$ 4,483	\$ 4,343	\$ 4,486	\$ 4,633	\$ 4,785	\$ 4,942
Earnings before taxes (EBT)	\$ 10,405	\$ 7,026	\$ 8,163	\$ 8,064	\$ 8,367	\$ 8,639	\$ 8,921	\$ 9,211
Tax expense	\$ 3,034	\$ 2,419	\$ 535	\$ 1,694	\$ 1,757	\$ 1,814	\$ 1,873	\$ 1,934
Net income before extraordinary items	\$ 7,371	\$ 4,607	\$ 7,628	\$ 6,371	\$ 6,610	\$ 6,825	\$ 7,047	\$ 7,277
After-tax extraordinary income (Expense)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net income (NI)	\$ 7,371	\$ 4,607	\$ 7,628	\$ 6,371	\$ 6,610	\$ 6,825	\$ 7,047	\$ 7,277
Dividends-- preferred	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dividends-- common	\$ 2,380	\$ 3,376	\$ 2,584	\$ 2,669	\$ 2,756	\$ 2,847	\$ 2,940	\$ 3,036
Additions to RE	\$ 4,991	\$ 1,231	\$ 5,044	\$ 3,702	\$ 3,853	\$ 3,978	\$ 4,107	\$ 4,240
Balance Sheet	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Assets								
Cash	\$ 14,272	\$ 15,905	\$ 18,492	\$ 18,031	\$ 18,623	\$ 19,233	\$ 19,863	\$ 20,515
Inventory	\$ 8,319	\$ 8,898	\$ 10,277	\$ 10,052	\$ 10,382	\$ 10,722	\$ 11,074	\$ 11,437
Accounts receivable	\$ 11,284	\$ 11,102	\$ 10,599	\$ 12,306	\$ 12,709	\$ 13,126	\$ 13,556	\$ 14,000
Other short-term operating assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Short-term investments	\$ 111,595	\$ 72,556	\$ 76,534	\$ -	\$ -	\$ -	\$ -	\$ -
Total current assets	\$ 145,470	\$ 108,461	\$ 115,902	\$ 40,389	\$ 41,713	\$ 43,081	\$ 44,493	\$ 45,951
Net plant, property, & equipment (PPE)	\$ 30,163	\$ 32,072	\$ 35,327	\$ 35,347	\$ 36,506	\$ 37,702	\$ 38,938	\$ 40,215
Other long-term operating assets	\$ 7,456	\$ 5,657	\$ 8,131	\$ 7,216	\$ 7,452	\$ 7,697	\$ 7,949	\$ 8,209
Long-term investments	\$ 30,317	\$ 82,057	\$ 87,502	\$ 88,948	\$ 91,863	\$ 94,875	\$ 97,985	\$ 101,196
Total assets	\$ 213,406	\$ 228,247	\$ 246,862	\$ 171,900	\$ 177,535	\$ 183,354	\$ 189,365	\$ 195,572
Liabilities and Equity								
Accounts payable (AP)	\$ 20,272	\$ 21,296	\$ 23,282	\$ 23,380	\$ 24,147	\$ 24,938	\$ 25,756	\$ 26,600
Accruals	\$ 5,564	\$ 6,251	\$ 6,300	\$ 6,587	\$ 6,803	\$ 7,026	\$ 7,256	\$ 7,494
Other operating current liabilities	\$ 19,814	\$ 19,316	\$ 19,697	\$ 20,473	\$ 21,144	\$ 21,837	\$ 22,553	\$ 23,292
All short-term debt	\$ 42,998	\$ 49,669	\$ 51,621	\$ 48,094	\$ 47,163	\$ 46,211	\$ 45,237	\$ 44,241
Total current liabilities	\$ 88,648	\$ 96,532	\$ 100,900	\$ 98,534	\$ 99,257	\$ 100,012	\$ 100,802	\$ 101,627
Long-term debt	\$ 105,785	\$ 110,030	\$ 119,558	\$ 43,127	\$ 44,461	\$ 45,831	\$ 47,239	\$ 48,684
Deferred taxes	\$ (11,007)	\$ (9,014)	\$ (10,158)	\$ (10,049)	\$ (10,379)	\$ (10,719)	\$ (11,070)	\$ (11,433)
Preferred stock	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other long-term liabilities	\$ 1,333	\$ 1,511	\$ 1,617	\$ 1,641	\$ 1,695	\$ 1,750	\$ 1,808	\$ 1,867
Total liabilities	\$ 184,759	\$ 199,059	\$ 211,917	\$ 133,253	\$ 135,034	\$ 136,875	\$ 138,778	\$ 140,745
Par plus PIC Less treasury (and other adjustments)	\$ 16,848	\$ 16,158	\$ 16,871	\$ 16,871	\$ 16,871	\$ 16,871	\$ 16,871	\$ 16,871
Retained earnings (RE)	\$ 11,799	\$ 13,030	\$ 18,074	\$ 21,776	\$ 25,630	\$ 29,608	\$ 33,715	\$ 37,956
Total common equity	\$ 28,647	\$ 29,188	\$ 34,945	\$ 38,647	\$ 42,501	\$ 46,479	\$ 50,586	\$ 54,827
Total liabilities and equity	\$ 213,406	\$ 228,247	\$ 246,862	\$ 171,900	\$ 177,535	\$ 183,354	\$ 189,365	\$ 195,572

Ford Motor Co. (DE) (NYS: F)*In thousands of USD*

Statement of Cash Flows	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Operating Activities								
Net income	\$ 7,371	\$ 4,607	\$ 7,628	\$ 6,371	\$ 6,610	\$ 6,825	\$ 7,047	\$ 7,277
Depreciation	\$ 7,993	\$ 9,023	\$ 9,122	\$ 9,536	\$ 9,848	\$ 10,171	\$ 10,505	\$ 10,849
Change in deferred tax	\$ 2,062	\$ 1,993	\$ (1,144)	\$ 109	\$ (329)	\$ (340)	\$ (351)	\$ (363)
Change in inventory	\$ (453)	\$ (579)	\$ (1,379)	\$ 225	\$ (330)	\$ (340)	\$ (351)	\$ (363)
Change in accounts receivable	\$ 424	\$ 182	\$ 503	\$ (1,707)	\$ (403)	\$ (417)	\$ (430)	\$ (444)
Change in other short-term operating assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in accounts payable	\$ 237	\$ 1,024	\$ 1,986	\$ 98	\$ 766	\$ 792	\$ 817	\$ 844
Change in accruals	\$ 26	\$ 687	\$ 49	\$ 287	\$ 216	\$ 223	\$ 230	\$ 238
Change in other current liabilities	\$ 30	\$ (498)	\$ 381	\$ 776	\$ 671	\$ 693	\$ 716	\$ 739
Net cash from operating activities	\$ 17,690	\$ 16,439	\$ 17,146	\$ 15,695	\$ 17,049	\$ 17,607	\$ 18,182	\$ 18,777
Investing Activities								
Investment in PPE	\$ (8,030)	\$ (10,932)	\$ (12,377)	\$ (9,556)	\$ (11,007)	\$ (11,368)	\$ (11,740)	\$ (12,125)
Investment in other long-term oper. ass.	\$ (1,111)	\$ 1,799	\$ (2,474)	\$ 915	\$ (237)	\$ (244)	\$ (252)	\$ (261)
Net cash from investing activities	\$ (9,141)	\$ (9,133)	\$ (14,851)	\$ (8,641)	\$ (11,244)	\$ (11,612)	\$ (11,993)	\$ (12,386)
Financing Activities								
Change in short-term investments	\$ (10,091)	\$ 39,039	\$ (3,978)	\$ 76,534	\$ -	\$ -	\$ -	\$ -
Change in long-term investments	\$ (3,743)	\$ (51,740)	\$ (5,445)	\$ (1,446)	\$ (2,916)	\$ (3,011)	\$ (3,110)	\$ (3,212)
Change in short-term debt	\$ 3,826	\$ 6,671	\$ 1,952	\$ (3,527)	\$ (930)	\$ (952)	\$ (974)	\$ (996)
Change in long-term debt	\$ 8,925	\$ 4,245	\$ 9,528	\$ (76,431)	\$ 1,334	\$ 1,370	\$ 1,407	\$ 1,445
Preferred dividends	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in preferred stock	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Change in other long-term liabilities	\$ (403)	\$ 178	\$ 106	\$ 24	\$ 54	\$ 56	\$ 57	\$ 59
Change in common stock (Par + PIC)	\$ (1,168)	\$ (690)	\$ 713	\$ -	\$ -	\$ -	\$ -	\$ -
Common dividends	\$ (2,380)	\$ (3,376)	\$ (2,584)	\$ (2,669)	\$ (2,756)	\$ (2,847)	\$ (2,940)	\$ (3,036)
Net cash from financing activities	\$ (5,034)	\$ (5,673)	\$ 292	\$ (7,515)	\$ (5,214)	\$ (5,384)	\$ (5,559)	\$ (5,740)
Net cash flow	\$ 3,515	\$ 1,633	\$ 2,587	\$ (461)	\$ 591	\$ 610	\$ 630	\$ 651
Starting cash	\$ 10,757	\$ 14,272	\$ 15,905	\$ 18,492	\$ 18,031	\$ 18,623	\$ 19,233	\$ 19,863
Ending cash	\$ 14,272	\$ 15,905	\$ 18,492	\$ 18,031	\$ 18,623	\$ 19,233	\$ 19,863	\$ 20,515

Ratios	2017	2016	2015	2014	2013
Productivity Ratios					
Growth in sales	3.3%	1.5%	3.8%	-1.9%	N/A
Receivables turnover	14.79	13.67	13.25	12.31	14.95
Days' Sales in Receivables (DSO)	24.68	26.69	27.54	29.66	24.42
Inventory turnover	15.26	17.06	17.98	18.32	19.06
Days' sale in inventory (DSI)	30.69	27.63	26.17	24.72	23.22
Net fixed asset turnover	3.61	4.02	3.98	3.95	4.39
Total asset turnover	0.64	0.67	0.70	0.74	0.78
Invested capital turnover	6.16	5.89	5.43	5.18	4.62
Liquidity Ratios					
Current ratio	1.15	1.12	1.64	1.56	1.63
Quick ratio	1.05	1.03	1.55	1.47	1.53
Cash ratio	0.94	0.92	1.42	1.33	1.41
Short-term investments over invested capital	3.01	2.82	4.05	3.65	3.13
Financial Risk (Leverage) Ratios					
Total debt-to-equity ratio	6.06	6.82	6.45	6.85	6.15
Total debt-to-equity ratio (excluding deferred taxes)	6.35	7.13	6.83	7.38	6.63
Total financial debt-to-equity ratio	4.90	5.47	5.19	5.48	4.93
Interest coverage ratio (accounting-based)	4.25	4.60	9.89	4.32	6.56
Interest coverage ratio (cash-based)	12.30	14.70	20.23	13.58	11.46
Total debt-to-assets ratio	0.86	0.87	0.87	0.87	0.86
Total financial debt over invested capital	0.69	0.70	0.70	0.70	0.69
Long-term financial debt over invested capital	4.69	4.27	3.84	3.48	2.90
Profitability/Valuation Ratios					
Gross profit margin	22.0%	22.6%	22.4%	19.4%	17.5%
EBITDA margin	8.9%	8.7%	10.5%	7.5%	6.5%
Operating profit margin	3.1%	2.7%	5.1%	2.4%	3.7%
NOPAT margin	4.9%	4.9%	4.1%	4.6%	4.7%
Earnings before taxes margin	5.2%	4.6%	7.0%	3.0%	4.8%
Net margin	4.9%	3.0%	4.9%	2.2%	4.9%
Return on Assets	3.09%	2.02%	3.45%	1.63%	3.79%
Dividend payout ratio	33.88%	73.28%	32.29%	61.27%	22.02%
ROIC	5.92%	2.44%	5.04%	3.00%	4.56%
Return on Equity	21.83%	15.78%	25.73%	12.83%	27.07%