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Teva Pharmaceutical: Generic Market Access to Global Healthcare Industry

Neta Kela-Madar

Abstract

The present paper represents a qualitative case study on the pharmaceutical company Teva, including an in-depth exploration of the company within the specific context of pharmaceutical industry. Being a qualitative case study in the business discipline, the company details regarding the shareholders, the stock price fluctuations in recent decades in comparison with other competitors will be presented. The objective of this article is to provide a thorough description of Teva, a global leader in the pharmaceutical industry, by assessing the evolution of the company considering the changes at the corporate level and in the market, like the appearances of new competitors. The results will contribute in providing an insight in how future pharma companies can avoid certain pitfalls and how they should reply to the market competition and different other changes on the market.

Keywords: Pharmaceutical, market access, healthcare, global industry

1. Introduction

Teva Pharmaceutical Industries Ltd. is Israel's first and largest multinational, reaching a dominant position on the global level, in generic pharmaceuticals. Teva has humble beginnings. Established in 1901, it was created out of a family endowment, immigrant loads, and a modest early investment. By 1990, it was one of the most prominent pharmaceutical companies in the world [1]. Teva's global meteoric rise was largely due to the development and patent of COPAXONE®, a novel treatment for multiple sclerosis.

Teva Pharmaceutical Industries Ltd. was one of the first companies to produce generic drugs and now it is one of the largest pharmaceutical companies in the world, with 16,000 products related to generics, novel drugs, and over-the-counter medications. Teva had been active in 60 countries internationally and supplied drugs to 200 million people worldwide. Manufacturing, research, and marketing sites were largely located in Israel, North America, and Europe.

The company had staff strength of 60,000 people, of which 6,500 were based in Israel. Since 1976, Teva has had eight chief executive officers (**Figure 1**). The year 1976 was a turning point for the company as Teva, Zori, and Assia united to create Teva Pharmaceutical Industries Ltd. It was a period of consolidation for the business [2].

The pharma industry suffered significant transformations over the last decades and a thorough analysis of how these changes impacted Teva company are worthy



Figure 1.
Teva C.E.O.s since 1976.



Figure 2.
Teva's logo, describing Teva's values.

of study. Also, it is important to understand the new competitors from emerging markets, which are adopting aggressive tactics on the market. The present research describes an analysis of the case study on Teva company in the context of pharma industry, having as purpose to provide an insight in how future pharma companies can avoid certain pitfalls and how they should reply to the market competition and different other changes on the market (Figure 2).

2. Literature review

2.1 Company's values

With a mission to be a global leader in generics and biopharmaceutical, improving the lives of patients worldwide, Teva's core values were centred on corporate

responsibility and transparency. During its initial successful decades, Teva consciously stressed a culture of employee satisfaction, and its message was that of a consumer brand to be trusted.

Teva emphasized the importance of drug safety, collaborations, health initiatives, and innovative research. The company had committed to various socio-economic initiatives, including donations, human rights, diversity, inclusion, occupational health, and safety, as well as the environment and pharmaceutical drugs [3].

2.2 History

The Teva production plant was established in Jerusalem on May 1, 1935, located in the neighborhood of Bayit Vegan. The factory was built with an investment of 4,900 pounds sterling, partially from the family endowment and partially from loans made by German immigrants. The immigrants wanted to support fellow German, Günther Friedlander, who was a pharmacist and botanist.

Banker Dr. Alfred Feuchtwanger became a partner in Teva when he funded a credit shortage in the company. He held a 33% share of Teva. In 1951, Dr. Feuchtwanger initiated Teva's initial public offering and entrance into the Tel Aviv Stock Exchange as a publicly listed and traded company.

During World War II, the factory supplied medicines to the Allied forces, in particular, to the British army in the Middle East. Sir Alan Gordon Cunningham, Colonial Minister and head of the British Mandate, visited the factory on behalf of the Secretary of State for the Colonies. His visit to the Teva factory significantly jumpstarted its reputation in the pharmaceutical industry.

In 1959, the pharmaceutical branch of the Israeli Manufacturer's Association conducted a survey among Israeli pharmaceutical companies, and the Teva plant in Jerusalem was ranked first. The results of the survey showed that the market approved of and supported Teva products, many of which were developed by Dr. Friedlander and the factory staff. The workers felt appreciated for their initiative and ideas. They took pride in their work and performed their tasks with strict execution.

In 1971, the Teva plant moved from Bayit Vegan to the industrial park in Har Hozvim. It was the first scientific factory that was established in Kiryat Atirot. Teva has expanded its operations over the years. For instance, in 1982, Teva received F.D.A. approval for its Kfar Saba plant in central Israel, which allowed it to market its generic drugs in the United States. The factories of Teva enabled the business to transform into a powerhouse drug maker. In 2019, the Kfar Saba plant of Teva received an F.D.A. approval stamp for the manufacturing of migraine drugs [4].

2.3 The company's main products

Regarding the commercialized products, the drugs produced by Teva can be used for migraines, pain management, cancer, and supportive care, and respiratory disorders. Some of the common generic drugs of the company are Alvimopan Capsules, Brinzolamide Ophthalmic Suspension, Colchicine Tablets, U.S.P., Dimethyl Fumarate Delayed-Release Capsules, Efavirenz, Emtricitabine, and Tenofovir Disoproxil Fumarate Tablets, etc. [5].

The company expanded into the treatment of a wide variety of disease types while simultaneously developing generic drugs. The goal was to provide faster and better solutions for patients battling various diseases. From a business perspective, Teva's strategy was to increase drug production to generate higher revenue.

In the mid-1990s, Teva introduced a novel drug called COPAXONE®, to treat multiple sclerosis. The drug was developed by a team of researchers at the Weizmann Institute of Science and was considered the world's best treatment against the condition. COPAXONE® received the United States Food and Drug Authority (F.D.A.) approval in 1996 and was regarded as one of the greatest achievements of Israel's scientific efforts.

This invention transformed Teva from a company that produced generic drugs to one that produced novel treatments. Since 2015, COPAXONE® was marketed to more than 50 countries worldwide. Teva's revenue from worldwide drug sales reached \$4.2 billion, roughly 21% of the company's total revenue.

Another novel drug produced by Teva called Azilect was intended to treat Parkinson's disease. Teva launched the drug in Israel in 2005. A year later, the drug was launched and marketed in the United States. Teva discovered that Azilect was the only drug in the world that could treat the symptoms of Parkinson's disease and delay the physical deterioration due to the disease. Azilect has been sold in more than 45 countries around the world. In 2010, sales revenue for Azilect was \$318 million.

At the end of 2016, Teva's novel drug portfolio was worth hundreds of millions of dollars. Considerable investments in R&D were critical to developing new novel drugs and maintaining Teva's current portfolio of novel drugs.

Patent protection has been an important tool for Teva to safeguard its innovation as well as to recoup the R&D invests in drug development. Various companies had tried to launch drugs in order to compete with COPAXONE®. In June 2015, the U.S. Federal Court of Appeals ruled that Teva's patent of its 20 mg dose of COPAXONE® was expired.

Teva's losses continued in 2017, as the U.S. Patent Commission in the Delaware District Court filed a motion to revoke the exclusivity of the patent from Teva that had accrued them \$49 billion in revenue. This caused the company's stock to decline about 50 percent in 12 months' time. Additionally, the Federal Court of Appeals filed a request to cancel the validity of one of the company's patents for the lung cancer drug Alimta that earned the company \$1.1 billion in 2016.

Teva had been looking at introducing a novel migraine drug to be a replacement of sorts for COPAXONE®. This new drug hoped to treat various iterations of migraines. Teva has introduced AJOVY, which is a pre-filled injection for the prophylaxis of migraines in adults. It received a nod from European Medicines Agency's Committee for Medicinal Products for Human Use in 2019 [6]. Despite patent challenges in the United States, in December 2015, the European Patent Office approved Teva's patent for the 40 mg dose of COPAXONE® until 2030.

3. Research method

To understand the evolution of a company in time, it is important to analyze the key factors which contribute to the success or to the fall of a company. The present paper is based on a qualitative research, aiming to provide an in-depth understanding on the correlation between the internal and external changes and the company's evolution.

According to Baskarada [7], the case study method is the most widely used method in academia for researchers interested in qualitative research, Baskarada [7] emphasizing the need to have a succinct guideline that can be practically followed.

This research presents a qualitative case study on Teva company in the context of pharma industry. Baxter and Jack [8] define a qualitative case study as a research methodology that helps in exploration of a phenomenon within some particular

context through various data sources, and it undertakes the exploration through variety of lenses in order to reveal multiple facets of the phenomenon. In the case of Teva company, the used data sources are business reports, news media, as well as specialized articles on pharmaceutical industries. The company is analyzed from multiple facets like the evolution of the stock price, the corporate decisions, the appearance of new competitors on the market and how the company's revenues have been affected.

According to Yazan [9], in qualitative research, case study is one of the frequently used methodologies, in which a real-time phenomenon is explored within its naturally occurring context, with the consideration that context will create a difference [10]. In the present case, the real-time phenomenon is the historical evolution of the Teva company with the consideration that the context of the overall pharmaceutical industry plays an important part in this evolution.

The considered phases of the chosen methodology are the same as the one proposed by Rashid et al. [11] and they are the following: the foundation phase (analyze of what is relevant in assessing the success of Teva company in the context of pharma industry), prefield phase (deciding on the factors which will be measured, the case study protocol), field phase (in this case, gathering the relevant data from trustworthy resources), reporting phase (reporting the findings).

The factors which help in assessing the evolution of Teva company are the competitors, the company's business strategy, the stock performance and the company's overall performance. By analyzing these factors and reporting some of the quantitative data associated with them will help in painting a broad picture of the company's evolution.

4. Findings

4.1 Competitors

Teva has several competitors in the global market, like Momenta Pharmaceuticals, Mylan, Synthon, Unipharm and Rafa. Another name worth mentioning is Allergan, which, in 2015, became the largest shareholder of Teva after Teva acquired Allergan's generic pharmaceutical division.

One of the main products of Momenta Pharmaceuticals is Glatopa®, a generic form of COPAXONE®. In 2015 Glatopa® was approved by the US FDA and launched in the United States. Momenta Pharmaceuticals collaborated with Sandoz, a Novartis company, to produce Glatopa®. The intent was for Glatopa® to replace Teva's 40 mg dose of COPAXONE® [12].

The multinational drug development company, Mylan, was registered and based in the Netherlands, with branches in the U.K. and Pennsylvania. Until 2007, the American branch of Mylan only operated in the domestic market. However, after Mylan acquired German drug company Merck, and the Indian Laboratories of Matrix, Mylan became the second-largest generic drug company in the world, after Teva. Mylan started marketing their version of the 40 mg dose of COPAXONE® in October 2017 [13].

The Dutch company Synthon, is an international pharmaceutical company and one of the leaders in the field of generic medicines. In 2017, Synthon announced that it had successfully conducted clinical trials in order to prove that its glatiramer acetate (sold as Remurel by Alvogen) provided the same therapeutic benefit as Teva's 40 mg COPAXONE®. Synthon received the European Medical Agency's approval in a process in which all 29 E.U. Member states adopted the approval [14].

Regarding the key competitors in the domestic market, Unipharm and Rafa are worth mentioning. Unipharm, had been developing and marketing generic drugs since 1975. Founded by pharmacist Zvulun Tomer, the company was a pioneer in the generic drugs force. Unipharm's drugs targeted the treatment of a wide range of diseases and symptoms such as mental health, heart health, sleep, Alzheimer's, infectious diseases, urology, eyes, and more. In 2017, Unipharm launched a new plant in Mavo Carmel. At this manufacturing plant, Unipharm introduced new technologies and development processes to achieve production efficiencies and cost savings in generic drug manufacturing [15]. It uses innovative approaches to act as a one-stop solution for health manufacturing needs and thus poses challenges to Teva.

Rafa was founded in 1937 and is one of the leading pharmaceutical companies in the country. The company specialized in the marketing, manufacturing, and distributing of novel and generic drugs, prescription drugs, over-the-counter drugs, as well as therapeutic products. Rafa products were marketed to all Israeli health institutions, such as public and private hospitals, clinics, health clinics, and more, serving a wide range of ages in the population, from infants to the elderly [16]. The company focuses on research activities to introduce the latest drugs and therapies relating to different conditions and thus poses a challenge for Teva [17].

4.2 The business strategy

Since the 2000s, Teva had embarked on an acquisition strategy – buying over large generic drug companies to create value for the company. Some acquisitions seemed initially successful but proved otherwise later. Other acquisitions lacked clear plans. When Teva acquired U.S. drug company Cephalon in October 2011, Cephalon's R&D team took over the development of the anti-depression drug. Within a year, the R&D employees were laid off.

The acquisitions resulted in significant short-term financial gains because stock prices could be raised through acquisitions. Chief executives of that period had focused on creating shareholder value through mergers and acquisitions in the pharmaceutical market, rather than focusing their energy on their drug clientele and patients. They also channeled investments away from the research and development of drugs such as COPAXONE®.

4.3 Stock performance

Teva had a “dual stock,” or a stock that traded in two trading areas: in the home country of the company, and in the stock exchange of another large country. Teva's dual stock was traded on the Tel Aviv Stock Exchange as well as the New York Stock Exchange.

At the beginning of the 2000s, Teva's share rose 20 times, which significantly impacted the Tel Aviv Stock Exchange. Investment in Teva had become extremely popular and was even referred to as the “people's share.” However, Teva stock also experienced sharp declines during 1998, the middle of 2004, and after the publication of negative reports in 2006. A financial commentator at one point even said, the public suddenly understands that “Teva is also a share.”

From the beginning of 2014 until the middle of 2015, Teva's share price almost doubled, but by the end of 2016, it returned to the level that it was in early 2014. In May 2017, Teva's share dropped to a level that it has not been since 2005.

4.4 Teva's overall performance

Since the end of 2015, Teva's shares are down by 64%, which has erased more than \$40 billion in market capitalization [18]. The company's worsening performance led to a wave of layoffs. Teva cut 14,000 jobs worldwide, which was more than 25 percent of the company's international workforce. According to Teva, it plans to lay off 1,750 employees, and that's just the beginning [19]. The layoffs will occur as a result of the closure or sale of a significant number of R&D sites, headquarters, offices, and a number of the company's geographical divisions will also be reduced.

By the end of 2017, Teva closed or sold six plants. This was followed by the closure of another nine plants in 2018.

The company's two plants in Jerusalem, which employed 1,100 employees, have been closed, the factory in Kiryat Shmona sold, the R&D center in Netanya, which employed 350, people has also closed as of 2019 [20].

In addition, Teva ceased operations at the global logistics center S.L.A. from the Shoham Industrial Area, even though it employed 700 people [21].

While on the one hand, the reduction plan raised the value of the stock by creating the illusion of improvement, it damaged employee and customer trust and further contributed to the deterioration of the company's shares.

In 2019, Teva's total revenue fell by 8% to \$16.9 million, which was a decrease of 8% as compared to 2018. This decline was mainly due to various reasons like the generic competition to COPAXONE®, a decline in revenues from U.S. generics business, BENDEKA®/TREANDA®, and Japan. However, this decline was partially offset by higher revenues from AUSTEDO, AJOVY, and QVAR® in the United States. COPAXONE® accounted for 11% of Teva's North America revenue from October to November 2019 [22].

5. Discussion

By combining the above-mentioned factors, a broad picture of the company's evolution can be painted.

Things took a downturn in the 2000s when Teva embarked on a strategy to create shareholder value through mergers and acquisitions. When Teva acquired U.S. drug company Cephalon in October 2011, Cephalon's R&D team took over the development of the anti-depression drug. Within a year, the R&D employees were laid off. The acquisitions resulted in significant short-term financial gains because stock prices could be raised through acquisitions. Chief executives of that period had focused on creating shareholder value through mergers and acquisitions in the pharmaceutical market, rather than focusing their energy on their drug clientele and patients. They also channeled investments away from the research and development of drugs such as COPAXONE®. Teva's reputation as an innovative and entrepreneurial Israeli company with a heart for its employees seemed to have lost its way (**Figure 3**).

In 2015, Teva's competitor, Allergan, became the largest shareholder of Teva after Teva acquired Allergan's generic pharmaceutical division. This resulted in much unhappiness among other shareholders, causing a corporate crisis. The other shareholders of the business were dissatisfied as the two leading generic businesses came together, and their fundamental needs and expectations overshadowed the needs of other shareholders [23].

After the U.S. Federal Court of Appeals ruled in 2015 that Teva's patent of its 20 mg dose of COPAXONE® was expired, the competitors launched their generic

Conditions	Description
Migraine ¹	<p>A migraine is much more than just a headache. A migraine is an advanced neurological disease characterized by recurrent bouts of moderate to severe headaches.</p> <p>Teva's treatment for migraine is AJOVY which is a humanised monoclonal antibody².</p>
Pain Therapy ³	<p>Pain is an unpleasant sensory and emotional experience, which is associated with actual or potential damage to bodily organs and tissue. Pain is sometimes a symptom, but it can also be an independent medical problem that requires treatment.</p> <p>Teva offers tools for dealing with pain in the form of literature, medical advice, and more. Pain therapy is intended to ease patients' suffering, improve their quality of life, and enable them to function better.</p>
Central Nervous System (C.N.S.) ⁴	<p>Teva's C.N.S. drug collection included pain management treatments for adults with cancer, opiates, and products for muscle contraction for people with muscle and skeletal conditions. Investments were also made to develop non-opioid alternatives.</p>
Cancer and Supportive Care ⁵	<p>The company has been working on new cancer treatments in the laboratory, which are based on accurate diagnosis.</p>
Breathing ⁶	<p>Teva provides respiratory products to increase the patients' quality of life and prognosis.</p>

Figure 3.

Areas of care treated by Teva. (Sources: ¹Teva treatment for migraine, <https://www.teva.co.il/Treatment-area/Migraine/>, date accessed: 28 February 2020. ²Teva launches AJOVY for the treatment of migraine with the Ypsomate autoinjector from Ypsomed, [https://www.ypsomed.com/fr-CA/derniere-nouvelles/news-reader-detail-page/teva-launches-ajovy-for-the-treatment-of-migraine-with-the-ypsomate-autoinjector-from-ypsomed.html#:~:text=AJOVY%20\(fremanezumab%20Dvfrm\),is%20affected%20by%20migraine%20worldwide](https://www.ypsomed.com/fr-CA/derniere-nouvelles/news-reader-detail-page/teva-launches-ajovy-for-the-treatment-of-migraine-with-the-ypsomate-autoinjector-from-ypsomed.html#:~:text=AJOVY%20(fremanezumab%20Dvfrm),is%20affected%20by%20migraine%20worldwide), date accessed: 28 February 2020. ³Teva treatment for pain, <https://www.teva.co.il/Treatment-area/Pain/>, date accessed: 28 February 2020. ⁴Teva treatment for CNS, <https://www.teva.co.il/Treatment-area/Central-Nervous-System/>, date accessed: 28 February 2020. ⁵Teva treatment for cancer, <https://www.teva.co.il/Treatment-area/Oncology/>, date accessed: 28 February 2020. ⁶Teva treatment for breathing, www.teva.co.il/Treatment-area/BreathLobby/, date accessed: 28 February 2020. Teva Pharmaceutical Industries Limited, https://www.annualreports.com/HostedData/AnnualReports/PDF/NYSE_TEVA_2019.pdf, date accessed: 28 February 2020.)

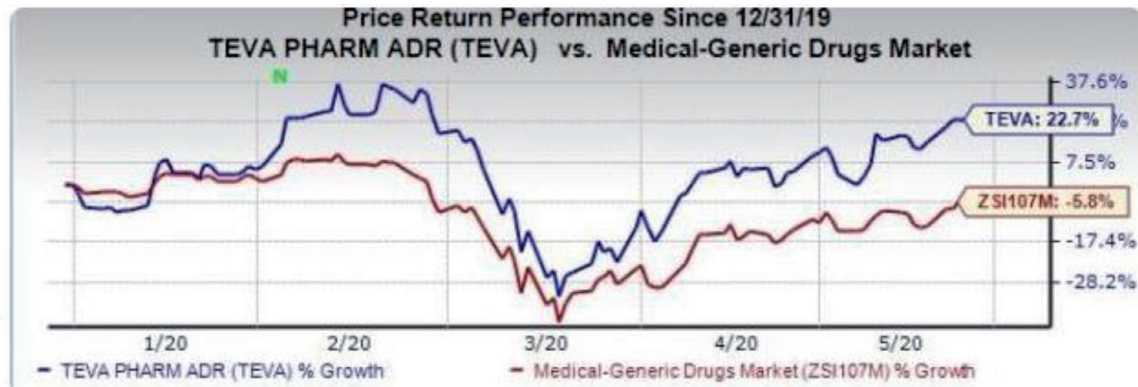


Figure 4.

Price return performance. (Source: Can Teva (TEVA) Return to Growth in This Year or Next?, [versions and the profitability of COPAXONE® eroded, and Teva’s market share plunged. With the launch of Glatopa®, Teva had expected it to reduce Teva’s revenue by 18% to 4.7 billion as well as further eroding prices \[24\]. This increased the competition of COPAXONE® significantly. Also, the competition generated by Mylan’s generic version, sparked a competitive price war leading to Teva’s US COPAXONE® revenue to fall by 20 percent \(Figure 4\). Regarding Synthron, one hit was when Synthron was accepted in European markets. Even though the European market was not the most important market for COPAXONE®, Teva had until then enjoyed patent protection and avoided competition. Synthron’s announcement came just a few days after Mylan launched the 40 mg and 20 mg versions of glatiramer acetate in the United States \[14\].](https://finance.yahoo.com/news/teva-teva-return-growth-next-095909420.html?guccounter=1&guce_referrer=aHRocHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAN5KQnTTljEo7PfnCLKNGoUwFpDU2vzUMoUxs zodGcNcK5sv1NLAQ5MMRj3ctF1Z9Rvi5QFhSDErtdGH6I66TL-5_HIFkVT_DpzonXFej10FdudfNDxoUQdY2WbUJRUR89J9wa1vGEVR_pjI9sG7phD6PFgemJIZyfMUon5mZdno, date accessed: 28 February 2020.)</p>
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Teva’s troubles continued to mount. Its share value was reduced in the indices due to stock exchange reform. Teva was also denied a critical patent application which eroded the profitability of the flagship drug COPAXONE®. COPAXONE® faced growing competition after parallel pharmaceutical companies launched their generic versions in 2016, which triggered a precipitous decrease in Teva’s market share (Figure 5).

One of the main reasons for Teva’s losses is a result of being entirely dependent on the sales of one of the company’s primary drugs, Copaxone, used as the



Figure 5.

Source: Zacks, Generic Industry on Path to Recovery: 3 Hot Picks for 2019, <https://www.nasdaq.com/articles/generic-industry-on-path-to-recovery%3A-3-hot-picks-for-2019-2018-12-28>, date accessed: 28 February 2020.

treatment for M.S. This puts Teva in a weak position because any drop in drug sales can and will have a negative impact on the company.

When Schultz joined the company, Teva's debt was \$40 billion. Teva had also begun a process of significant streamlining, which included laying off about 25 percent of its employees, or roughly 14,000 people, and 1,750 in Israel alone. Teva had lost more than half its market value, with plans underway to leave 45 countries before the year is out. It is currently difficult to assess what can be done so that Teva can rebuild its reputation (Figure 6).

The acquisitions resulted in significant short-term financial gains because stock prices could be raised through acquisitions. Chief executives of that period had



Figure 6. Teva's stock performance. (Source: Teva Pharmaceutical Industries Limited, <https://finance.yahoo.com/chart/TEVA>, date accessed: 28 February 2020.)

Revenue of Teva Pharmaceutical Industries from 2006 to 2020 (in million U.S. dollars)

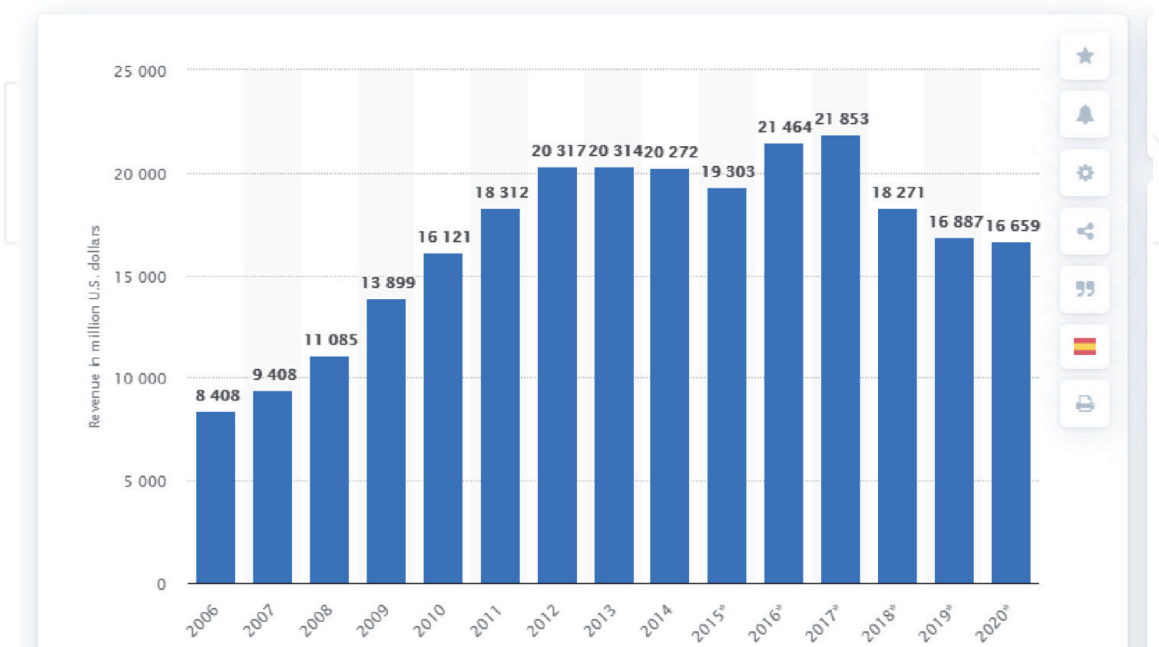


Figure 7. Annual revenue of Teva Pharmaceuticals industries. (Source: Revenue of Teva Pharmaceutical Industries from 2006 to 2020, <https://www.statista.com/statistics/272542/teva-pharmaceutical-industries-net-sales-since-2006/>, date accessed: 28 February 2020.)

focused on creating shareholder value through mergers and acquisitions in the pharmaceutical market, rather than focusing their energy on their drug clientele and patients. They also channeled investments away from the research and development of drugs such as COPAXONE®. Teva's reputation as an innovative and entrepreneurial Israeli company with a heart for its employees seemed to have lost its way (**Figure 7**).

In May 2017, Teva's share dropped to a level that it has not been since 2005; the decline was due to investors' concerns that in June 2017, Mylan would receive authorization to initiate the marketing of a generic version of Teva's profitable 40 mg COPAXONE® in the United States.

In the last decade, Teva has spent \$70 billion on giant acquisitions, Cephalon and Actavis, and for that reason, it is expected that its value to be minimally \$70 billion, but in reality, it is about half of that, and its share has plummeted more than the rest of the sector. The cutting of spending was not large enough to justify the acquisition.

In 2019, Teva's total revenue fell by 8% to \$16.9 million, which was a decrease of 8% as compared to 2018. This decline was mainly due to various reasons like the generic competition to COPAXONE®, a decline in revenues from U.S. generics business, BENDEKA®/TREANDA®, and Japan. However, this decline was partially offset by higher revenues from AUSTEDO, AJOVY, and QVAR® in the United States. COPAXONE® accounted for 11% of Teva's North America revenue from October to November 2019 [22].

In spite of the many difficulties the company faced in the last decades, there is still the possibility that the company can rebalance again and learn from its mistakes. Teva is still a major pharmaceutical company that offers a broad range of drugs in the global market setting. It has been showcasing consistent performance and contributing to improve the health outcome of the general public. The firm's strategy plays a cardinal role in influencing its contribution to the dynamic industry.


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