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EXECUTIVE SUMMARY

Dr. Wallace C. Abbott founded Abbott Laboratories in 1888 in northern Chicago. Over the last century, Abbott has developed into a diversified medical products company, developing, producing and marketing a range of products that are used in prevention, diagnosis, treatment, and care. The company has two major product groups; the first, diversified medical products include diagnostics, nutritional products, established pharmaceuticals, and medical devices. The second, research-based pharmaceuticals, has been the core line of business for Abbott and spurred most of their growth. Abbott currently employs over 60,000 people worldwide and sells its products in 140 countries.

Abbott Laboratories is classified in the brand pharmaceutical industry, a highly competitive industry in which the firms rely on research and development to create innovative drugs. Through securing patents for these discovered drugs brand pharmaceuticals are able to protect their drugs against replicas. In this industry patent protection lasts for twenty years, but the long development process necessary to bring drugs to market makes their effective lifespan a little over a decade. Once these patents expire generic pharmaceutical companies can immediately begin duplicating the drug and offering it at a substantial discount, undercutting the branded pharmaceuticals and eroding their sale volume and revenue.

Although research-based pharmaceuticals have been Abbott’s main line of business throughout the past century, in recent years they have shifted more of their focus on to the diversified medical product sector. The culmination of this shift came in October of 2011 when they announced the spinning off of their research-based pharmaceutical business and the intention to keep the diversified medical products under the Abbott name. This shift comes at a time when big pharmaceutical companies face an extremely murky landscape going forward. Research and development costs for new drugs have skyrocketed in recent years and increased government regulation projected to shorten patent protection periods has made it increasingly difficult for pharmaceutical companies to produce high enough revenues to cover their costs of production.

Griffin agrees with Abbott’s decision to shift their focus away from branded pharmaceuticals towards other pillars of their business. They will, however, need to focus on increasing their margins in these lines of business, especially as they expand internationally into high-growth emerging markets. Abbott has already begun expanding overseas and 2011 saw 60% of Abbott’s net sales generated abroad.
trend should continue with the bleak outlook for American pharmaceutical demand and the increased demand, especially for branded generic products, in emerging market countries.

While they still operate both lines of business it is in Abbott’s best interest to develop synergies between their product lines. Currently, although it is a diversified company, Abbott operates its product lines fairly independently. If they instead restructured slightly to incorporate aspects of each of their lines in their products they might be able to produce more cutting edge, innovative products. An example of this is Xience, Abbott’s blockbuster drug-eluting stent. This product was developed jointly between Abbott’s medical devices and pharmaceutical branches. Abbott is one of few companies diversified and developed enough to produce such a product, and as such has seen the stent become a best-selling product with essentially no viable competitors. By creating more synergies within the branches of its business Abbott can take advantage of economies of scope and create novel products that carve out their own distinct niches in the marketplace.

The final aspect Griffin believes Abbott can pursue is further diversifying their product line through acquisitions of biotech companies. Biotech products tend to be produced using microorganisms and DNA, making them much more difficult to copy than traditional pharmaceutical compounds. This complexity will allow Abbott to retain more market share of their products after the patent expires, reducing their exposure to generic erosion, the main threat for all big pharmaceutical companies. In this same vein, increasing focus on Abbott’s branded generics product line will allow the company to retain some of that erosion, and perhaps get a leg up on other generic manufacturers since they will already have the infrastructure and scientific knowledge in place to produce the drugs efficiently.
**History**

Abbott got its name and start from Dr. Wallace C. Abbott, a practicing physician and pharmacy proprietor at his People’s Drug Store in Chicago. In 1898, Dr. Abbot began producing tiny pills called dosimetric granules using alkaloid to improve his patients’ medications. Soon the demand for these granules grew beyond that of his patients and so began the Abbott Alkaloidal Company in 1900. Abbott Laboratories had modest origins, bringing in just $2000 its first year, but by 1910, Abbott had expanded into New York, San Francisco, Seattle and Toronto with over 700 products in its catalog. Five years later, Abbott Alkaloidal Company officially changed its name to Abbott Laboratories to reflect the company’s new direction into research and synthetic compounds. The company went public in 1929, and now Abbott has more than 120 facilities worldwide and has become a global innovator in healthcare and new products.

With a long, rich history, Abbott has been a major player in innovation, health care expansion and development of new products since its inception. During WWI, Abbott’s antiseptic agent Chlorazene helped soldiers clean wounds. Seven years later, Abbott developed Butyn, a butyl alcohol-based anesthetic, which began Abbott’s pioneering role in the development of anesthesia products. In 1930, Abbott introduced Nembutal, used to treat seizures, preoperative sedation and insomnia; today, the anesthetic is still one of Abbott’s best-known and widely-used products. In the early 1930s, Abbott doctors Ernest H. Volwiler and Donalee L. Tabern created another anesthetic, Pentothal, which is now on the World Health Organization’s “Essential Drug List”. The invention of Pentothal began Abbott’s expansion into the I.V. segment. Fifty years after Pentothal’s introduction, Volwiler and Tabern were inducted into the U.S. Inventors Hall of Fame. Throughout the rest of the century, Abbott introduced groundbreaking products that have led to them becoming a global leader in pharmaceutical, medical, and nutritional products.

Since Abbott’s inception, the company has grown and entered new segments through acquisitions. In 1964, Abbott acquired Ross Laboratories, turning it into a wholly owned subsidiary of Abbott and renaming it Abbott Nutrition in 2007. Since 2001, Abbott has purchased Knoll, the pharmaceutical division of BASF; TheraSense, a diabetes care company; the vascular device division of Guidant; and Advanced Medical Optics, giving Abbott a Vision Eye Care division in 2009. All acquisitions served to improve Abbott’s standing as a leader in global, broad-based health care and an innovator in new medicines, technologies and health management. The acquisition of the pharmaceutical arm of BASF Knoll has proven especially beneficial to Abbott. BASF
created and owned the drug Humira, which treats rheumatoid arthritis, until the Abbott acquisition. Humira has proven to be a highly profitable drug and has potential to add $10 billion in sales for 2012.iv In 2010, acquisitions continued with the purchases of Solvay Pharmaceuticals, expanding Abbott’s presence in emerging markets and enhancing its portfolio of pharmaceutical products; STARLIMS, a LIMS company based in Hollywood and Florida for an all-cash transaction valued at $123 million; and Facet Biotech Corporation, strengthening its oncology and immunology divisions. Recently, Abbott acquired Piramal Healthcare Ltd’s Healthcare Solutions unit for $3.72 billion to become India’s largest drug company. To refine Abbott’s focus, it has also sold several subsidiaries. In 2002, Abbott sold the Selsun Blue, Clear Eyes and Murine brands. These acquisitions and divestitures have helped position Abbott as a leader in six targeted sectors: pharmaceutical products, nutritional products, diagnostic instruments & tests, medical & surgical devices, animal health, and vision technologies.v
FINANCIAL ANALYSIS

OVERVIEW

Abbott’s revenues are derived primarily from the sale of a broad line of health care products under short-term receivable arrangements. Abbott’s primary products are prescription pharmaceuticals, nutritional products, diagnostic testing products, and vascular products. Sales in international markets are approximately 60 percent of consolidated net sales. The revenue growth rate Abbott exhibited from 2005 to 2010 was relatively strong except for two down years in 2006 and 2009. The setback in 2009 can be attributed to the economic downturn and the general contraction of the economy as a whole during this time. Indeed, there was a widespread pharmaceutical downturn in 2006, which caused the massive drop off shown in Chart 1. Abbott’s revenue growth did not drop as steeply as some of their competitors however, as they were still able to eke out a positive growth rate.\[^{vi}\]

**Chart 1: Revenue Growth (%)\[^{vii}\]**

In 2003, Abbott began the worldwide launch of *Humira* for rheumatoid arthritis, followed by launches for five additional indications (additional uses for the drug), which increased *Humira’s* worldwide sales to $7.9 billion in 2011 compared to $6.5 billion in 2010, and $5.5 billion in 2009. Abbott forecasts low double-digit growth for worldwide *Humira* sales in 2012. Abbott is studying additional indications for *Humira*.  

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\[^{vi}\]: 

\[^{vii}\]:
Substantial research and development and selling support have been and continue to be dedicated to maximizing the worldwide potential of Humira.

**Chart 2: Humira: Percentage of Abbott’s Sales**

![Humira Sales Chart](chart)

Austerity measures implemented by several European countries reduced healthcare spending and affected pharmaceutical pricing in 2010 and 2011. The 2010 healthcare reform legislation in the U.S. resulted in rebate changes beginning in 2010 and the payment of an annual fee beginning in 2011, which negatively affected Abbott’s pharmaceutical business. The impact of the austerity measures and the U.S. healthcare reform legislation is expected to continue.\(^\text{ix}\)

Continued robust growth of Humira in a broad range of indications, the acquisitions of Solvay’s pharmaceuticals business (Solvay Pharmaceuticals) and Piramal Healthcare Limited’s Healthcare Solutions business, continued growth and market penetration by the Xience drug eluting stent franchise, the loss of patent protection for some pharmaceutical products, an ongoing government investigation of Abbott’s sales and marketing activities related to Depakote, and the challenging economic environment in many countries around the world have impacted Abbott’s sales, costs and financial position over the last three years.

In February 2010, Abbott acquired Solvay Pharmaceuticals, which provided Abbott with a large and complementary portfolio of pharmaceutical products and expanded Abbott’s presence in key global emerging markets. The acquisition added approximately $3.1 billion to Abbott’s 2010 total sales, primarily outside the U.S. In
September 2010, Abbott completed the acquisition of Piramal’s Healthcare Solutions business, propelling Abbott to market leadership in the Indian pharmaceutical market and further accelerating the company’s growth in emerging markets. In 2011 and 2010, Abbott recorded approximately $345 million and $710 million, respectively, of expenses related to the integration of the Solvay business and a restructuring plan announced in September 2010 to streamline operations, improve efficiencies and reduce costs primarily in certain Solvay sites and functions.

Abbott’s short- and long-term debt totaled $15.4 billion at December 31, 2011, largely incurred to finance acquisitions. Operating cash flows in excess of capital expenditures and cash dividends have partially funded acquisitions over the last three years. At December 31, 2011, Abbott’s long-term debt rating was AA by Standard and Poor’s Corporation and A1 by Moody’s Investors Service.\textsuperscript{x}
Table 1: Sales Growth By Segment

<table>
<thead>
<tr>
<th>Total Net Sales</th>
<th>Total %</th>
<th>Components of Change %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change</td>
<td>Price</td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>10.5</td>
<td>1.2</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>14.3</td>
<td>(0.1)</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>4.2</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Total U.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>5.4</td>
<td>4.4</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>6.8</td>
<td>0.7</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>0.4</td>
<td>(0.3)</td>
</tr>
<tr>
<td>Total International</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>14.3</td>
<td>(1.2)</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>20.7</td>
<td>(0.8)</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>7.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Proprietary Pharmaceutical Products Segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>11.0</td>
<td>3.5</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>13.2</td>
<td>0.3</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>0.2</td>
<td>(0.2)</td>
</tr>
<tr>
<td>Established Pharmaceutical Products Segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>19.8</td>
<td>(1.7)</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>53.7</td>
<td>(0.3)</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>(7.6)</td>
<td>0.4</td>
</tr>
<tr>
<td>Nutritional Products Segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>8.6</td>
<td>3.0</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>4.7</td>
<td>1.7</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>7.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Diagnostic Products Segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>8.8</td>
<td>(1.1)</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>6.0</td>
<td>0.1</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>0.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Vascular Products Segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011 vs. 2010</td>
<td>4.4</td>
<td>(4.3)</td>
</tr>
<tr>
<td>2010 vs. 2009</td>
<td>16.6</td>
<td>(4.7)</td>
</tr>
<tr>
<td>2009 vs. 2008</td>
<td>20.1</td>
<td>(2.9)</td>
</tr>
</tbody>
</table>
In 2011 and 2010, Total Net, Total U.S., Total International, Proprietary Pharmaceutical Products segment and Established Pharmaceutical Products segment sales reflect the acquisition of Solvay’s pharmaceuticals business on February 15, 2010 and unit growth, while the relatively weaker U.S. dollar favorably impacted international sales across all segments. Total Net, Total International and Established Pharmaceutical Products segment sales growth in 2011 also reflects the acquisition of Piramal Healthcare Limited’s Healthcare Solution business in September 2010. Total Net Sales growth in 2009 reflects unit growth and the acquisition of Advanced Medical Optics, Inc. on February 25, 2009, partially offset by the negative effect of the relatively stronger U.S. dollar. Total Net, Total U.S. and Proprietary Pharmaceutical Products segment sales in 2009 also reflect decreased sales of Depakote due to generic competition. Excluding U.S. Depakote sales, Total Net sales increased 7.7 percent, Total U.S. sales increased 7.6 percent and Proprietary Pharmaceutical Products segment sales increased 7.8 percent from 2008 to 2009. Evidently, acquisitions have positively affected Abbott’s growth both internationally and domestically.xii

**Operating Earnings**

**Chart 3: Gross ProfitMargins (%)**

Gross profit margins were 60.0 percent of net sales in 2011, 58.3 percent in 2010 and 57.1 percent in 2009 as seen in Chart 3 above. The increase in the gross profit margin over recent years is due, in part, to improved margins in the established pharmaceutical, diagnostics, diabetes, and nutritional businesses. The decrease in the
gross profit margin in 2009 was mainly due to the negative impact from lower sales of Depakote. In the U.S., states receive price rebates from manufacturers of infant formula under the federally subsidized Special Supplemental Nutrition Program for Women, Infants, and Children. There are also rebate programs for pharmaceutical products. These rebate programs continue to have a negative effect on the gross profit margins of the Nutritional, Proprietary Pharmaceutical and Established Pharmaceutical Products segments.

Research and development expense was $4.129 billion in 2011, $3.724 billion in 2010 and $2.744 billion in 2009 and represented increases of 10.9 percent in 2011, 35.7 percent in 2010 and 2.0 percent in 2009. Excluding charges related to the Solvay restructurings announced in September 2010, research and development expense increased 29.4 percent in 2010 and 6.2 percent in 2011. The 2010 increase, exclusive of the effects of the restructuring charges, reflects the acquisitions of Solvay’s pharmaceuticals business in February 2010 and Facet Biotech in April 2010. The increase in 2009 reflects the favorable effect of exchange rates which reduced research and development expense in 2009. Although research and development represents a large portion of Abbott’s costs, it actually makes up a smaller percentage of their earnings than their competitors Johnson and Johnson and Pfizer, as shown in Chart 4 below. They are able to achieve similar results without dedicating as many resources to research and development because of their tendency to bolster their drug pipeline through acquisitions rather than organic drug development.

**Chart 4: R&D Expense As % of Sales**

![Chart 4: R&D Expense As % of Sales](image)
The majority of research and development expenditures are concentrated on pharmaceutical products. $2.8 billion of Abbott’s 2011 research and development expenses related to Abbott’s pharmaceutical products, of which $2.2 billion was directly allocated to the Proprietary Pharmaceutical Products segment. In 2011, research and development expenditures totaled $403 million for the Vascular Products segment, $325 million for the Diagnostics Products segment, $251 million for the Established Pharmaceutical Products segment and $165 million for the Nutritional Products segment.

DuPont Analysis

Table 2: DuPont Competitor Analysis

<table>
<thead>
<tr>
<th>2011</th>
<th>Net Profit Margin</th>
<th>Turnover</th>
<th>Leverage</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbott</td>
<td>12.17%</td>
<td>0.64</td>
<td>2.47</td>
<td>19.35%</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>14.87%</td>
<td>0.57</td>
<td>1.99</td>
<td>16.94%</td>
</tr>
<tr>
<td>Pfizer</td>
<td>14.84%</td>
<td>0.36</td>
<td>2.29</td>
<td>12.18%</td>
</tr>
<tr>
<td>Merck &amp; Co.</td>
<td>13.05%</td>
<td>0.46</td>
<td>1.93</td>
<td>11.50%</td>
</tr>
<tr>
<td>Eli Lilly &amp; Co.</td>
<td>17.90%</td>
<td>0.72</td>
<td>2.49</td>
<td>32.11%</td>
</tr>
<tr>
<td>Median</td>
<td>14.84%</td>
<td>0.57</td>
<td>2.29</td>
<td>16.94%</td>
</tr>
</tbody>
</table>

The Return on Equity figure measures Abbott’s profitability by revealing how much profit the company has generated with the money shareholders have invested. Comparing Abbott’s ROE to four competitors’, we see that Abbott is comfortably above the median and leading three of the four excluding only Eli Lilly & Co.’s relatively large figure. For financial leverage, a proxy for how much of the company is financed by debt, we see that Abbott is again above the median, barely trailing Eli Lilly once again. This figure has come down since 2010 as Abbott used debt to finance their purchase of Piramel. Abbott’s asset turnover looks relatively strong, above the median and once again trailing only Eli Lilly’s ratio. Abbott’s net profit margin though is dismal, well below the median and trailing every other member of the group. The 12.17% margin is Abbott’s lowest in the last five years and has been trending downwards from a high of 18.68% in 2009. Abbott attributes this decreasing margin to an increased emphasis on
their diagnostics and nutritional products, which have been produced at much lower margins than their pharmaceutical counterparts. Abbott can expect to see these margins and subsequently their ROE trend lower still as they undergo the pharmaceutical spinoff since they would be diverging from their pillar of business with the highest margins. Over time, however, as they streamline their production processes in diagnostics they should be able to build their margins back to competitive levels.

**Stock Performance**

**Chart 5: Comparing Abbott Stock to S&P 500 Index**

![Abbott Laboratories Common Stock Chart](image-url)
As seen in Chart 5, Abbott has generally outperformed the market over the previous five-year span. They were not immune to the economic downturn in 2008 and 2009 but Abbott, and the pharmaceutical industry as a whole, was able to navigate the downturn better than many other sectors. There was a brief period in the beginning of 2011 when Abbott began to underperform the market. This can be attributed to a brief recall of baby formula that scared off investors for a period of time, when production got back on line though the stock price swung upwards. There was also some investor apprehension and initial skepticism with Abbott’s spinoff announcement that the company will separate from its pharmaceutical sector, slated for the beginning of 2013. The relatively ephemeral dip below the S&P 500 during that stretch could reflect the initial gut reaction of investors before they were able to iron out the details of the spinoff and present it as a positive step in Abbott’s future, followed by a general upswing in Abbott’s stock through the later part of 2011.

Abbott’s stock has performed in lock step with its major competitors, Johnson & Johnson and Pfizer, since 2009. They were all affected differently by the economic downturn, most likely due to the different levels of diversification within the companies subjecting each of them to different amounts of exposure to the state of the economy. Since the economy has started to rebound, though, these companies have been generally following the same trends until the very end of 2011, when Abbott went on an upswing causing it to surpass Johnson & Johnson for the first time since 2009. This upswing was most likely due to favorable fourth quarter projections for Abbott as they had higher than estimated profits due to increased profit margins in their diagnostics and nutritional product lines. Abbott has paid dividends without interruption since
1924 and the stock presently yields 3.3%. Analysts peg their long-term stock growth at about 9% slightly lower than the 10% projections for the S&P but still above industry expectations, and with the planned spinoff allowing investors to differentiate between investment vehicles the opportunity definitely exists for Abbott to outperform expectations.
COMPETITIVE ANALYSIS

PORTER’S FIVE FORCES ANALYSIS

<table>
<thead>
<tr>
<th>Force</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Rivalry</td>
<td>High</td>
</tr>
<tr>
<td>New Entry</td>
<td>Low</td>
</tr>
<tr>
<td>Substitutes</td>
<td>Low</td>
</tr>
<tr>
<td>Buyer Power</td>
<td>Low -&gt; Moderate</td>
</tr>
<tr>
<td>Supplier Power</td>
<td>Low</td>
</tr>
</tbody>
</table>

INTERNAL RIVALRY

The pharmaceutical market is a highly competitive industry, organized around the high costs of research and development. The lifeblood of the industry is the drug discovery process. Firms invest billions of dollars in search of innovative molecules, chemical compounds, and biological processes in order to develop novel medicines and therapies. Upon discovery of a promising molecule or compound, firms rush to seek FDA approval through a highly regulated clinical trial process. The approval of drugs is critical to the financial health of firms, who rely on the revenue from marketed pharmaceuticals to finance future research. A failed drug is often an incredible setback for a firm, representing a monumental financial loss in the form of unrecoverable research costs. Novel compounds or formulations that lead to successful drugs are often patented, ensuring sales revenue to recuperate developmental costs. To offset the high degree of uncertainty in drug development, companies invest in developing a diverse portfolio of compounds and processes, often acquiring medicines or medical devices in development from others in an effort to bolster the firm's drug pipeline.

Though pharmaceutical companies traditionally seek patents, multiple products treating the same condition in the market are not uncommon. Branded drug manufacturers often compete directly with one another, and upon the expiration of patents, firms see stiff competition from generic drug manufacturers. As a result, sales and marketing costs are very high, with advertising a prominent expense. Branded drug companies often go war in television, Internet, and print media. In 2003, the industry spent $25.3 billion marketing drugs, according to the industry trade group Pharmaceutical Researchers and Manufacturers of America. Firms who specialize in generics spend little on research and development, as they simply the mimic the formulations of post-patent branded products, and are able to severely undercut the
prices of branded drugs. As the profitability of novel drugs can be limited by the emergence of generic products following the patent's lifespan, the research and development of new compounds must be an ongoing process for drug manufacturers.

Due to the high upfront costs of drug discovery and the extensive regulation that accompanies it, the industry is characterized by strong economies of scale. Mergers and acquisitions are frequent, and in recent years the industry has been consolidating. Between 1990 and 2003, the ten largest firms leapt from 28% of total market share (in sales) to nearly 50% of the market. Top drug manufacturers use mergers to achieve cost savings in research, development, marketing and sales, as well as to compete in market share.

**NEW ENTRY**

Entry into the pharmaceutical industry is severely restricted, an important consequence of the enormous costs of research and development. The frontloaded cost structure of the drug discovery process promotes scale economies through consolidation, making it nearly impossible for new entrants to compete with large branded drug manufacturers on research expenditure. The branded drug market is characterized by some of the highest barriers to entry of any major industry, an effect of the regulatory environment, intellectual property law, and the industry's aforementioned cost structure.

The complex regulation that surrounds the drug development process requires extensive knowledge and experience in attempting to navigate the new drug discovery and clinical trial channels. Entrants must be familiar with the regulatory procedures and legal considerations involved in the development and sale of healthcare products. Similarly, the high cost and legal complexities surrounding the marketing and sale of new drugs may deter new entrants.

Strong intellectual property laws in developed markets seek to provide financial incentive for firms facing steep research costs. Patent protections give drug developers exclusive rights to the manufacture and distribution of their medicines, ensuring profits for those who continue to innovate. Composition patents license the chemical structure of the primary molecule or compound, while process patents are used to protect novel methods of manufacturing. Patents span twenty years, though the long timeline for development and FDA approval leaves the patent valid for shortly over a decade. Upon expiration however, chemical formulations and manufacturing processes become public and generic drug manufacturers are quick to replicate the branded drugs, swiftly capturing market share with lower prices. Firms can compete with existing products by
designing drugs that are structurally very similar to those already known, with only minor differences. These so-called “me-too” drugs have become an increasingly important part of the industry, due to the low cost of development and prospects for patenting. The Food and Drug Administration classified three-fourths of the 119 drugs approved in 2004 as similar to existing products in chemical makeup or therapeutic value. Another important consideration for potential new entrants is the high legal costs to developing and enforcing patents, through both patent prosecution and litigation.

The largest barrier to entry remains the extraordinary costs of bringing a drug to market. Research and development can span over a decade for any particular compound, and costs (though the exact number is often disputed) can exceed $1 billion.

**Chart 7: Drug Development Cost (Millions of $)**

Research and development in this industry is ten times more per employee than all manufacturing industries overall. For every 5,000 compounds discovered, only one reaches the market; fewer than 1 in 10 medicines that begin testing in human clinical trials eventually succeed. The cost of failure is incredible, with research costs rising. Accounting for approval rates leads to staggering sums in calculating drug development costs. AstraZeneca spent nearly $12 billion (inflation adjusted) in research per new drug approved, largely a result of many previous failures. More successful firms, such as Amgen and Eli Lilly, spent $3.7 billion and $4 billion respectively. Only three out of twenty drug products that reach market generate enough sales revenue to
recover the development cost.\textsuperscript{xxiv} Considering, in addition, the immense marketing and sales costs, the development of new medicines is an extremely risky endeavor for already existing firms, let alone new entrants.

\textbf{SUBSTITUTES/ COMPLEMENTS}

Traditionally, the threat of substitutes in the pharmaceutical market has been very limited. As intellectual property laws protect revenues for branded drug products, competition stems primarily from generic manufacturers following the expiration of patents. New compounds or unique biologic products face little initial competition, and for the few drugs that offer the only available treatment, there may exist no direct substitutes. As mentioned earlier, “me-too” drugs that mimic existing compounds with slight tweaks in formulation are an increasing presence in the marketplace. Generic drugs are a constant threat to branded drugs nearing the end of their patents, with generic introduction substantially reducing the price of the incumbent drug (in some cases, by as much as 80%).\textsuperscript{xxv} Generic drug manufacturers are poised to see incredible growth in the future, with many notable branded drugs seeing their patents soon expire. Some of the drugs slated to lose patent protection by 2013 include Lipitor (Pfizer), Plavix (Sanofi-Aventis and Bristol-Myers Squibb) and Advair (GlaxoSmithKline). In 2008, Lipitor, Plavix and Advair saw global sales of $13.7 billion, $8.6 billion and $7.7 billion respectively.\textsuperscript{xxvi}

In some cases, alternative medical treatments may be available, but are not widely used. In this regard, the industry faces few non-pharmaceutical substitutes. For particular prescription drugs however, certain substitute procedures or therapies may exist. Psychiatry, for example, may compete with anti-depressants. In overseas markets, herbs, acupuncture, and other traditional therapies (including Ayurveda in India) are likely to substitute for prescription pharmaceuticals. Overall however, the threat of substitutes is low, especially domestically.

\textbf{BUYER POWER}

Buyer power has historically been limited in medicinal and pharmaceutical products, as there are few substitute therapies, and drug products are often necessary for a patient's health or well being. Pharmaceutical companies have been able to maintain high prices during the life of their patents, due to the inelasticity of drug products. Even in cases where there may be a cheaper alternative, it can prove difficult to switch regimens, especially in cases of critical care.
The customer base for pharmaceutical companies typically consists of retail drug stores, hospitals (or managed care organizations), and state and federal governments. Retail drug store customers often have little choice in what their physicians prescribe, and as such, have limited bargaining power. Hospitals and governments often have more bargaining power, as they purchase for large numbers of patients at once, often organizing bulk purchase discounts. In addition to seeking bulk agreements, insurance companies and other providers of pharmaceuticals increasingly prefer generic products to brand name prescription drugs.

Finally, there is great uncertainty regarding the future of healthcare following recent reforms by the Obama Administration. It remains to be seen how hospitals, retail drug stores, and pharmaceutical companies will react to new changes in legislation, but cost containment efforts could harm the sales of branded drug products. In addition, as significant changes are made to Medicare and Medicaid the drugs they cover may change. This could have a significant effect on pharmaceutical companies, as oftentimes having a drug covered under one of these federal programs essentially gives companies a monopoly in the market, as all patients covered by Medicare and Medicaid would use the federally-covered product rather than a competitor. The final important aspect of the healthcare reform is the push to increase coverage, and possibilities for an expanded market of customers.

**Supplier Power**

The primary inputs for pharmaceutical companies vary across drug discovery, development, and manufacturing. During research and development, inputs traditionally consist of laboratory and research equipment, as well as biochemical materials. For later stage products, firms require production and manufacturing equipment, and packaging and labeling materials. As chemical inputs as well as packaging and labeling products are relatively homogeneous, their suppliers have little bargaining power in their sales to drug manufacturers. More advanced or specific manufacturing equipment may garner greater supplier power.
SWOT Analysis

Strengths

• Global Presence
  o Acquired one of the top three Indian healthcare companies, Piramal, and another global pharmaceutical company, Solvay, in 2010
  o More than half of pharmaceutical sales come from outside the US
  o International diagnostic sales more than double domestic sales
• Huge recognition and sales
• Large market share
  o Largest company in nutritional products
  o Second largest company in diagnostics
• Strong record of lifecycle management – important in view of forthcoming patent expirations
  o Has done a great job smoothing their production schedule in the past, maintaining a steady flow of new products to replace those lost to expiring patents
• Biggest warehouse in pharmaceutical industry
  o Able to maintain high production levels without incurring additional inventory costs
  o Plans to add warehouses in Asia in order to place products closer to emerging market customers, lowering distribution costs
• Good growth forecast for Humira across a wide range of autoimmune disorders
  o Researching further indications for Humira, already have discovered five additional uses

Most of Abbott’s strengths stem from their size and longevity in the industry. Abbott, as of the end of 2010, is the eighth largest pharmaceutical company in the world by revenue and the third largest in the United States behind Johnson & Johnson and Pfizer. In addition, as Abbott has diversified beyond being simply a pharmaceutical company, they are the largest company in nutritional products and the second largest company in diagnostic products in the world. This large size has taken on increased importance in recent years, as the pharmaceutical industry has seen significant consolidation in the face of skyrocketing research and development costs and increased regulation of new drugs (See Appendix). Due to its prominence in the industry Abbott has been able to make several key acquisitions to increase its global presence and bolster its drug production pipeline, and they have been able to maintain the largest warehouse system.
in the pharmaceutical industry and plan to open up more warehouses in Asia and other emerging economies to cut down distribution costs to these new markets.

Abbott’s large size and diversification allows the company to leverage revenue from other pillars of the organization, namely the nutritional and diagnostics products, to fund the incredibly high upfront costs of drug discovery. The pharmaceutical industry is extremely risky, in that only one out of every ten thousand discovered compounds actually becomes an approved drug for sale. On top of that, after a seven to ten year process to get a drug approved, only three out of twenty drugs end up making enough revenue to actually cover their costs of production.\textsuperscript{xxviii} Therefore, to be a viable company in the pharmaceutical business a firm must have a steady stream of revenue to cover all the futile attempts at producing a “blockbuster” drug, and in order to remain solvent they generally must discover a blockbuster billion-dollar drug every few years. Abbott has been able to do this throughout their history by making key acquisitions to bolster their drug-production pipeline, as shown in Table 3 below.

\textbf{Table 3: Abbott’s Recent Acquisitions}\textsuperscript{xxix}

<table>
<thead>
<tr>
<th>Year</th>
<th>Acquisition</th>
<th>Price</th>
<th>Strategic Fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Knoll (a unit of BASF)</td>
<td>$6.9B (Cash)</td>
<td>Acquired the rights to \textit{Humira}</td>
</tr>
<tr>
<td>2004</td>
<td>Therasense</td>
<td>$1.1B (Cash)</td>
<td>Acquired products for diabetes treatment</td>
</tr>
<tr>
<td>2005</td>
<td>Guidant’s vascular unit</td>
<td>$5.5B (Cash)</td>
<td>Acquired several vascular products</td>
</tr>
<tr>
<td>2006</td>
<td>Kos Pharmaceutical</td>
<td>$3.7B (Cash)</td>
<td>Acquired cholesterol treatments</td>
</tr>
<tr>
<td>2009</td>
<td>Advanced Medical Optics</td>
<td>$2.8B (Cash)</td>
<td>Acquired #1 maker of LASIK surgical devices</td>
</tr>
<tr>
<td>2009</td>
<td>Solvay’s drug unit</td>
<td>$6.6B (Cash)</td>
<td>Expanded pharmaceutical portfolio</td>
</tr>
<tr>
<td>2010</td>
<td>Piramal Healthcare</td>
<td>$3.8B (Cash)</td>
<td>Expanded pharmaceutical portfolio abroad</td>
</tr>
</tbody>
</table>

Acquiring companies that have already funded the initial stages of drug production allow Abbott to cut out some of the risk involved since they are more likely to be purchasing a viable product. The likelihood of viability jumps around 60% as a compound progresses to the next stage of clinical trials, so purchasing a late-stage compound significantly hedges Abbott’s risk. In addition, Abbott has been using acquisitions to increase its global presence and expand in to high-growth emerging markets. More than half of its pharmaceutical sales come from outside the United States and its international diagnostics sales more than double their domestic sales.\textsuperscript{xxx} Their recent acquisitions of Piramal, one of the top three Indian healthcare companies, and Solvay, another global pharmaceutical company have put Abbott in a strong position to continue growing their overseas presence.
Abbott’s century-long history is another of Abbott’s strengths. They have been a leader in the industry for such a long time that they have come across and dealt with what would be nightmare scenarios for other newer companies. They have a very strong history of lifecycle management, always managing to streamline their drug pipeline to account for future drug patent expirations. This will, ideally, allow them to navigate the future patent expiration landscape and the role changing regulation has on the length of patents.

**Weaknesses**

- Upcoming patent expirations
  - No significant expirations until 2013
- Uncharacteristically narrow phase III pipeline, with few explosive launch opportunities
  - 15 compounds in Phase III
- Late stage pipeline currently offers limited expansion beyond existing therapeutic positions
  - 30 compounds in human trials

Abbott’s main weakness, patent expirations, is not essentially unique to Abbott itself but more inherent to the pharmaceutical industry itself. They have to worry about the patents on their protected drugs expiring and coming in direct competition with generic products that offer the same results but at a significantly lower price. Abbott faces no major patent expiration in 2016 and if they are not able to produce another highly profitable drug before then they are likely to see a major drop in revenue.xxxi In that vein, however, Abbott’s drug pipeline is currently uncharacteristically narrow. They have relatively few (fifteen) phase III drugs in their pipeline, the final stage before proceeding to human trials, and of those there do not seem to be many with projected explosive launch opportunities. They also only have thirty compounds currently in human trials and few of these compounds offer expansion in to new realms of healthcare but simply offer new treatments for existing therapeutic positions.

It is not clear whether this atypically poor pipeline management is simply a result of bad luck or lack of oversight on Abbott’s part as they prepare to spinoff their pharmaceutical business. It is not an insurmountable obstacle however, and they can still use their preferred technique of acquiring smaller companies with promising drugs throughout the development process to bolster their pipeline, although it will be more expensive to acquire companies with late stage products.
Opportunities

- License agreements
- Positive outlook for diagnostics and nutritional products markets
  - Increasing profit margins
  - Spinoff

Abbott has some potential opportunities in all their product lines, although some may be more profitable than others. For their pharmaceutical line of business they can utilize joint license agreements with other companies in order to lower development costs and still achieve some profit. Their diversification leads to further opportunities as well since their other product lines, diagnostics and nutritional products, have extremely positive outlooks going forward. They have seen their diagnostics segment increase revenue and increase margins over the last few years and a similar story in their nutritional products division. This increased profitability from these two sectors of their business, coupled with rising costs, riskiness, and regulation in their pharmaceutical business might be a motivating force behind the planned spinoff of their pharmaceutical division in 2013. The spinoff will make the pharmaceutical division of Abbott its own independent company. There are currently no plans to sell the pharmaceutical division but rather keep it operating as a wholly owned subsidiary of Abbott Laboratories under a different name. This offers Abbott’s investors another investment vehicle to capitalize on the company’s different growth strategies. It will allow Abbott to focus on the realizing the potential high growth and high margins of their nutritional and diagnostic product lines, without their balance sheets being hampered by the astronomical research and development costs of their pharmaceutical division.

Threats

- Generic erosion
- Government regulation
- Industry consolidation

The threats Abbott faces are not necessarily unique to the company itself but stem more from industry-wide issues. The main issues they face are generic erosion of their products, changing and increased government regulation, and industry consolidation. Generic erosion, as touched upon earlier, is a major threat to any drug developer that relies on the patent system to recoup their costs of development. After a patent expires
and the market is flooded with generic brand competitors Abbott will see their profitability significantly decrease. In the past Abbott has been able to manage this threat fairly well through meticulously planned product pipelines that produced a steady stream of new revenue. More recently, however, Abbott has been slacking in the late-stage pipeline. There is not too much danger of generic erosion until 2016 when Humira’s patent expires, if they do not shore up their pipeline through acquisitions or increased research and development spending by then, they will see their profits decrease significantly through generic erosion.

Government regulation is another potential threat. As the Patient Protection and Affordable Care Act, colloquially known as Obamacare, goes in to effect and millions of people across the country see their healthcare benefits and cost structures change it will actually become clear what effect this particular legislation will have on Abbott and other pharmaceutical companies. The stated goal of Obamacare is to make healthcare generally cheaper, which by the same token could mean reduced profits for pharmaceutical companies. It remains to be seen whether the burden of payment that is taken off the customer is added more to insurance providers or the companies actually producing and distributing the drugs. Future legislation may also take aim at the prolonged patent period in medicine and attempt to shorten the length so as to create generic erosion faster, another decision that would significantly hamper Abbott’s profits. The silver lining is the Obama Administration’s push to increase healthcare coverage, which could potentially expand Abbott’s customer base. In any case, Abbott does have some leverage in the political landscape, again due to their size and prominence in the industry; they have a voice in Washington and might be able to sway things more in their favor through lobbying efforts. It is rumored that big pharmaceutical companies, Abbott included, had a prominent hand in writing the pricing regulations included in the PPACA and were able to skew it heavily in their favor. It seems plausible, then, that any plans for healthcare reform will have to take the large pharmaceutical companies in to consideration and Abbott will definitely have a seat at the table should those discussion ever come about, allowing them to have their voice heard and truly understand how they would potentially be effected and plan accordingly.

The last threat comes through industry consolidation. There has been a strong trend of consolidation in the industry over recent years. From 1990 to 2003 the top ten firms in the industry went from representing 28% of the total market to almost half. This consolidation has continued since then as economies of scale took effect with the rising upfront costs of drug development. Thus far, Abbott has been an active member
of the consolidation movement, making many acquisitions and continuing its growth. There is the chance that should Abbott falter for whatever reason, that it becomes a target of acquisition itself to one of its larger competitors such as Johnson & Johnson. This threat becomes much more viable after the planned spinoff, when other firms may view the pharmaceutical pillar of Abbott’s business as a valuable addition and seek to pry it away from the umbrella corporation.
**Strategic Recommendations**

After analyzing the state of the industry, Abbott’s position within the sector, and Abbott’s strategy and performance, Griffin Consulting has developed a strategic plan for Abbott to continue to expand and thrive in the increasingly competitive environment they face. The multi-faceted plan takes in to account and refines Abbott’s current focus while introducing other aspects that the company seems to be neglecting.

**Diversify/Spinoff**

Diversification has been a core tenet of Abbott’s business strategy. Through expanding its wide range of product offerings, the company believes they can gain an edge on their competitors. The advantages include scientific insights and increased knowledge of the many aspects of providing health care. So far this strategy appears to be working. Through its diversification Abbott has been able to lean on other pillars of the organization to insulate themselves from the inherently risky and cyclical nature of the pharmaceutical industry.

In past years they have been placing increased emphasis on non-pharmaceutical products culminating in their announcement to separate Abbott into two separate healthcare companies. The spinoff would see Abbott retain their diversified medical products business, including established pharmaceuticals, nutritional products, diagnostics, and medical devices while creating another company focused on research-based pharmaceuticals. This separation represents a major shift in focus for Abbott and further highlights the company’s commitment to diversification. They are willing to turn their back on what once was their core business and what made them the company they are today, in favor of other lines of business they created as hedges along the way. The spinoff represents Abbott’s attempt to cash in on those hedges. Griffin agrees with the decision to separate and in particular retaining and focusing on the lines of business within the diversified medical products firm. Branded pharmaceuticals are still going to be viable businesses for some time but the outlook for research based pharmaceutical companies has never looked so bleak. Soaring upfront production costs, precipitous patent cliffs, stiff generic competition, and increased government regulation will all serve to squeeze margins and increase risk for branded pharmaceutical companies. Abbott is fortunate that they had the foresight to diversify years ago and now they are able to leverage those decisions by shifting the focus of the company entirely towards what were once “fringe” products.
CONTINUE TO IMPROVE MARGINS

There are some improvements, though, that Griffin would like Abbott to focus on within its diversified medical products business, the most important being operating margins. Abbott recognizes that this is an issue and has put plans in place intending to expand margins. The plan has seen some success in diagnostics, but has yet to fully take hold in the nutritional business. We recommend focusing on methods of cutting costs as they continue to expand their business in to emerging markets in order to drive the nutrition margin from the low teens to reach Abbott’s stated goal of more than 20% by 2015. A few main drivers of improvement are: manufacturing locations and processes, material and packaging costs, distribution, and product and geographic mix. As the fast-growing emerging markets take on a larger importance for Abbott, it is imperative that they continue to increase their manufacturing presence in these areas as well. Building plants in key emerging markets will allow the company to be closer to the customer as well as reduce its manufacturing and shipping costs. Also, altering their distribution methods in these markets should be considered, perhaps moving from a distributor model to a direct model in some countries. Similarly, they should tailor their product mix to the different geographical areas by entering and exiting product lines as they become more or less profitable in certain countries.

GLOBAL EXPANSION/ ESTABLISHED PHARMACEUTICALS

On a similar note, Griffin recommends that Abbott continue to increase its global presence through focusing on emerging markets. Abbott has been seeing significant growth from abroad. Three fiscal years ago, Abbott produced 47% of its sales from within the United States; today, while still its largest market, the US represented only 41% of Abbott’s total revenue. This is a good trend but it can, and should, be ramped up. In the past decade emerging market consumer spending grew 250%, leaving the growth rates of the United States and Europe trailing far behind. These companies represent a strong growing demand for healthcare and nutritional products that Abbott is in an excellent position to satiate. Through the acquisition of Piramal and its existing positions, Abbott is now the largest healthcare company in India. The market generated $8 billion in pharmaceutical revenue in 2010, a number expected to double by 2015, and Abbott expects its pharmaceutical sales in India to exceed $2.5 billion by 2020. Griffin believes that similar opportunities exist in other emerging markets (See Appendix) and just as Abbott historically bolstered their drug pipelines through acquisition, they can strengthen their global presence in the same fashion.
The business line that has had the most success in these emerging markets is Abbott’s established pharmaceutical line. This is another exciting area that Griffin believes Abbott should focus on. “Established pharmaceuticals” is essentially Abbott’s branded generics line. Once their patent-protected drugs expire, this line of Abbott’s business begins producing the same drugs as generics. By doing this Abbott can take back a slice of what they lose through generic erosion. They already have the facilities and experience for producing the drug so they enter the generic market with a leg up on their competition. This also allows Abbott to capitalize slightly on successful drugs from competitors. Going forward, though, Griffin expects this line of business to grow rapidly. With sever austerity measures implemented abroad and increased government regulation potentially leading to shorter patent cliffs the demand for generic drugs is expected to skyrocket. Abbott can utilize its economies of scope in the branded generics business and produce these drugs more efficiently than its competitors and potentially undercut them on price. Abbott has been developing this business for almost a decade now, but focusing most of the products abroad. With the changing healthcare landscape in America, Griffin believes this line of business will be just as effective and profitable domestically as it has been abroad.

**BIOTECH ACQUISITIONS**

Another way to lessen the effect of patent expirations is to simply make products that are difficult for generic developers to copy. In recent years there has been an explosion of products from the biotech industry and remedies utilizing DNA and genetics to effectively thwart disease. While most generic compounds are relatively easy to manufacture once discovered, these new drugs elucidated from proteins are much more difficult to copy. Griffin believes that emphasizing these particular drugs throughout Abbott’s pipeline will insulate them from the major threat of generic erosion. Even if the patent expires it will be extremely costly and difficult for other companies to reproduce these products, allowing Abbott to maintain their monopoly profits on these products for a longer time. The best way for Abbott to dive in to the biotech industry is through acquisition, rather than revamp their research and development process to cater to these new drugs and procedures. By acquiring some biotech companies with strong R&D departments, Abbott can gain the scientific know-how to undertake its own successful production of biotech products that will allow them to retain market share of their products long after the patent expires.
Griffin’s final recommendation is to restructure slightly to increase communication and knowledge spillover among the numerous lines of Abbott’s business. Currently, Abbott operates its various operations as separate entities, much like individual companies operating under the Abbott umbrella. By integrating, at the very least, the research and development of their branches they can unlock synergies that may exist between various product lines. When Abbott has attempted this in the past it has paid off. The pharmaceutical and medical devices divisions developed one of Abbott’s most profitable products, *Xience* the drug eluting stent, jointly. No other companies have the capacity and scientific knowledge to compete with *Xience*, due to the multi-faceted nature of the stent. Abbott is therefore able to enjoy exaggerated revenues because they have a complete corner on the market. Further integrating the branches of Abbott’s business could lead to more novel products such as *Xience*. Abbott, as mentioned earlier, is unique in that it boasts an extremely diverse array of products and with some subtle internal restructurings Abbott can further leverage this diversity and create exciting, unprecedented products that will have little or no competition in their respective markets.
APPENDIX

Figure 3.4: Trend in Merger & Acquisition activity by value (1995-2005)

Source: Cygnus Research

Figure 3.5: Global Pharmaceutical Outsourcing Market Size (2001 - 2005)

Source: OPPI, 2004 and Cygnus estimate
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