

MCKESSON CORPORATION: PHARMACEUTICAL DISTRIBUTION INDUSTRY¹

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On October 27, 2017, the St. Louis Post-Dispatch reported that Amazon.com, Inc. (Amazon) had quietly acquired wholesales pharmacy licences in 12 US states: Nevada, Arizona, North Dakota, Louisiana, Alabama, New Jersey, Michigan, Connecticut, Idaho, New Hampshire, Oregon, and Tennessee.² Amazon had been selling over-the-counter drugs for years, but this report fuelled market speculation that Amazon was considering a move into the prescription drug delivery business, an industry already dominated by several major companies.³ Upon release of the report, the share price of three major pharmaceutical distributors—McKesson Corporation (McKesson), Cardinal Health Inc. (Cardinal Health), and AmerisourceBergen Corporation (AmerisourceBergen)—dropped by 7–12 per cent over only a few days (see Exhibit 1).⁴ Amazon had a history of disrupting high margin industries, but why disrupt a low margin industry, where 3 per cent gross margins were typical?

Three months later, on January 30, 2018, Amazon also announced that it had formed an independent venture with Berkshire Hathaway Inc. and JP Morgan Chase & Co. to improve the cost and quality of health care for the US employees of all three companies.⁵ The venture was intended to focus on technological solutions to simplify the health care system. After Amazon's announcement, the share price of various major pharmaceutical distributors and retailers, including McKesson and Walgreens Company, dropped by nearly 20 per cent, wiping out most gains achieved over the previous several months (see Exhibit 1).⁶

These two notable events in the US pharmaceuticals market did not go unnoticed by a group of Ivey Business School students enrolled in a value investing class, who wondered, “Is it possible for Amazon to disrupt the health care industry?” Amazon had already prospered in the cloud services market over Internet giants Google LLC and Microsoft Corporation, which had underestimated Amazon's potential. The two market leaders simply had not believed there was enough of a market to worry about.⁷ However, could Amazon compete and prosper in a new industry with incumbents who were well aware of Amazon's capabilities and who were watching its every move? Was the market overreacting to the two reports? Was Amazon really a threat to McKesson's future in the pharmaceutical distribution business? Or was McKesson's stock suddenly in a favourable *buy* position, from a value investing perspective, given its sharp decrease in share price?

HEALTH CARE SYSTEM IN THE UNITED STATES

Unlike in most countries, where national health care systems were generally owned and operated by the public, the US health care system was largely controlled by the private sector. Most health care costs in the United States were paid through insurance systems such as Medicare, Medicaid, the Affordable Care Act (known informally as Obamacare), and many other programs run by private insurance companies.

The largest competitors in all sectors of the US health care industry (e.g., hospitals, pharmaceutical companies, health insurance companies, pharmaceutical distributors, pharmacy retail store chains) were US companies. The US market was also the largest source of revenue for all major pharmaceutical manufacturers in the industry.⁸ The largest pharmaceutical distributors and pharmacy retailers (e.g., McKesson, Walgreens Company, CVS Pharmacy) were also US companies. Even most of the largest health benefit plan systems (e.g., United Health Group Incorporated, Anthem Inc., and Aetna Inc.) were US entities.

However, despite high economies of scale and recent innovations in the health care industry, the US health care system was considered highly inefficient. According to the Organisation for Economic Co-operation and Development,⁹ the US government spent 17.1 per cent of its gross domestic product (GDP) on health care expenditures, and the number was increasing. In contrast, comparable countries spent below 12 per cent of their GDP on health care. For example, Canada spent only 10 per cent of GDP on health care, for what was considered a successful system, and most developing countries spent less than 7 per cent of their GDP (see Exhibit 2).¹⁰

PHARMACEUTICAL TERMINOLOGY

Over-the-Counter Drugs versus Prescription Drugs

Over-the-counter drugs (e.g., Tylenol, Advil, Claritin) could be purchased without a doctor's prescription from pharmacies, supermarkets, or online shopping platforms such as Amazon. Conversely, prescription drugs were available only with a doctor's prescription, which normally allowed the patient to repurchase the drug (i.e., refill the prescription) several times, based on the client's specific situation. For refills beyond the number prescribed, the patient needed the doctor's approval.¹¹

Branded Drugs versus Generic Drugs

Branded drugs were specifically protected by the patent system, which also provided a marketing benefit. Pharmaceutical companies received legal protection for their newly developed drugs by registering patents for drug brands, which typically covered the brands for 20 years after registration with the US Food and Drug Administration. During the patent protection period, competing companies or brands could not make or sell a copy of a patented drug. To bring a new drug to market, pharmaceutical companies often spent hundreds of millions of dollars on research and development and clinical trials, which normally took eight to 12 years. During that time, the risk of failing to successfully bring the drug to market was very high, despite major expenses. Therefore, the patent system helped pharmaceutical companies recoup their development costs by allowing them to charge a very high price for the drugs, relative to the actual production cost.¹² US doctors tended to prescribe branded drugs, which they claimed were more effective than substitutes available in the market. Substitute products were referred to as generic drugs.¹³

After the expiry of a brand's patent protection, competitors were allowed to produce copies of the branded drugs, or generic drugs. These drugs also required a certain amount of research and development, as well

as approval by the Food and Drug Administration. However, the amount of resources required was much lower and the approval time much shorter. Several different generic copies could be produced and brought to market for the same drug. As a result, generic drugs were less expensive than branded drugs.¹⁴

Chemical (or Conventional) Drugs versus Biotechnology Drugs

Conventional drugs had chemicals as active ingredients, which served as the main source of efficacies. For example, Tylenol's main active ingredient was the chemical substance paracetamol. A chemical drug was easy to copy, which was allowed after the branded drug's patent expired.

Biotechnology drugs differed from chemical or conventional drugs. They were made from living cells through highly complex manufacturing processes. The branded biotechnology drugs were referred to as biologics; the copies were referred to as biosimilars. Biotechnology drugs were affected by their exterior environment; therefore, control of external conditions such as humidity and temperature was critical during production, storage, and transportation. The development of technology related to deoxyribonucleic acid (DNA), had led to an increase in the value of biotechnology drugs, from 17 per cent of 2008 global sales to 25 per cent of 2016 global sales.¹⁵ The value of these drugs was forecasted to increase to 30 per cent of global sales by 2021 (see Exhibit 3).¹⁶

PHARMACEUTICAL INDUSTRY

Various entities, including insurance companies and government agencies, could play a role in the health care industry. However, three main groups comprised the pharmaceutical value chain: manufacturers, distributors, and retailers.

Pharmaceutical Manufacturers

The price of a new branded drug was based on negotiations between pharmaceutical companies and insurance companies. However, the pharmaceutical companies held the patents for branded drugs; therefore, pharmaceutical manufacturers had great bargaining power in terms of setting drug prices, which were usually paid by insurance companies. Conversely, distributors and retailers had lower power in regard to setting the price that many consumers had to pay for branded drugs. Due to their high bargaining power, the top 20 pharmaceutical manufacturers accounted for more than 50 per cent of global pharmaceutical sales (see Exhibit 4 and Exhibit 5).¹⁷

In contrast, manufacturers did not have bargaining power in setting prices for generic drugs because there was no patent protection. Therefore, generic drug manufacturers were exposed to price competition from each other.¹⁸

Pharmaceutical Distributors

Pharmaceutical distributors had to meet specific conditions for the proper storage and transportation of drugs, which was highly regulated. Also, to avoid out-of-stock situations, the distribution system had to be effective to provide pharmacies with sufficient drugs at the right time. In the United States, three companies controlled over 90 per cent of the pharmaceutical distribution market: McKesson, Cardinal Health, and AmerisourceBergen.¹⁹