Case 18

Cardinal Health Inc. (A)

Mary B. Teagarden

INTRODUCTION

1 Bob Walter belted himself into his bright-red BMW two-seater and reflected on the pep talk that he was about to give to his top managers at the Embassy Suites, a five-minute drive away. Cardinal Health, the health care products-distribution industry merger and acquisition juggernaut, had hit an earnings speed bump. Cardinal was one of a handful of large U.S. companies that had achieved earnings-per-share growth in excess of 20 percent for 15 years straight. Nevertheless, Wall Street was questioning whether Cardinal Health, an empire that had grown through acquisition, could continue to grow at this remarkable rate using this approach. This doubt, coupled with recent questionable "stock crushing" accounting practices among wholesalers (including one of their own suppliers, Pfizer), was weighing down Cardinal's stock price despite their continued and healthy earnings growth.

2 Walter believed that recent blowups at major U.S. companies had occurred because of ultra-fast growth, high debt, and unfocused strategies, with Tyco serving as a prime example. Cardinal, by contrast, had grown gradually, had low debt (16 percent of total capital), and followed an acquisition program that never strayed from selling to pharmacies, hospitals, and pharmaceutical makers. Walter's fans, such as Peter Lynch, a Fidelity vice chairman, commented, "He's one of the best managers I've ever seen—and I've seen thousands" (Lashinsky). In 32 years, Walter had weathered other storms, and believed that this current speed bump was little more than the latest in a long line of "*crises du jour*" that included the Clinton health care plan of the early 1990s that had been expected to drive down drug prices, and the Internet threat of the late 1990s that had been expected to eliminate distributors altogether. Each time, Cardinal's stock rebounded. Walter believed the stock would rebound again as he repositioned Cardinal to compete beyond distribution into higher-margin services and pharmaceutical manufacturing.

THE HEALTH CARE INDUSTRY

3 Health care is a vital, dynamic industry with exciting prospects for future growth in the U.S. In 2006, health care expenditures totaled $2.5.trillion, which was 16.3 percent of the U.S. gross domestic product, and growing at a rate faster than the GDP. The U.S. population age 65 and over was expected to double in the next 25 years. By 2030, almost one out of five Americans (some 72 million people) would be 65 years or older. The age group 85 and older was the fastest growing segment of the U.S. population. They represented 27 percent of the U.S. population in 2002, and forecasts were that their numbers would increase 13 percent, totaling 85 million by 2007. This consumer segment spent $610 billion on health care, utilized 74 percent of all pharmaceuticals, represented 65 percent of hospital bed days, accounted for 42 percent of physician visits in 2002, and grew as forecasted. Europe and Asia showed similar trends (Summary Annual Report, 2001).

4 The health care industry was under tremendous pressure to cut costs while increasing service and functionality to several demanding sets of customers. They had been constantly asked to do more with less to combat labor shortages in nursing and pharmacy and eroding reimbursement rates from third-party payers. In addition, they faced stringent regulations and significant regulatory oversight, which limited their degree of freedom to conduct business in the most effective and profitable manner possible. Health care organizations rose to the challenge by undertaking ambitious programs to improve customer service and streamline business processes, often in partnership with companies like Cardinal. Without a single exception, these companies used state-of-the-art technology to achieve their goals. As an industry trade group research director observed, "That's impressive when you consider that health care has traditionally skimped on technology."[1]

5 Within the health care industry, pharmaceutical companies merged to become larger, truly global entities, and their habits of capital investment showed it. Free to ship their high-value, low-volume products worldwide with minimal impact on the bottom line, they turned unusual locations into hotbeds of pharmaceutical production. The U.S. and Europe saw their share of new construction, particularly in the biopharmaceutical sector. Puerto Rico, long a model for using tax incentives to attract high-tech industry, experienced resurgent interest. Ireland developed a very strong tax incentive program in the mid-1970s, and Singapore followed suit with a focus on pharmaceuticals (and electronics) in the mid-1990s, reaping a windfall of investment. It is no surprise that in 2000, Cardinal Health announced that it would build a $100 million facility in Ireland to gain better access to European customers, according to a publication of the Health Care Distribution Management Association (HDMA). In 2003, they acquired the Intercare Group PLC to expand pharmaceutical manufacturing and distribution capabilities in Europe.

6 The number of customers—hospitals, surgery centers, nursing homes, and drugstores increased dramatically as baby-boomers aged. Most of these customers lacked warehousing facilities. Instead, they depended on health care distribution and service wholesalers with high service levels, like Cardinal, to make daily, precise deliveries of pharmaceuticals. "In a supermarket, if you're out of Heinz, Campbell is okay," observed Walter. In the pharmaceutical industry, where drugs were not good substitutes for each other, the opposite was true—accuracy and specificity mattered. When a physician prescribed a specific branded drug, the prescription had to be filled precisely according to the physician's directive. Just as the number of customers had grown steadily, the number of drugs had grown from 650 in the 1960s to in excess of 10,000 in forty-plus years. With another 10,000 new product targets in development by pharmaceutical research companies, the health care distributor's role became pivotal in the health care industry.

THE HEALTH CARE DISTRIBUTION AND SERVICES INDUSTRY SECTOR

7 While health care distributors may be relatively unknown to patients, they are vitally important to pharmaceutical manufacturers and those who need medicines or medical supplies. Health care distributors assure that products needed to diagnose, prevent, and treat health care ills are distributed to the many locations where they are used. To guarantee the accurate, efficient, and timely delivery of products, health care distributors expanded their services to provide the products themselves, and the information and other benefits

[1] *Information Week*, September 2000, p. 251. Gartner Group's research director for health care says the $1.4 trillion health care sector accounts for technology spending of $20 billion.

designed to make their customers—hospitals, surgery centers, nursing homes, and drugstores—more efficient and effective. Cardinal had taken a leadership position in this shift. As government-licensed entities, health care distributors manage distribution and assure product safety, quality, integrity, and availability in the health care marketplace. They are integral partners in the health care industry, serving patients and reducing the cost of care. The Health Care Distribution Management Association identified 21 discrete services provided by health care distributors, ranging from price sticker and shelf labels to third-party reimbursement services (HDMA).

8 Industry experts argued that by 2002, health care distributors saved the health care system more than $146 billion each year by maximizing economies of scale, creating efficiencies, lowering expenses, and simplifying distribution. Through a fairly aggressive use of information technology (another area Cardinal had pioneered), health care distributors lowered their own operating cost and most passed these savings through to their customers. The Health Care Distribution Management Association estimated that without distributors there would be 4.393 billion transactions between pharmacies and pharmaceutical manufacturers. Pharmaceutical distributors reduced this number to 35.18 million transactions per year. The average distribution center held more than 28,000 different health care items. Distributors, however, did not set the price of the products they handled—this was done by pharmaceutical companies and manufacturers (HDMA).

DISINTERMEDIATION AND e-BUSINESS IN THE HEALTH CARE SERVICES SECTOR

9 The health care distribution and services industry was threatened by disintermediation—elimination of the middle man. Internet-facilitated disintermediation was a major environmental threat for health care service providers. Cardinal Health responded with a technology budget of $250 million in 2000, including $20 million allocated to a single effort—the ambitious cardinal.com project. The increased funding and emphasis on technology was a natural move for Cardinal Health as it absorbed its 1998 purchase of the medical-surgical product manufacturing and distribution company, Allegiance Corp. (*Information Week*).

10 Cardinal Health launched perhaps the most ambitious Web-based project in the industry. Designed to service the company's entire customer base of health care facilities and physicians' offices, cardinal.com was a procurement portal that offered more than 500,000 items for purchase. It was an aggressive move for the company, which had been transacting most business with customers via electronic data interchange for years since it was not evident that customers would accept new Web-based approaches. "We're thinking that many of our customers will move to the Web with us," Cardinal's CIO Kathy White said expectantly (*Information Week*).

11 Marketing guru Roger Blackwell observed, "Cardinal Health [was] able to use IT to manage a very complicated problem of many items in the pharmaceutical industry. Pharmaceutical products have to be carefully controlled. So firms like Cardinal Health [were] in the vanguard of using computerized control of those products. It doesn't necessarily mean they [had] pioneered applications, but they [had] certainly been on the forefront of development and increased efficiency from the very beginning" (Weston).

12 White had hoped that cardinal.com would increase the company's customer base. Because the system was online, White said, . . . "we can reach areas where we had very low penetration because it wasn't financially feasible for our sales representatives to call on physicians' offices and rural hospitals." White's predictions were on target. By 2002, twenty percent of cardinal.com's customers were new.

13 Walter had discounted the impact of disintermediation by the Internet on Cardinal. He commented, "We firmly put to rest the notion that upstart dotcoms would replace a company that has the scale and resources of Cardinal. We do believe that the Internet is a valuable efficiency tool, and will continue to invest in the technology to realize those benefits" (Summary Annual Report, 2001). Blackwell admired Walter's ability to turn a potential threat into an advantage. He commented, "That's what makes Walter, at Cardinal Health, and Sam Walton different from other people. They are able to conceptualize rather than just do. Most businesses are run by people who have tunnel data and tunnel vision. They accumulate data to tell them what has happened. The great leaders are those who understand what's at the end of the tunnel" (Weston). Walter would tell you he was simply meeting the needs of his customers and suppliers.

COMPANY BACKGROUND

14 Robert D. Walter, called "Bob the Builder" by *Forbes*, built Cardinal Health into the most valuable company in the U.S. health care services industry and the world's largest distributor of health care products like pharmaceuticals and surgical instruments (Tanzer (a)). Cardinal Health had revenues of $81 billion in 2006, was ranked Number 19 on the Fortune 500, and owned about 30 percent of the pharmaceutical distribution business. Regardless, most people had never heard of Cardinal Health, its founder Bob Walter, or the company's 32-year journey from a regional wholesale food distributor to an international health care distributor and service giant.

Cardinal Foods, Inc.

15 Walter used his undergraduate degree in mechanical engineering from Ohio University in his first job working on missile technology at North American Rockwell. He hated the bureaucracy he encountered and went back to graduate school to study business. In 1971, at 26 and fresh out of Harvard Business School, Walter borrowed $1.3 million to purchase Cardinal Foods, a wholesale food distributor in Dublin, Ohio, that served small retailers. Walter spent the early years at Cardinal Foods growing the business, and the company eventually became a strong regional food wholesaler. However, Walter realized that Cardinal Foods would never be a big player in the food business. He recognized that the food industry was rapidly consolidating and that it was dominated by a few large national competitors that would limit his company's growth potential. He also found that the barriers to national expansion were significant in food wholesaling, so he and his partners began looking for additional acquisition opportunities that would enable growth (Tanzer (b)). Walter put his MBA skills to work and found that the pharmaceutical distribution industry was highly fragmented, with 354 independently owned distributors, but only three public companies (Lashinsky). In addition, the pharmaceutical business was growing faster than the economy as a whole, and when a physician prescribed a drug, typically another drug could not be substituted.

Cardinal Distribution, Inc.

16 In 1979, Walter undertook the migration to pharmaceutical distribution; he took the distribution skills he learned in food wholesaling and applied them to pharmaceuticals through the acquisition of a local pharmaceutical distributor. Cardinal Foods evolved into Cardinal Distribution with the addition of two pharmaceutical distributors and a pharmaceutical and food distributor. Walter decided to take Cardinal into pharmaceutical wholesaling at a time when this industry sector was highly fragmented, offered strong growth prospects, was noncyclical, and already mature. For the next 15 years, Cardinal bought smaller distributors

that specialized in moving pharmaceuticals from one place to another. In the next five years, the pharmaceutical segment of Cardinal's business had grown to nearly twice the size of the food distribution business.

Cardinal Health: The Early Years

17. Cardinal Distribution went public in 1983 to raise capital for its fast-growing pharmaceutical business, and was renamed Cardinal Health Inc. to reflect its new positioning. By the end of 1988, the Cardinal Health name remained, but the company had exited the food business entirely (cardinal.com (a)). By 2000, Cardinal had a well-ingrained philosophy that focused on obvious things like customers and adding value, as indicated in their mission statement in Exhibit 1. "Quality service" was the vow Cardinal made to its customers. Just as important, Cardinal also focused on developing management talent for the future and achieving operational excellence by driving costs down and using advanced information technology. If you were lucky enough to have invested $10,000 into Cardinal stock in 1983, you would have been sitting on $700,000 in 2000. Shareholders and customers were not the only constituents Cardinal served; in 2002, management and employees owned about 10 percent of Cardinal (Gallagher).

18 Walter had grown Cardinal into the world's largest distributor of health care products such as pharmaceuticals and surgical instruments and, in the process, built Cardinal to a market value of $31 billion in 2000, the largest in the U.S. health care services industry. Cardinal's core pharmaceutical distribution business represented 75 percent of the firm's operating revenues and 22 percent of its growth in 2000. Industry analysts praised Cardinal as one of the best-managed health care companies and lauded their clear vision on direction of growth and how to capitalize the growth prospects. Between 1990 and 2000, Cardinal's stock price had compounded at an average 26 percent a year, and analysts believed that Cardinal was going to continue this pattern. (*Plain Dealer*). Cardinal consistently met or exceeded market expectations. On Wall Street, they called Cardinal Health the GE of

EXHIBIT 1 Cardinal Health Mission

Our Purpose

The people of Cardinal Health are driven by a common purpose: To help customers across the health care industry—from manufacturers to providers of patient care—find answers to the challenges they face.

Our success is dependent on helping our customers succeed.
Our approach is to be:

A Partner

We believe the best ideas come from creative collaboration with our customers and each other.

Applying Unparalleled Resources

We create powerful solutions with our customers by applying leading products and services to their needs in new and innovative ways.

With a Passion for Performance

We achieve the greatest results for our customers when we actively identify and capitalize on the opportunities created by the advancement of health care

Source: Cardinal Health, Annual Report, 2000.

the health care services industry. Cardinal's depth and breadth of management, its consistency, and its love affair with shareholders brought to mind GE under Jack Welch (Tanzer; cardinal.com (b)).

19 In 2001, Cardinal employed more than 49,000 associates—in 110 facilities in 22 countries on five continents—who spoke 12 languages. "However, we speak a universal language of high quality and commitment to our customer" (Summary Annual Report, 2001). Slightly more than 42 percent of Cardinal's associates were employed outside the U.S. Among Cardinal's employees were 1,800 pharmacists and 550 clinical, productivity, and logistics consultants. Cardinal's clinical consultants used a proprietary database of best-demonstrated practices identified in more than 1,600 studies of some 200 medical procedures. Cardinal also had 2,900 sales and service associates serving hospitals and other clinical-care providers, retail pharmacies, and pharmaceutical manufacturers (Slywotzky).

20 From their position in the middle of the value-added chain, Cardinal made life easier for companies at both ends of the pharmaceutical distribution chain—suppliers and customers. Essentially, Cardinal linked customers to solutions. An industry observer commented:

> Cardinal Health performs many of the functions that were once performed by retailers and manufacturers in the demand chain. For example, it provides sales and credit functions for the large pharmaceutical companies whose expertise lies more with the development of products than their distribution. For drug retailers and hospitals, a wholesaler such as Cardinal stores, warehouses, and controls inventory more efficiently than the retailers and hospitals can. This is especially true for highly specialized pharmaceutical products which carry a myriad of technical and regulatory concerns.
>
> Cardinal achieved its success . . . by monitoring consumer purchasing data while at the same time maintaining superior product knowledge for both itself and other channel members. The company also develops logistics systems required for shipping and inventory replenishment based on this information. (*HDMA*)

21 Between 1970 and 1980, the once-tranquil field of pharmaceutical distributors shrank by a mere five from 144 to 139 according to the National Wholesale Druggists' Association. By 1990, only 84 pharmaceutical distributors survived, and by 1996 that number shrank to 63. The top five controlled three-quarters of the market (*Columbus Business First*). Exhibit 2 identifies the top 10 North American pharmaceutical wholesalers in 2001.

EXHIBIT 2 Top 10 North American Wholesalers—2001

Wholesaler	Total Sales (000,000)	% Change	Stores
Cardinal Health	$47,948	60.5%	15,000
McKesson Corp.	$42,010	14.5%	18,000
AmerisourceBergen	$36,000	16.1%	25,000
Supervalu	$23,194	14.0%	6,800+
Fleming Co.	$14,444	1.2%	3,500+
Loblaw Cos	$13,425	5.5%	10,800
Sobey's	$7,374	3.7%	1,371
C&S Wholesale Grocers	$7,100	6.6%	4,000+
Wakefern Food	$5,800	5.5%	154
Giant Eagle	$4,221	3.2%	400

Source: *Private Label*, November 2001, pp. 82–84.

22 Pharmaceutical distributors joined the rest of the pharmaceutical industry in a rush toward consolidation in the 1990s, and competition within the pharmaceutical industry evolved at an exponential rate, making differentiation increasingly critical. By 2002, Cardinal recognized that in such a highly competitive market, its success could be derailed in a nanosecond. Larger firms, such as Cardinal Health and DSM Pharmaceuticals, began integrating services to include drug discovery and development, production for clinical trials, final dose formulation, and commercial production in an effort to provide "cradle-to-grave" outsourcing. Although not embraced by every industry player, an industry trend among the larger competitors was consolidation to provide one-stop-shopping for contract services (Mullen).

Cardinal Health Today

23 By 2006, three companies—Cardinal, Amerisource, and McKesson—controlled 90 percent of the sales in the health care distribution and services industry. All three were roughly the same size and offered the same basic products and services, as shown in Exhibit 3. Cardinal was one of the largest pharmaceutical distribution companies in the U.S. and, unlike their nearest competitors, a larger percentage of their overall operating income came from nondistribution activities. Their diversified operating income streams included distributing pharmaceuticals, packaging them, providing devices to hospitals that automate pharmaceutical dispensing through their Pyxis subsidiary, and providing pharmacy services through outlets like Medicine Shoppe. These diversified businesses all provided higher operating margins than the traditional pharmaceutical distribution business did.

24 By 2006, Cardinal depended heavily on several key customers and suppliers: CVS and Walgreens accounted for 35 percent of Cardinal's total revenue, growing to 40 percent by 2007. Fifteen percent of Cardinal's 2006 revenue was from group purchasing organizations (GPOs). Pfizer, Cardinal's largest supplier, accounted for nine percent of total suppliers, and their top five suppliers accounted for about 33 percent of total revenue. By 2007, according to company sources, 90 percent of all hospitals and 50 percent of all surgeries in the United States used Cardinal Health products or services. Each day, 50,000 deliveries were made to 40,000 customer sites, including hospitals, pharmacies, and other points of care. One-third of all pharmaceutical, laboratory, and medical products passed through Cardinal Health's logistics system. As important, Cardinal Health held 2,765 patents and patent applications on proprietary medical products, manufacturing processes, and medication management solutions. By 2007, Cardinal Health was an $87 billion diversified global health care products and services company, and its primary market was the United States.

EXHIBIT 3 **Relative Share of Wholesalers in Health Care Products and Services Distribution 2006**

Company	Pharmaceutical Distribution	Medical & Surgical Supplies	IT Provider	Automation Services	Long-Term Care Pharmacy
AmerisourceBergen	97%	n/a	n/a	n/a	3%
Cardinal Health	80%	13%	4%	3%	n/a
McKesson	94%	4%	2%	n/a	n/a

Source: www.wikinvest.com/stock/Cardinal_Health_(CAH), downloaded 12-18-08.

CARDINAL'S POSITION IN THE VALUE CHAIN

25 Cardinal Health, a multinational and a leading provider in the health care industry, applied vast resources, knowledge, and expertise to help customers—from health care manufacturers to providers of patient care. Cardinal's operations were extensive—it developed, manufactured, packaged, and marketed products for patient care; developed drug-delivery technologies; distributed pharmaceuticals, medical-surgical and laboratory supplies; and provided consulting and other services that improve quality and efficiency in health care.

26 Cardinal Health was a vital intermediary between manufacturers and providers of patient care. Upstream in the value chain, they served key suppliers—health care manufacturers—by offering product development, manufacturing and packaging services, distribution services, and marketing and sales services. Cardinal worked in partnership with pharmaceutical and biotechnology companies to develop unique dosage forms of drugs. Distribution services to these suppliers included warehousing and distribution of drugs, medical-surgical and laboratory products to hospitals, retail pharmacies, surgery centers, physician practices, and other points of care. Cardinal's marketing and sales services included specialized information systems, consulting, and promotional programs with community pharmacies and acute-care providers (Slywotzky).

27 At the other end of the value chain, Cardinal, one of the largest distributors of pharmaceuticals and other medical products, served key customers—health care providers—with similar services and an array of products and services that helped health care providers improve operational and clinical performance. They developed and manufactured a broad range of leading medical and surgical products, as well as automated supply and pharmaceutical dispensing systems. Cardinal also repackaged bulk pharmaceuticals into smaller volumes for more efficient use by hospitals and retail pharmacies. They provided systems to help customers streamline purchasing and inventory management. Cardinal helped retail pharmacies market themselves locally through Internet-based programs, patient education activities, and systems to maximize reimbursement from third-party payers. In addition, Cardinal's operations and clinical improvement services included consulting and information systems to help health care providers reduce supply costs, improve operational efficiencies, and enhance clinical outcomes.

28 Cardinal competed in four business segments: pharmaceutical distribution and provider sales, medical-surgical products and services, pharmaceutical technologies and services, and automation and information services. Exhibit 4 identifies the companies in each of these segments.

29 Cardinal was considered a master at cross-selling, bundling products and services, and making itself an indispensable partner of drug makers and health care providers. Essentially, the distributor leveraged its position in the middle to capture more of the dollars in the health care continuum though backward and forward vertical integration. For example, Cardinal-packaged drugs for pharmaceutical producers—a $1.5 billion market—provided contract manufacturing services and alternative drug-delivery formulations, such as softgel capsules and rapid-dissolving tablets, a $3 billion market (Tanzer (b)). They also consulted with health care providers on the other end of the value chain.

30 In 2006, Cardinal considered reorganization into two operating units: Health Care Supply Chain, providing prescription pharmaceuticals and medical products, and Clinical and Medical Products, to manufacture medical equipment and technologies, including infusion and medication dispensing, respiratory care, and infection prevention products used in hospitals and other primary care facilities. These were to be complemented by a third unit, Cardinal Pharmacy Services and Medicine Shoppe.

EXHIBIT 4 Cardinal Health Inc. Companies by Business Segments 2006

Pharmaceutical Distribution and Provider Service	Medical Products and Services	Clinical Technologies and Services	Pharmaceutical Technologies and Services
Cardinal Distribution	Allegiance—a Cardinal Health company	Cardinal Health Information Companies	ALP (Automated Liquid Packaging)—a Cardinal Health company
Cardinal Health Provider Pharmacy Services	Cardinal Health Consulting Services	Pyxis—a Cardinal Health company	Cardinal Health Manufacturing Services
Cardinal Health Staffing Network		Vistant—a Cardinal Health company	Cardinal Health Sales and Marketing Services
Central Pharmacy Services			IPC (International Processing)—a Cardinal Health company
CORD Logistics			PCI Services
Medicine Shoppe International—a Cardinal Health company			R.P. Scherer—a Cardinal Health company
Cardinal Health National PharmPak			SP Pharmaceutical—a Cardinal Health company
Cardinal NSS—National Specialty Services			

Source: cardinal.com (c).

CARDINAL BRAND EQUITY AND VALUE CREATION

31 In 2002, Walter maintained that the strengths Cardinal had built during the past three decades were the basis of future competitiveness. He commented, "The rich tradition and culture that exist within Cardinal give me particular comfort as I face the future. Our tradition is one of winning, playing fairly, acting ethically, continually raising our standards of performance, moving aggressively, taking appropriate risks to see the resulting rewards, and, finally, acting like owners. After all, our associates are owners. Our officers, directors, and associates have an equity stake in the company of more than $3 billion, making us collectively the second largest owner of Cardinal. We all know that the creation of economic value for ourselves and other shareholders depends on focused efforts to create value for our customers and the associates around us" (Tanzer (b)).

32 The creation of value for Cardinal's customers was accomplished through concentration on four operational drivers: "A relentless pursuit of *growth*, a total *focus on customer needs*, a continual push toward *operational excellence* in everything they do, and, finally, recognition that *leadership development* is critical to Cardinal's future success" (Cone). Cardinal had established and reinforced a position of leadership in providing proprietary products and services to health care providers and manufacturers worldwide. Superior scale, market leadership. and proprietary offerings were the foundation of Cardinal's strategy. For Cardinal, growth was an objective, not a by-product. Its focus on growth was purposefully intense (Summary Annual Report, 2001).

33 Cardinal used co-branding selectively. "Cardinal's corporate branding image and value are as a problem solver," said public affairs Vice President Geoffrey Fenton, who oversaw Cardinal's branding efforts. For example, they partnered with Home Diagnostics, Inc., to provide *The Prestige Smart System* for diabetes monitoring (prestigesmartsystem.com). Walter observed, "Our strategy of focusing on health care, while building scale, leadership positions, and proprietary solutions, is working. Our ability to cross-sell our products and services accelerated our growth rate. . ." (*Columbus Business First*).

34 To reinforce the Cardinal brand, the company used training to align its employees with its mission, emphasizing "standards to make sure you are speaking, acting, behaving, representing yourself in a way that is consistent with the company's corporate brand image," said Fenton. Brand image rules also covered use of logos and graphics. The Cardinal Bird had size and color specs (branding-report.com). Nevertheless, Gary Dowdy, vice president of Cardinal's e-business, observed, "We're a complex business that is an amalgamation of many companies, and we have two different groups of customers—health care providers and pharmaceutical manufacturers. We want to have one Cardinal approach to present one Cardinal to all of our customers, but to do that, we need to first do things like extending adequate security to our heterogeneous software environment" (Cone). Information technology infrastructure development lagged Cardinal's brand strategy.

35 Cardinal Health leveraged its value chain position to capitalize on the expertise, systems, and information gained in its once-restrictive middleman role. Once one of several large players in a notoriously low-margin business—essentially delivering pills from Point A to Point B—they leveraged their unique vantage point to take advantage of their powerful insights into the rapidly changing pharmaceutical marketplace. Cardinal's executives realized that they could create offerings built on their unique position as a market knowledge and information expert that would meet the evolving needs of both customers and suppliers (Slywotzky).

36 Downstream hospitals and independent pharmacies experienced growing cost pressures while trying to maintain quality care. They also faced challenges, including the management of an increasingly complex body of patient and financial information. Cardinal addressed these problems. By using their distribution experience in inventory management and procurement, they began to host information systems for hospitals and pharmacies. Cardinal developed automated technology for ordering and dispensing medications and distributing them to hospital patients, thereby reducing loss and theft, improving accuracy, and maximizing data capture. This in turn led to the development of a range of hospital pharmacy management services from staffing to consulting to complete outsourcing of the pharmaceutical function. Cardinal also introduced a franchise option to independent retail pharmacists, offering them information systems, marketing resources, and purchasing power that were once beyond their reach (Slywotzky).

37 Upstream, Cardinal created specialized services for pharmaceutical makers in which Cardinal would design and produce customized packaging for pharmaceuticals. This again leveraged the intimate market knowledge Cardinal had derived from their position in the value chain. The company reduced its overall manufacturing and distribution costs by linking the two functions, which enabled just-in-time replenishment and smaller inventories. Cardinal was able to aggregate demand for less-common dosage forms, such as freeze-dried tablets, from multiple pharmaceutical companies to achieve scale production advantages. And it was able to profitably meet hospitals' needs for customized packaging of certain pharmaceuticals—something most pharmaceutical companies, with their "siloed" manufacturing operations, did poorly, if at all (Slywotzky).

38 These strategic moves in both directions on the value chain led Cardinal to expand its economic horizons beyond the pharmaceutical distribution market. By 2002, Cardinal was a major player in a dramatically larger market—one that encompassed consulting, information technology, pharmaceutical-packaging design and manufacture, pharmacy management, and other health care services. Cardinal managed more pharmacies than all of its