

University of Connecticut SMF 2015-2016 Equity Research Report

Ford Motor Company

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Executive Summary

We issue a **Buy** recommendation on Ford Motor Company (F) with a target price of \$34.67 using the Discounted Cash Flow methods. This offers a 176% upside from its closing price of \$12.56 on Feb 22th, 2016.

Business Description

Ford Motor Company was incorporated in Delaware in 1919. Ford Motor Co. is the second largest U.S. motor vehicle manufacturer. It produces cars and trucks, and many of the vehicles' plastic, glass and electronic components, and replacement parts. Also, it owns a 2.1% stake in Mazda Motor Corp. Financial services include Ford Motor Credit (automotive financing and insurance) and American Road Insurance Co.

CORPORATE STRATEGY

Challenged by a shrinking U.S. market share, and more recently by lower industry volume, the company has announced restructuring plans in recent years in an attempt to lower its costs. Also, even as global demand begins a multi-year uptrend, by our view, the company has worked to prune its product portfolio to focus on its Ford and Lincoln brands. Most recently, the company discontinued production of Mercury brand vehicles.

The company's business and product portfolio has changed several times in recent years, as Ford sought to optimize its financial health and performance. In 2000, Ford acquired Land Rover from BMW Group for \$1.9 billion. In June 2008, the company sold Jaguar and Land Rover to Tata Motors for \$2.3 billion, but used about \$600 million of the proceeds to fund the Jaguar and Land Rover pension plans. In late 2008, the company reduced its stake in Mazda from 33% to 13.8% (now 2.1%). The company sold its Volvo unit to China's Zhejiang Geely Holding Group Co. Ltd. for \$1.8 billion in the third quarter of 2010.

Corporate Governance and Social Responsibility

Ford Corporate Governance Principles provide the framework for the governance of Ford Motor Company. we evaluated Ford's quality of governance in following main facets:

- 1. Board Established audit, risk, governance, and nomination and election committees
- 2. Meetings The Board of Directors ordinarily has 7 scheduled meetings a year
- 3. Annual Performance Evaluation The Board and each of the Committees will perform an annual self-evaluation. Each of the

directors will be requested to provide his or her assessment of the effectiveness of the Board and the Committees on which he or she serves.

Exhibit 1. Ford Historical Stock Price



Source: Yahoo Finance

Exhibit 2. Ford Long Term Strategy



Source: Ford Annual Report to investor

Exhibit 3. Ford Long Term Strategy



Source: Ford Annual Report to investor

Social Responsibility

Looking out for local communities and environmental issues, Ford defines corporate social responsibility as being willing to help others, being environmentally conscious and socially tolerant. With those guiding principles in mind, Ford has designed a special programme to promote tolerance and equal opportunities, and actively support social and environmental protection programmes.

Ford Motor Company has been recognized as one of the world's most ethical companies by Ethisphere Institute, a leading business think tank. Ford is one of only a 100 global companies - and the only automotive manufacturer - to be included in the list.

Industry Overview and Competitive Position

Automobile manufacturers sub-industry outlook

Our fundamental outlook for the automobile manufacturers sub-industry for the next 12 months is positive. In 2016, we see U.S. automotive demand trending higher year-over-year. While we expect to see uneven geographic progress, we look for global demand to rise again. Also, despite the risks we perceive, we forecast steady improvement overall. Europe has pressured General Motors and Ford in the troubled region, but the companies have shown progress, and we see higher industry sales volume there after years of declines. Russia and parts of South America still look likely to be challenged areas, with declines, and the strong dollar is hurting profit and sales translation.

Numbers

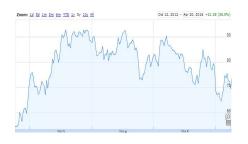
The Autocare Association estimates that the US automotive aftermarket will be worth \$273.4 billion in 2017 - an increase of almost \$35 billion in just four years. This puts the aftermarket between 1.5 and 2% of the US Gross Domestic Product. It is estimated that over 4.2 million people work in the industry and growth is expected.

The fleet is growing

In 2015 there were 257.9 million passenger vehicles registered in the United States, an increase of 5.3 million (2.3%) over 2014. As mentioned the number of cars per licensed driver now stands at 1.1 and has been increasing steadily since 1972.

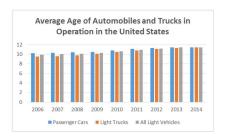
The scrappage rate - the rate at which cars are taken off the road - has also been declining with only 11.4 million cars retired in 2014. Fewer cars are being unregistered, abandoned, or junked. In 2015, new vehicle registrations was greater than scrappage by 42% - the highest number recorded by the IHS.

Exhibit 4. S&P 500 Automobile Manufacturers



Source: Yahoo Finance

Exhibit 4. Average Age of Automobiles and Trucks in US



Source: United States Transportation department

The fleet is getting older

In 2015 the average age of registered vehicles was 11.5 years old and has been increasing steadily since the Great Recession. With more than 70% of the population driving to work, folks need their car. Can't live without one and can't buy a new one - you better keep the one you have running.

Though the growth has plateaued with improving economic conditions this average is still increasing and is expected to reach 11.7 years by 2017.

Ford Market Profile

According toWard's Reports, Ford and Lincoln models accounted for 10.5% of cars sold in U.S. markets (including foreign-built) in 2014 versus 11.0% in 2013. Comparable figures for trucks were 18.4% and 20.1%, respectively.

Ford Competitive advantages

- Strong position in the American auto market. Ford's U.S. market share in the market for cars and light trucks in August 2015 was 14.8%, making it number two to General Motors Corporation.
- Geographically diversified revenue streams. The majority (65%) of Ford's revenue comes from the North American region.
- Extremely popular model includes the F150 pickup truck, the Transit Connect work van, the Fusion sedan and the Explorer SUV.
- Strong dealership network. Ford currently has 7,500, according to Automotive News.

Ford's challenges

- Inability to match the production capabilities or sales volume of the top five automakers: Toyota, Volkswagen, General Motors, Renault-Nissan and Hyundai Kia.
- Heavy dependence on U.S. and European auto markets. Most experts believe future growth in car sales will be in emerging markets such as China and India
- Ford's reputation as a working- or middle-class brand, which makes it hard to market vehicles to the upwardly mobile.
- Ford's reputation as a staid, conservative brand, which makes it harder to market to younger consumers.

Investment Thesis

Pick up trucks

Ford led all other vehicle manufacturers here in 2015, underscored by a 34thstraight year of its F-Series being the top seller. The steep falloff in gas prices has helped spur demand for large pickup trucks and SUVs, which carry wider profit margins than sedans and compacts. Ford's total light-truck sales came in just above the 1.8 million mark last year, up 8.3%.

Economy of Scale

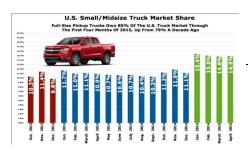
Another key change is building more Ford models on common platforms, which will improve economies of scale. In 2016, Ford expects 99% of its global

Exhibit 5. Ford Operation Geographic Coverage



Source: Ford Annual Report investor

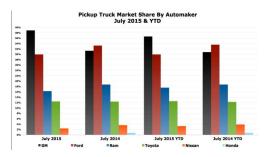
Exhibit 6. US Small/Midsize Truck Market Share



Source:

http://www.thetruthaboutcars.com/ 2015/05/chart-day-19-monthsmidsize-pickup-truck-market-shareamerica/

Exhibit 7. Pickup Truck Market Share By Automaker



Source: http://www.thetruthaboutcars.com/ 2015/08/chart-day-gms-pickuptruck-market-share-soars-july/

Table 1. DCF model

DCF method	
Weighted average cost of capital:	4.20%
Net present value of free cash flow	14,202.7
Terminal growth rate	2.00%
Terminal value	136,589.0
Present value of the terminal value	111,192.9
Enterprise value	125,395.6
Less: Net debt	12,633.0
Equity value	138,028.6
No. of Common Shares	3,981.0
Intrinsic Value per share	34.67

production to come from nine core platforms: five global and four regional. This move to nine platforms from 12 in 2015 and 27 in 2007 will also allow Ford to switch production faster to meet changing demand while drastically cutting costs via better economies of scale than in recent decades. This change should save Ford billions of dollars in development costs. Management targets eight platforms as a long-term objective. The global subcompact and compact platforms (B and C segments) now each get more than 2 million units of annual volume. Before former CEO Alan Mulally's arrival, Ford had a different platform in each segment for each part of the world. The old way wasted billions and had volume too low to achieve the economies of scale Ford can achieve going forward.

Growing opportunities

The average age of vehicles on the road is 11 years and near a historical high which, combined with the recent consumer confidence increase and pent-up demand for new vehicles, stands to drive vehicle sales in the near future.

Compared to General Motors (NYSE:GM) and other automakers, Ford has less exposure to the slowing economy in Europe and China. According to a recent article, GM has lost about \$15.6 billion in Europe since 1999. General Motors owns the "Opel" brand in Europe, which has been losing money and is being impacted by the weakening European economy. China has been showing signs of an economic slowdown and China is GM's biggest single market, so that could lead to additional downside risk for GM shares.

Valuation

DCF Valuation

We used DCF model to valuate Ford's intrinsic value. This method involves estimating the firm's value and adjusting it for net debt to arrive at equity value. Ford's business can be broken down into two components: automotive and financial services. However, compared with the automotive sector, financial services sector accounts for only a small portion, 6% of the total revenue. Thus, we decided to forecast the free cash flow of the company as a whole, using a two-stage growth model. The first phase includes a detailed year-to-year forecast up to 2020, while we assumed a constant growth rate for the terminal phase.

Based on this approach, Ford's intrinsic value per common share should be \$34.67, offering a 176% upside from its closing price of \$12.56 on Feb 22th 2016. Our fair value uncertainty is high regarding the possibilities in Ford's fair value estimate, given its high degree of operating leverage and many macroeconomic factors beyond management's control.

Source: Bloomberg

	2013	2014	2015	2016F	2017F	2018F	2019F	2020F
Operating Income	6,349.0	6,062.0	8,195.0	7,433.4	7,730.1	9,348.0	8,313.0	8,507.2
Tax	120.6	1,823.3	2,337.3	1,412.9	1,627.8	1,880.1	1,974.8	1,913.3
NOPAT	6,228.4	4,238.7	5,857.7	6,020.6	6,102.3	7,467.9	6,338.2	6,593.8
Plus: Depreciation and Amortizaiton	6,544.0	7,423.0	7,966.0	5,310.6	5,651.3	3,694.0	3,562.7	3,646.0
Less: Capital expenditures	6,597.0	7,463.0	7,196.0	7,689.6	8,167.8	8,042.0	7,904.0	7,983.0
Less: Net working capital	-3,366.0	-293.0	-2,544.0	1,906.7	-927.7	-1,142.8	-614.0	-689.2
Free Cash Flow	9,541.4	4,491.7	9,171.7	1,734.9	4,513.5	4,262.7	2,610.9	2,946.0

Source: Bloomberg

Revenue

Our average compound annual revenue growth rate is around 1% according to the predication of analysts from Bloomberg and we model EBITDA margin of 8% for our forecast period, which is a little lower than the historical data. We modeled this conservative number due to the continued competitive threats, high degree of debt ratio, and the risk of macroeconomic downturns negatively influencing the automotive industry.

Capital Expenditures

Capital expenditure is modeled at 5.35% of revenue on average, according to the latest three years historical data.

Weighted Average Cost of Capital

Risk-free rate

The risk-free rate was based on 10-year US government bond with yield of 1.83% as of April 20^{th} 2016.

Beta

The value of the beta of the was calculated by using a regression of Ford's share returns against the SPX index returns from April 20th 2014 to April 20th 2016 by weekly.

Market risk premium

The market risk premium was based on the estimate from Bloomberg, which is 7.59%.

Pre-tax cost of debt

The cost of debt was calculated by using the weighed average cost of debt historically. This computation resulted to a weighted pre-tax cost of debt of 2.23%. The table 3 shows the weights and different interest rates for the long-term and short-term debt respectively.

Marginal tax rate

The tax rate of 28.1% is based on average of historical effective tax rate.

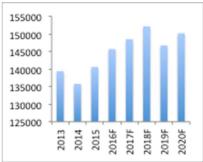
Capital structure

The capital structure of 70:30 (D/E) is based on the market value of debt and equity, which are \$132,854 million and \$55,930.4 million respectively.

Terminal Growth

Terminal Growth Rate was based on the GDP growth, and we forecasted a rate of 2% for the terminal phase beyond the year of 2020.

Exhibit 8 Revenue Forecast



Source: Bloomberg

Table 2 WACC Computation

'	
WACC Computation	
Cost of debt:	
Cost of debt	2.23%
Marginal tax rate	28.10%
After-tax cost of debt	1.60%
Cost of equity:	
Risk free rate	1.85%
Beta	1.14
Market risk premium	8.64%
Cost of equity	10.49%
Percentage of capital:	
Total debt	70.40%
Market value of equity	29.60%
Total capital	100%
WACC	4.20%
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Source: Bloomberg

Table 3 Cost of Debt

Pre-tax Cost of Debt	1.50%
Note rate*ST to Total Debt	0.26%
ST debt to total debt	32%
Note rate	0.79%
Plus: Bond rate*LT to Total Debt	1.24%
LT debt to total debt	68%
Bond rate	1.83%

Source: Bloomberg

Sensitive analysis

We performed a sensitivity analysis on the identified investment risks to determine their impact on the fair value of Ford. We applied incremental change of 0.2% for WACC and 0.2% for terminal growth rate. Based on the price of \$12.56 on Feb 22th 2015, the fair value of Ford is seriously undervalued.

			<u> </u>	Neighted a	average cos	t of capital		
		3.60%	3.80%	4.00%	4.20%	4.40%	4.60%	4.80%
rate	1.40%	\$35.38	\$32.73	\$30.48	\$28.56	\$26.89	\$25.43	\$24.14
_	1.60%	\$38.30	\$35.14	\$32.51	\$30.28	\$28.37	\$26.72	\$25.27
rowth	1.80%	\$41.87	\$38.04	\$34.91	\$32.29	\$30.08	\$28.19	\$26.54
<u>a</u>	2.00%	\$46.33	\$41.58	\$37.78	\$34.67	\$32.08	\$29.89	\$28.01
nina	2.20%	\$52.07	\$46.01	\$41.30	\$37.53	\$34.44	\$31.87	\$29.69
Tern	2.40%	\$59.72	\$51.70	\$45.69	\$41.01	\$37.27	\$34.21	\$31.66
	2.60%	\$70.42	\$59.29	\$51.34	\$45.37	\$40.73	\$37.02	\$33.98

Source: Team estimates

Financial Analysis

RATIOS	2011	2012	2013	2014	2015	2016F	2017F
Profitability							
EBITDA Margin	10.0	8.5	8.2	5.4	10.4	10.5	10.6
Operating Margin	6.0%	4.4%	3.7%	0.2%	5.1%	5.1%	5.2%
Profit Margin	14.8%	4.2%	4.9%	0.9%	4.9%	5.4%	5.5%
ROA	11.7%	3.1%	3.6%	0.6%	3.4%	5.1%	3.2%
ROE		36.6%	34.2%	4.9%	27.8%	27.4%	22.2%
Liquidity							
Current Ratio	0.70	0.74	0.72	0.64	0.69	0.73	0.79
Quick Ratio	0.57	0.58	0.58	0.50	0.52	0.54	0.56
Cash Ratio	0.51	0.51	0.50	0.42	0.45	0.49	0.53
Activity							
Cash Conversion Cycle	-22.37	-22.95	-20.45	-20.81	-22.38	-24.07	-25.88
Asset Turnover	0.79	0.72	0.74	0.70	0.68	0.67	0.66
Fixed Asset Turnover	6.02	5.68	5.62	5.03	5.00	4.97	4.94
Financial Leverage							
LT Debt to Assets	33.13	34.67	37.58	38.00	39.43	40.91	42.45
LT Debt to Equity	393.99	406.45	289.41	322.49	312.53	302.89	293.54
Debt to Equity	661.46	644.09	433.18	480.39	462.08	444.47	427.54
EBIT to Interest expense	9.64	8.20	6.47	0.41	9.64	11.34	13.33
Shareholder Ratios							
Earnings per Share	1.86	1.31	1.90	1.45	1.91	1.97	2.03
Dividend Payout Ratio	0.0%	13.5%	21.9%	158.6%	32.3%	31.5%	31.2%

Source: Bloomberg

Exhibit 9. Cash Ratio 0.60 0.50 0.40 0.30 0.20 0.10 0.00

Source: Company data

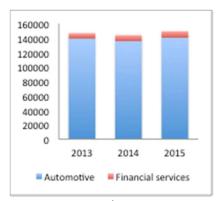
Figure 3. Revenue breakdown

Profitability

Ford's automotive operating margin of 6.8% was the highest since at least the 1990s, and full year automotive pre-tax profit improved by \$3.3 billion.

Ford financial sector continues to support its growth with contract volume up 8% in 2015, and had pre-tax profit of \$2.1 billion, up \$232 million from 2014.

ROE ratio was 27.8% in 2015, which shows a significant increase from the end of 2014 year. And statistics reveal that there has been some deterioration from 2011 to 2012 and 2013 to 2014, but it also reveals that the profitability has been recovering since 2015.



Source: Company data

Table 4. Income breakdown

	2013	2014	2015
Automotive	12,699	-560	8,224
Financial services	1,672	1,794	2,028
Total	14.371	1.234	10,252

Source: Company data

Liquidity

All of these three indicators, current ratio, quick ratio, and cash ratio, have improved from 2014 to 2015, even though they significantly deteriorated from 2013 to 2014. We believe that is suggesting the company's ability to satisfy its short-term obligations is becoming stronger.

Shareholder Analysis

Ford's earnings per share increased to 1.91, which hit a new historical high since 2011, and we expect the increasing EPS and positive forecast of EPS will positively influence the company's stock in the near future.

Investment risks

Decline in industry sales

Ford operates in a very cyclical industry that is coming out from one of its downturns. Macroeconomic condition is a big risk toward Ford, since Ford's stock can sell off heavily on macroeconomic fears, even if the company itself is doing well.

Decline in Ford's market share

Ford had been losing significant U.S. automotive market share to foreign automakers for years, and we believe this situation would continue, or even worse. To maintain its economics of scale, Ford must grow its global market share and try to develop in emerging markets. Meanwhile, as barriers to entry are declining, the competition in this industry must be increasing.

Fluctuations in exchange rates

Ford is exposed to the international market, thus the changes in foreign currency exchange rates could seriously affect its financial performance.

Regulatory

Ford's expansion to emerging market will make it vulnerable to the local political risks. Such risk includes but not limited to the civil disturbance, compliance inconsistency, bilateral action, change in political environment, etc.

Appendix

Appendix 1: Income statement

Revenue	2006-12	2007-12	2008-12 146,277	2009-12	2010-12	2011-12 136,264	2012-12	2013-12	2014-12	2015-12 149,558
Cost of revenue	160,123 148,869	172,455 143,255	128,977	118,308 100,016	128,954 104,451	113,345	134,252 115,693	146,917 128,094	144,077 126,215	126,495
Gross profit	11,254	29,200	17,300	18,292	24,503	22,919	18,559	18,823	17,862	23,063
Sales, General and administrative	19,180	21,169	21,430	13,258	11,909	11,578	12,182	13,176	14,117	14,999
Other operating expenses	-			7,858	5,936	(33)	86	208		
	10.100	04.400	04 400						44447	14 000
Total operating expenses	19,180	21,169	21,430	21,116	17,845	11,545	12,268	13,384	14,117	14,999
Operating income	(7,926)	8,031	(4,130)	(2,824)	6,658	11,374	6,291	5,439	3,745	8,064
Interest Expense	8,783	10,927	10,437	6,828	5,936	4,431	713	829	810	773
Other income (expense)	1,658	(850)	163	12,678	6,427	1,738	2,142	2,391	1,407	2,961
Income before taxes	(15,051)	(3,746)	(14,404)	3,026	7,149	8,681	7,720	7,001	4,342	10,252
Provision for income taxes	(2,646)	(1,294)	63	69	592	(11,541)	2,056	(147)	1,156	2,881
Other income	(210)	(312)	(214)	_	_	_	-	_	_	_
Net income from continuing operations	(12,615)	(2,764)	(14,681)	2,957	6,557	20,222	5,664	7,148	3,186	7,371
Net income from discontinuing ops	2	41	9	5	_	_	_	_	_	_
Other	_	_	_	(245)	4	(9)	1	7	1	2
Net income	(12,613)	(2,723)	(14,672)	2,717	6,561	20,213	5,665	7,155	3,187	7,373
Net income available to common shareholders	(12,613)	(2,723)	(14,672)	2,717	6,561	20,213	5,665	7,155	3,187	7,373
Earnings per share										
Basic	(6.72)	(1.38)	(6.46)	0.91	1.90	5.33	1.48	1.82	0.81	1.86
Diluted	(6.72)	(1.38)	(6.46)	0.86	1.66	4.94	1.42	1.76	0.80	1.84
Weighted average shares outstanding										
Basic	1,879	1,979	2,273	2,992	3,449	3,793	3,815	3,935	3,912	3,969
Diluted	1,879	1,979	2,273	2,992	4,178	4,111	4,015	4,087	4,045	4,002
EBITDA	10,251	20,917	8,366	16,785	18,669	17,368	13,637	14,286	12,575	18,991

Appendix 2: Cash Flow statement

Net income 12,613 2,723 14,672 5,685 2,213 5,685 7,155 3,166 7,273 1,000		2006-12	2007-12	2008-12	2009-12	2010-12	2011-12	2012-12	2013-12	2014-12	2015-12
Investment/asset impairment charges	Net income	(12,613)	(2,723)	(14,672)	_	6,561	20,213	5,665	7,155	3,186	7,371
Investments losses (gains)	Depreciation & amortization	16,519	13,736	12,333	6,931	5,584	4,256	5,204	6,456	7,423	7,966
Deferred income taxas	Investment/asset impairment charges	_	_	_	961	_	_	_	_	_	_
Casin Loss from discontinued operations Casin	Investments losses (gains)	_	_	_	(410)	(83)	82	(105)	(719)	_	_
Stock based compensation	Deferred income taxes	_	(5,477)	1,954	_	_	_	_	_	_	_
Common stock issued	(Gain) Loss from discontinued operations	_	_	_	(5)	_	_	_	_	_	_
Inventory G695	Stock based compensation	_	_	_	_	_	171	140	159	180	199
Accounts payable C	Accounts receivable	_	_	_	2,244	765	_	(1,622)	(1,969)	(2,897)	(3,563)
Other working capital (497) 5,932 (7,867) (2,607) (670) (12,678) 485 — 5,734 7,758 Other non-cash items 6,897 5,259 8,431 6,595 223 (1,893) 679 529 1,756 (2,406) Net cash provided by operating activities 9,611 17,098 (17) 16,042 (1,4561) (4,929) (5,488) (6,597) (7,463) 7,106 Property, plant, and equipment reductions 5,120 — — — — 4,293 (5,488) (6,597) (7,463) 7,106 Property, plant, and equipment reductions 5,120 — — — 4,293 (5,488) (6,597) 7,106 6,841 (26,010) (27,917) (35,602) 257 9 — — Acquisitions, net (59,737) 1,210 6,841 (26,010) (27,917) (35,602) 99,349 118,247 50,248 (41,279) 9 3,4782 11,562 12,579 12,479 14,249	Inventory	(695)	371	(358)	2,333	(903)	(367)	(1,401)	(572)	(875)	(1,155)
Other non-cash items 6,897 5,259 8,431 6,595 223 (1,893) 679 529 1,756 (2,406) Net cash provided by operating activities 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Investments in property, plant, and equipment reductions 5,120 — <	Accounts payable	_	_	_	_	_	_	_	(595)	_	_
Net cash provided by operating activities 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Investments in property, plant, and equipment (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196) Property, plant, and equipment reductions 5,120	Other working capital	(497)		(7,867)	(2,607)	(670)	(12,678)	485	_	5,734	7,758
Investments in property, plant, and equipment 6,848 6,022 66,696 4,561 4,092 4,293 5,488 6,597 7,463 7,196 7,000 7,0	Other non-cash items	6,897	5,259	8,431	6,595	223	(1,893)	679	529	1,756	(2,406)
Investments in property, plant, and equipment 6,848 6,022 66,696 4,561 4,092 4,293 5,488 6,597 7,463 7,196 7,000 7,0	Net cash provided by operating activities	9,611	17,098	(179)	16,042	11,477	9,784	9,045	10,444	14,507	16,170
Property, plant, and equipment reductions 5,120 1,210 6,841 (26,010) (27,917) (35,602) 257 9		(6,848)	(6,022)	(6,696)	(4,561)	(4,092)	(4,293)	(5,488)	(6,597)	(7,463)	(7,196)
Purchases of investments (23,678) (11,423) (64,754) 78,789) (100,150) (68,723) (95,135) (119,993) (48,694) (41,279) Sales/Maturities of investments 18,456 18,660 62,046 76,322 101,077 70,795 93,749 118,247 50,264 40,766 Other investing activities 41,823 (8,908) (580) 39,507 37,990 34,782 (7,673) (11,397) (15,231) (18,453) Net cash used for investing activities (24,864) (6,483) (3,143) 6,489 6,908 (3,041) 114,290 (19,731) (21,124) (26,162) Debt repayment — — — (70,403) (49,379) (43,095) (29,210) (27,953) (28,859) (33,358) Common stock issued 431 250 756 2,450 1,339 — — — — — — — — — — — — — — — — — <	Property, plant, and equipment reductions	5,120	_	_	_	_	_	_	_	_	_
Sales/Maturities of investments 18,456 18,660 62,046 76,322 101,077 70,795 93,749 118,247 50,264 40,766 Other investing activities 41,823 (8,908) (580) 39,507 37,990 34,782 (7,673) (11,397) (15,231) (18,453) Net cash used for investing activities 24,864) (6,483) (3,143) 6,469 6,908 (3,041) (14,290) (19,731) (21,124) (26,162) Debt issued — — — 45,990 30,821 35,921 32,436 40,543 40,043 48,860 Debt repayment — — — (70,403) (49,379) (43,095) (29,210) (27,953) (28,659) (33,358) Common stock issued 431 250 756 2,450 1,339 —	Acquisitions, net	(59,737)	1,210	6,841	(26,010)	(27,917)	(35,602)	257	9	_	_
Other investing activities 41,823 (8,908) (580) 39,507 37,990 34,782 (7,673) (11,397) (15,231) (18,453) Net cash used for investing activities (24,864) (6,483) (3,143) 6,469 6,908 (3,041) (14,290) (19,731) (21,124) (26,162) Debt issued — — — 45,990 30,821 35,921 32,436 40,543 40,043 48,860 Debt repayment — — — (70,403) (49,379) (43,095) (29,210) (27,953) (28,859) (33,358) Common stock issued 431 250 756 2,450 1,339 — — — — Common stock issued (183) (31) — — — — (125) (213) (1,964) (129) Dividend paid (468) — — — — — (763) (1,574) (1,952) (2,380) Other financing activities 15,493 <	Purchases of investments	(23,678)	(11,423)	(64,754)	(78,789)	(100, 150)	(68,723)	(95, 135)	(119,993)	(48,694)	(41,279)
Net cash used for investing activities (24,864) (6,483) (3,143) 6,469 6,908 (3,041) (14,290) (19,731) (21,124) (26,162) Debt issued ————————————————————————————————————	Sales/Maturities of investments	18,456	18,660	62,046	76,322	101,077	70,795	93,749	118,247	50,264	40,766
Debt issued — — — 45,990 30,821 35,921 32,436 40,543 40,043 48,860 Debt repayment — — (70,403) (49,379) (43,095) (29,210) (27,953) (28,859) (33,358) Common stock issued 431 250 756 2,450 1,339 — </td <td>Other investing activities</td> <td>41,823</td> <td>(8,908)</td> <td>(580)</td> <td>39,507</td> <td>37,990</td> <td>34,782</td> <td>(7,673)</td> <td>(11,397)</td> <td>(15,231)</td> <td>(18,453)</td>	Other investing activities	41,823	(8,908)	(580)	39,507	37,990	34,782	(7,673)	(11,397)	(15,231)	(18,453)
Debt repayment — — (70,403) (49,379) (43,095) (29,210) (27,953) (28,859) (33,358) Common stock issued 431 250 756 2,450 1,339 —	Net cash used for investing activities	(24,864)	(6,483)	(3,143)	6,469	6,908	(3,041)	(14,290)	(19,731)	(21,124)	(26,162)
Common stock issued 431 250 756 2,450 1,339 —	Debt issued	_	_	_	45,990	30,821	35,921	32,436	40,543	40,043	48,860
Common stock repurchased (183) (31) — — — — (125) (213) (1,964) (129) Dividend paid (468) — — — — (763) (1,574) (1,952) (2,380) Other financing activities 15,493 (5,461) (9,860) (996) (7,202) 2,933 1,367 (2,670) (3,845) 1,329 Net cash provided by (used for) financing activities 15,273 (5,242) (9,104) (22,959) (24,421) (4,241) 3,705 8,133 3,423 14,322 Effect of exchange rate changes 464 1,014 (808) 470 (53) (159) 51 (37) (517) (815) Net change in cash 484 6,387 (13,234) 22 (6,089) 2,343 (1,489) (1,191) (3,711) 3,515 Cash at beginning of period 28,410 28,896 35,283 22,049 20,894 14,805 17,148 15,659 14,468 10,757	Debt repayment	_	_	_	(70,403)	(49,379)	(43,095)	(29,210)	(27,953)	(28,859)	(33,358)
Dividend paid (468) — — — — — — — — — — — — — — — — — — —	Common stock issued	431	250	756	2,450	1,339	_	_	_	_	_
Other financing activities 15,493 (5,461) (9,860) (996) (7,202) 2,933 1,367 (2,670) (3,845) 1,329 Net cash provided by (used for) financing activities 15,273 (5,242) (9,104) (22,959) (24,421) (4,241) 3,705 8,133 3,423 14,322 Effect of exchange rate changes 464 1,014 (808) 470 (53) (159) 51 (37) (517) (815) Net change in cash 484 6,387 (13,234) 22 (6,089) 2,343 (1,489) (1,191) (3,711) 3,515 Cash at beginning of period 28,410 28,896 35,283 22,049 20,894 14,805 17,148 15,659 14,468 10,757 Cash at end of period 28,894 35,283 22,049 22,071 14,805 17,148 15,659 14,468 10,757 14,272 Free Cash Flow Operating cash flow 9,611 17,098 (179) 16,042 11,477 <td>Common stock repurchased</td> <td>(183)</td> <td>(31)</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td>(125)</td> <td>(213)</td> <td>(1,964)</td> <td>(129)</td>	Common stock repurchased	(183)	(31)	_	_	_	_	(125)	(213)	(1,964)	(129)
Net cash provided by (used for) financing activities Effect of exchange rate changes 464 1,014 (808) 470 (53) (5,242) (6,089) (24,421) (4,241) 3,705 8,133 3,423 14,322 (5,17) (617) (815) Net change in cash 484 6,387 (13,234) 22 (6,089) 2,343 (1,489) (1,191) (3,711) 3,515 Cash at beginning of period 28,410 28,896 35,283 22,049 20,894 14,805 17,148 15,659 14,468 10,757 14,272 Free Cash Flow Operating cash flow 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,481) 3,705 8,133 3,423 14,322 (4,31) 14,322 (4,21) (4,241) 3,705 8,133 3,423 14,322 (4,31) (4,321) (4,241) 3,705 8,133 3,423 14,322 (4,371) (5,171) (815) (815) (8,711) (8	Dividend paid	(468)	_	_	_	_	_	(763)	(1,574)	(1,952)	(2,380)
activities Effect of exchange rate changes 464 1,014 (808) 470 (53) (159) 51 (37) (517) (815) Net change in cash 484 6,387 (13,234) 22 (6,089) 2,343 (1,489) (1,191) (3,711) 3,515 Cash at beginning of period 28,410 28,896 35,283 22,049 20,894 14,805 17,148 15,659 14,468 10,757 Cash at end of period 28,894 35,283 22,049 22,071 14,805 17,148 15,659 14,468 10,757 14,272 Free Cash Flow Operating cash flow 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196)	Other financing activities	15,493	(5,461)	(9,860)	(996)	(7,202)	2,933	1,367	(2,670)	(3,845)	1,329
Net change in cash 484 6,387 (13,234) 22 (6,089) 2,343 (1,489) (1,191) (3,711) 3,515 Cash at beginning of period 28,410 28,896 35,283 22,049 20,894 14,805 17,148 15,659 14,468 10,757 Cash at end of period 28,894 35,283 22,049 22,071 14,805 17,148 15,659 14,468 10,757 14,272 Free Cash Flow Operating cash flow 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196)		15,273	(5,242)	(9,104)	(22,959)	(24,421)	(4,241)	3,705	8,133	3,423	14,322
Cash at beginning of period 28,410 28,896 35,283 22,049 20,894 14,805 17,148 15,659 14,468 10,757 Cash at end of period 28,894 35,283 22,049 22,071 14,805 17,148 15,659 14,468 10,757 14,272 Free Cash Flow Operating cash flow 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196)	Effect of exchange rate changes	464	1,014	(808)	470	(53)	(159)	51	(37)	(517)	(815)
Cash at end of period 28,894 35,283 22,049 22,071 14,805 17,148 15,659 14,468 10,757 14,272 Free Cash Flow Operating cash flow 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196)	Net change in cash	484	6,387	(13, 234)	22	(6,089)	2,343	(1,489)	(1,191)	(3,711)	3,515
Free Cash Flow Operating cash flow	Cash at beginning of period	28,410	28,896	35,283	22,049	20,894	14,805	17,148	15,659	14,468	10,757
Operating cash flow 9,611 17,098 (179) 16,042 11,477 9,784 9,045 10,444 14,507 16,170 Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196)	Cash at end of period	28,894	35,283	22,049	22,071	14,805	17,148	15,659	14,468	10,757	14,272
Capital expenditure (6,848) (6,022) (6,696) (4,561) (4,092) (4,293) (5,488) (6,597) (7,463) (7,196)	Free Cash Flow										
	Operating cash flow	9,611	17,098	(179)	16,042	11,477	9,784	9,045	10,444	14,507	16,170
Free cash flow 2,763 11,076 (6,875) 11,481 7,385 5,491 3,557 3,847 7,044 8,974	Capital expenditure	(6,848)	(6,022)	(6,696)	(4,561)	(4,092)	(4,293)	(5,488)	(6,597)	(7,463)	(7,196)
	Free cash flow	2,763	11,076	(6,875)	11,481	7,385	5,491	3,557	3,847	7,044	8,974

Appendix 3: Balance Sheet

	2006-12	2007-12	2008-12	2009-12	2010-12	2011-12	2012-12	2013-12	2014-12	2015-12
Cash and cash equivalents	28,894	35,283	22,049	21,441	14,805	17,148	15,659	14,468	10,757	14,272
Short-term investments	26,728	15,515	17,411	38,657	32,440	31,456	36,735	42,084	43,610	47,997
Total analy	55,622	50,798	39,460	60,098	47,245	48,604	52,394	56,552	54,367	62,269
Total cash		109,053			77,458	78,541	82,338	87,309	92,819	
Receivables	106,863		93,484	84,583						101,975
Inventories	11,578	10,121	8,618	5,450	5,917	5,901	7,362	7,708	7,866	8,319
Other current assets	8,772	8,210	6,073				 		 	
Total current assets	182,835	178,182	147,635	150,131	130,620	133,046	142,094	151,569	155,052	172,563
Gross property, plant and equipment	77,023	72,800	66,802	60,182	57,079	55,245	57,777	59,092	59,260	57,629
Accumulated Depreciation	(38,518)	(36,561)	(38,237)	(35,404)	(33,900)	(32,874)	(32,835)	(31,476)	(29, 134)	(27,466)
Net property, plant and equipment	38,505	36,239	28,565	24,778	23,179	22,371	24,942	27,616	30,126	30,163
Equity and other investments	00,000	-	20,000	1,550	2,569	2,936	3,246	3,679	3,357	3,224
Goodwill	5,839	2,069	1,593	1,550	2,303	2,330	3,240	3,073	3,337	3,224
doodwiii	0,039	2,009	1,093							
Intangible assets	1,098	_	_	209	102	100	87	_	_	_
Deferred income taxes	4,950	3,500	3,108	3,440	2,003	15,125	15,185	13,315	13,639	11,509
Other long-term assets	45,327	59,274	37,427	14,742	6,214	4,770	5,000	5,847	6,353	7,466
Total non-current assets	95,719	101,082	70,693	44,719	34,067	45,302	48,460	50,457	53,475	52,362
Total assets	270 EEA	270.264	210 220	104.050	104 007	170 240	100 EE4	202 026	200 527	224 025
Total assets	278,554	279,264	218,328	194,850	164,687	178,348	190,554	202,026	208,527	224,925
Short-term debt	27,676	28,275	63,662	17,714	10,931	40,311	38,762	38,063	39,172	42,998
Accounts payable	23,549	20,832	14,772		13,466		-			
Accrued liabilities	24,287	23,579	28,728	11,624	14,996	2,632	2,577	2,682	2,987	2,385
Deferred revenues	4,708	4,093	3,667	3,162	2,069	2,216	2,796	2,817	3,923	4,559
Other current liabilities				18,273	7,421	27,879	29,293	30,569	31,059	31,320
Total current liabilities	80,220	76,779	110,829	50,773	48,883	73,038	73,428	74,131	77,141	81,262
Long-term debt	144,373	140,255	90,534	115,373	88,532	59,177	66,296	76,625	79,999	89,856
Deferred taxes liabilities	2,744	3,034	2,035	2,375	1,135	696	470	598	570	502
Accrued liabilities	_	_	_	7,803	21,394	3,456	3,500	2,260	_	_
Deferred revenues	_	_	_	1,656	1,622	1,739	1,893	2,534	2,686	2.833
Pensions and other benefits	_	_	_	17,791	_	21,243	24,798	14,790	15,712	9,541
Minority interest	1,159	1,421	1,195	1,305	31	43	42	33	27	15
Other long-term liabilities	53,523	52,147	31,046	5,594	3,763	3,928	4,180	4,672	7,587	12,274
Other long-term habilities					3,700		4,100			
Total non-current liabilities	201,799	196,857	124,810	151,897	116,477	90,282	101,179	101,512	106,581	115,021
Total liabilities	282,019	273,636	235,639	202,670	165,360	163,320	174,607	175,643	183,722	196,283
Common stock	_	_	_	34	38	38	40	40	40	41
Additional paid-in capital	4,562	7,834	9,076	16,786	20,803	20,905	20,976	21,422	21,089	21,421
Retained earnings	(17)	(1,485)	(16,145)	(13,599)	(7,038)	12,985	18,077	23,658	24,556	14,414
Treasury stock	(183)	(185)	(181)	(177)	(163)	(166)	(292)	(506)	(848)	(977)
Accumulated other comprehensive income	(7,827)	(536)	(10,061)	(10,864)	(14,313)	(18,734)	(22,854)	(18,231)	(20,032)	(6,257)
Total stockholders' equity	(3,465)	5,628	(17,311)	(7,820)	(673)	15,028	15,947	26,383	24,805	28,642
Total liabilities and stockholders' equity	278,554	279,264	218,328	194,850	164,687	178,348	190,554	202,026	208,527	224,925
	,_,	,		,	, ,		,	,		,

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