

**STRATEGIC REPORT FOR  
PFIZER PHARMACEUTICAL COMPANY**

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GLOBAL.

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## EXECUTIVE SUMMARY

Pfizer (Ticker Symbol: PFE) is the world's largest research-based pharmaceutical company with a market capitalization approaching 200 billion USD. The Company produces drugs which address nearly every kind of human and animal ailment imaginable. Pfizer researches, develops, produces, markets and sells its products. The Company divides its product line into three distinct groups: human health, consumer healthcare and animal health.

The top products by revenue and volume produced by the human health group include *Lipitor* (for cholesterol), *Norvasc* (for hypertension and angina), *Zoloft* (for depression), *Celebrex* (for arthritis) and *Viagra* (for erectile dysfunction). *Lipitor* is the world's highest revenue-generating prescription medicine. The consumer healthcare segment makes such common over-the-counter medications as *Listerine*, *Nicorette*, *Benadryl*, *Sudafed*, *Visine*, *Purell* and *BenGay*. The animal health division produces various products including parasiticides, anti-inflammatories, vaccines and antibiotics. Pfizer's human health group accounts for the lion's share of the Company's revenues (93% in 2006).

Pfizer is a truly international company. While the Company is based in New York City and earned 53.4% of its fiscal 2006 revenues<sup>1</sup> in the U.S., the Company has 79 plants and locations spread across the globe<sup>2</sup>. The Company's major facilities outside of the U.S. are in Belgium, Brazil, France, Germany, Ireland, Italy, Japan, Mexico, Puerto Rico, Singapore, Sweden and the UK.

This paper reviews Pfizer's history, examines the forces at play in the pharmaceutical industry as a whole and provides a high level financial analysis of the Company. This report uses these three areas of research to identify two major strategic issues facing Pfizer today and recommends four solutions Pfizer can implement to meet these challenges.

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<sup>1</sup> Pfizer 2006 10-K Financial Report

<sup>2</sup> Ibid

## COMPANY BACKGROUND

Today's global behemoth Pfizer finds its modest beginnings in a brick building in Brooklyn, New York in 1849. Using \$2,500 borrowed from his father, Charles Pfizer founded Charles Pfizer & Co. with his cousin Charles Erhart. The cousins were young entrepreneurs from Germany who wanted to bring chemicals not found in the US to the American marketplace. The first product the Company made was a candy cone, created by combining Santonin (an anthelmintic, or agent that is destructive to worms and is used for removing internal parasitic worms in animals and humans) with almond-toffee flavoring. The tasty remedy was an immediate success and the nascent company was up and running.

In 1857, the Company bought 72 acres surrounding its original Brooklyn building and established an office in Manhattan in what is today the heart of New York's drug and chemical district. The American Civil War was a great boon to Pfizer as it greatly expanded production to meet the need of Union soldiers for a plethora of painkillers, preservatives and disinfectants. Spurred by the demands of the War, Pfizer's revenue doubled between 1860 and 1868.

Citric acid (a colorless translucent crystalline acid principally derived by fermentation of carbohydrates or from lemon, lime, and pineapple juices) was a key product for Pfizer from 1880 well into the 20<sup>th</sup> century, a period of time in which it became America's leading producer of citric acid. Citric acid is used in soda and magnesia (a popular laxative). As the use of soda became engrained in American culture, Pfizer looked for a way to meet the ever-growing demand and was the first to produce citric acid in bulk. This success led to great growth for Pfizer and the Company added an office in Chicago, Illinois in 1882. In 1891, Charles Erhart died and Charles Pfizer bought his cousin's portion of the Company for \$250,000, concentrating ownership of the blossoming company.

The 1900's were defined by multiple races to be the market leader in the discovery and production of a number of life-changing drugs. Pfizer led the market in Vitamin C and Penicillin and many others pharmaceutical products.

Taking a cue from the development of Penicillin, Pfizer scientists began to research ways of creating more types of antibiotics. The drug Terramycin, a broad-spectrum antibiotic first produced by Pfizer in 1950, was the first drug to be created solely by Pfizer scientists. Recognizing the business value of “owning” a drug patent rather than licensing it from others, Pfizer sold the rights to Terramycin to itself. Finding this approach profitable, Pfizer shifted more focus into research.

On June 22, 1942, 250,000 common shares of Pfizer were sold in the Company’s initial public offering. Soon following this, Pfizer made a major international push, opening operations in Belgium, Brazil, Canada, Cuba, England, Mexico, Panama, and Puerto Rico. In order to augment this international growth, Pfizer acquired a number of companies. Partially due to these acquisitions and partially due to the continued discovery and production of new drugs, Pfizer crossed the billion dollar sales threshold in 1972. Explosive growth has continued since 1972 by emphasizing the strategy of the research-based model. Today, Pfizer revenues are about \$48 billion annually and the Company produces many of the world’s leading drugs and consumer products.

## COMPETITIVE ANALYSIS

Pfizer is classified as SIC Industry 2834, Pharmaceutical Preparations. Other corporations in this industry include Johnson & Johnson, Merck, Novartis and GlaxoSmithKline. The very technical criteria of the U.S. patenting process allows companies to produce similar, but not identical, drugs to address the same condition. Therefore, these companies are in the most direct competition when researching these products rather than in producing and selling these products. The following review of Porter’s Five Forces provides a summary this phenomenon as well as other key drivers of the pharmaceutical industry.

## INTERNAL RIVALRY

The pharmaceutical preparations industry is characterized by intense competition and a constant battle for the next blockbuster drug. Discovering a blockbuster drug can mean billions of dollars in revenues for the discoverer and/or patent owner. This is a “winner-takes-all” patent race. Not only is the company which creates and patents the new hot drug (e.g. Lipitor) guaranteed a steady and solid revenue stream for the life of the patent, but by beating out its competition it has left them with research and design costs without any offsetting revenue.

Drug creation is only half of the story. Pfizer and the other large firms in the industry distinguish themselves from their competitors not only by their ability to engineer new blockbuster drugs, but also by mass producing and selling large quantities of their various products. The successful firms in the industry possess large sales forces enabling them to aggressively bring their drugs to the market, whether it be prescribing physicians or store shelves, whereas less well-healed drug companies – which have significantly smaller sales forces with fewer resources – are typically slower to bring their products to market.

For the first time in recent history, however, the smaller firms have a real chance at competing head-to-head with the larger drug companies like Pfizer because the future of the industry lies in personalized drugs based on individuals’ DNA. Such products are quite specialized, and thus the introduction of these drugs opens the door for more market niches to fill. As a result, the industry is sure to see more small drug companies entering the market with their specific drugs, rivaling Pfizer and the other large firms with their ability to cater to much smaller, individualized markets.

## BARRIERS TO ENTRY AND EXIT

Research and development of a drug can take a huge amount of money. The nature of therapeutic discoveries is such that a lucky firm can discover a new drug quickly and at a relatively low cost. However, more typically a firm spends large amounts of money and has nothing but “lessons earned”, not revenues, to show for it. Because of these risky and typically high up-front costs, the barrier to entry is considerable.

Further, pharmaceutical companies must meet the stringent regulations and specifications of the U.S. Federal Drug Administration and similar agencies around the world. These agencies act as gatekeepers and keep even drugs with great curative potential off the market if their risk/reward ratio is deemed unacceptable.

Barriers to entry also exist in the form of brand loyalty and sales reach. Established companies such as Pfizer have loyal customers who trust products because they come with the weight of Pfizer’s name behind them. Smaller or start-up companies may not be able to convince companies of their product’s reliability without a proven track record. Smaller companies can also struggle to inform the public of the existence of their product while larger drug companies have huge sales and marketing teams and established advertising budgets and programs. Larger companies realize this is a competitive edge that they have over smaller companies and therefore look to find synergistic effects by buying up companies with promising research. Often these takeovers are friendly, but they can be hostile as well, providing yet another barrier to entry.

In addition to the barriers to entry discussed above there are barriers to exit. It is difficult to determine when the payoff will come when researching a drug. It is possible that just one more day of research will lead to a significant breakthrough. This may push some companies to not exit the market when it would have been efficient from a financial perspective to do so.

A moral dilemma exists in the industry. If one decides to exit the industry, what happens to those who are reliant on your products for health or even life? A feeling of moral responsibility may thus prevent an efficient exit.

## SUBSTITUTES AND COMPLEMENTS

The threat of substitutes to a pharmaceutical company's product line is minimal once a patient has been diagnosed with a treatable disease, at least for drugs which are still under patent. This lack of substitutes explains in part the relatively high profit margins inherent in the drug industry. However, once a patent expires, generic drugs enter the market and attempt to (often successfully) steal market share by undercutting on price.

Additionally, there are a number of preventative health measures which consumers may substitute for medications in the long-term, given the growing expense of prescription medication. Better physician care, improved dietary habits, and increased exercise are all factors that can affect drug consumption over time. Recent consumer trends towards consumption of organic produce, as well as increased consumer awareness of health risks posed by trans-fats and excessive fast-food consumption indicate that consumers are moving towards healthier lifestyles, and as such the potential for future profitability of drugs designed to target obesity, high cholesterol or elevated blood pressure may be declining.

Physicians who are aware of and regularly prescribe medications are the most important complement to a pharmaceutical company's drug portfolio. Most patients know little about the relative merits of different drugs, and thus rely on their physicians to make these decisions for them. Therefore, it is important for companies in this industry to sponsor educational programs for physicians to ensure continued support. Ensuring physicians of the superior performance and safety of products is one of the most effective ways of maintaining drug profitability after a patent has expired and generic drugs enter the market. Fostering a sense of attachment or security with physicians vis-à-vis a product



line ensures positive feedback in the future.

On a larger scale, recent movements towards government-sponsored or single-payer healthcare programs requires that the pharmaceutical industry ensure that its drug lines are included in the all health care plan formularies (a listing of prescription drugs approved for use). As insurance plans can be extremely limited as to specific drugs that are covered for each medical condition, successful lobbying of insurance carriers is extremely important. On the flip side, health care insurance sometimes allows individuals access to expensive brand-name drugs that patients might not be able to afford without insurance. Since drug insurance-covered patients is a very substantial percentage of any pharmaceutical company's customer base, it is important that the drug companies maintain good relationships with HMO's, hospitals, and other healthcare entities.

#### SUPPLIER POWER

Most pharmaceutical companies are vertically integrated. These companies research, develop, produce, market and sell these drugs and therefore there is very little supplier power in this industry. The largest source of supplier power is the labor force, but no more so than any other industry which requires some degree of skilled labor. In addition, a great deal of pharmaceutical production is automated.

#### BUYER POWER

Buyer power is a serious issue. The U.S. Government through Medicare Part D (prescription drug insurance) and insurance companies which sell drug insurance are two huge players on the buy side. Both of these groups have huge customer bases and therefore power to push the prices of these drugs down significantly. This is a major problem in the industry. This issue, especially as it pertains to the role of the U.S. Federal Government will be discussed in more detail later in this paper.

Doctors and patients do not present as big of a threat. Doctors are not the ones who must pay for the medicine and therefore typically are more focused on quality than price. In the face of a lack of independent scientific information, patients often have such steep demand curves that they will pay for whatever they are prescribed by their treating physicians, resulting in very little negotiating power with the pharmaceutical giants.

## SUMMARY OF FIVE FORCES FRAMEWORK

Exhibit A shows a visual summary of the five forces framework as laid out above. The following table should also help summarize the competitive analysis:

<b>Force</b>	<b>Strength of Force</b>
Internal Rivalry	High
Entry and Exit	Medium to High
Substitutes and Complement	Medium to High
Supplier Power	Low
Buyer Power	High

## FINANCIAL ISSUES

### AT A GLANCE<sup>3</sup>

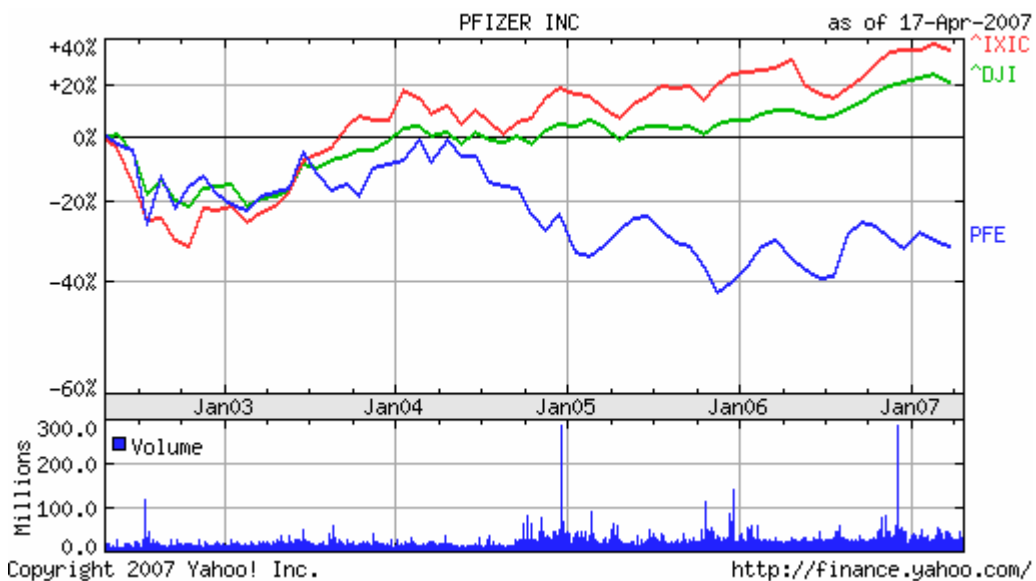
As previously noted, the Company has a market capitalization approaching 200 billion USD. As of 4/17/07, the exact figure was 190.64 billion. In 2006, Pfizer reported revenue of about 48 billion USD against total costs of about 60% of that, or about 29 billion USD. The Company's largest expense were selling and administrative costs which represented slightly more than half of all the Company's costs in 2006.

Pfizer's assets are mainly long term in nature. Not surprisingly, one of the largest categories on Pfizer's asset side of its balance sheet is intangible assets, an account that includes the value of patents. The largest asset category is short-

<sup>3</sup> All figures in this subsection come from Pfizer's 2006 10-K Financial Report

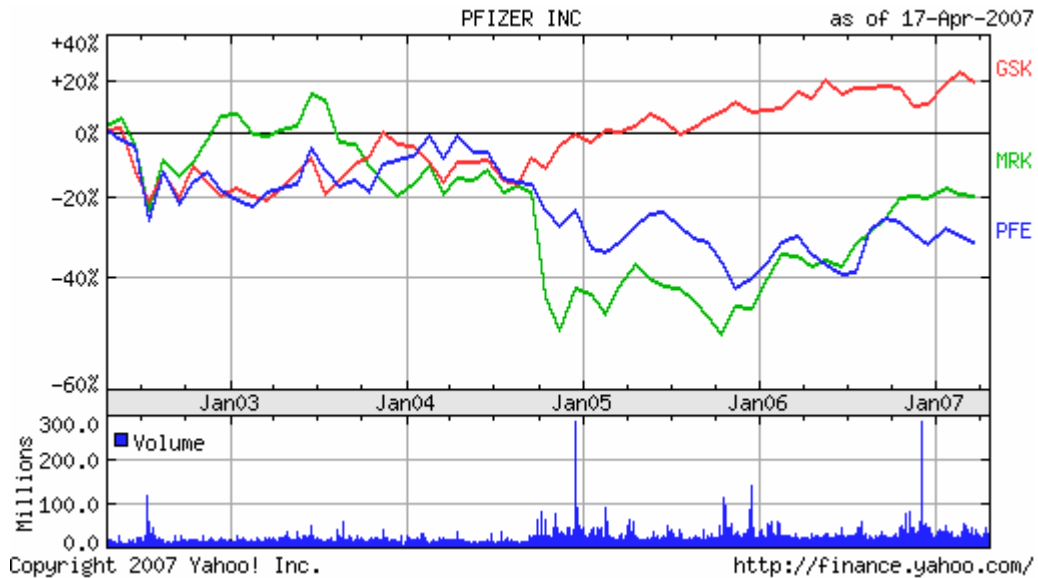
term investments. This is likely a business strategy meant to guarantee steady cash flow while having cash available for acquisitions and new projects. Interestingly, the Company has chosen to have a high level of retained earnings (almost 50 billion USD in 2006) which the Company will plow back into its operations. Total Stockholder Equity totaled 71.4 billion USD compared to 43.8 billion USD in liabilities in 2006. Total assets are equal to the sum of these two categories, or about 115 billion USD.

#### STOCK PERFORMANCE<sup>4</sup>



Pfizer's stock has not performed well over the past five years (down about 30%) when compared to the Dow Jones Industrial Average (^DJI) and the NASDAQ (^IXIC). Pfizer's stock has also underperformed compared to its peer group (GSK – GlaxoSmithKline, and MRK – Merck):

<sup>4</sup> All graphs in this section are taken from Yahoo! Finance 4/16/07



The three main analyst concerns over this five year period have been over management at the Company, rampant inefficiencies and whether Pfizer's tried and true strategy of reliance on blockbuster drugs will work in a changing industry (more on each of these issues later). Concern over management was so serious that the stock price actually increased when ex-CEO Henry McKinnell stepped down last year.

### DUPONT ANALYSIS

Part of the reason for this poor stock performance is that Pfizer has been the victim of some bad press at times because of its relatively low Return on Equity (ROE) numbers:

	<u>Pfizer</u>	<u>Glaxo Smith Kline</u>	<u>Merck</u>
Return on Equity <sup>5</sup>	16.08%	64.55%	23.87%

In fact, on April 16, 2007, Pfizer had the lowest ROE of the three largest pharmaceutical-only companies (Pfizer, British-based GlaxoSmithKline, and fellow U.S. pharmaceutical giant Merck).

<sup>5</sup> Yahoo! Finance 4/16/07

ROE is a statistic often used as a quick way of evaluating management effectiveness, but it can often be misleading if taken at face value. The following Dupont Analysis is useful to show the reasons behind differences in company Return on Equity (ROE).

*2006 Annual Figures, in thousands*

	<i>Pfizer</i> <sup>6</sup>	<u>Glaxo Smith Kline</u> <sup>7</sup>	<u>Merck</u> <sup>8</sup>
Net income	19,337	5,741	4,434
Sales	48,371	37,272	22,636
<b>Profit Margin</b>	<b>39.98%</b>	<b>15.40%</b>	<b>19.59%</b>
Sales	48,371	5,741	22,636
Avg. Total Assets	115,904	98,681	44,708
<b>Asset Turnover</b>	<b>41.73%</b>	<b>5.82%</b>	<b>50.63%</b>
Avg. Total Assets	115,904	98,681	44,708
Avg. Stockholder Equity	68,561	62,289	17,739
<b>Financial Leverage</b>	<b>169.05%</b>	<b>158.42%</b>	<b>252.04%</b>

The above demonstrates that Pfizer has a very high profit margin. However, its ROE is lower than GlaxoSmithKline because Glaxo has a very low asset turnover. Meanwhile, Merck's high financial leverage allows it to have a higher ROE. While some reporting has focused on Pfizer's supposedly low ROE, this analysis shows that it is not a lack of profitability that is causing this, but rather asset turnover and relatively low financial leverage. Therefore, this relatively low ROE is not an issue to be alarmed about.

## DISCOUNTED CASH FLOW ANALYSIS

Attached as Exhibits B, C and D are three versions of discounted cash flow (DCF) valuations for Pfizer. These DCF's should be seen as approximations at valuing Pfizer rather than exact attempts to value the Company. The value of these

<sup>6</sup> Pfizer 2006 10-K

<sup>7</sup> Yahoo! Finance 4/16/07

<sup>8</sup> Ibid

projections lies in demonstrating the effect that changes in growth rates of the components of the Company's cash flow can have on company value.

Exhibit B illustrates how investors could arrive at the valuation for Pfizer of today's (4/16/06) market<sup>9</sup>. This analysis shows that revenues are expected to grow only slightly faster than costs. For a company looking to expand in order to appease stockholders, if economies of scale are appropriately applied (more on this later), revenues should grow noticeably faster than costs.

Exhibit C shows a valuation of Pfizer if the Company stagnates (i.e., does not grow at all). Under this assumption, the Company would be worth much less than investors believe it is worth today. Clearly, to maintain investor confidence, the Company must grow, not just idle in place.

Exhibit D provides a valuation of the Company if the suggestions made later in this paper are put into place and have the projected effects. Notice that the revenue growth rate is much greater than that of costs. In this scenario, Pfizer is significantly undervalued in today's market.

These three exhibits taken together are meant to provide impetus for the client to neither be happy with where it is today nor be happy meeting the Wall Street's expectations. It is the goal of the rest of this report to identify the strategic issues facing Pfizer and present solutions to these issues in order to move toward making the possibilities shown in Exhibit D a reality.

## SWOT ANALYSIS

This section of the paper will focus on the strategic issues facing Pfizer. It is typical convention to approach such an endeavor via a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. The paper will focus intensely on two key subjects discussed in the "strategic issues" section and which

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<sup>9</sup> Yahoo! Finance 4/16/07

incorporate large parts of the features highlighted in the following SWOT framework summary.

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Large size leading to economies of scale</li> <li>• Marketing and sales engine</li> <li>• Highly profitable</li> </ul>	<ul style="list-style-type: none"> <li>• Bureaucratic infrastructure</li> <li>• Overdependence on blockbuster drugs</li> <li>• Lipitor's coming loss of patent protection</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Changing industry</li> <li>• New CEO Kindler brings fresh outlook</li> </ul>	<ul style="list-style-type: none"> <li>• Changing industry</li> <li>• Generics</li> <li>• Medicare Part D / adoption of a US Nationalized Health Care System?</li> </ul>

## STRATEGIC ISSUES

Pfizer today is the dominant player in the pharmaceutical market. It produces the world's highest revenue drug Lipitor and its market capitalization of about \$180 billion<sup>10</sup> is the largest in the industry. In addition, the Company's net profit margin was over 30% over the past year<sup>11</sup>, a figure that surely is to be envied. That said, Pfizer faces a market that is drastically changing in such that its formula that has worked incredibly well over the past few decades will likely not continue to do so into the foreseeable future.

### ISSUE #1: A CHANGING INDUSTRY

The standard approach at Pfizer has been to do research with the aim of discovering "blockbuster drugs" -- drugs that make the Company in excess of \$1 billion per year. Pfizer has been successful in discovering such products as Lipitor and Viagra which are huge revenue producers. Because of the profitability of such drugs, Pfizer has allowed itself to cover up its inefficiency by hiring excessively. Even Pfizer's most recent annual report implies that Pfizer has been a victim of bureaucratic inefficiency<sup>12</sup>.

<sup>10</sup> Yahoo! Finance 3/30/07

<sup>11</sup> Pfizer ValueLine Tear Sheet

<sup>12</sup> Pfizer 2006 Annual Report

Pfizer's inefficiency due to its size would be an issue no matter the industry environment and these problems are only amplified by the direction that the pharmaceutical industry is headed. According to industry analysts, the three major changes that the industry will undergo in the coming years are:

1. A slowdown in the discovery of "blockbuster" drugs
2. Prescription of medicine based on individual's DNA rather than "one size fits all"
3. Smaller companies making market share inroads into due to #2

Some would contend that the reasoning behind these three changes is that many of the markets with the largest demands (for example, cholesterol) have been met with the appropriate drugs. However, it is unlikely that another "new" illness which effects a huge number of people will not spring up just as many have over the past century. Unfortunately, illnesses do not sit still while drugs are concocted to treat them, but instead they react to our treatments. Instead, the real reason for the downfall of the blockbuster drug market will likely be the ability to pinpoint the specific protein, gene or other specific thing causing the illness. Think of blockbuster drugs as the "carpet-bombers" of the pharmaceutical industry: they act as the "cure-all" for a huge number of people. Other products which are more specific to each individual's problems would likely have more success in treatment and therefore in the marketplace. Such drugs take advantage of the ability to pinpoint the specific protein, gene, etc. that cause the illness. These specifically targeted drugs would, however, likely not be able to prescribed to a large population group since they target a specific sub-population. For example, a drug that selectively increases "good" or HDL cholesterol for a sub-population of patients is a totally different kind of drug than a drug blockbuster drug that addresses the large population of patients with total high cholesterol.

Clearly, these three industry trends do not bode well for a lumbering company highly reliant on blockbuster drugs. This environment is far more suited to a nimble and entrepreneurial smaller company. Therefore, Pfizer needs to take drastic steps to change its business model in order to compete with such smaller companies.



## ISSUE #2: THE U.S. GOVERNMENT'S INCREASING ROLE IN THE PRESCRIPTION DRUG MARKET

The U.S. government's Medicare part D went into effect on January 1, 2006. The result is that everyone with Medicare qualifies for prescription drug coverage. According to the latest reports, 39.5 million Americans are insured under Medicare<sup>13</sup>. The impact of this is obvious: the sheer size of this buying group creates downward pressure on the prices of drugs. The pharmaceutical companies have been dealing with pressure for quite some time from insurance companies, but this pressure will increase substantially as more "Baby Boomers" swell the rolls of Medicare and, also, as political pressure to control Medicare costs grows in Congress.

Government pressure on drug companies' pricing would only increase if a national health care system were to emerge in this country – a very real possibility given the popularity of the idea among some early leading candidates in the 2008 Presidential race. The argument for a national health care system has been made based on both economic as well as social responsibility grounds.

The economic rationale for a single payer health care system is two fold. First, it is clear that the current multi-payer health care system represents a case of market failure. The basic problem here stems from the unique nature of health care as a good. Health care has an extremely inelastic demand curve, meaning that profit maximizing health care entities can often extract high prices for the services they provide. However, many people believe that health care is a basic human right and that a healthy work force is a more productive work force (a positive externality not internalized). The combination of the existence of positive externalities and the prominence of adverse selection rampant throughout all parts of the health care insurance industry lead to a circumstance where profit

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<sup>13</sup> CNNMoney.com "Survey: Uninsured on the rise",  
<http://money.cnn.com/2004/08/26/news/economy/uninsured/index.htm>

maximizing firms do not yield the optimal solution. Furthermore, health care delivery entities, insurance companies and other payment and administrative organizations have become a tangled web of inefficiency further pushing prices up and adding to the market failure.

Political pressures for a national health care system come from three main sources: desire for universal coverage, desire for equal coverage for all and desire to make the U.S. an attractive place to work in the increasingly competitive global marketplace. Exacerbating these factors is the U.S. trend toward a service-dominated economy which means smaller companies are becoming the norm. In fact, 2/3 of American workers now work for companies with fewer than 500 employees. These smaller companies cannot provide health insurance to their employees at a reasonable cost because the number of employees in these firms is typically too small to overcome adverse selection.

The case for nationalized health care is that the government is the only player able to internalize positive externalities, fairly assign benefits (to combat the adverse selection problem), as well as meet the demands of the political pressures listed above. Obviously, the effect of a U.S. nationalized health care system on the pharmaceutical industry would be massive for the same reasons that Medicare part D will have a large effect, but in a more extreme way since not only 39.5 million Americans, but rather all 300 million (and growing) Americans, would be effected.

## RECOMMENDATIONS

Pfizer appointed a new CEO, Jeffrey Kindler, in July of 2006. Kindler seems to have grasped the fact that Pfizer likely is facing a changing environment due to the issues discussed in the previous section. In the 2006 annual report, Kindler addresses these issues in such a direct and strategically sound way that this section will incorporate many of the ideas Kindler puts forth. This report will also expand upon these ideas and add new ones with the aim of setting out a plan for Pfizer to profitably compete in the drastically changing pharmaceutical industry.

The aim of this plan is to drive down costs, emphasize the Company's inherent comparative advantages in the market and to position the Company's bottom line to be positively (rather than negatively) influenced by the decline of the "blockbuster" drug. The four parts of this plan are as follows:

1. Maximize revenue in both the short and long run
2. Establish a lower and more flexible cost base while making Pfizer a great place to work
3. Emphasize key comparative advantages
4. Invest in expansion overseas, specifically in Asia

### 1. MAXIMIZE REVENUE IN BOTH THE SHORT AND LONG RUN

As has been mentioned various times previously, Pfizer produces many of the world's leading pharmaceutical products including *Norvasc* (cardiovascular), *Zoloft* (antidepressant), *Zithromax* (antibiotic), *Lipitor* (Cholesterol), *Aricept* (Alzheimer's), *Cardura* (cardiovascular), *Diflucan* (antifungal), *Zyrtec* (antihistamine), *Viagra* (impotence), *Celebrex* (arthritis)<sup>14</sup>.

Any discussion of Pfizer's revenue must start with Lipitor, the world's leading prescription generic drug by any measure. Lipitor has already experienced competition from other branded products. In addition, despite technical formulation extension modification strategies, early in the coming decade Lipitor's patent will likely expire, exposing it to the entrance of generics. Lipitor's plight is representative of that of many other blockbuster drugs: the loss of exclusivity makes such a product much less profitable. This problem is worse for blockbuster drugs because companies such as Pfizer become extremely reliant on these "cash cows" and therefore can face disaster when patents run out. The following table shows when Pfizer's major products lose U.S. patent protection:

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<sup>14</sup> Valueline Tear Sheet

<b>Drug</b>	<b>Patent Expiration Year</b>
Norvasc	2007
Zyrtec	2007
Camptosar	2008
Aricept	2010
Lipitor	2010
Xalatan	2011
Viagra	2012
Detrol	2012
Celebrex	2014
Chantix	2018
Lyrica	2018
Sutent	2021

To combat this problem with Lipitor and other drugs to follow, Pfizer should implement a two part strategy. The first part of this strategy is to *maintain a product pipeline* that provides a steady flow of products. These products should not be brought to market all at once even if R+D finishes with the development of multiple products simultaneously. Of course, this may be a risky strategy since other firms may beat Pfizer in a patent race if Pfizer delays filing for a patent. Pfizer has promised to bring six new drugs to market per year starting in 2010, implying a three-fold increase in the Company's late stage product pipeline by the end of 2009 compared to the current status of the pipeline. Pfizer claims that two of these drugs will be from externally developed sources (important to note given part 8 of this section). This is an excellent start, but delivering on this promise will require a willingness to research some products that will likely never reach blockbuster status. An example of a drug that Pfizer is currently developing is *Lyrica* for neuropathic pain. Pfizer also is performing research in heart disease, oncology, neuroscience, infectious diseases, infectious diseases, pain, inflammation, ophthalmology, allergy and various other areas.

In addition to maintaining revenue growth through production of new sources of income, Pfizer needs to *protect the revenue of its current product portfolio* even as products lose their exclusivity. Even after prescription medicines lose their patent protection, they often still account for large shares of the product's market. Branded medicines maintain this market share even though they are more highly priced due to brand loyalty. Individuals and doctors both build some

degree of trust due to success with the product during the time of its patent protection. Pfizer must work to maintain this degree of trust through strong marketing campaigns and excellent product service. The current work in this vein for *Lipitor* are a solid example of such efforts. Pfizer is promoting *Lipitor*'s "advantages" by making it known that more than 100 clinical studies support *Lipitor*'s value in terms of safety and efficacy. The main constituents for such an effort should be patients themselves, but more importantly for prescription drugs, the doctors who prescribe to them. Pfizer should not only do what it thinks these groups would like but solicit and act on feedback that these groups provide, thereby giving these groups a feeling of ownership and improvement in service.

In light of Medicare Part D and the possibility of adoption of a national health care system in the U.S., perhaps the most important entity to *maintain a good relationship with is the U.S. government*. If Pfizer's products are backed by the government, this opens up a large potential client base. Further, if Pfizer can leverage its importance as a major U.S. employer to have some input into governmental policy that will affect the industry, this would be highly beneficial. Donating, forming and funding interest groups and other forms of government "interaction" are highly advisable for Pfizer going forward. *Maintaining a positive public image* through PR campaign is also very important since doctors will not prescribe medicines produced by firms with poor reputations.

Pfizer is surely already making efforts to *lobby the U.S. government*, but this section intends to point out areas that Pfizer must be sure to emphasize in doing so. While Part D would mean lower prices for medicinal products (the government would have a direct interest in achieving this), it would also provide a huge customer base which Pfizer cannot afford to miss out on. The Company should urge the U.S. government to include its drugs in its portfolio of prescription drugs covered under Part D. Further, Pfizer must make lobbying efforts to extend patent protection time frames. If even an extra year or two of patent protection could be extracted from the government, this could mean huge benefits to Pfizer. The argument that Pfizer's lobbyist should take to the

government with this goal is obvious: longer patents means more incentive for R&D which means more life-changing and life-saving medicines. Pfizer should also choose a stance on a U.S. national health care system. While such a system would increase the client base since more people could afford medicine under such a universal system, it would also lead to more downward pressure on price from the U.S. government. A careful study of which side of this would have a larger effect is crucial. Following this study, government petitioning should take place in earnest immediately. Pfizer should also, of course, stay on top of any possible governmental developments and lobby these accordingly as well. The lobbying efforts described in this section in regards to the U.S. government also are an excellent strategy with regards to foreign governments.

## 2. ESTABLISH A LOW AND MORE FLEXIBLE COST BASE WHILE MAKING PFIZER A GREAT PLACE TO WORK

With the rise of the power of insurance companies, the new U.S. Medicare Part D and the possibility of a U.S. national health care system looming, downward pressure is mounting on the prices pharmaceutical companies are able to charge for its products. The most obvious antidote to this problem is to do everything possible to *cut the costs* of making these products.

Pfizer has already taken the difficult, but necessary step of dismissing 10,000 employees and closing down five research facilities in effort to reduce absolute costs by \$2 billion per year. The 10,000 employee cutback is quite a move as it represented 10% of Pfizer's total workforce. This sends a strong signal that Pfizer is taking its cost-cutting effort seriously.

In addition to the need to cut costs, Pfizer may have been looking to achieve *addition by subtraction* by streamlining its employee base. Pfizer had been well known as a "cushy" job where employees felt so part of a massive machine that the entrepreneurial spirit a pharmaceutical company should be rife with had been completely extinguished. Amongst so many other workers, employees could have a feeling similar to a person in a crowd watching a robbery: "well if I don't do

anything, it won't matter, someone else will take care of it." By cutting the number of employees, each worker should feel more pressure and opportunity to contribute.

Pfizer hopes to enhance each employee's productivity further by *changing the organizational structure* of the firm. Pfizer plans to break its US commercial operations into five distinct groups. While this is a step in the right direction, at a company with around 90,000 employees, each of these groups would still be large. Pfizer needs to find a way to have distinct subdivisions within each of these five larger groups to further enhance the entrepreneurial spirit. To additionally foster this spirit, Pfizer has made the wise decision to use increasingly *performance-based compensation* schemes. Such a system gives employees an incentive to produce. These changes will help Pfizer compete with the smaller companies where each employee *knows* that they are vital to the success of their firm. The ability to contribute and the knowledge of monetary reward for contribution will also make Pfizer a more exciting place to work. Hopefully, increased productivity will outweigh the fewer number of workers in which case not only will worker compensation be lower, but total worker production will be higher.

### 3. EMPHASIZE KEY COMPARATIVE ADVANTAGES

As has been mentioned previously multiple times, Pfizer is the world's largest pharmaceutical company. As such a large company, Pfizer should have comparative advantages over its smaller rivals. Given that part 2 above ensures that Pfizer does not reach such a size that diseconomies of scale take place, economies of scale due to Pfizer's great size are likely the Company's biggest comparative advantages. The Company should take advantage of its *economies of scale in three major areas: sales, production and marketing*.

In a market where specialized drugs will likely rule, it will be important for doctors and patients to have knowledge of the existence of which drugs are available. If Pfizer can do a better job of providing this information about its

product set than others, it will have an advantage. It is clearly more efficient to have one sales representative traveling around touting ten different products than having one sales rep pushing only one product. Thus, a larger company like Pfizer which can produce more drugs should be able to use its sales force more efficiently. Further, a large, well-trained sales force, such as that which Pfizer can afford due to its size, is highly beneficial in achieving product recognition.

Pfizer first really took off as a company because it found a way to mass produce Penicillin. The Company has been able to continue this legacy and is still amongst the best at mass producing pharmaceutical products. This is another source of competitive advantage.

Pfizer can also market itself as a “*one stop shop*” for specialized drugs by being big enough to supply all of the types of drugs a consumer could need. For example, a doctor or a patient could go to Pfizer’s website, look through the listing of Pfizer’s products and likely find the product they are looking for. In a world of increasingly confusing drug choices, this would be extremely helpful. A smaller company that is unable to produce enough drugs to provide a product that covers many different ailments cannot offer such a service. Further, a smaller company may not find it profitable to market a drug that has a narrow target consumer base, whereas a larger company such as Pfizer would find doing so profitable because it can market many such drugs, spreading out its fixed costs over a larger product offering.

Having such an array of drugs that the Company can claim to be a “one stop shop” will likely be extremely difficult if Pfizer tries to develop all of the numerous products required internally. Therefore, an effort to monitor and acquire smaller companies who have successfully (or are about to successfully) patented a product will be extremely important. Pfizer has taken strong steps to ensure toward this end. The Company has cemented a number of partnerships with non-profit institutes and is continuously looking to “outsource” the research and development process by funding smaller firm’s efforts and by partnering with non-profit research centers such as the Scripps Research Institute in La Jolla,

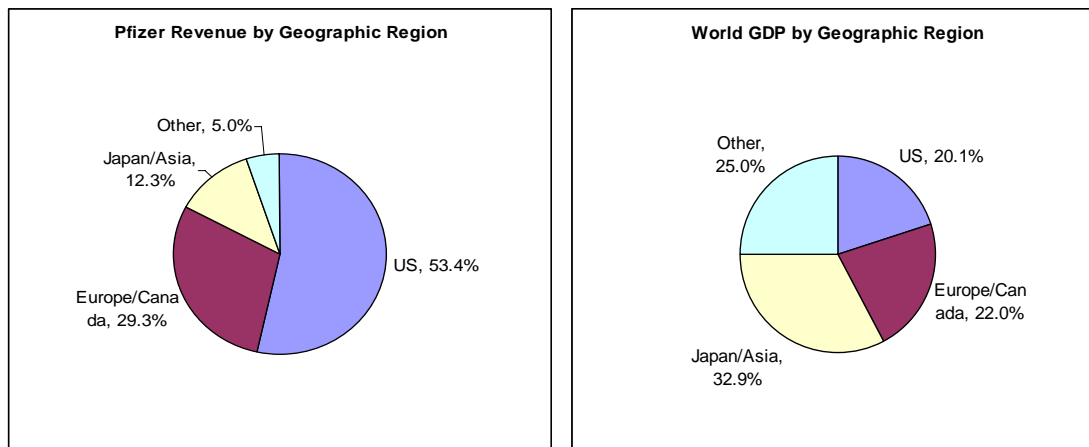


California. In order for this strategy to be possible, Pfizer must have massive reserves of cash available. While the Company does not have particularly high levels of cash on hand (less than 1% of total assets<sup>15</sup>), the firm does hold a high level of short term assets (22.5% of total assets in 2006)<sup>16</sup>. These short term assets should be held in highly liquid ways so that the Company can pounce on opportunities that present themselves.

#### 4. INVESTIGATE EXPANSION OVERSEAS, SPECIFICALLY IN ASIA

Pfizer's international business represents 46.6% of its total sales<sup>17</sup>. However, non-U.S. countries represent about 80% of world GDP; a figure that should only grow in the future. The economies of China and India have been growing at amazing rates the populations in excess of 1 billion each may make a ready and huge market for mass-produced drugs. The graphic below graphically illustrates this point.

*Pfizer Revenue v. World GDP by Geographic Region<sup>18</sup>*



Pfizer's revenue breakdown clearly does not approach that of world GDP. There are some good reasons for this including the rampant existence of generics in Asia and the difficulty of dealing with the governments of China and India,

<sup>15</sup> Pfizer 2006 10-K

<sup>16</sup> Ibid

<sup>17</sup> Ibid

<sup>18</sup> Ibid and [http://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_GDP\\_\(PPP\)](http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)) which uses International Monetary fund data from 2006; this data adjusts GDP by using the concept of Purchasing Power Parity

especially the former. Further, there is less disposable income on average in Asia, meaning non-vital products such as Viagra may see less demand in these foreign markets. Despite these drawbacks, Pfizer should still do everything they can to take advantage of this huge and relatively untapped market.

Specifically, Pfizer should put every effort into lobbying the Chinese and Indian governments to form some sort of patent protection laws that are strictly enforced. Doing so would help not only Pfizer, but also encourage internal research and development. A country such as India which has such a well-trained population of engineers should stand to benefit greatly from such laws in the long term. Without a doubt, Pfizer has made efforts to this end and surely influencing the governments of China and India is extremely difficult. Still, 33% of world GDP and growing (incredibly!) is worth redoubling efforts to protect entry.

Japan is also an intriguing market. Japan has a fairly developed patent protection system, albeit one that has taken some flack from American companies historically, which makes it more attractive than many other companies from that standpoint. Further, Japan has an abnormally old population, meaning its demand for Pfizer's products likely quite high. For these two reasons, research should be done to determine the viability of a push to increase sales in Japan.

## HOW THESE RECOMMENDATIONS WILL HELP ALLEVIATE THE STRATEGIC ISSUES

To review, the two key strategic issues Pfizer faces are:

1. The changing nature of the pharmaceutical industry, and
2. The U.S. government's increasing involvement in the prescription drug market.

This paper suggests that Pfizer counteract these two issues via a four part plan.

These four parts are:

1. Maximize revenue in both the short and long run
2. Establish a lower and most flexible cost base while making Pfizer a great place to work
3. Emphasize key comparative advantages
4. Invest in expansion overseas, specifically in Asia

The connection between the issues and the recommendations may not be immediately apparent when comparing these two lists since the issues Pfizer faces are exogenous to the Company. Pfizer must adapt to this changing environment by morphing into a more efficient company that is well-positioned for the dynamic future of pharmaceuticals.

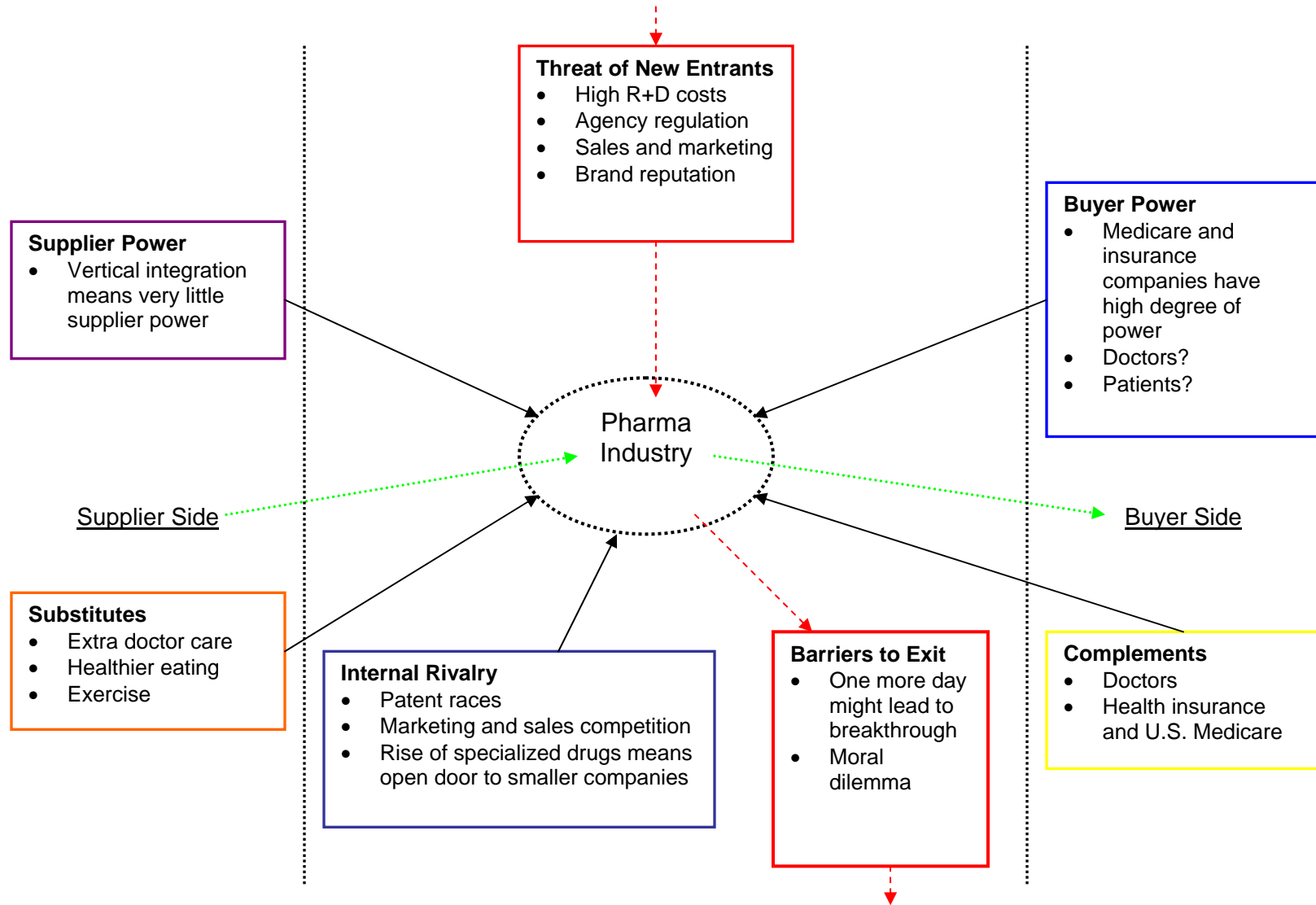
In order to maximize revenue in both the short and long run, Pfizer must squeeze every last bit of profit out of its current blockbuster drugs while starting to develop a plethora of more specialized drugs for release in the future. These specialized drugs will fit well into the changing prescription drug industry, while the current drug portfolio will ensure Pfizer's continued dominance today. Efforts to maximize revenue would be useless, however, if Pfizer is unable to maintain a solid relationship with the U.S. government which not only governs patents, but also is entering the market as a key demand-side player with extremely significant market power.

Pfizer's efforts to change its cost structure also play a role in alleviating both of the strategic issues. Clearly, the U.S. government will put pressure on prescription drug providers to lower prices. Since even companies as large as Pfizer cannot entirely ignore this pressure, it is likely that prices for medicines will fall as the public sector becomes more involved. If Pfizer is able to have lower overhead and cost of goods sold, it can hope to retain the same high profit margins it currently enjoys. If Pfizer achieves this lower cost structure by removing layers of bureaucracy, it will also become more efficient in its research and development both by being able to provide a stronger incentive culture and by creating smaller, more flexible groups that can research in the way that will become pervasive in the near future. Pressuring the government in any way possible is also useful in dealing with increased government intervention.

Pfizer is clearly the largest player in its industry and must take full advantage of this. Doing so should help drive down its cost base via the magic of economies of scale. This should also allow Pfizer to carve out a niche in the new pharmaceutical industry landscape as a "one stop shop".

The Company should also look to expand overseas to take advantage of changes in the global economy. Further, expansion overseas will lessen the Company's reliance on the U.S. economy which is becoming less of a profitable environment due to the entrance of the government via Medicare Part D and possibly through a national health care system.

## EXHIBIT A: PHARMACEUTICAL INDUSTRY 5 FORCES DIAGRAM



## EXHIBIT B: DCF TO APPROXIMATE CURRENT STOCK VALUATION\*

All numbers other than ratios in  
000,000's

	0	1	2	3	4	5	6	7	8	9	10	Terminal Value	
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
<b>Revenue</b>	47,405	48,371	50,910	53,583	56,396	59,357	62,473	65,441	68,222	70,781	73,081	75,091	76,780
<b>Costs and Expenses</b>													
Cost of Sales and R+D	24,007	13,445	13,871	14,359	14,865	15,388	15,929	16,410	16,823	17,162	17,423	17,600	17,691
SG&A	15,313	15,589	16,213	16,861	17,536	18,237	18,966	19,725	20,514	21,335	22,188	23,076	23,999
<b>Depreciation</b>	5,576	5,293	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692
<b>EBIT</b>	2,509	14,044	15,135	16,671	18,304	20,041	21,886	23,614	25,193	26,592	27,778	28,723	29,398
<b>EBIT(1-t)</b>	1,631	9,129	9,837	10,836	11,898	13,027	14,226	15,349	16,376	17,285	18,056	18,670	19,109
<b>Depreciation</b>	5,576	5,293	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692
<b>ΔNWC</b>	18,433	7,127	0	0	0	0	0	0	0	0	0	0	0
<b>Capital Expenditures</b>	3,424	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692
<b>FCF</b>	-14,650	1,603	9,837	10,836	11,898	13,027	14,226	15,349	16,376	17,285	18,056	18,670	296,445
<b>PV Factor</b>			0.927	0.859	0.796	0.738	0.684	0.634	0.588	0.545	0.505	0.468	0.468
<b>DCF</b>			9,118	9,309	9,473	9,613	9,730	9,731	9,622	9,413	9,114	8,734	138,687

Growth Rate Predictions		This shows that the market expects Revenues to grow faster than COGS, R+D or SG&A. These numbers should be interpreted as one way to meet market expectations, but clearly not the only way.	WAAC Calculations	
Revenue Growth	5.25%		WAAC	7.89%
Cost of Sales Growth	3.52%		Total Debt	43,479
SG&A Growth	4.00%		Total Equity	71,358
Depr. % of Cap Ex	100.00%		Total Value	114,837
Long Term Growth	1.50%		% Debt	37.8%
			%	
WAAC	7.89%		Equity	0.62.1%
Tax Rate	35.00%		Corporate Tax Rate	35%
Cap Ex Growth	0.00%		kd	6.0%
		ke	10.33%	
		ke Calculations	10.33%	
		Risk Free Rate	5%	
		Risk Premium	7.50%	
		Beta	0.71	

<b>DCF Value of Pfizer</b>													<b>\$232,544.20</b>
<b>Book Value Debt</b>													<b>\$43,479</b>
<b>DCF Value of Equity</b>													<b>\$189,065.20</b>
<b>Market Value</b>		<i>Shares</i>	<i>Market Value</i>										
		7,090	\$26.67										<b>\$189,090.30</b>
<b>Difference between DCF Value and Market Value</b>													<b>(\$25.10)</b>
<b>According to this calculation Pfizer is undervalued by \$25.10 or \$0.00 per share</b>													

\*2005 and 2006 Numbers Taken From 2006 Pfizer 10-K; the rest of the numbers are projected



## EXHIBIT D: DCF TO SHOW POSSIBLE VALUATION IF RECOMMENDATIONS USED\*

All numbers other than ratios in 000,000's

	0	1	2	3	4	5	6	7	8	9	10	Terminal Value	
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
<b>Revenue</b>	<b>47,405</b>	<b>48,371</b>	51,273	54,350	57,611	61,067	64,731	68,292	71,706	74,933	77,930	80,658	83,077
<b>Costs and Expenses</b>													
Cost of Sales and R+D	24,007	13,445	13,534	13,669	13,806	13,944	14,084	14,154	14,154	14,083	13,942	13,733	13,459
SG&A	15,313	15,589	15,823	16,060	16,301	16,546	16,794	17,046	17,301	17,561	17,824	18,092	18,363
<b>Depreciation</b>	<b>5,576</b>	<b>5,293</b>	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692
<b>EBIT</b>	<b>2,509</b>	<b>14,044</b>	16,224	18,928	21,812	24,886	28,162	31,400	34,559	37,597	40,472	43,141	45,564
<b>EBIT(1-t)</b>	<b>1,631</b>	<b>9,129</b>	10,546	12,303	14,177	16,176	18,305	20,410	22,463	24,438	26,307	28,042	29,617
<b>Depreciation</b>	<b>5,576</b>	<b>5,293</b>	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692
<b>ΔNWC</b>	<b>18,433</b>	<b>7,127</b>	0	0	0	0	0	0	0	0	0	0	0
<b>Capital Expenditures</b>	<b>3,424</b>	<b>5,692</b>	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692	5,692
<b>FCF</b>	<b>-14,650</b>	<b>1,603</b>	10,546	12,303	14,177	16,176	18,305	20,410	22,463	24,438	26,307	28,042	355,298
<b>PV Factor</b>			0.927	0.859	0.796	0.738	0.684	0.634	0.588	0.545	0.505	0.468	0.468
<b>DCF</b>			9,774	10,569	11,288	11,937	12,521	12,939	13,199	13,309	13,278	13,119	166,221

Growth Rate Predictions		WAAC Calculations	
Revenue Growth	6.00%	WAAC	7.89%
Cost of Sales Growth	1.00%	Total	
SG&A Growth	1.50%	Debt	43,479
Depr. % of Cap Ex	100.00%	Total Equity	71,358
Long Term Growth	0.00%	Total	
WAAC	7.89%	Value	114,837
Tax Rate	35.00%	% Debt	37.9%
Cap Ex Growth	0.00%	%	
		Equity	62.1%
		Corporate Tax	
		Rate	35%
		kd	6.0%
		ke	10.33%
		ke Calculations	10.33%
		Risk Free Rate	5%
		Risk Premium	7.50%
		Beta	0.71

<b>DCF Value of Pfizer</b>		<b>\$288,153.62</b>
<b>Book Value Debt</b>		<b>\$43,479</b>
<b>DCF Value of Equity</b>		<b>\$244,674.62</b>
	<i>Shares</i>	<i>Market Value</i>
<b>Market Value</b>	7,090	\$26.67
<b>Difference between DCF Value and Market Value</b>		<b>\$55,584.32</b>
<b>According to this calculation Pfizer is undervalued by \$55,584.32 or \$7.84 per share</b>		



