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DuPont Corporation: Sale of Performance Coatings

In January 2012, Ellen Kullman, CEO and chairman of DuPont, was reviewing an internal report on the company's Performance Coatings division. A month earlier, she had dismissed rumors that the business was up for sale after reports had surfaced that the company had hired Credit Suisse to seek potential buyers for it. Kullman stated that the business would be given a "chance" to see if it could meet certain performance targets, saying: "From a performance standpoint we will give them a chance to see if they can get there. If any of our businesses can't obtain their targets, obviously we will look at alternatives."[1] For several years, the business, which produced paint for the auto and trucking industries, had struggled with low demand and high raw-material costs that had hurt profits. During her tenure as CEO, Kullman had attempted to move DuPont away from commodity chemicals to a specialty chemical and science–focused products business. It was no longer clear whether DuPont Performance Coatings (DPC) fit her strategic vision for the firm. Still, the issue was what course would produce the greatest value for shareholders. She had called for an internal review of the business that fall to assess its value to DuPont compared to what outside parties might pay for it. Those reports were now complete, and she would have to decide whether to retain the business or sell it and, if so, at what price.

History of DuPont

E. I. du Pont de Nemours and Company was one of the longest continually operating companies in the United States. It traced its origin to a French émigré, Eleuthère Irénée (E. I.) du Pont, who had studied chemistry and who, at age 14, had written a paper on gunpowder. In 1799, his family fled revolutionary France, and in 1802, he founded a company in Delaware, at the urging of Thomas Jefferson, to manufacturer gunpowder.[2] From its origins in gunpowder, in the 1880s, the company pioneered the manufacture of dynamite. At the turn of the 20th century, the chemistry of nitrocellulose, critical to explosives, began to spawn early innovations in plastics, lacquers, films, and fibers. In 1911, the U.S. government, citing antitrust reasons, forced DuPont to break up its monopoly gunpowder business. Notwithstanding this, the company made enormous profits during World War I, which it used to diversify into other businesses. By 2011, DuPont was among the world's largest chemical companies; it had $38 billion in sales and operations in 90

[1] Stefan Baumgarten, "DuPont CEO Slams News Media Over Reports of Coatings Business Sale," ICIS News, December 13, 2011.

[2] Du Pont's gunpowder company was capitalized at $36,000, with 18 shares worth $2,000 each, a portion of which was used to purchase a site on Brandywine Creek for $6,740. Jefferson advised du Pont of the new nation's need for gunpowder and gave him his first order, calling the agreement between the two a "handshake that built a country," from E. I. du Pont de Nemours and Company, "DuPont—200 Years of Service to the U.S. Government in Times of Need."

This case was prepared by Susan Chaplinsky, Tipton P. Snavely Professor of Business Administration; and Felicia Marston, Professor of Commerce, McIntire School of Commerce; with the assistance of Brett Merker, Research Assistant. It was written as a basis for class discussion rather than to illustrate an effective or ineffective handling of an administrative situation.

countries. Among its most well-known products were nylon (introduced in 1935), Tyvek (used in construction), Kevlar (a protection product), and Teflon (a protective surface). **Exhibit 1** shows the evolving nature of DuPont's businesses since its founding.

Kullman's Watch

Kullman joined DuPont in 1988 as a marketing manager after starting her career at GE. Within DuPont, she had a reputation for making businesses grow, a legacy she attributed to her father, who was a landscaper. In 1998, she launched a safety consulting business, which later became the Safety & Protection business, which boasted sales approaching $4 billion in 2011. She was named DuPont's CEO in January 2009 and, later that same year, chairman. That year was a difficult one for the company because its performance was closely tied to the broader economy, which had fallen into a recession. Shortly after her appointment as CEO, in February 2009, DuPont's stock price fell below $19, a multiyear low (**Exhibit 2**). In response to the downturn, Kullman cut costs, laid off 4,500 employees, and continued to transition the company from a commodity chemical business to a specialty chemical and science–driven business. Commodity chemicals typically were cyclical, and intense priced-based competition kept margins low. By moving toward specialty chemicals and more customized products based on DuPont's research and development (R&D), Kullman hoped to focus the company on higher-growth and -margin businesses.

As part of this plan, the company acquired Danisco, a leading food ingredient and enzyme company, for $7.1 billion in January 2011. It was the second-largest acquisition in company history, smaller only than the 1999 acquisition of Pioneer Hi-Bred International, a maker of genetically modified seeds. With the shift taking place away from the "Old DuPont" to a more specialty-focused company, the drivers of growth over the next few years were likely to be Agriculture, Nutrition & Health, Performance Chemicals, and the nascent Industrial Biosciences businesses. Kullman saw the firm's future increasingly at the core of industrial biotechnology; the company was positioned to compete in agriculture, nutrition, and advanced materials. She articulated her direction for the firm in the 2010 annual report:

> We have attractive growth opportunities supported by market-driven science and fueled by global megatrends associated with population growth. We are allocating resources to drive the highest growth opportunities…Global population will pass the 7 billion mark in 2011 and exceed 9 billion people by 2050—or about 150,000 more people on the planet every day. This will translate into critical needs in the areas of feeding the world, reducing our dependence on fossil fuels and keeping people and the environment safe—the megatrends that are driving our science and innovation….[3]

With her push to match the company's focus to these megatrends, DuPont's business units were evaluated to determine whether they fit this vision and could meet the company's performance goals. The company had publicly stated that its longer-term performance goals were to achieve 7% sales growth annually and 12% earning margins. The firm had eight separate business units: Agriculture (24% of 2011 sales), Performance Chemicals (21%), Performance Materials (18%), Performance Coatings (11%), Safety & Protection (10%), Electronics & Communications (8%), Nutrition & Health (6%), and Industrial Biosciences (2%). Based on 2011 revenue, Agriculture had grown to be DuPont's largest business (**Exhibit 3**). Although there was some unevenness in growth over the past two years, most of DuPont's divisions had been able to grow sales in line with the 7% goal. This was also true of DPC, which, in rebounding from the lows of 2009, had grown sales by 12.5% in 2011, but the growth rate in sales over the next two years was expected to be

[3] DuPont, "Letter to Shareholders," *2010 Annual Review*, 2011, 2.

only 3% to 5% (**Exhibit 4**). More concerning was that its profit margins were the lowest among the eight businesses. All of this suggested that DPC would have to significantly improve its growth and profitability to meet DuPont's performance goals.

Performance Coatings

DPC was formed in March 1999 when Herberts GmbH and DuPont Automotive Finishes merged.[4] Its products included high-performance liquid and powder coatings for motor vehicle original equipment manufacturers (OEMs), the motor vehicle aftermarket (refinishing), and general industrial applications, such as coatings for heavy equipment, pipes and appliances, and electrical insulation.[5] DPC employees liked to say that the products they made didn't make cars go faster, they just made them look good going faster. From 2007 to 2011, sales had grown at a –0.3% cumulative average growth rate (CAGR) and profits had declined at a –6.0% CAGR (**Exhibit 5**). Due to the company's exposure to the auto sector, sales and earnings had been adversely affected by the 2008 and 2009 downturn. In 2011, the company posted stronger revenue growth of 12.5%, but most of this was attributed to price increases, which were unlikely to continue. Notwithstanding the pickup in sales, operating margins remained muted because of rising input costs. Nearly 50% of the key raw-material inputs (e.g., hydrocarbon solvents and organic pigments) were tied to crude oil prices, which had risen since the middle of 2010 due to tight supply and improving economic conditions.

Key competitive factors in its business included technology and technical expertise, product innovation and quality, breadth of product line, service, and price. In most industrial applications, the coating itself was only a small part of total production costs (e.g., 10% to 15%), and most customers were willing to pay more for technologically advanced coatings if it reduced application costs (e.g., labor). The industry in general was also not highly capital-intensive—capital expenditures and R&D were relatively small in comparison to the variable costs of production.

DPC held the number-four position in the global industrial coatings market, where it faced strong competition in all the business verticals that made up the industry (**Exhibit 6**). The market was highly fragmented: two companies—PPG Industries and Akzo Nobel N.V., each with sales greater than $10 billion—together accounted for 25% of industry sales. Seventeen firms had sales between $1 billion and $10 billion, the range of DPC's sales, which accounted for 45% of sales. The remainder of sales came from over 60 additional firms. Given the increased pressures for cutting costs and finding higher-growth opportunities, over the last six years, the industry had been consolidating; the market share of the six top companies increased from 28% in 2005 to 35% in 2011.[6] The top-10 global competitors controlled 60% to 75% of the sales in U.S. and European markets. To varying degrees, all the top competitors saw opportunities for growth in the less saturated Asia-Pacific and Latin American markets.

Relative to peers, DPC's strengths were in refinishing and the vehicle OEM market. In 2011, the vehicle aftermarket accounted for 43% of the division's sales, down from 53% of sales in 2009. The decline in refinishing was of concern because its profit margins tended to be higher than those in the vehicle OEM market. Of the $7 billion global refinishing market, PPG and DuPont were the market leaders—each had approximately a 28% market share—followed by Akzo Nobel (17% market share). Sales to motor vehicle

[4] DuPont had been a supplier of paint to the U.S. auto industry since its infancy, providing paint to General Motors in the 1920s. Herberts, a subsidiary of Hoechst, was acquired for $1.9 billion, making the combined firms the largest supplier of automotive finishes in the world. At the time, 80% of Herberts's operations were in Europe, while 75% of DuPont's business was in North America.

[5] Sales to OEMs included all vehicles (e.g., cars, trucks, buses, and motorcycles).

[6] Buckingham Research Group, PPG Industries: "Other" Industrial Coatings Review, May 21, 2012.

OEMs accounted for 37% of DPC's 2011 sales, and DPC held the number-three market position in the OEM paint market behind PPG and BASF SE.

The two key drivers of revenue for these businesses were miles driven and vehicle sales. Miles driven was correlated with the incidence of collisions, which affected the demand for paint from refinishing, and sales of vehicles generated demand for paint from OEMs (**Exhibit 7**). Trends in the refinishing market were generally steady to negative. In the past several years, the number of miles driven in the United States had tapered off, resulting in fewer collisions. Potentially offsetting this trend was an expected increase in miles driven—and relatedly, collisions—outside the United States.

Also reducing the demand for paint was a significant dropoff in the number of damaged cars that were refinished. This was due to more damaged cars being written off ("totaled") and insurance companies imposing higher deductibles such that damaged cars more frequently went without repair. In the United Kingdom, for example, an estimated 7% of damaged cars were written off in 2010 compared to 5% in 2000; that translated to 80,000 fewer cars requiring repair (and paint) every year.[7] Further, advances in the quality of paint used by OEMs made it more durable and resistant to scratches and weathering.

The OEM market had experienced a sharp decline in global motor vehicle production in 2009 that had since begun to recover (**Exhibit 8**). In 2011, North American vehicle production (13.5 million units) still fell short of its 2007 level (15.5 million units). Over the past decade, most of the growth in vehicle production had taken place in countries outside the United States, particularly in emerging markets. For example, between 2000 and 2010, China and India had experienced an astonishing 763% and 344% increase, respectively, in vehicle manufacturing. DPC's existing customer base was heavily concentrated in Detroit, but North America accounted for only 27% of its revenues. As vehicle manufacturing continued to grow outside North America, DPC's revenues would likely expand in those markets.

DPC's overall revenues were closely tied to GDP growth, which was expected to be 1% to 2% in 2012–13 in the United States, largely flat in Europe, and more positive but erratic in emerging markets. Most analysts expected that emerging-market growth coupled with unprecedented fleet aging would spur a recovery in vehicle sales on the order of 3% to 5% per year.[8] Increases in sales, however, did not necessarily translate into higher profits for several reasons. First, the OEM profit margins were set by multiyear contracts with vehicle manufacturers, which made it difficult for paint suppliers to quickly pass on raw-material price increases. By comparison, the margins in refinishing were primarily based on claims paid by insurance companies, which left consumers less price sensitive to repair costs. Second, growing concerns about lead, the high cost of treating airborne emissions and solid hazardous waste generated by paint operations, and new regulations covering the global chemical industry in Europe were all expected to increase environmental compliance costs gradually over time.

Although a bullish scenario could be concocted for DPC, industry trends suggested that stable to modest improvement was the more likely course for the business over the next several years. As part of the internal review, DuPont attempted to assess DPC's value if it remained a division of the company. DuPont's internal targets for DPC were annual revenue growth of 3% to 5% and operating margins of 10% to 12%. Given DPC's mixed track record of performance, the internal review set targets at 4% for growth and 10% for margins, the low end of the targeted range. Other assumptions underlying the stand-alone valuation were

[7] Morgan Stanley, "E. I. du Pont de Nemours & Co.," analyst report, February 13, 2012.
[8] Morgan Stanley, 5.

incorporated into the analysis itself (**Exhibit 9**) and together yielded a value of approximately $4 billion for the division.

Potential Buyers

When news surfaced in late October 2011 that DuPont was seeking a potential buyer for DPC, companies including PPG, BASF, Akzo Nobel, and Valspar Corporation were mentioned as prospective strategic buyers. For all but BASF, a potential purchase price of $4 billion would be a sizable transaction to complete (**Exhibit 10**). In response to a question about his company's potential interest, Valspar CEO Gary E. Hendrickson said that DPC was "a little too big a bite for us."[9] Although the $4 billion price tag would also be large in the current environment for private equity (PE) firms, Blackstone, Advent International, KKR & Co., Onex Corporation, and Clayton, Dubilier & Rice were all reportedly considering bids or had already made inquiries about the division.[10] The interest from PE firms was not surprising, given that buyout firms were sitting on record levels of "dry powder" cumulatively totaling over $400 billion at the end of 2011. A large portion of that was concentrated in buyout funds with 2006 and 2007 vintage years. In those years, buyout funds had raised record amounts of capital but had found it difficult to invest in the ensuing crisis years. As these funds neared the end of their investment periods, their general partners were under increasing pressure to find investments.

A leveraged buyout (LBO) was the purchase of a firm facilitated by large amounts of debt financing. In an LBO, the PE firm or sponsor would arrange debt financing for the deal and contribute the balance of financing with equity from one or more of its funds. Because of the anticipated higher debt load, PE firms generally looked for firms that could readily service the debt. Target characteristics might include steady and predictable cash flows, assets that provided good collateral for debt, or non-core assets that could be sold to pay down debt. Debt support (and returns) could also be bolstered if the targets had opportunities to grow EBITDA by increasing sales or cutting costs. For similar reasons, sponsors looked for mature firms that did not seemingly require large amounts of additional capital expenditures or R&D. Most sponsors also looked for a strong management team because they typically were not hands-on operators and had to rely on the target's management to run day-to-day operations.

Of course, to make a good return, the sponsor had to increase the target's value above its purchase price over a typically four- to five-year period, after which it would seek to exit the investment. Sponsors in PE deals generally looked to three factors to drive returns in their investee companies: benefits from the use of leverage, growth in EBITDA, and multiple arbitrage (i.e., buy at a low multiple and sell at a high multiple).

Benefits of leverage

One benefit of leverage was that interest on debt was tax deductible and therefore the cost of debt was lower than the cost of equity. As a result, increasing leverage could produce interest tax shields that enhanced the company's value. The use of leverage could also help augment a sponsor's returns, because for a given price paid for the business, more debt financing directly translated to a smaller equity contribution. All else equal, the smaller the equity base, the higher the return. Additionally, as equity holders, the sponsors received their share of the difference between the selling price (i.e., enterprise value of the firm at exit) and the equity

[9] Doug Cameron, "Valspar: DuPont Coatings Business Too Big a Bite for Us to Buy," *Wall Street Journal*, May 14, 2012.

[10] At the same time, DuPont hired Greenhill & Co. to handle the sale of a smaller part of the business that handled coatings for tractors and playground equipment. Zachary R. Mider and Jeffrey McCracken, "DuPont Is Said to Weigh $4 Billion Sale of Auto-Paint Unit," Bloomberg, October 28, 2011.

value remaining after the debt and other senior claims were paid off. In a highly leveraged company, a relatively small increase in the firm's enterprise value could lead to a substantial increase in the sponsor's equity value. But high leverage also increased the sponsor's risk, since, analogously, a relatively small decline in enterprise value could materially reduce the value of its equity. High leverage could also be instrumental in driving returns for another reason—high interest and principal payments helped focus management's attention on improving performance and operating efficiency to generate cash for debt service.

DPC as a stand-alone company was expected to be all equity financed, and therefore the use of leverage was a potential source of value for PE sponsors. Sponsors typically spoke to bankers ahead of a deal to gauge how much debt might be available to finance the transaction. The total financing that would have to be raised depended on how much the sponsors paid for the target. Given its size, DPC would be considered a large buyout, which was generally defined as a deal above $1 billion in size. The number of large buyouts had declined precipitously from 98 deals in 2007 to just 10 in 2009, before clawing back to 36 deals in 2011 (**Exhibit 11**). The pressure to put money to work and the resulting pickup in number of deals had increased median purchase price multiples (PPMs) to 9.0× in 2011, almost as high as their peak of 9.5× in 2008. Not unrelatedly, the increase in PPMs coincided with easing in the credit markets as the markets moved further away from the financial crisis. Total debt-to-EBITDA multiples contracted sharply, from 7.6× in 2007 to 3.3× in 2009, necessitating a large increase in equity contributions from the sponsors. Thereafter, there had been a significant increase in debt availability: the median debt multiple expanded to 6.2× in 2011. Over 2010–11, large buyouts had been approximately 60% debt financed on average. If current trends held, it appeared that PE firms would have generous amounts of debt financing available, on the order of 5.5× to 6.0× EBITDA for a potential purchase of DPC.

Growth in EBITDA

Growth in EBITDA created value by improving the target's operations by undertaking measures such as product expansions, cost reductions, and add-on acquisitions. In assessing the opportunity for growth in EBITDA, PE firms routinely conducted extensive due diligence to develop improvement plans after they gained control of a company. A first step in this process was often to compare the target's performance to that of close competitors. Because PPG's industrial and performance coatings business segments directly competed with DPC, it was DPC's closest peer. Compared with DPC, PPG had projected slightly stronger sales growth and had achieved higher margins. PPG's mix of products accounted for some of the difference, but DPC's lower margins were mostly the result of higher costs and overhead. Based on this assessment and other due diligence, sponsors might reasonably expect to increase DPC's sales growth by 1% to 2% and improve its operating margins by 200 to 250 basis points.

DPC was led by DuPont veteran John McCool, 58, who was well regarded in the industry. McCool had held a variety of leadership positions since joining DuPont's Textile Fibers department in 1976. Kullman named McCool president in 2010 after he had served as vice president for DPC's Europe, Middle East, and Africa (EMEA) operations. She had given him the specific charge to turn the division's performance around. All the PE firms that were contemplating a bid for DPC would have to evaluate McCool and his team to see if they had the requisite skills to head the new company. If the current team was found wanting, the sponsors would have to be prepared to replace management as part of their plans.

Multiple arbitrage

Multiple arbitrage arose when a sponsor received a higher PPM at exit for a target than it paid for it. All else equal, the higher the entry PPM, the lower the chances of a sponsor achieving multiple arbitrage. At a stand-alone value of approximately $4 billion, it looked as if DPC's potential buyers would have to pay on the order of 7× projected EBITDA for the company. Exit opportunities could arise from an IPO, sale to a

strategic buyer, or sale to another PE fund (secondary buyout). Over the period 2006 to 2011, sales to strategic buyers had been the most frequent mode of exit by PE firms (**Exhibit 12**). Due to the growth in the size of the PE sector, however, secondary buyouts were a strong second to them. IPOs had fallen off as exit vehicles, in part due to uncertain market conditions accompanying the financial crisis and its aftermath. Because strategic buyers likely had greater opportunity for operating synergies with a target company, they were commonly thought to pay more for a target than financial buyers. Based on the PPMs of recent exits, however, the average PPM for exits to secondary buyouts was somewhat higher than the average PPM of exits to strategic buyers (**Exhibit 12**). Based on the current valuation of PPG and potential market expansion, sponsors might look to achieve 7.5× to 8.0× EBITDA at exit for DPC, given improvements in margins and growth as a private firm.

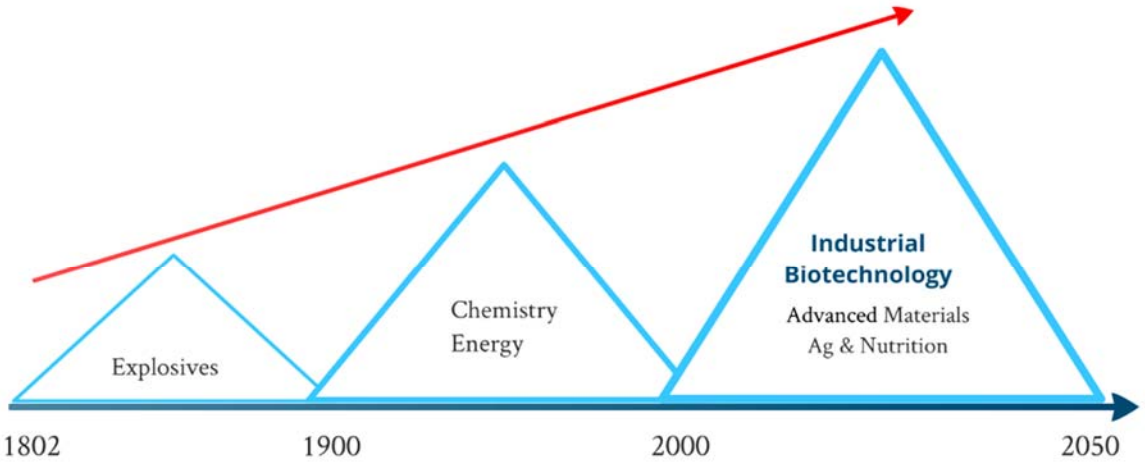
Decision

If Ellen Kullman decided to divest DPC, she would put in motion an auction for the division. At that point, DuPont would provide detailed information about the target and invite interested parties to bid. As part of that process, she would likely set a minimum price for bidders. Her stand-alone valuation suggested that the division was worth nearly $4 billion to DuPont. She would then need to assess how much potential additional value could be obtained, both separately and jointly, from EBITDA growth, multiple arbitrage, and the use of leverage to give her some idea of the potential range of values that bidders might offer. Relative to that, she knew that sponsors would likely seek higher returns to justify the greater financial risk from the use of leverage. Although financial buyers naturally sought the highest possible internal rate of return (IRR), in the current environment of tough competition, they often had to settle for IRRs of 20%. With that in mind, she would formulate her minimum required bid to ensure that shareholders' interests were served no matter what decision she reached about DPC.

Exhibit 1

DuPont Corporation: Sale of Performance Coatings

History and Outlook of Business



1800s - Largest supplier of gunpowder to U.S. military

1862 -Develops "Mammoth Powder" for heavy artillery

1904 - Dynamite used to construct Panama Canal

1911 - Forced to divest monopoly gunpowder business

1917 - Entered dye business

1918 - Partnered with GM in auto industry

1928 - Discovered first synthetic rubber

1935 - Discovered nylon

1938 - Discovered Teflon

1950-70 - New materials (Lycra, Corian, Kevlar)

1981 - Acquired Conoco (Sold 1999)

1998 - Purchased Herberts to become largest supplier of automotive coatings

1999 - Purchased Pioneer Hibred

2001 - Formed electronic display JV

2001 - Sold pharmaceutical business

2003 - Began biofuel research

2004 - Sold Invista textiles business

2011 - Largest TiO_2 producer

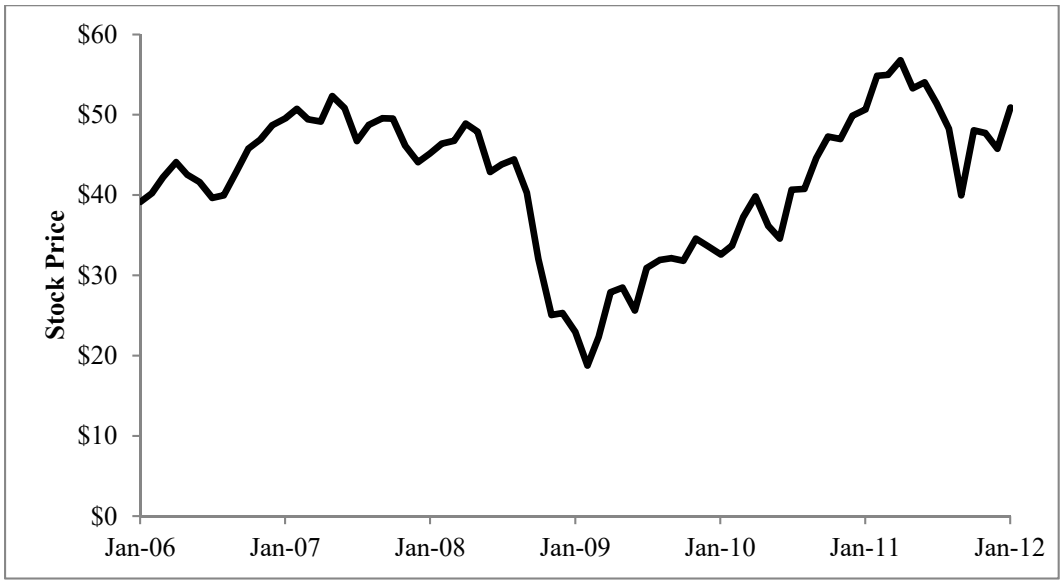
2011 - Purchased Danisco

Data source: Macquarie Research, "E. I. du Pont de Nemours & Co.," analyst report, January 26, 2012, adapted by authors.

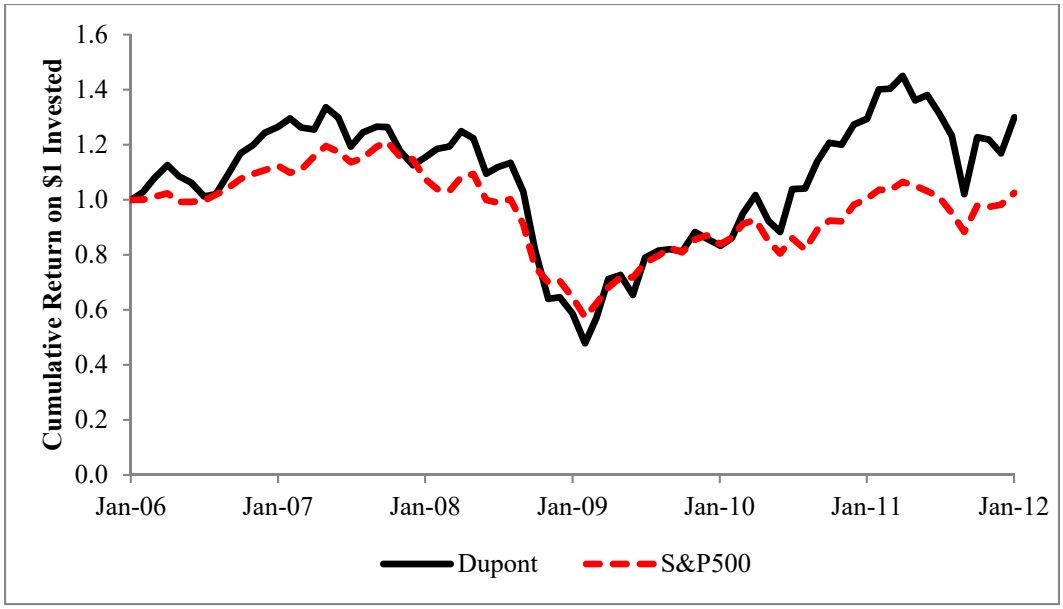
Exhibit 2

DuPont Corporation: Sale of Performance Coatings

Stock Price Performance



Performance Relative to S&P 500



Data source: Yahoo! Finance.

Exhibit 3

DuPont Corporation: Sale of Performance Coatings

Business Segment Performance
(dollars in millions)

Segment Sales				Year-over-Year Growth		
	2009	2010	2011	2009	2010	2011
Agriculture	$7,069	$7,845	$9,166	7.9%	11.0%	16.8%
Electronics & Communications	1,918	2,764	3,173	-10.7%	44.1%	14.8%
Nutrition & Health	1,218	1,240	2,460	-13.2%	1.8%	98.4%
Performance Chemicals	4,964	6,322	7,794	-14.5%	27.4%	23.3%
Performance Coatings	3,429	3,806	4,281	-21.4%	11.0%	12.5%
Performance Materials	4,768	6,287	6,815	-25.3%	31.9%	8.4%
Safety & Protection	2,811	3,364	3,934	-24.4%	19.7%	16.9%
Industrial Biosciences			705			
Other	158	194	40			
Total segment sales	26,335	31,822	38,368			
Elimination of transfers	(226)	(317)	(407)			
Net sales	$26,109	$31,505	$37,961	-14.5%	20.7%	20.5%

Pretax Operating Income*				Segment Margins		
	2009	2010	2011	2009	2010	2011
Agriculture	$1,160	$1,293	$1,527	16.4%	16.5%	16.7%
Electronics & Communications	87	445	355	4.5%	16.1%	11.2%
Nutrition & Health	64	62	44	5.3%	5.0%	1.8%
Performance Chemicals	547	1,081	1,923	11.0%	17.1%	24.7%
Performance Coatings	69	249	271	2.0%	6.5%	6.3%
Performance Materials	287	994	973	6.0%	15.8%	14.3%
Safety & Protection	260	454	500	9.2%	13.5%	12.7%
Industrial Biosciences			(1)			-0.1%
Pharmaceuticals (discontinued)	1,037	489	289			
Other	(169)	(206)	(235)			
Total pretax operating income	$3,342	$4,861	$5,646	12.8%	15.4%	14.9%

* After significant items.

Data source: Company reports.

Exhibit 4

DuPont Corporation: Sale of Performance Coatings

Sales Growth Forecasts for Business Units

	Est. Sales Growth (2012–14)	Major Products	Sales as % of Product	Major Industry	Sales as % of Industry
Agriculture	10%	Corn seeds	47%	Seeds	68%
		Soybean seeds	15%	Chemicals	32%
		Herbicides	13%		
Performance Chemicals	12%	White pigments (TiO_2)	47%	Industrials and chemicals	36%
		Fluoroproducts	34%	Construction	31%
		ChemSolutions	19%	Specialties	18%
Performance Materials	4%	Engineering resins	46%	Transportation	37%
		Ethylene co-polymers	23%	Industrial	18%
		Elastomers	9%	Packaging	14%
Performance Coatings	3%–5%	Refinish coatings	43%	Vehicle aftermarket	43%
		OEM coatings	31%	Vehicle OEM	37%
		Ind. liquid and powder coatings	26%	General industrial	15%
Safety & Protection	7%	Aramids products	39%	Industrial	54%
		Tyvek/Typar	26%	Consumer	20%
		Safety consulting and training	16%	Construction materials	12%
Electronics & Communications	6%	Photovoltaic materials	39%	Photovoltaics	39%
		Electronic materials	25%	Consumer electronics	18%
		Printing, packaging materials	18%	Advanced printing	18%
Nutrition & Health	15%	Food ingredients	100%	Food ingredients	100%
Industrial Biosciences	29%	Biomaterials—enzymes		Bioprocessing	100%

Data source: Company data, Macquarie Research, "E. I. du Pont de Nemours & Co.," analyst report, January 26, 2012, and author estimates.

Exhibit 5

DuPont Corporation: Sale of Performance Coatings

Performance Coatings Historical Performance
(dollars in millions)

	2007	2008	2009	2010	2011	five-year CAGR
Net Sales	$4,347	$4,360	$3,428	$3,806	$4,281	-0.3%
Year-over-Year Growth		0.3%	-21.4%	11.0%	12.5%	
Pretax Operating Income	366	-8	69	255	268	-6.0%
Margin	8.4%	-0.2%	2.0%	6.7%	6.3%	
Depreciation and Amortization	107	111	123	105	104	
Research and Development	71	69	56	48	46	
Capital Expenditures	126	91	55	74	80	
Segment Net Assets	2,607	2,226	2,018	2,047	2,107	
Sales by Industry						
Aftermarket (refinishing)			53%	44%	43%	
Vehicle OEM			28%	36%	37%	
General Industrial			14%	14%	15%	
Other			5%	6%	5%	
Sales by Region						
North America			26%	27%	27%	
Asia-Pacific			12%	13%	13%	
Europe, Middle East, and Africa			46%	44%	43%	
Latin America			16%	18%	17%	

Data source: Company Databooks, various years.

Exhibit 6

DuPont Corporation: Sale of Performance Coatings

Global Competitive Position in Industrial Coatings Market

	Global Position	Architectural	Industrial	Protective & Marine	Refinishing	Auto OEM	Packaging	Aerospace
End Market Sales (billions)	$95.0	$40.9	$24.7	$12.4	$6.7	$5.7	$2.9	$1.9
% of End Market Sales	100%	43%	26%	13%	7%	6%	3%	2%
Peer Ranking:								
Akzo Nobel	1	1	1	1	3		3	2
PPG	2	3	2	2	1	1	2	1
Sherwin-Williams	3	2	4+	4+	4+			4+
DuPont	**4**		**4+**		**2**	**3**		
Valspar	5	4+	3		4+		1	
BASF	6	4+	4+		4+	2		

A blank cell indicates "no participation" in business vertical.

Penetration Rates of Top Global Competitors by Region

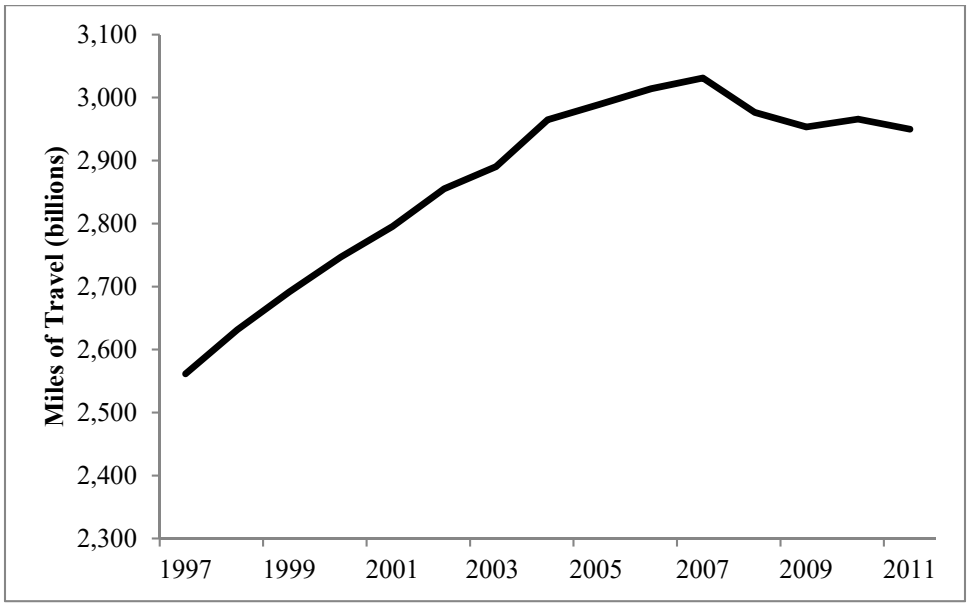
	Percent of Sales of Top-10 Competitors
U.S. and Canada	75%
EMEA	60%
Asia-Pacific	30%
Latin America	30%

Data source: Buckingham Research Group, *PPG Industries: "Other" Industrial Coatings Review*, May 21, 2012.

Exhibit 7

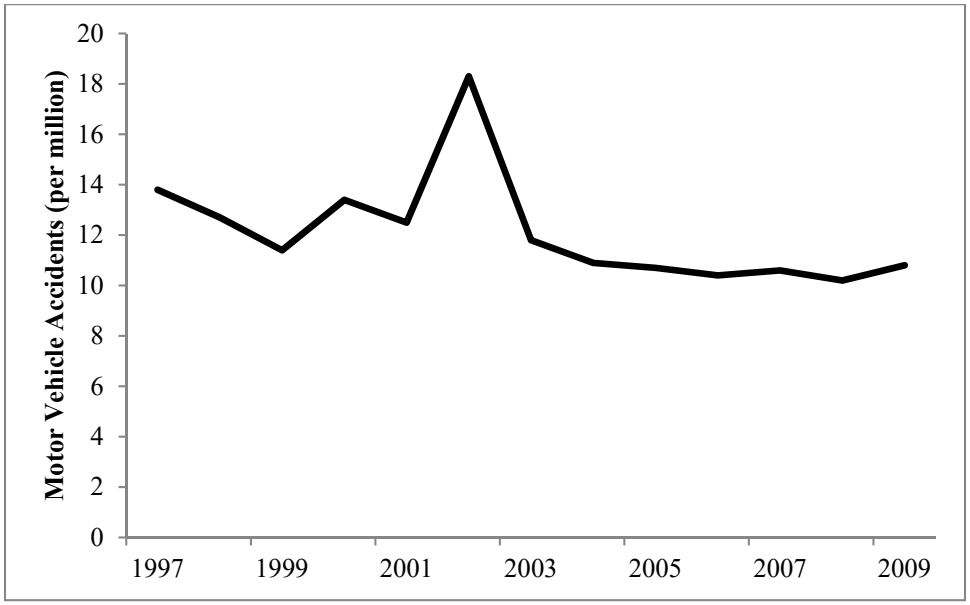
DuPont Corporation: Sale of Performance Coatings

Trends Affecting Paint Demand in Vehicle Aftermarket
U.S. Vehicle Miles Traveled (billions)



Data source: U.S. Federal Highway Administration, Highway Statistics.

U.S. Motor Vehicle Accidents per Million

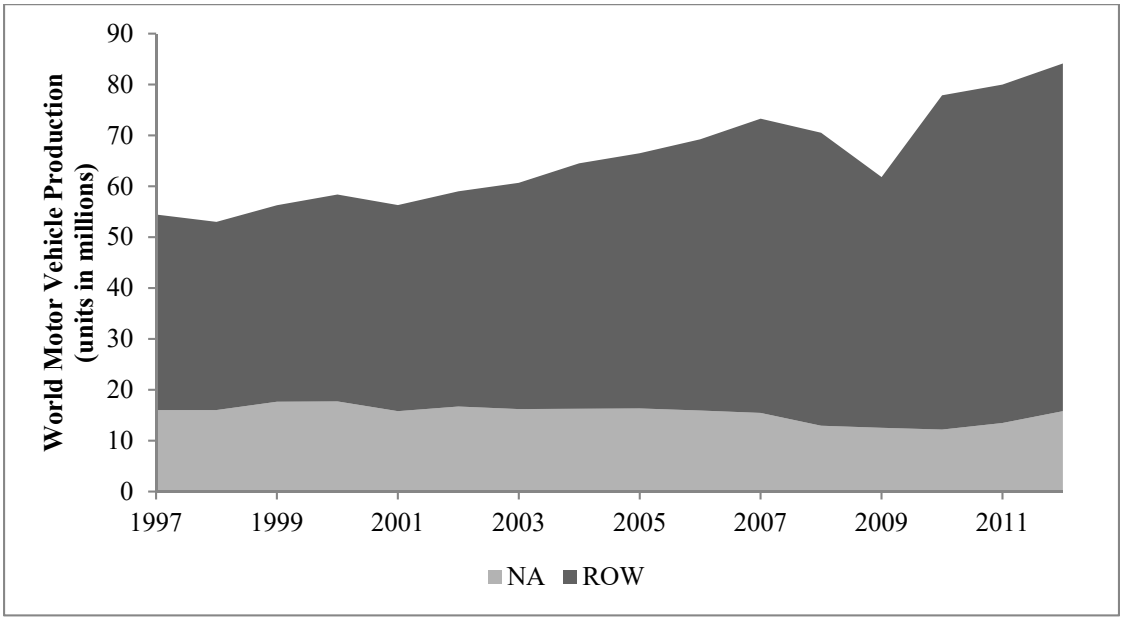


Data source: National Safety Council.

Exhibit 8

DuPont Corporation: Sale of Performance Coatings

Trends Affecting Paint Demand from Vehicle Manufacturers
World Motor Vehicle Production



Notes: NA = North America (United States, Canada, and Mexico); ROW = Rest of World.

World Production of Vehicles, 2000 and 2010.

	2000	2010	% Change
North America	**17,699**	**12,177**	**–31%**
United States	12,800	7,761	–39%
Canada	2,964	2,071	–30%
Mexico	1,935	2,345	21%
Asia-Oceania	**17,928**	**40,900**	**128%**
Japan	10,144	9,625	–5%
China	2,069	18,263	783%
India	796	3,537	344%
South Korea	3,115	4,272	37%
Europe	**20,275**	**19,822**	**–2%**
France	3,348	2,229	–33%
Germany	5,527	5,906	7%
Italy	1,738	838	–52%
Spain	3,032	2,388	–21%
United Kingdom	1,814	1,393	–23%
South America	**2,076**	**4,464**	**115%**

Data source: Organisation Internationale des Constructeurs d'Automobiles (OICA) production statistics.

Exhibit 9

DuPont Corporation: Sale of Performance Coatings

Stand-Alone Valuation
(dollars in millions)

PPG Industries

Metric	Actual 2011		Projected 2012E	Projected 2013E
Sales Growth (%)	10.9%		***4.1%***	***4.3%***
EBIT Margin (Pretax)	11.2%		***11.0%***	***12.0%***
EV/EBITDA 2012 (×)	7.3			

DuPont Performance Coatings

Metric	2011A	Closing	Projected 2012E	2013E	2014E	2015E	2016E
Sales Growth (%)	12.5%		4.0%	4.0%	4.0%	4.0%	4.0%
Depreciation and Amortization	$104		$115	$118	$122	$125	$130
EBIT Margin (Pretax)	6.3%		10.0%	10.0%	10.0%	10.0%	10.0%
Tax Rate[1]	25%		25%	25%	25%	25%	25%
Capital Expenditures	$80		$115	$122	$132	$144	$150
Net Working Capital (%)			15.0%	15.0%	15.0%	15.0%	15.0%
Terminal EBITDA Multiple (×)[2]							7.0
Debt/EBITDA 2012 (×)	N/A						
Debt							
Blended Interest Rate on Debt	6.75%						
Unlevered Cost of Equity[3]	11.2%						

Exhibit 9 (continued)

Stand-Alone Valuation (continued)

APV Analysis							
	2011A	**Closing**	**2012E**	**2013E**	**2014E**	**2015E**	**2016E**
Net Sales	$4,281		$4,452	$4,630	$4,816	$5,008	$5,208
EBITDA	$372		$560	$581	$604	$626	$651
Depreciation and Amortization	$104		$115	$118	$122	$125	$130
Pretax Operating Income (EBIT)	$268		$445	$463	$482	$501	$521
Interest Expense			$0	$0	$0	$0	$0
Earnings before Taxes			$445	$463	$482	$501	$521
Taxes			($111)	($116)	($120)	($125)	($130)
Net Income			$334	$347	$361	$376	$391
Increase in Net Working Capital			($26)	($27)	($28)	($29)	($30)
Capital Expenditures			($115)	($122)	($132)	($144)	($150)
Residual (Levered) Cash Flow			$308	$317	$323	$327	$341
Unlevered Free Cash Flow (FCF)			$308	$317	$323	$327	$341
Terminal Value							$4,738
Unlevered FCF, including TV			$308	$317	$323	$327	$5,079
Enterprise Value (EV)		**$3,970**					
Interest Tax Shield							
PV Tax Shield							
EV with Tax Shield		**$3,970**					

Data sources: Historical information for DPC is from DuPont company Databooks. Projections are case writer estimates. PPG's enterprise value is based on prices at the end of January 2012. PPG's projections are based on Buckingham Research Group analyst report, *PPG Industries: "Other" Industrial Coatings Review*, May 21, 2012.

Notes to stand-alone model:
[1] DPC's estimated average tax rate of 25% is lower than the U.S. marginal corporate tax rate as a result of international operations taxed at lower rates.
[2] Assumed forward exit multiple for Terminal Value is based on projected EBITDA growth in 2017 and is below PPG's multiple because of lower margins and slightly lower growth.
[3] Unlevered Cost of Equity (k_u) is based on PPG's estimated unlevered beta of 1.2, a normalized 4% long-term U.S. Treasury rate, and a 6% market risk premium.

Exhibit 10

DuPont Corporation: Sale of Performance Coatings

Financial Characteristics of Potential Strategic Buyers
(fiscal-year-end values in millions, except multiples and percentages)

	Market Capitalization 12/31/2011	Revenues	EBITDA	Total Debt	Total Debt/ EBITDA	Five-Year Stock Performance	One-Year Stock Performance
Akzo Nobel NV	$11,837	$18,972	$2,311	4,585	2.0×	NA	-21.0%
BASF SE	$66,702	$95,482	$15,205	16,972	1.1×	-5.4%	-12.8%
PPG Industries	$12,893	$14,885	$2,141	3,682	1.7×	30.0%	-0.7%
Sherwin-Williams	$9,263	$8,766	$956	993	1.0×	40.4%	6.6%
Valspar	$3,637	$3,953	$513	1,057	2.1×	41.0%	13.0%

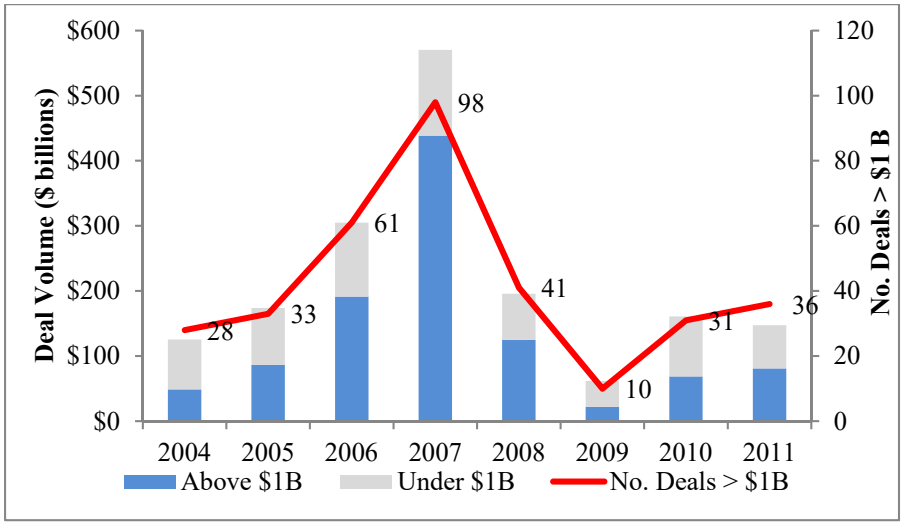
Data source: Financial data are from Capital IQ; stock price performance is based on CRSP data.

Exhibit 11

DuPont Corporation: Sale of Performance Coatings

Buyout Deals

Volume and Number of Buyout Deals above $1 Billion



Debt, Equity, and Purchase Price Multiples for Buyout Deals

Medians	2004	2005	2006	2007	2008	2009	2010	2011
Total Debt/EBITDA	5.3	5.0	5.9	7.6	4.4	3.3	4.6	6.2
Equity/EBITDA	2.3	3.2	3.1	1.2	5.0	3.2	2.7	2.8
Purchase Price/EBITDA	7.6	8.2	9.0	8.8	9.4	6.5	7.3	9.0

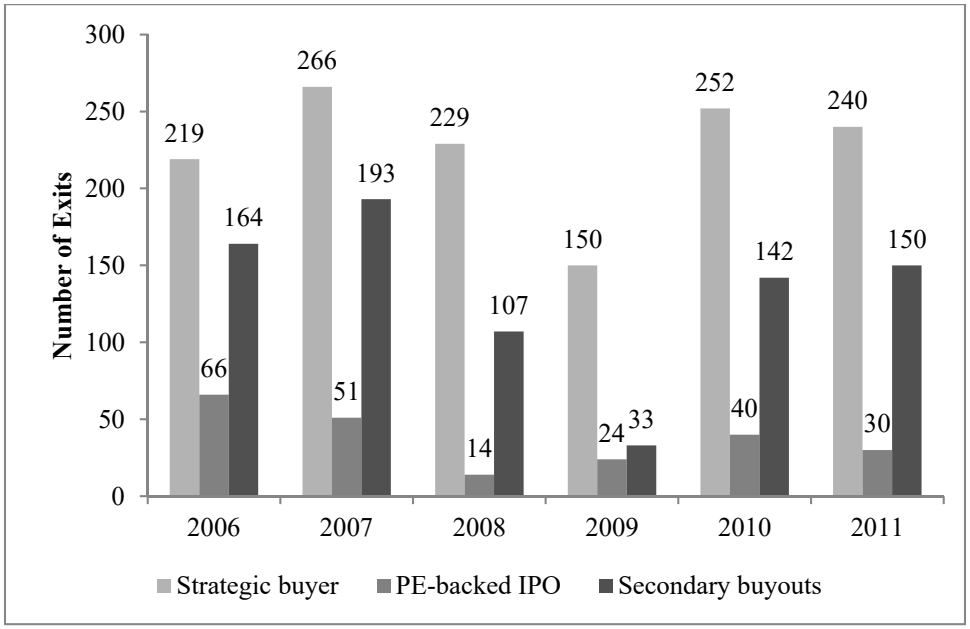
Data source: PitchBook, Annual Private Equity Breakdown 2012.

Exhibit 12

DuPont Corporation: Sale of Performance Coatings

Private Equity Exits

Number of Exits by Exit Type



Exit Multiple by Exit Type

Medians	2006	2007	2008	2009	2010	2011	Average
Strategic buyer	9.5	10.9	9.5	8.0	8.5	8.7	9.2
PE-backed IPOs	5.8	11.7	10.8	7.4	7.2	5.1	8.0
Secondary buyouts	11.0	6.9	9.8	12.4	9.4	9.6	9.9

Data source: PitchBook and Grant Thornton, Private Equity Exits Report, 2012 Annual Edition.