CASE 28

The Rise and Fall of Eastman Kodak: Will It Survive Beyond 2012?

Gareth R. Jones
Texas A&M University

In 2011, Antonio Perez, CEO of the Eastman Kodak Co., was reflecting upon his company's current situation. Since he had become CEO in 2005 and launched his strategy to make Kodak a leader in the consumer and business imaging markets, progress had been slow. His efforts to cut costs while heavily investing to develop new digital products had resulted in Kodak losing money in most of the previous years, and Kodak had already cut its profit estimates for 2011.

After spending billions of dollars to create the digital competencies necessary to give Kodak a competitive advantage, and after cutting tens of thousands of jobs, the company's future was still in doubt. Could Kodak survive given the fact its digital rivals were continually introducing new and improved products that made its own look out of date? Was Kodak's new digital business model really working? And, did it have the digital products in place to rebuild its profitability and fulfill its "You press the button, we do the rest" promise? Or, after 10 years of declining sales and profits was the company on the verge of bankruptcy in the face of intense global competition on all product fronts?

Kodak's History

Eastman Kodak Co. was incorporated in New Jersey on October 24, 1901, as successor to the Eastman Dry Plate Co., a business originally established by George Eastman in September 1880. The Dry Plate Co. had been formed to develop a dry photographic plate that was more portable and easier to use than other plates in the rapidly developing photography field. To mass produce the dry plates uniformly, Eastman patented a plate-coating machine and began to commercially manufacture the plates. Eastman's continuing interest in the infant photographic industry led to his development in 1884 of silver halide paper-based photographic roll film. Eastman capped this invention with his introduction of the first portable camera in 1888. This camera used his own patented film, which was developed using his own proprietary method. Thus, Eastman had gained control of all the stages of the photographic process. His breakthroughs made possible the development of photography as a mass leisure activity. The popularity of the "recorded images" business was immediate, and sales boomed. Eastman's inventions revolutionized the photographic industry, and his company was uniquely placed to lead the world in the development of photographic technology.

From the beginning, Kodak focused on 4 primary objectives to guide the growth of its business: (1) mass production to lower production costs; (2) maintaining the lead in technological developments; (3) extensive product advertising; and (4) the development of a multinational business to exploit the world market. Although common now, those goals were revolutionary at the time. In due course, Kodak's yellow boxes could be found in every country in the world. Preeminent in world markets, Kodak operated research, manufacturing, and distribution networks throughout Europe and the rest of the world. Kodak's leadership in the development of advanced color film for simple, easy-to-use cameras and in quality film processing was maintained by constant research and development in its many research laboratories. Its huge volume of production allowed it to obtain economies of scale. Kodak was also its own supplier of the plastics and chemicals

 For the most recent financial results of the company discussed in this case, go to **http://finance.yahoo.com**, input the company's stock symbol (EK), and download the latest company report from its homepage.

needed to produce film, and it made most of the component parts for its cameras.

Kodak became one of the most profitable American corporations, and its return on shareholders' equity averaged 18% for many years. To maintain its competitive advantage, it continued to heavily invest in research and development in silver halide photography, principally remaining in the photographic business. In this business, as the company used its resources to expand sales and become a global business, the name *Kodak* became a household word signifying unmatched quality. By 1990, approximately 40% of Kodak's revenues came from sales outside the United States.

Starting in the early 1970s, however, and especially in the 1980s, Kodak ran into major problems, reflected in the drop in return on equity. Its preeminence was being increasingly threatened as the photographic industry and industry competition changed. Major innovations were taking place within the photography business, and new methods of recording images and memories beyond silver halide technology, most noticeably digital imaging, were emerging.

Increasing Competition

In the 1970s, Kodak began to face an uncertain environment in all its product markets. First, the color film and paper market from which Kodak made 75% of its profits experienced growing competition from Japanese companies, led by FujiFilm. Fuji invested in huge, low-cost manufacturing plants, using the latest technology to mass-produce film in large volume. Fuji's low production costs and aggressive, competitive price cutting squeezed Kodak's profit margin. Finding no apparent differences in quality, and obtaining more vivid colors with the Japanese product, consumers began to switch to the cheaper Japanese film, and this shift drastically reduced Kodak's market share.

Besides greater industry competition, another liability for Kodak was that it had done little internally to improve productivity to counteract rising costs. Supremacy in the marketplace had made Kodak complacent, and it had been slow to introduce productivity and quality improvements. Furthermore, Kodak (unlike Fuji in Japan) produced film in many different countries in the world rather than in one single country, and this also gave Kodak a cost disadvantage. Thus, the combination of Fuji's efficient production and Kodak's own management style allowed the Japanese to become the cost leaders—to charge lower prices and still maintain profit margins.

Another blow on the camera front came when Kodak lost its patent suit with Polaroid Corp. Kodak had abandoned the instant photography business in the 1940s, when it turned down Edwin Land's offer to develop his instant photography process. Polaroid developed it, and instant photography was wildly successful, capturing a significant share of the photographic market. In response, Kodak set out in the 1960s to develop its own instant camera to compete with Polaroid's. According to testimony in the patent trial, Kodak spent $94 million perfecting its system, only to scrub it when Polaroid introduced the new SX-70 camera in 1972. Kodak then rushed to produce a competing instant camera, hoping to capitalize on the $6.5 billion in sales of instant cameras. However, a federal judge ordered Kodak out of the instant photography business for violating 7 of Polaroid's patents in its rush to produce an instant camera. The cost to Kodak for closing its instant photography operation and exchanging the 16.5 million cameras sold to consumers was over $800 million. By 1985, Kodak reported that it had exited the industry at a cost of $494 million; however, in 1991 Kodak also agreed to pay Polaroid $925 million to settle out of court a suit that Polaroid had brought against Kodak for patent infringement.

On its third product front, photographic processing, Kodak also experienced problems. It faced stiff competition from foreign manufacturers of photographic paper and from new competitors in the film-processing market. Increasingly, film processors were turning to cheaper sources of paper to reduce the costs of film processing. Once again, the Japanese had developed cheaper sources of paper and were eroding Kodak's market share. At the same time, many new independent film-processing companies had emerged and were printing film at far lower rates than Kodak's own official developers. These independent laboratories had opened to serve the needs of drugstores and supermarkets, and many of them offered 24-hour service. They used the less expensive paper to maintain their cost advantage and were willing to accept lower profit margins in return for a higher volume of sales.

As a result, Kodak lost markets for its chemical and paper products—products that had contributed significantly to its revenues and profits. The photographic industry surrounding Kodak had dramatically changed. Competition had increased in all product areas, and Kodak, while still the largest producer, faced increasing threats to its profitability as it was forced to reduce prices to match the competition.

The Emergence of Digital Imaging

Another major problem that Kodak had to confront was not because of increased competition in its *existing* product markets, but because of the emergence of *new* industries that provided alternative means of producing and recording images. The introduction of videotape recorders, and later video cameras, gave consumers an alternative way to use their dollars to produce images, particularly moving images. Video basically destroyed the old, film-based home movie business upon which Kodak had a virtual monopoly. After Sony's introduction of the Betamax machine in 1975 the video industry grew into a multibillion-dollar business. VCRs and first 16mm camera, and the compact 8mm video cameras became increasingly hot-selling items as their prices fell with the growth in demand and the standardization of technology. Then, the later introduction of laser disks, compact disks, and, in the 1990s, DVDs were also significant developments. The vast amount of data that can be recorded on these disks gave them a great advantage in reproducing images through electronic means.

It was increasingly apparent that the entire nature of the imaging and recording process was changing from chemical methods to electronic, digital methods of reproduction. Kodak's managers should have perceived this transformation to digital-based methods as a disruptive technology because its technical preeminence was based on silver halide photography. However, as is always the case with such technologies, the real threat lies in the future. These changes in the competitive environment caused enormous difficulties for Kodak. Between 1972 and 1982, profit margins from sales declined from 16% to 10%. Kodak's glossy image lost its luster. It was in this declining situation that Colby Chandler took over as chairman in July 1983.

Kodak's New Strategy

Chandler saw the need for dramatic changes in Kodak's businesses and quickly pioneered 4 changes in strategy: (1) he strove to increase Kodak's control of its existing chemical-based imaging businesses; (2) he aimed to make Kodak the leader in electronic imaging; (3) he spearheaded attempts by Kodak to diversify into new businesses to increase profitability; and (4) he began on major efforts to reduce costs and improve productivity. To achieve the first 3 objectives, he began a huge program of acquisitions, realizing that Kodak did not have the time to venture new activities internally. Because Kodak was cash rich (it was one of the richest global companies) and had low debt, financing these acquisitions was easy.

For the next 6 years, Chandler acquired businesses in 4 main areas. By 1989, Kodak had been restructured into 4 main operating groups: imaging, information systems, health, and chemicals. At its annual meeting in 1988, Chandler announced that with the recent acquisition of Sterling Drug for $5 billion, the company had achieved its objective: "With a sharp focus on these 4 sectors, we are serving diversified markets from a unified base of science and manufacturing technology. The logical synergy of the Kodak growth strategy means that we are neither diversified as a conglomerate nor a company with a 1-product family."

The way these operating groups developed under Chandler's leadership is described in the following text.

The Imaging Group

Imaging comprised Kodak's original businesses, including consumer products, motion picture and audiovisual products, photo finishing, and consumer electronics. The unit was charged with strengthening Kodak's position in its existing businesses. Kodak's strategy in its photographic imaging business has been to fill gaps in its product line by introducing new products either made by Kodak or bought from Japanese manufacturers and sold under the Kodak name. For example, to maintain market share in the camera business, Kodak introduced a new line of disk cameras to replace the Instamatic lines. Kodak also bought a minority stake and entered into a joint venture with Chinon of Japan to produce a range of 35mm automatic film cameras that would be sold

under the Kodak name. This arrangement would capitalize upon Kodak's strong brand image and give Kodak a presence in this market to maintain its camera and film sales. Kodak sold 500,000 cameras and gained 15% of the declining film camera market. In addition, Kodak invested heavily in developing new and advanced film such as a new range of "DX" coded film to match the new 35mm camera market that possesses the vivid color qualities of Fuji's film. Kodak had not developed vivid film color earlier because of its belief that consumers wanted "realistic" color—its managers were still fixated on improving core declining film business.

Kodak also made major moves to solidify its hold on the film-processing market. It attempted to stem the inflow of foreign low-cost photographic paper by gaining control over the processing market. In 1986, it acquired Fox Photo Inc. for $96 million and became the largest national wholesale photograph finisher. In 1987, it acquired the American Photographic Group, and in 1989, it solidified its hold on the photofinishing market by forming a joint venture, Qualex, with the photofinishing operations of Fuqua industries. These acquisitions provided Kodak with a large, captive customer for its chemical and paper products as well as control over the photofinishing market. Also, in 1986 Kodak introduced new improved 1-hour film-processing labs to compete with other photographic developers. To accompany the new labs, Kodak popularized the Kodak "Color Watch" system that requires these labs to use only Kodak paper and chemicals. Kodak's strategy was to stem the flow of business to 1-hour mini-labs and also establish the industry standard for quality processing—it succeeded but the pace of change to the digital world was accelerating and by the end of the 1980s, given the soaring popularity of digital PCs Kodak's managers should have recognized they were on the wrong track.

Kodak's rapidly declining profitability forced it to engage in a massive internal cost-cutting effort to improve the efficiency of the photographic products group. Beginning in 1984, it introduced more and more stringent efficiency targets aimed at reducing waste while increasing productivity. In 1986, it established a baseline for measuring the total cost of waste incurred in the manufacture of film and paper throughout its worldwide operations. By 1987, it had cut that waste by 15%, and by 1989, it announced total cost savings worth $500 million annually. This was peanuts given the rapidly changing competitive situation—Kodak's managers did not want to shrink their large, bureaucratic company that had become conservative and paternalistic over time. As a result, Kodak's profits dropped dramatically in 1989 as all film makers woke up to the new competitive reality and Polaroid and Fuji also aggressively tried to capture market share by engaging in price cutting and increasing advertising to raise market share. The result was even further major declines in profitability. These rising expenditures offset most of the benefits of Kodak's cost-cutting effort, and there was little prospect of increasing profitability because Kodak's core photographic imaging business was in decline—Kodak already had 80% of the market, it was tied to the fortunes of one industry. In addition, the increasing use and growing applications of digital imaging techniques, led to Chandler's second strategic thrust: an immediate policy of acquisition and diversification into new industries, including the electronic imaging business with the stated goal of being first in film and digital imaging. He thought the two could still co-exist. He could not understand that digital imaging was a disruptive technology.

The Information Systems Group

In 1988, Sony introduced a digital electronic camera that could take still pictures and then transmit them back to a television screen. This was an obvious signal that the threat to Kodak from new digital imaging techniques was going to accelerate. However, at that time, the pictures taken with video film could not match the quality achieved with chemical reproduction. Technology will always advance, and the introduction of CDs was also a sign that new form of digital storage media were on the horizon—the silver halide film media was already out of date as declining sales showed. For Kodak to survive in the imaging business, its managers woke up to the fact that it required expertise in a broad range of new technologies to satisfy customers' recording and imaging needs—they began to see the threat posed by the disruptive technology. Kodak's managers saw in all its film markets different types of digital products were emerging as strong competitors. For example, electronic imaging had become important in the medical sciences and in all business, technical, and research applications driven by introduction of ever more powerful servers and PCs.

However, Kodak's managers did not choose to focus on imaging products and markets close to "photographs"—for example Kodak could have bought Sony or Apple. Instead, they began to target any kind of imaging applications in communications, computer science, and similar applications, that they believed would be important in digital imaging markets of the future. Because Kodak had *no* expertise in digital imaging, its managers decided to acquire companies they perceived did have these skills and then market these companies' products under its own famous brand name. For example, a Kodak electronic publishing system for business documents, and a Kodak imaging record keeping system.

Kodak began its disastrous strategy of acquisitions and joint ventures that wasted much of its huge retained earnings in new imagining technologies that its managers hoped, somehow, would increase its future profitability. In the new information systems group, acquisitions included Atex Inc., Eikonix Corp., and Disconix Inc. Atex made newspaper and magazine electronic publishing and text-editing systems to newspapers and magazines worldwide as well as to government agencies and law firms. Eikonix Corp. was a leader in the design, development, and production of precision digital imaging systems. Further growth within the information systems group came with the development of the Ektaprint line of copier-duplicators that did achieve some success in the competitive high-volume segment of the copier market. In 1988, Kodak announced another major move into the copier service business when it purchased IBM's copier service business and that it would market copiers manufactured by IBM as well as its own Ektaprint copiers. But these copiers were not based on digital imaging—they were still ink-based even though they used digital technology. With these moves, Kodak extended its activities into the electronic areas of artificial intelligence, computer systems, consumer electronics, peripherals, telecommunications, and test and measuring equipment. Kodak was hoping to gain a strong foothold in these new businesses to make up for losses in its traditional business—but it was still not trying to streamline and shrink its core business to reduce its cost structure fast enough, and these acquisitions raised its cost structure.

In addition, top managers now terrified by how far Kodak was behind, decided to purchase imaging companies that made products as diverse as computer workstations and floppy disks! Kodak aggressively acquired any IT companies that might fill in its product lines and obtain technical expertise in digital technology, and help it in its core imaging business. After taking more than a decade to make its first 4 acquisitions, Kodak completed 7 acquisitions in 1985 and more than 10 in 1986. Among the 1985 acquisitions was Verbatim Corp., a major producer of floppy disks. This acquisition made Kodak one of the 3 big producers in the floppy disk industry—an industry in which it had no expertise.

In entering office information systems, Kodak entered new markets where it faced strong competition from established companies such as IBM, Apple, and Sun Microsystems. The Verbatim acquisition brought Kodak into direct competition with 3M. Entering the copier market brought Kodak into direct competition with Japanese firms such as Canon, which was the leader in marketing advanced, new low-cost copiers—and Canon still is today.

In brief, Kodak was entering new businesses where it had little expertise, where it was unfamiliar with the competitive forces, and where there was already strong competition. Soon, Kodak was forced to retreat from many of these markets. In 1990, it announced that it would sell Verbatim to Mitsubishi. (Mitsubishi was immediately criticized by Japanese investors for buying a company with an old, outdated product line!) Kodak was forced to withdraw from many other areas of business simply by selling assets, closing operations, and taking a write-off such as its non-digital videocassette operations. The fast-declining performance of its information systems group, which Kodak attributed to increased competition and delays in bringing out new products, reduced earnings from operations from a profit of $311 million in 1988 to a loss of $360 million in 1989. This was a major wake up call to investors who now realized that Kodak's top managers had no viable business model for the company and were simply wasting its capital.

The Health Group

Kodak's interest in health products emerged from its involvement in the design and production of film for medical and dental X-rays. The growth of digital imaging in medical sciences seemed another opportunity for Kodak to apply its "skills" in new markets, and it began to develop such products as Kodak Ektachem—clinical blood analyzers. It developed

other products—Ektascan laser imaging films, printers, and accessories—for improving the display, storage, processing, and retrieval of diagnostic images. This seemed more related to its core business imaging mission.

However, Kodak did not confine its interests in medical and health markets to imaging-based products. In 1984, it established within the health group a life sciences division to develop and commercialize new products deriving from Kodak's distinctive competencies in its still profitable chemical division. Kodak had about 500,000 chemical formulations upon which it could base new products, top managers decided that they could use these resources to enter newly developing biotechnology markets and grow its "life sciences" division that soon engaged in joint ventures with major biotechnology companies such as Amgen and Immunex. However, these advances into biotechnology proved highly expensive, and again Kodak had no expertise in this complex industry! Soon, even its own managers realized this, and in 1988 Kodak quietly exited the industry. What remained of the life sciences division was then folded into the health group in 1988, when Chandler completed Kodak's biggest, and most useless acquisition, the purchase of Sterling Drug, for more than $5 billion.

The Sterling acquisition once again had no relevance to Kodak's business model. Sterling Drug was a global maker of prescription drugs, over-the-counter medicines, and consumer products with familiar brand names such as Bayer Aspirin, Phillips' Milk of Magnesia, and Panadol. Chandler thought this merger would allow Kodak to become a major player in the pharmaceuticals industry. With this acquisition, Kodak's health group became pharmaceutically oriented, and its mission was to develop a full pipeline of major prescription drugs and a world-class portfolio of over-the-counter medicines—something that is an enormously complex, uncertain, and expensive process. Analysts immediately questioned the acquisition because, once again, Chandler was taking Kodak into a new industry where competition was intense and was consolidating because of the massive costs of drug development. Some analysts claimed that the acquisition was aimed at deterring a possible takeover of Kodak—because it was still cash rich and its capital was being wasted! The acquisition of Sterling also resulted in a major decline in profits in 1989; this was growth without profitability.

The Chemical Division

Established almost a hundred years ago to be the high-quality supplier of raw materials for Kodak's film and processing businesses, the Eastman Chemical division was responsible for developing many of the chemicals and plastics that made Kodak the leader in silver-halide filmmaking. The chemical division was also a major supplier of chemicals, fibers, and plastics to thousands of customers worldwide, and Kodak had benefited from the profits from its plastic material and resins unit because of the success of Kodak PET (polyethylene terephthalate), today the major polymer used in soft-drink bottles.

However, in its chemical division, Kodak also ran into the same kinds of problems experienced by its other operating groups. There is intense competition in the plastics industry, not only from U.S. firms like DuPont, but also from large Japanese and European. In specialty plastics and PET, for example, increased competition forced Kodak to reduce prices by 5% and this also led to the plunge in its earnings in 1989. The chemical division, however, had excellent resources and competencies—but not now that they were still controlled by a declining film giant.

Kodak's Failing Business Model Results in Massive Cost Cutting

With the huge profit reversal in 1989 after all the years of acquisition and "internal development," analysts were questioning the existence of the "logical synergy," or economies of scope that Chandler claimed for Kodak's new acquisitions. Certainly, Kodak had new sources of revenue—but was this profitable growth? Was Kodak positioned to compete successfully in the future? What were the synergies that Chandler was talking about? And wasn't any increase in profit due to its attempts to reduce costs?

Indeed, as Chandler made his acquisitions, he also realized the increasing need to change Kodak's management style and organizational structure to reduce costs and allow it to respond more quickly to changes in the competitive environment. Because of its dominance in the industry, in the past, Kodak had not worried about outside competition. As a result, the organizational culture at Kodak emphasized traditional, conservative values rather than

entrepreneurial values. Kodak was often described as a conservative, plodding monolith because all decision making had been centralized at the top of the organization among a clique of senior managers. Furthermore, the company had been operating along functional lines. Research, production, and sales and marketing had operated separately in different units at corporate headquarters and dispersed to many different global locations. Kodak's different product groups also operated separately. The result of these factors was a lack of communication and slow, inflexible decision making that led to delays in making new product decisions. When the company attempted to transfer resources between product groups, conflict often resulted, and the separate functional operations also led to poor product group relations, for managers protected their own turf at the expense of corporate goals. Moreover, there was a lack of attention to the bottom line, and management failed to institute measures to control waste.

Another factor encouraging Kodak's conservative orientation was its promotion policy. Seniority and loyalty to "Mother Kodak" counted nearly as much as ability when it came to promotions. Only 12 presidents had led the company since its beginnings in the 1880s. Long after George Eastman's suicide in 1932, the company followed his cautious ways: "If George didn't do it, his successors didn't either."

Kodak's technical orientation also contributed to its problems. Traditionally, its engineers and scientists had dominated decision making, and marketing had been neglected. The engineers and scientists were perfectionists who spent enormous amounts of time developing, analyzing, testing, assessing, and retesting new products. Little time, however, was spent determining whether the products satisfied consumer needs. As a result of this technical orientation, management passed up the invention of xerography, leaving the new technology to be developed by a small Rochester, New York, firm named Haloid Co.—later Xerox. Similarly, Kodak had passed up the instant camera business.

With its monopoly in the photographic film and paper industry gone, Kodak was in trouble. Chandler had to alter Kodak's management orientation. He began with some radical changes in the company's culture and structure. Forced to cut costs, Chandler began a massive downsizing of the work force to eliminate the fat that had accumulated during Kodak's prosperous past. Kodak's policy of lifetime employment was swept out the door when declining profitability led to continuing employee layoffs and cost reductions. Between 1985 and 1990, Kodak laid off over 100,000 of its former 136,000 employees, less that 10% of its workforce and a tiny percentage that would do nothing to prevent its declining performance. Kodak was now a company that had come unstuck, it could not recognize that it had lost its competitive advantage and that all its new strategies were just accelerating its decline. It was burning money but its top managers did not want to damage the company or its employees, it was obviously a dinosaur.

Every move top managers made failed. Kodak attempted to create a structure and culture to encourage internal venturing. It formed a "venture board" to help underwrite projects imitating 3M and created an "office of submitted ideas" to screen projects. Kodak's attempts at new venturing were unsuccessful, of the 14 ventures that Kodak created 6 were shut down, 3 were sold, and 4 were merged into other divisions. One reason was Kodak's management style, which also affected its new businesses. Kodak's top managers never gave operating executives real authority or abandoned the centralized, conservative approach of the past. Kodak also reorganized its worldwide facilities to increase productivity and lower costs, For example, Kodak streamlined European production by closing duplicate manufacturing facilities and centralizing production and marketing operations, and in doing so thousands more employees were laid off.

George Fisher Tries to Change Kodak

Chandler retired as CEO in 1989, and was replaced by his COO, Kay Whitmore, another Kodak veteran. As Kodak's performance continued to plunge, Whitmore hired new top managers from outside Kodak to help restructure the company. When they proposed selling off Kodak's new acquisitions and laying off tens of thousands more employees to reduce costs Whitmore resisted; he too was entrenched in the old Kodak culture. Kodak's board of directors ousted Whitmore as CEO, and in 1993, George Fisher left his job as CEO of Motorola to become Kodak's new CEO. At Motorola, he had been credited with leading that company into the digital age.

Fisher's strategy was to reverse Chandler's diversification into any industry outside digital imaging and to strengthen its competencies in this industry. Given that Kodak had spent so much money on making useless acquisitions, and the company was now burdened with huge debt from its acquisitions and because of falling profits, Fisher's solution was dramatic. Strategizing about Kodak's 4 business groups Fisher decided that the over-the-counter drugs component of the health products group was reducing Kodak's profitability and he decided to divest it and use the proceeds to pay off debt. Soon, all that was left of this group was the health imaging business. Fisher also decided that the chemicals division, despite its expertise in the invention and manufacture of chemicals, no longer fit with his new digital strategy. Kodak would now buy its chemicals in the open market, and in 1995 he spun the chemicals division off and gave each Kodak shareholder a share in the new company. This was a very profitable move for shareholders who kept their shares in Eastman Chemicals—its price has soared.

The information systems group with its diverse businesses was a more difficult challenge; the new businesses that would promote Kodak's new digital strategy should be kept, and the businesses which would not should be sold off. Fisher decided that Kodak should focus on building its strengths in document imaging and on photocopiers, business imaging, and inkjet printers, and exit all its business that did not fit this theme.

After 2 years, Fisher had reduced Kodak's debt by $7 billion and boosted Kodak's stock price. Fisher still had to confront the problems inside Kodak's core photographic imaging group, and here the solution was neither easy nor quick. Kodak was still plagued by high operating costs that were over 27% of annual revenue, and Fisher knew he needed to reduce these costs by half to compete effectively in the digital world. Kodak's workforce had shrunk by 40,000 to only 95,000 by 1993, and the only means to quickly slash costs was to implement more layoffs and close down its operations. However, Kodak's top managers fought him all the way because they wanted to keep their power, arguing that it was better to find ways to raise revenue than layoff a loyal workforce to reduce costs.

Kodak put off the need to take the hard steps necessary to reduce operating costs by billions. At the same time, top managers were urging Fisher to invest billions of its declining capital in R&D to build competences in digital imaging. Kodak still had no particular competency in making either digital cameras or the software necessary to allow them to operate efficiently. Over the next 5 years, Kodak spent over 4 billion dollars on digital projects, but new digital products were slow to emerge and its competitors were drawing ahead because they had the first-mover advantage. Also, in the 1990s consumers were slow to embrace digital photography because early cameras were expensive, bulky, and complicated to use, and printing digital photographs was also expensive. By 1997, Kodak's digital business was still losing over $100 million a year and Japanese companies were coming out with the first compact easy to use digital cameras. To make things worse, Kodak's share of the film market was falling as a price war broke out to protect market share and it revenues continued to plunge.

To speed product development, Fisher reorganized Kodak's product divisions into 14 autonomous business units based on serving the needs of distinct groups of customers, such as those for its health products or commercial products. The idea was to decentralize decision making and put managers closer to their major customers and so escaping Kodak's suffocating centralized style of decision making. Fisher also changed the top managers in charge of the film and camera units but he did not bring in many outsiders to spearhead the new digital efforts—Kodak's top managers prevented him from doing this. However, the creation of these 14 business units also meant that operating costs soared because each unit had its own complement of functions; thus sales forces and so on were duplicated.

The bottom line was that Fisher was making little progress, was in a weak position, and was pressured by powerful top managers backed by Kodak's directors. The result was that Daniel A. Carp, a Kodak veteran, was named Kodak's president and COO meaning that he was Fisher's heir apparent as Kodak's CEO. Carp had spearheaded the global consolidation of its operations and its entry into major new international markets such as China. He was widely credited with having had a major impact on Kodak's attempts to fight Fuji on a global level and help it to maintain its market share. Henceforth, Kodak's digital and applied imaging, business imaging, and equipment manufacturing—almost all its major operating groups—would now report to Carp.

However, Kodak's revenues and profits continued to decline throughout the 1990s and into the 2000s as it steadily lost market share in its core film business to Fuji and new cheap generic film makers, so prices and profits plunged and so did its market share—down over 25% in the last decade to 66% of the U.S. market meaning the loss of billions in annual revenues. Meanwhile, the quality of the pictures taken by digital cameras was advancing rapidly as as newer models touted higher resolutions (more pixels). The price of basic digital cameras was falling rapidly because of huge economies of scale in global production by companies such as Sony and Canon. Finally, the digital photography market was taking off, but could Kodak meet the challenge?

The answer was no. Kodak had effectively taken control of Japanese camera manufacturer Chinon to make its advanced digital cameras and scanners and Kodak continued to introduce low-priced digital cameras—but it was just one more company in a highly competitive market now dominated by Sony and Canon. Kodak also bought online companies that offered digital processing services over the Internet, and began offering Kodak branded digital picture-maker kiosks in stores where customers could edit and print out their digital images. Although Kodak was making some progress in its digital mission; its digital cameras, digital kiosks, and online photofinishing operations were being increasingly used by customers, it was being left behind by agile competitors. In 1999, Carp replaced Fisher as CEO to head Kodak's fight to develop the digital skills that would lead to innovative new products in all its major businesses. In 1999, its health imaging group announced the fastest digital image management system for echocardiography labs. It also entered the digital radiography market with 3 state-of-the-art digital systems for capturing X-ray images. Its document imaging group announced several new electronic document management systems. It also teamed up with inkjet maker Lexmark to introduce the stand-alone Kodak Personal Picture Maker by Lexmark, which could print color photos from both compact flash cards and smart media. Its commercial and government systems group announced advanced new high-powered digital cameras for uses such as in space and in the military.

With these developments, Kodak's net earnings increased between 1998 and 2000, and its stock price rose. However, one reason for the increase in profits was that the devastating price war with Fuji ended in 1999 as both companies realized it simply reduced both their profits. The main reason was simply the fact that the stock market soared in the late-1990s and Kodak's stock price increased with it—for no good reason. Kodak was still not introducing the new digital imaging products it needed to drive its future profitability. Also, Carp made no major efforts to reduce costs in its film products division, which had powerful managers backing Carp to become CEO to make sure he did nothing threaten their interests. It was the same old story, a rising cost structure and declining revenues and profits.

Kodak in the 2000s

Rapidly advancing digital technology and the emergence of ever more powerful, easy to use digital imaging devices began to increasingly punish Kodak in the 2000s. In the consumer imaging group, for example, Kodak launched a new camera, the EasyShare, in 2001. Over 4 million digital cameras were sold in 2000 and over 6 million in 2001. However, given the huge R&D costs to develop its new products, and intense competition from Japanese companies like Sony and Canon, Kodak could not make any money from its digital cameras because profit margins were razor thin. Moreover, every time it sold a digital camera, it reduced demand for its high-margin film products that really had been the source of its incredible profitability in the past. Kodak was being forced to cannibalize a profitable product (film) for an unprofitable one (digital imaging). Kodak was now a dinosaur in the new digital world and its stock collapsed in 2000 and 2001, falling from $80 to $60 to around $30, as investors now saw the writing on the wall as its profitability plunged.

Carp argued that Kodak would make more money in the future from sales of the highly profitable photographic paper necessary to print these images and from its photofinishing operations. However, consumers were not printing out many of the photographs they took, preferring to save most in digital form and display them on their PCs and then on the rapidly emerging digital photo frames market that made film-based photograph albums obsolete. Revenues would not increase from sales of film or paper. Similarly, the photofinishing market

was declining and its own Qualex and Fox photo finishing chains were forced into bankruptcy.

Kodak was also doing poorly in the important health imaging market where its state-of-the-art imaging products were expected to boost its profitability. However, competition increased when health care providers demanded lower prices from imaging suppliers and Kodak was forced to slash its prices to win contracts with other large health care providers. Competition was so intense that in 2001, sales of laser printers and health-related imagining products, which make up Kodak's second biggest business fell 7% and profit fell 30% causing Kodak's stock price to plunge. Also, in 2001 Carp announced another major reorganization of Kodak's businesses to give it a sharper focus on its products and customers, Kodak announced that it would create 4 distinct product groups: the film group, which now contained all its silver halide activities; consumer digital imaging; health imaging, and its commercial imaging group, which continued to develop its business imaging and printing applications. Nevertheless, revenues plunged from $19 billion in 2001 to only $13 billion by 2002 and its profits disappeared.

Analysts wondered if Carp was doing any better than Fisher and if real change was taking place. Now Carp was forced to cut jobs, and by 2003 its workforce was down to 78,000—still far too high a number given its declining performance. Carp was still trying to avoid the massive downsizing that was still needed to take place to make Kodak a viable company because its entrenched, inbred, and unresponsive top managers frustrated real efforts to reduce costs and streamline operations. Despite all the advances it had made in developing its digital skills, Kodak's high operating costs combined with its declining revenues were driving the company further down the road to bankruptcy. Would layoffs or reorganization be enough to turn Kodak's performance around at this point?

2002 proved to be a turning point in the photographic imaging business as sales of digital cameras and other products began to soar at a far faster pace than had been expected. The result for Kodak's film business was disastrous because sales of Kodak film started to fall sharply as did demand for its paper—people printed only a small fraction of the pictures they took. From 2003–2005 this trend accelerated, as it has ever since. Digital cameras became the camera of choice of photographers worldwide and Kodak's film and paper revenues sunk. Kodak had become unprofitable, which was somewhat ironic given that Kodak's line of EasyShare digital cameras had become one of the best-selling cameras, and Kodak was the number 2 global seller with about 18% of the market. However, profit margins on digital products were razor thin because of intense competition from companies such as Canon, Olympus, and Nikon. Profits earned in digital imaging were not enough to offset the plunging profits in its core film and paper making divisions.

The Decline and Fall of Kodak's Core Film Business

In 2004, Carp announced Kodak's cash-cow film business was in "irreversible decline" and that Kodak would stop investing in its core film business and pour all its resources into developing new digital products, such as new digital cameras and accessories to improve its competitive position and profit margins. It bought the remaining 44% of Chinon, its Japanese division that designed and made its digital cameras to protect its competency in digital imaging. Kodak began a major push to develop new state-of-the-art digital cameras and also to develop new skills in inkjet printing to create digital photo printing systems so its users could directly print from its cameras—and achieve economies of scope. Also, Carp announced Kodak would invest to grow its digital health imaging business that had gained market share and it would launch a new initiative to make advanced digital products for the commercial printing industry.

Analysts and investors reacted badly to this news. Xerox had tried to enter the digital printer business years before with no success against HP, the market leader. Moreover, they wondered how new revenues from digital products could ever make up for the loss of Kodak's film and paper revenues. Carp also announced that to fund this new strategy, Kodak would reduce its hefty dividend by 72% from $1.80 to $0.50 a share that would immediately raise $1.3 billion to invest in digital products. Investors had no faith in Carp's new plan, and Kodak's stock plunged to $22, its lowest price in decades. Kodak's top management came under intense criticism for not reducing its cost structure, and Kodak's stock

price continued to fall as it became clear its new strategy would do little to raise its falling revenues—this might be the beginning of Kodak's end.

In 2004, Carp finally announced what the company should have done 10 years before. Kodak would cut its workforce by over 20% by 2007; another 15,000 employees would lose their jobs saving a billion dollars a year in operating costs. Jobs would be lost in film manufacturing at the support and corporate levels and from global downsizing as Kodak reduced its total facilities worldwide by 1/3 and continued to close its out-of-date photofinishing labs that served retailers. This news sent Kodak's share price up by 20% to over $30. But, it was now too late for Kodak to build the competencies that might have offered it a chance to rebuild its presence as a digital imaging company—there were too many agile competitors and digital technology was changing too fast for the company to respond—at least under Carp's leadership.

Antonio Perez Takes Control of Kodak

It had become clear that Carp could and would not radically restructure Kodak's operations and bring it back to profitability. Kodak's board of directors decided to hire Antonio Perez, a former HP printing executive, as its new president and COO, to take charge of the reorganization effort. Perez now made the hard choices about which divisions Kodak would close, and announced the termination of thousands of more managers and employees. Carp resigned and Perez' restructuring efforts were rewarded by his appointment as Kodak's new CEO. He was now in charge of implementing the downsized, streamlined company's new digital imaging strategy. Perez announced a major 3-year restructuring plan in 2004 to try to make Kodak a leader in digital imaging.

With regard to costs, Perez announced that Kodak needed "to install a new, lower-cost business model consistent with the realities of a digital business. The reality of digital businesses is thinner margins—we must continue to move to the business model appropriate for that reality." His main objectives were to reduce operating facilities by 33%, divest redundant operations, and reduce its workforce by another 20%. In 2004, Kodak ended all its traditional camera and film activities except for advanced 35mm film, it allowed Vivitar to make film cameras using its name, but in 2007 that agreement ended. Kodak also implemented SAP's ERP system to link all segments of its value-chain activities together and to its suppliers to reduce costs after benchmarking its competitors showed it had a much higher cost of goods sold. Using ERP, Kodak's goal was to reduce costs from 19% to 14% by 2007 and, therefore, increase profit margins.

From 2004–2007 Perez laid off 25,000 more employees, shut down and sold operating units, and moved to a more centralized structure. All 4 heads of Kodak's main operating groups report directly to Perez. In 2006, Kodak also signed a deal with Flextronics, a Singapore-based outsourcing company, to make its cameras and inkjet printers that allowed it to close its own manufacturing operations. The costs of this transformation were huge. Kodak lost $900 million in 2004, $1.1 billion in 2005, and $1.6 billion in 2006. Because of its transformation, and the high costs involved in terminating employees while investing in new digital technology its 2006 ROIC was a negative 20% compared to its main digital rival, Canon, that enjoyed a positive 14% ROIC!

Kodak's Increasing Problems, 2007

Kodak's revenues and profits were falling fast, but in its 3 primary digital business groups—consumer imaging, business graphics, and health imaging—Perez continued his push to develop innovative new products. The goals was to reduce costs in its declining film division that still enjoyed much higher profit margins than its digital business groups! Kodak had to increase profit margins in all its digital divisions if it was to survive.

The Medical Imaging Group

By 2006, the costs of research and marketing digital products in its consumer and commercial units was putting intense pressure on the company's resources—and Kodak still had to invest large amounts of capital to develop a lasting competitive advantage in its medical imaging unit. Here, too, in the 2000s, Kodak had made many strategic acquisitions to strengthen its competitive advantage in several areas of medical imaging such as digital mammography and advanced X-rays. It had developed one of the top 5 medical imaging groups in the world. However, in May 2006, Kodak put its

medical imaging unit up for sale. It realized that this unit required too much future investment if it was to succeed—and its consumer and commercial groups were not providing the profits necessary to fund this investment. In addition, although the medical unit accounted for nearly 1/5 of Kodak's overall sales in 2005, its operating profit plunged 21% as profit margins fell because of increased competition from major rivals such as GE. In 2007, Kodak announced that it had sold its medical imaging unit to the Onex Corp., Canada's biggest buyout firm, for $2.35 billion. By selling its health imaging unit, Kodak cut another 27,000 jobs, and its global workforce was now under 50,000 from a peak of 145,300 in 1988. Once again Perez said, "We now plan to focus our attention on the significant digital growth opportunities within our businesses in consumer and professional imaging and graphic communications."

Developments in the Consumer Imaging Group

In the consumer group, improving its digital imaging products and services was still the heart of Perez' business model for Kodak; he was determined to make Kodak the leader in digital processing and printing. Perez focused on developing improved digital cameras, inkjet printers, and photofinishing software and services.

Advanced Digital Cameras

Perez pushed designers to continuously innovate new and improved models several times a year to increase profit margins and keep its lead over competitors. It was the market leader in the United States by 2005 in digital camera sales, and total sales and revenues increased sharply. However, by 2006, Kodak's prospects deteriorated as the growth in sales of its digital cameras came to a standstill because of increasing price competition. Now, many new companies like Samsung were making digital cameras that had become a commodity product and profit margins plunged for all digital camera makers. Nevertheless, in 2006, the company brought out new digital cameras products such as its first dual-lens camera, and cameras with Wi-Fi that could connect wirelessly to PCs to download and print photographs, and it used these innovations to once again raise prices. Kodak also entered the growing digital photo-frame market in 2007 introducing 4 new EasyShare-branded models in sizes from 8″ to 11″, some of which included multiple memory card slots and even Wi-Fi capability to connect with Kodak's cameras.

Since 2007, however, Kodak has been forced to cut the prices of its digital cameras to compete with Canon and Sony, U.S. customers had lost faith that its EasyShare models offered the best value and so Kodak's profits from the sales of its cameras continued to decline. At the same time, increasing digital camera sales led to a major decline in sales of its film products. In 1999, Kodak announced that it was ending production of its consumer film products and its "yellow boxes" disappeared from sight as it sought to cut costs. In sum, its camera business offered little prospect of being able to raise its future profitability.

New Inkjet Printers

A major change in strategy occurred when Perez launched an advertising campaign to promote its new Kodak EasyShare all-in-one inkjet printers. This new line of color digital printers used an advanced Kodak ink that would provide brighter pictures that would keep their clarity for decades. Apparently Perez, who had been in charge of HP's printer business before he left Kodak had all along made the development of digital printers a major part of his turnaround strategy—despite that profit margins were shrinking on these products as well. However, Perez' printer strategy was based upon charging a higher price for the printer than competitors like HP and Lexmark, but a much lower price for the ink cartridge to attract a bigger market share—a razor and razor blades strategy. Black ink cartridges would cost $9.99 and color $14.99, which will average out to about $0.10 per print—far lower than the $0.20–$0.25 per print using a HP printer. Perez believed this would attract the large market segment that still wanted to print out large numbers of photographs, and so would make this product a multibillion revenue generator in the future, Perez announced he expected inkjet printing to result in double digit increases in profit within 3 years.

Kodak's new printers did attract a lot of customers who were alienated by the high costs of ink cartridges, however, as online photo processing and storage solutions became more and more popular, and new mobile devices made it increasingly easy

to access photos from the net—on iPods, iPads, and smartphones in general, users had less and less incentive to burden themselves with paper-based photo albums. Nevertheless, its new printers did help increase revenues and profits although they never achieved the gains Perez anticipated. In 2009, it announced its new line of ESP all-in-one digital printers that still used all its EasyShare technology to help users print and share their photographs. Kodak's new printers were popular and helped to increase revenues and profits. For example, in 2010–2011, sales increased by over 40% but this was still not enough to make up for declines in revenues elsewhere in digital imaging.

Digital Photofinishing Another part of Perez' consumer strategy was to invest in developing both online, and physical "digital kiosks," channels to allow customers to download, process, print, and store their photographs using its EasyShare software. Kodak's EasyShare Internet service would allow customers to download their images to its online Website, Kodak Gallery, and receive back both printed photographs and the images on a CD.

In a major effort to develop an empire of digital processing kiosks, Kodak began to rapidly install them in stores, pharmacies, and other outlets as fast as possible, especially because they used its inks and paper. It configured these kiosks to give customers total control over which pictures to develop at what quantity, quality, and size. Kodak and Walmart signed an alliance to put 2,000 kiosks into 1,000 Walmart stores, and by 2006, Kodak had over 65,000 kiosks. However, this was an expensive business to operate and profit margins were razor thin as competition increased.

These moves proved popular because it was easy to use and photofinishing revenues increased as it built a base of 30 million customers. But profit margins were slim because competition increased and many other free online programs were being introduced, such as Goggle's Picasa. Between July 2010 and July 2011, profits dropped from $36 million to $2 million and did nothing to help Kodak's bottom line.

Kodak also made major attempts to penetrate the mobile imaging market because of the huge growth in the use of cameras in mobile phones in the 2000s. The Kodak Mobile Imaging Service offered camera phone users several options to view, order, and share prints of all the digital photos on their phones. Users could upload and store pictures from their cameras in their personal Kodak gallery accounts; then after editing using Kodak's free EasyShare software, they could send their favorite photos back to their mobile phones or wirelessly link to its picture Kiosks to arrange to print the best photographs. Kodak also joined up with social media sites like Facebook and Picasa (now linked to Google+), to easily download photos to members of their social community's pages. It has, of course, also developed applications for the Apple iOS, BlackBerry OS and Android OS mobile operating systems to make it easy for users to connect their Kodak EasyShare pictures to the kind of mobile computing device they are using. Kodak benefits from revenues received when mobile customers take advantage of its processing and printing services while they upload and share photographs. For example, any user can request a paper copy, or enlargement of a particular photograph or a series of photos contained in an album. Kodak Kiosks also allows users to upload pictures wirelessly through Bluetooth; customers can beam photos directly to the kiosk from mobile device to get Kodak prints and more. One problem, however, was that increasing sales of powerful cameras in smartphones led to a major decline in the number of customers who intended to upgrade to a more advanced digital camera—smartphones were cannibalizing sales of digital cameras. In addition, this has not proved to be an important source of additional revenues, its greater market share has not translated into higher profits. By 2010, there was intense competition in all areas of the digital imaging and information markets, including PCs, smartphones, MP3 Players and gaming consoles, as more and more people were online and became used to the Web as the place to process and store their documents in different forms—written, graphic, photographic, video, music or movies. Although Kodak had achieved a presence in the consumer digital imaging and storage market segment, it still could not generate the profits needed to offset its losses resulting from the rapid decline of its cash-cow film business—and in its other business areas.

In fact, in July 2011, it announced major decreases in profits and sales across many of its product groups. Sales of cameras were down by 8%; revenues from its photofinishing operations were down 14%; sales of ink and inkjet printers had

increased by over 40%, a bright spot, but nevertheless overall sales had decreased by 10% compared to the previous year and the group had lost $92 million.

The Graphic Communications Group

Although its consumer digital business was its most visible business group, by 2007 Perez, had recognized that its graphic communications group that had dealt with business customers also offered an opportunity to grow revenues and profits—if it could develop distinctive competencies. Profit margins are much higher in commercial imaging and packaging because the users of these products are companies with large budgets. The 5 primary customer groups served by this division are commercial printers, in-plant printers, data centers, digital service providers, and packaging companies. For each of these segments, Kodak developed a suite of digital products and services that offered customers a single end-to-end solution to deliver the products and services they needed to compete in their business. Kodak was able to develop this end-to-end solution because of its acquisition of specialist digital printing companies such as KPG, CREO, Versamark, and Express. From each acquisition, Kodak gained access to more products and more customers along with more services and solutions to offer them. Perez claimed that no other competitor could offer the same breadth of products and solutions that it could offer. Kodak's product line included image scanners and document management systems, and the industry's leading portfolio of digital proofing solutions and state-of-the-art color packaging solutions that can be customized to the needs of different customers—whether they need cardboard boxes, or rigid or flexible cardboard or plastic packaging.

Following his decision to make Kodak a major competitor in consumer inkjet printing, because of his HP printing background, Perez also decided to make it a major player in commercial printing as well—bringing into direct competition with HP, Xerox, and Canon by 2009. Kodak had developed an award-winning wide-format inkjet printing process including the most robust toner-based platforms for 4-color and monochrome printing. Kodak also claimed to have the leading continuous inkjet technology for high-speed, high-volume printing, as well as imprinting capabilities that could be combined with traditional offset printing for those customers still in the process of making the transition to digital printing.

At the same time, he decided to invest resources to improve Kodak's packaging solutions to utilize its expertise in color processing and he made packing another avenue to increase revenues and profits. Kodak then announced in July 2011 that second-quarter sales from this group were $685 million, similar to the previous year; however, this group also lost $45 (compared $17 million in the same quarter a year ago) because of the enormous development and marketing costs necessary to support growth in its commercial inkjet operations.

Will Kodak Survive?

In January 2009, Kodak posted a $137 million loss and announced plans to cut 4,500 jobs that decreased its workforce to about 18,000, and in June 2009, it announced it would retire its Kodachrome film—the main source of its incredible past financial success. In fact, its losses have been increasing in the last 5 years, but the extent of these losses had been disguised because of the way the company had sold many of its assets to reduce its losses and engaged in patent battles. For example, in 2007, it sold its Light Management Film Group to Rohm & Hass, and in 209 it sold its Organic Light-Emitting Diode (OLED) business unit to LG Electronics, both were advanced LED flatscreen technologies that it could no longer afford to invest in—but brought in a few hundred million dollars.

Then, to find new sources of revenue to offset losses, Kodak launched a series of lawsuits against other electronic companies, claiming that they had infringed on the huge library of digital patents that it had generated over the years. In 2008, Kodak selected its first targets, Samsung and LEG, which it claimed had used its technology in the cameras in their mobile phones. A U.S. judge decided in 2009 that these companies had infringed on its patents, but they decided not to appeal. Kodak announced it would settle out of court and develop cross-license agreements with these companies and it is estimated that Kodak received over $900 million from these settlements.

Emboldened by its success, Kodak decided to take on Apple and Research In Motion (RIM) in March 2010. The Kodak complaint, filed with the U.S. International Trade Commission (ITC) claimed

that Apple's iPhone and RIM's camera-enabled BlackBerrys infringed upon a Kodak patent that covered technology related to a method for previewing images. At the end of March, the ITC ruled in favor of Kodak; it seemed to have won its patent dispute with Apple and RIM, a victory that might provide it with $1 billion in new licensing revenue. Overnight Kodak's stock soared by 25%. Then, Apple filed a countersuit, and in April 2011, Kodak sold it Microfilm Unit to raise the millions needed to fund its lawsuits. In June 2011, the ITC, under a new judge issued a mixed ruling and announced the final decision would not be made until August 2011—and Kodak's stock plunged 25%. Then, in August 2011 Kodak's stock price soared by 25% after it seemed that it would get protection for its patents. However, in late 2011 its stock plunged again as the value of its patent portfolio became unclear and investors once again fled.

Perez continued to claim he would use the proceeds from intellectual property licensing to continue to invest in the company's now core growth businesses—inkjet printing, packaging and software and services—in order to counter falling revenue from camera film. However, since 2007, Kodak's stock had steadily plunged from $24 to around $1.25 in November 2011. It seemed that Perez' strategies have done little or nothing to turnaround Kodak, which had a market value of only around $300 million in November 2011. Some analysts claimed the only reason the company had not been acquired for this low price was that it had $2.6 billion in unfunded pension obligations because of its huge layoffs over the last decade. Given that Kodak announced it would have to incur more debt—unless it could sell its portfolio of patents profitably—by November 2011 many analysts wondered how the company would survive beyond 2012—and what would finally push it into bankruptcy.

Endnotes

www.kodak.com, Annual reports, 1980–2011.
www.kodak.com, 10K reports, 1980–2011.

CASE 29

Boeing Commercial Aircraft in 2011

Charles W.L. Hill
University of Washington

Introduction

The first decade of the 20th century was one of ups and downs for Boeing Commercial Airplane, the commercial aircraft division of the world's largest aerospace company. In the late-1990s and early-2000s, Boeing had struggled with a number of ethics scandals and production problems that had tarnished the reputation of the company and led to sub-par financial performance. To make maters worse, its global rival, Airbus, had been gaining market share. Between 2001 and 2005, the European company regularly garnered more new orders than Boeing.

The tide started to turn Boeing's way in 2003, when it formally launched its next generation jet, the 787. Built largely out of carbon-fiber composites, the wide-bodied 787 was billed as the most fuel-efficient large jetliner in the world. The 787 was forecasted to consume 20% less fuel than Boeing's older wide-bodied jet, the 767. By 2006, the 787 was logging significant orders. This, together with strong interest in Boeing's best-selling narrow bodied jet, the 737, helped the company to recapture the lead in new commercial jet aircraft orders. Moreover, in 2006 Boeing's rival, Airbus, was struggling with significant production problems and weak orders for its new aircraft, the A380 super-jumbo. Airbus was also late to market with a rival for the 787, the wide-bodied Airbus A350, which would also be built largely out of carbon-fiber. While the 787 was scheduled to enter service in 2008, the A350 would not appear until 2012, giving Boeing a significant lead.

Over the next few years, Boeing encountered a number of production problems and technical design issues with the 787 that resulted in the introduction of the 787 being delayed 5 times. The 787 is now scheduled to enter service in late-2011, more than 3 years later than planned. Despite this, Boeing has a very healthy backlog for the 787, with 827 jets ordered as of mid-2011, compared to 567 for the rival A350. Airbus has also encountered some production problems of its own with the A350, and delivery of that aircraft model has now slipped into 2013.

Looking forward, Boeing now has some important decisions to make regarding its venerable narrow-bodied 737 aircraft family, which accounts for some 60% of Boeing's total aircraft deliveries. The main competitor for the 737 has long been Airbus' A320. In late-2010, Airbus announced that it would build a new version of the A320, designed to use advanced engines from Pratt & Whitney, and estimated to be 10–15% more efficient than existing engines. Know as the A320NEO (NEO stands for "new engine option"), by August 2011, the aircraft had garnered an impressive 1,029 orders. Airbus' success here forced Boeing's hand. Boeing, too, has stated that they will offer a version of the 737 using new engines (this will require some redesign of the 737, driving up Boeing's R&D costs). However, the company still must decide whether to totally redesign the 737, taking advantage of knowledge gained during the process of developing the 787, to build an all-new 737 out of composites that would also be designed with more efficient engines.

To complicate matters, for the first time in a generation there are several new entrants on the horizon. The Canadian regional jet manufacturer, Bombardier, is starting to gain orders for the 110–130 seat narrow bodied CSeries jet, which would place it in direct competition with the smallest of the 737 and A320 families. In addition, the Commercial Aircraft Corporation of China (Comac) has announced that it will build a 170–190 seat narrow-bodied jet.