

# **FOREST LABORATORIES INC.**

**INDUSTRY-Biotechnology & Drugs**

**SECTOR- Healthcare**

**RECOMMENDATION- Hold shares**

**FINANCE 284**

**ANALYSTS:**

- **EDYTA BABICZ-MARKOWSKA**
- **JOE CARPINONE**
- **DWAIN COX**
- **ESTHER JORDAN**
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<b>Price (11/11/05)</b>	<b>\$39.28</b>
<b>52 Wk Price Range</b>	<b>\$32.46-\$47.44</b>
<b>P/E</b>	<b>17.37X</b>
<b>Shares Outstanding</b>	<b>339 Million</b>
<b>EPS</b>	<b>\$2.26</b>
<b>Market Capitalization</b>	<b>\$13.3 Billion</b>
<b>Institutional Ownership</b>	<b>91.2%</b>

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## **EXECUTIVE SUMMARY**

In 2003, Forest Laboratories Incorporated, a biotechnology Company, was selected to be part of Finance 284's portfolio due to its outstanding financial performance and high growth potential. However, while the stock continues to be profitable, several recent factors prompted our team to conduct another analysis to determine whether it is prudent to keep it in the portfolio.

Our analyses lead us to focus on several key aspects that may influence the stock's performance, namely, the general pharmaceutical industry, the Company's present situation with regard to its plans, litigations and pipeline, etc.

Qualitative investigations proved inconclusive and thus extensive financial and technical scrutiny and a valuation model were employed to assist us in our decision.

Our findings indicate that the stock is undervalued and as such, we should maintain a "HOLD" position.

Thursday November 17<sup>th</sup>, 2005

## **INVESTMENT COMMITTEE: MINUTES**

Members present: Drs. Liaw, Neumann, and Pappas  
Joe Carpinone (student representative)

After presentations by FRX and TM groups, committee members discussed the various aspects relating to the research papers and the presentations. The actions taken are:

FRX: no action required (a hold recommendation).

TM: will review the group's revision and vote on their recommendation, the maximum amount that can be purchased is \$15,000 (reaching the 80-20 equity-debt allocation).

Forest Labs suggestions listed below:

- Adjust the increase in revenues from the valuation tables.

The percentage increase in revenues was adjusted (refer to Valuation tables on pages 41-43).

- Use a 1-2 year lag for R&D in the regression formula.

One year lag used for R & D in the regression analysis.

## **VALUE STATEMENT**

*“Guided by principles, powered by people*

*As a pharmaceutical company in a regulated industry, Forest is dedicated to adhering to the laws and regulations applicable to within our industry and business world as a whole. However, we are not satisfied with merely acting within the realm of acceptability. Forest proudly and actively promotes professional behavior that aligns with the intent as well as the letter of the law.*

*We follow the regulations governing testing, approval, manufacture and distribution of our products because we are both morally and legally obligated to do this—the people who rely on our products deserve nothing less.*

*Forest is deeply committed to our employees. Our goal is to enable everyone to feel supported, to be treated with respect and to expect the same treatment from co-workers that we extend to our customers and business partners. Finally, we support the community of our employees—where we live and work.*

*At Forest, our mandate is clear: to conduct our business with integrity, respect and responsibility.”*

## **BUSINESS SUMMARY**

Forest Laboratories Inc. develops, manufactures and sells ethical drug products which require a physician’s prescription, as well as non-prescription pharmaceutical products sold over the counter. Generally, its products consist of branded ethical drugs marketed directly to physicians by its sales force.

In 2003, a decision was made to purchase this Company’s shares and at that time it was deemed to be a prudent investment due to several factors. These include, but are not limited to the industry in

which the Company operated, its pipeline of potential new drugs, performance on the stock market, and favorable financial performance.

However, there have been significant changes since then as evidenced by developments in the pharmaceutical industry, some of which are captured by the recent news articles listed below.

- **November 14, 2005**

Lundbeck advised that two Phase III studies have shown its anti-depressant Cipralelex to be effective in treating obsessive-compulsive disorder (OCD). Cipralelex, sold in the United States as Lexapro by Forest Laboratories, is approved for the treatment of depression, panic disorder, social anxiety disorder and generalised anxiety disorder<sup>1</sup>.

- **October 26, 2005**

Forest Laboratories Incorporated's patent lawsuit against Ivax Corporation over a generic version of its Lexapro antidepressant has been rescheduled from December 5, 2005 to March 15, 2006. A pretrial conference has been scheduled for February 7, 2006.

- **October 18, 2005**

For its second quarter, Forest Laboratories reported a 16% decline in its revenue to \$736.5 million and a 44% decrease in its earnings to \$204.9 million (59 cents a share) compared with \$295.3 million (79 cents a share) for the same quarter last year. Forest Laboratories recently stated that its fiscal-year forecast would be lower than planned.

- **October 18, 2005**

Forest Laboratories, Inc. announced that Howard Solomon, Chairman and Chief Executive Officer and Kenneth Goodman, President and Chief Operating Officer, intend to exercise stock options for 800,000 shares and 400,000 shares, respectively which will expire in December 2005 at the end of their 10-year term<sup>2</sup>.

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<sup>1</sup> <http://yahoo.reuters.com>

<sup>2</sup> <http://www.frx.com/news/PressRelease.aspx?ID=769014>

- **October 6, 2005**

Danish pharmaceutical group, Lundbeck, and Forest Laboratories settled a patent infringement case regarding its antidepressant, Lexapro, with Australian generic drug maker Alphapharm. As part of the settlement, Lundbeck/Forest agreed to give Alphapharm, the right to distribute an authorized generic version of Lexapro in the U.S. when its patent expires, or sooner if Lundbeck and Forest Laboratories are unsuccessful in the case against IVAX.

- **September 28, 2005**

Forest Laboratories and Cypress Biosciences announced that early data from a key Phase III clinical trial showed their drug Milnacipran was statistically ineffective in treating fibromyalgia, a condition that causes chronic muscle pain and stiffness. The phase III study involved nearly 900 patients. In spite of the results, the companies still plan to pursue additional Phase III clinical trials for the drug.

## **SWOT ANALYSIS**

### **Strengths**

- Well established, viable entity;
- Substantial amount of current assets with no debts;
- Focused, flexible approach to decision-making which aids in collaborations with its partners;
- In-licensing opportunities - in all phases of development from pre-clinical to products ready for FDA review;
- Drug product formulation capabilities
  - To prepare immediate release, modified and controlled release formulation of tablets and capsules
  - In developing liquids, aerosols and dry powder inhalers;
- Selling and Marketing capabilities
  - Leading sales force comprises of 2700 professionally trained representatives.

## **Weaknesses**

- Limited diversification- highly dependent on one blockbuster drug (Lexapro);
- Lean drug pipeline;
- Worsening financial position evidenced by declining rate of growth in sales revenues and earnings per share;
- Inability to absorb shocks in pharmaceutical industry;

## **Opportunities**

- Demographics- aging population that requires drugs, lengthening of average life expectancy and a rising incidence of chronic diseases;
- Growing anti-depressant market;
- External scientific research alliances;
- Relative immunity to general economic activity ( products are inelastic in demand);
- Drug treatments in the pipeline
  - For therapeutic areas of Asthma, gastrointestinal, cardiovascular, Alzheimer's, neuropathic pain, stroke, fibromyalgia and Central Nervous System disorders.

## **Threats**

### *Synonymous with the pharmaceutical industry*

- Extremely competitive environment
  - Generic drugs
  - Larger companies capitalizing on licensing opportunities;
- Patent expiration;
- Litigation;
- Increasing Research and Development costs;
- Lengthy time for development and FDA approval of new drugs;
- Government Regulations
  - Increased regulatory initiatives and requirements
  - Increased socio-political price and delivery pressures;



- Crowding of Major Therapeutic Categories
  - New and global competition
  - Many weak new product portfolios;
- FDA's issuance of new anti-depressant warning.

## **INDUSTRY OVERVIEW**

In 2003, the pharmaceutical industry sold an estimated \$466 billion worth of drugs, making it one of the fastest growing manufacturing industries in the United States<sup>3</sup>. The United States is the world leader in pharmaceutical research<sup>4</sup>, and is one of the largest employers of scientists. According to the Pharmaceutical Research and Manufacturers of America, its success or failure relies heavily on its ability to make breakthroughs. For decades, the industry has been regarded as a 'safe bet', but in recent years there has been growing concerns among the investment community that this position is being threatened by the emergence of generic drugs and looming patent expirations, among other factors.

There are several aspects of the pharmaceutical industry that warrant discussion:

- **Political**

The pharmaceutical industry has asserted itself in the political arena through its intense, lobbying activities and as such, has attracted political pressure from all sides. In fact, various political groups have differing moral and ethical values regarding the development of certain advancements, e.g. the present debate on stem-cell research.

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<sup>3</sup> Based on data taken from US Department of Labor and Statistics

<sup>4</sup> Based on data taken from Organization for Economic Cooperation and Development (OECD)

- **Economic**

The industry is often affected by the fluctuations of the market but not in the conventional way since healthcare is seen as a priority by most governments and the good is generally inelastic in demand.

- **Sociological**

Medical advancements, especially radical ones, have often been met with opposition and this clearly affects the growth of the industry. In recent years the pharmaceutical industry's major challenge has been trending toward 'natural' healing and treatment methods.

- **Technological**

Technology is very important to the industry's existence. Technological prowess aids in companies' competitive advantage and makes the difference between breakthrough findings and complete failures.

- **Legal**

Through globalization the industry has grown, but not without challenges. Legal systems differ across the world and as such, a drug that may be acceptable in one location may not be acceptable in another. Additionally, intellectual property and patenting systems have become more prominent in a marketplace where the establishment of rights can lead to expensive legal battles and restrictions in producing a particular drug. Moreover, there is an ongoing battle to allow cheaper, imported drugs from countries where prices are controlled by governments. The profitability of United States of America' pharmaceutical companies will be adversely affected if produce from Canada, Mexico, Asia, or Europe are imported.

- **Environmental**

These issues are important given the nature of research that takes place within these companies. The incidence of environmental laws adds to the cost of developing /producing drugs.

- **Corporate Finance**

In an era of outsourcing, mergers and acquisitions, the industry has not been left unscathed. Some companies have merged to optimize research efforts while others have sought to outsource production or research operations in a bid to lower costs and maximize output.

- **Pharma and biotech companies**

Companies within the industry can be effectively divided into two main categories: pharmaceutical and biotech. Pharmaceutical companies produce medicines from plant-based and chemical-based compounds, whereas Companies dealing with biotechnology duplicate or change the function of a living cell to make it work in a more predictable manner. A major difference between pharma and biotech is the size of their operations.

In 2002, the entire biotech industry spent \$20 billion on Research and Development (R&D). In 2003, the top five Big Pharma Companies alone spent nearly \$23 billion on R&D. There are also significant differences in the employee base as the largest pharmaceutical Firms employ as many as 100,000 people, while Amgen, the largest biotech company, has fewer than 13,000 employees.

- **Food and Drug Administration Approval**

Market research shows that it takes an average of fifteen (15) years for a Company to nurture a drug from infancy to the Food and Drug Administration (FDA) approval stage – a process that can cost between \$800 million and \$900 million. Further, only one in fifteen hundred screened compounds has ever been approved for use in a new product. The R&D process is divided into several stages:

- Preclinical/pre human studies;
- Phase I clinical trials;
- Phase II clinical trials;
- Phase III clinical trials;
- Phase IV (Post-marketing Surveillance).

- **Trends in drug development**

With the rising costs of R&D, drug makers tend to focus on products for chronic rather than acute diseases because of long treatment and large patient populations (such as cancer, arthritis, cardiovascular conditions). Ulcer medications, cholesterol treatments, and antidepressants are the top three drug categories.

## **COMPANY OVERVIEW**

### **Reasons stock was purchased in 2003**

- **Stock price and trend**

During the period January 1999 to January 2003, Forest Laboratories' stock price increased each year, shifting from \$12 to \$50. Perhaps more importantly, it had outperformed larger firms such as Merck, Pfizer, Bristol-Myers Squibb in the pharmaceutical industry in the past 14 years.

- **Existing products**

Based on the financial statements for fiscal year end March 2002, Forest Laboratories Inc. had four main drugs, two of which accounted for 81.5% of its sales revenues.

- **Celexa**, an antidepressant, contributed 69.4 % of total sales revenues in fiscal year 2002 (60.8% and 49.0% for the fiscal years ended March 31, 2001 and 2000, respectively).
- **Tiazac**, a hypertension drug, contributed 12.1% of sales revenues in fiscal year 2002 (15.1% and 18.1% of sales for the fiscal years ended 2001 and 2000, respectively).

Since Celexa's patent was due to expire in 2004, the company introduced an improved, alternative drug named Lexapro in September 2002. As Lexapro's patent was due to expire in 2009, the Company's future appeared extremely promising.

- **Drug pipeline**

At the beginning of year 2003, Forest Laboratories had a dynamic product development pipeline with six (6) new drugs:

- **Namenda®/memantine**-drug designed to treat moderate-to-severe Alzheimer's disease, was accepted by the FDA for review in January 2003
- **Aerospan**- was due to be launched in 2003
- **Neramexane**- Phase II studies
- **Gastrointestina**- Phase III studies
  
- **Lercanidipine**- was due to be launched at the end of 2003
- **Oxycodone/ibuprofen**- submitted for approval in December 2001

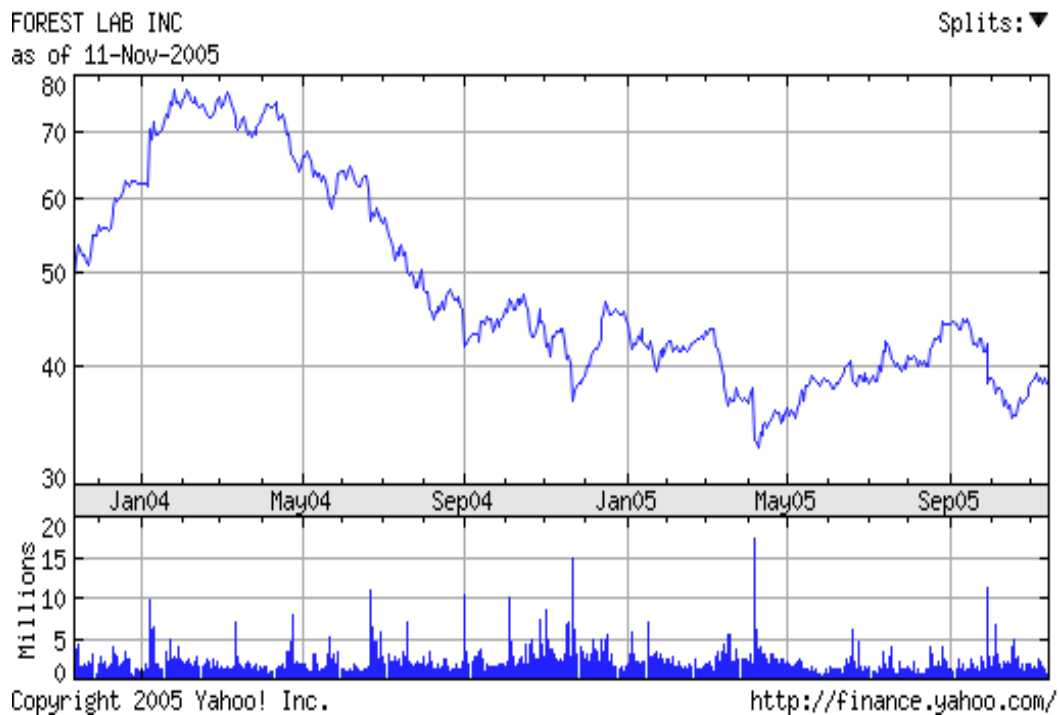
- **Correlation analysis**

Utilizing information during a 10 year period, the company's stock displayed little correlation with other stocks in the portfolio. As such, a level of diversification was evident and this is a critical component of an efficient portfolio.

### **Reasons to hold the stock**

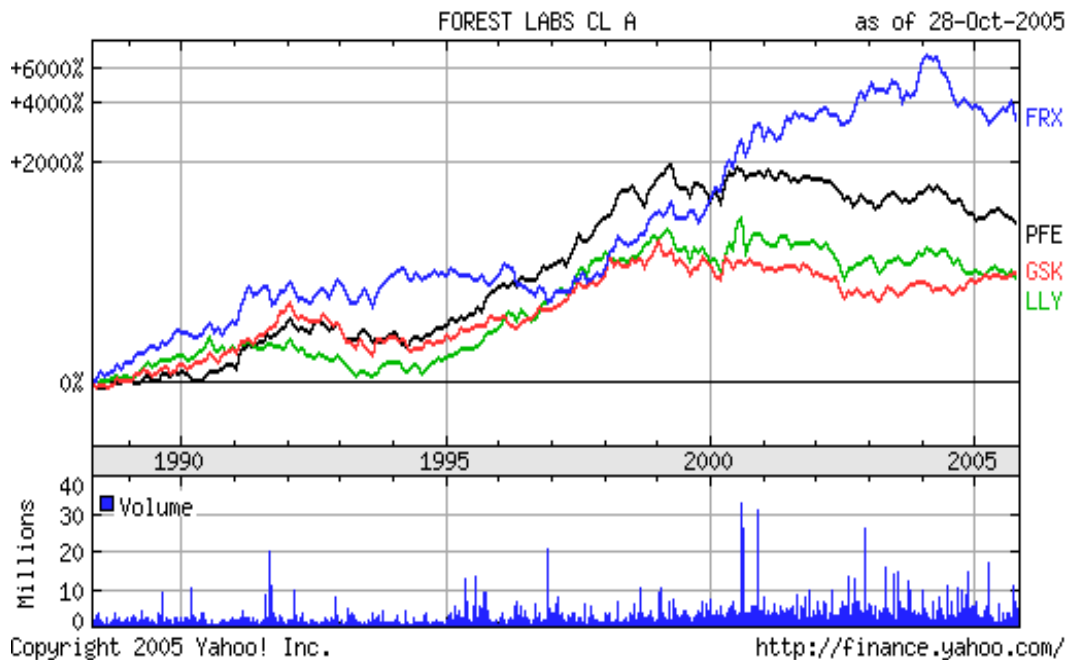
- **Movement in stock price**

The Company's stock price has declined rapidly during the past few months due to intense competition of generic drugs as well as the rejection of a critical drug in its pipeline. However, due to recent news regarding postponement of litigation case as well as the company's strong believe of a favorable outcome, its stock price has increased by 9% during the past few weeks.

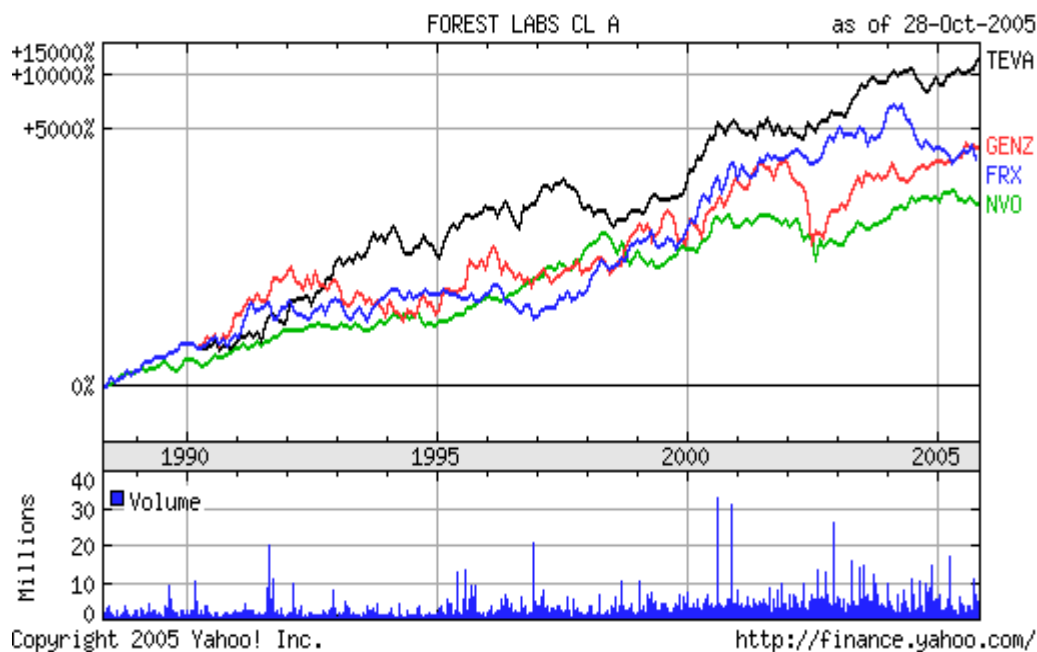


- **Company's performance**

The price of Forest Laboratories' stock has outperformed those of its main competitors listed as Pfizer, GlaxoSmithKline and Eli Lilly.



It has performed relatively better than most of its peers.



- **Drug pipeline**

In October 2003, the Food and Drug Administration (FDA) approved **Memantine/Namenda** for the treatment of moderate-to- severe Alzheimer's disease and the Company commenced promotion in March 2004. To date, it has not received approval to market the drug to treat mild Alzheimer's disease, but intends to submit alternative data to FDA.

**Neramexane** as well as **Gastrointestinal/dexloxiglumide**, which were expected to be approved, as the stock was purchased, failed to achieve statistical significance in Phase III study. Moreover, **Lercanidipine** and **Oxycodone/ibuprofen** both require additional supporting data.

Forest Laboratories' main products include:

- **Lexapro**- accounted for 52.6% of total sales for the fiscal year ended March 31, 2005, and 41.1% and 11.1% of sales for fiscal years ended 2004 and 2003, respectively;
- **Celexa**- contributed 21.6% of total sales revenue for the fiscal year ended March 31, 2005, and 41.0% and 65.8%, for 2004 and 2003 fiscal years, respectively;
- **Namenda**-generated 10.9% of total sales for the fiscal year ended March 31, 2005 and 1.7% for fiscal year 2004;
- **Benicar**, an angiotensin receptor blocker for the treatment of hypertension, has begun to generate contract revenue;
- **Combunox**, an oxycodone/ibuprofen combination for the treatment of acute pain (new);
- **Campral**, for the maintenance of alcohol abstinence (new).

Forest Laboratories' future drug pipeline consists of the following<sup>5</sup>:

- **GRC 3886** for the treatment of asthma and COPD - successfully completed Phase I; license agreement with Glenmark Pharmaceuticals;
- **RGH-188**, for the treatment of schizophrenia, bipolar mania and other psychiatric conditions - currently in Phase I; license agreement with Gedeon Richter Limited;
- **Desmoteplase**- for the treatment of stroke- currently in Phase II; license agreement with PAION GmbH.

It should be noted that the drugs in the pipeline still have to pass the rigorous stage III before they can be approved. The anti-depressant drug market is one of the fastest growing sectors of the pharmaceutical industry and this auger well for Forest Laboratories which markets Lexapro.

We note that Forest Laboratories has ample amount of cash to partner with other Firms and purchase in-license agreements. This will not only expand its product line but also generate more revenue.

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<sup>5</sup> [http://media.corporate-ir.net/media\\_files/irol/83/83198/reports/2005/MgmtDiscussion.pdf](http://media.corporate-ir.net/media_files/irol/83/83198/reports/2005/MgmtDiscussion.pdf)



## **FINANCIAL OVERVIEW**

### **Reasons shares were purchased in 2003**

The purchase of Forest Laboratories shares' in 2003 represented a viable alternative in terms of:

- Profitability- Operated with a net profit margin (NPM) of 22%;
- Liquidity- Displayed its ability to meet its short term obligations;
- Efficiency in maintaining tight control over its expenses - R&D represented 10% of sales, Cost of Goods Sold (COGS) - 24% and Selling, General and Administrative Expenses (SG&A) - declined from 44% to 38%, which thereby had a positive impact on Net Income (NI);
- Capital solvency – No debt obligations;
- Growth potential- Sales revenues and net profit increased by 33% and 57%, respectively;
- Market Share - Forest Laboratories had captured 17% of the anti-depressant market with Celexa, a market labeled as the largest therapeutic market in the pharmaceutical industry. In addition, as Celexa's patent was about to expire, it introduced a superior anti-depressant named Lexapro.

Based on the aforementioned, its growth prospect seemed promising, especially given its impressive pipeline of potential drugs.

To date, Forest Laboratories' continues to:

- Display financial strength with a NPM of 32%;
- Possess the ability to meet its short term commitments (holds cash and short term marketable securities of \$1.85 billion);
- Operate virtually debt free and
- Achieve increased market share in the anti-depressant market with Lexapro (20% ) and Alzheimer's market (20%).

### **Changes in financial performance**

However, its situation has changed during the past few years. Some of the changes are directly related to the Company while others are a result of external factors and they are as follows:

- Decline in growth of sales revenue, net income and diluted EPS;
- Impending litigation;
- Generic erosion
- Food and drug Administration's (FDA) rejection of potential new drugs;
- FDA's investigation of increased number of suicides among adolescents who use anti-depressants;

### **Sales Revenues**

In FYE 2002, Forest Laboratories' sales revenue increased by 33% primarily due to the sale of its main product, Celexa, and overall increase in prices of pharmaceutical products. However, in FYE 2005 as reflected in the table below, its revenue merely increased by 15% as Celexa treated with fierce competition from generic drugs. Although Lexapro and Namenda successfully penetrated the market, the revenues generated were insufficient to entirely offset the decline.

### **Net Profit**

In FYE 2002, the Company experienced a 57% growth in its net income compared with a 14% increase in FYE 2005. This was due to a decline in the growth of its sales revenue (discussed above) and a huge, one time tax charge of approximately \$90 million. Without this charge (all other things being equal), it would have realized growth in its net profit by 26%. Still, a 14% growth in net income may be considered a great feat, especially given the challenging environment in which the Company operates. During the past three (3) years, Forest Laboratories has been able to maintain a relatively stable net profit margin.

### **Earnings per Share**

In FYE 2002, Forest Laboratories' diluted EPS increased by 57%. In FYE 2005, it merely grew by 15% and this growth only occurred after the Company repurchased 30 million of its outstanding shares. We reiterate that the one time tax charge adversely affected the Company's earnings.

## TREND ANALYSIS

	Qtr 06/2005	2005	2004	2003	2002	2001
<b><u>Growth</u></b>						
Sales Revenues	-14%	15%	20%	40%	33%	34%
Net Income	-6%	14%	18%	84%	57%	91%
Earnings per Share		15.40%	17.50%	82%	54%	84%
<b><u>Liquidity Ratios</u></b>						
Current Ratio	5.3	4.8	4.82	4	3.68	3.95
Quick Ratio	4.1	3.45	3.44	2.89	2.28	2.44
Cash&Eqv/Current Assets	59.65	59.79	61.47	63.93	51.17	45.84
Receivables Turnover	2	10	11	14	14	11
Inventory Turnover	1	5	5	6	5	5
<b><u>Profitability Ratios</u></b>						
NP Margin	32%	26.90%	27.76%	28.19%	21.57%	18.31%
GP Margin	76%	77.00%	77.00%	77.00%	76.00%	76.00%
Return on Equity		26.30%	26.20%	31.30%	23.70%	20.40%
Return on Assets		22.20%	21.70%	25.50%	19.90%	16.70%
<b><u>Asset Utilization Ratios</u></b>						
Fixed Asset Turnover		3.14	3.29	3.1	2.48	2.31
Total Asset Turnover		0.84	0.78	0.91	0.92	0.91
CapEx/Fixed Assets		18.07	25.12	26.11	16.12	16.04
CapEx/Total Assets		2.41	2.64	2.74	1.88	2.15
<b><u>Valuation</u></b>						
High P/E		68.95	49.38	32.15	45.07	52.09
Low P/E		12.91	11.47	21.92	24.1	32.49

### **Recent financial data**

For the quarter ending June 30, 2005, Forest Laboratories' sales revenue declined by 14% (shifted from \$782 million to \$694 million) due primarily to intense competition from generic drugs.

However, its net income decreased by a smaller percentage (6%) given:

- Substantial increases in contract revenue;
- Reduction in taxes (5% as opposed to 21% due to one time reversal of \$36 million, related to March 2005 charge of \$90 million for the repatriation of dividends);
- Decline in R & D expenses since the previous year it had made a payment to PAION GmbH for the US and Canadian rights to a drug named desmoteplase.

We note that even with the decline in net income, the Company was able to achieve a net profit margin of 32%.

Financial Statements for Quarter ending September 2005 have not as yet been posted.

However, preliminary data reveals that the Company's overall sales revenue fell by 16% because of:

- Generic erosion which caused Celexa to contribute \$4 million as opposed to \$256 million;
- Limited performance of Lexapro whose market share remained fairly constant at 20% compared with the previous quarter.

Its net income decreased by 31% to \$204.9 million compared with similar quarter of previous year due to increases in selling, general and administrative expenses (to enhance its sales force).

## COMPARATIVE ANALYSIS

	FRX	PEERS	INDUSTRY	S&P 500	COMPETITORS
<b>Liquidity</b>					
Current Ratio	5.31	2.44	4.18	1.74	1.66
Quick Ratio	3.75	1.33	3.33	1.22	1.17
<b>Profitability</b>					
Gross Profit Margin	77.82%	65.22%	68.66%	45.49%	79.44%
Operating Profit Margin	36.44%	20.85%	19.62%	20.67%	24.06%
Net Profit Margin	26.81%	15.09%	13.12%	13.55%	16.41%
<b>Efficiency</b>					
Receivable Turnover	9.86	4.56	8.49	10.39	5.1
Inventory Turnover	1.15	2.02	3.18	13.02	1.6
Asset Turnover	0.79	0.6	0.75	0.97	0.65
<b>Mangmt. Effectiveness</b>					
Return on Assets	21.13%	9.70%	3.19%	7.62%	11.00%
Return on Equity	24.59%	15.26%	8.98%	18.96%	34.00%
<b>Growth</b>					
Sales growth for past 5 Years	28.60%	23.49%	29.80%	9.8%	8.12%
EPS growth for past 5 Years	47.70%	6.87%	10.60%	13.90%	14.31%
<b>Valuation</b>					
P/E Ratio TTM	17.37	58.25	45.3	20.1	26.43
High P/E for past 5 yrs	101.6	48.67	50.6	38.4	83.09
Low P/E for past 5 yrs	14.4	20.84	15.1	15.4	13.43
Beta	0.34	0.69	0.92	1	0.37
Institutional Investors (%)	91.33%	51.14%	43.27%	66.01%	47.35%

**NB.** Forest Laboratories’ main competitors are listed as Pfizer (PFE), Eli Lilly (LLY) and GlaxoSmithKline (GSK). They possess the following characteristics:

	PFE	LLY	GSK
Sales Revenue (billions)	\$52	\$13.8	\$35.4
Market cap (billions)	157	57	142

Due to the disparity of these Firms, we decided to compare Forest Laboratories with companies that operate in the same industry and are more closely aligned in terms of sales revenue and market capitalization, namely, Genzyme Corporation, Novo Nordisk and Teva Pharmaceuticals.

	GENZ	NVO	TEVA
Sales Revenue (billions)	\$2.5	\$5	\$5.1
Market cap (billions)	19	17.5	23

Notwithstanding our previous discussion, the comparative analysis reveals that Forest Laboratories’ performance is still superior to most of its peers, competitors and the industry as evidenced by the following:

- Managerial effectiveness;
- Liquidity - Even though it is turning over its inventory at a slower rate (consistent with the present growth rate of its main drug, Lexapro) when compared with that of its peers and competitors, it’s collecting its receivables at a much faster rate. More importantly, its liquidity has not been adversely affected;
- Profitability – For several years Forest Laboratories was the typical growth Company in the biotechnology sector that had a competitive advantage. As such, even though it is now experiencing a decline in growth, most of its profitability indicators (other than its competitors’ gross profit margin) are still superior to those of its peers, competitors and industry;

- Valuation - Understandably, its P/E ratio of 17.37 is significantly less than those of its peers and the industry given recent occurrences with the non approval of the drug, etc. However, we expect reduced liquidity risk, increased price of the stock and subsequent rise in its P/E ratio as institutional investors' (majority shareholder) have begun to display increased confidence in the Company. In fact, during the past few weeks its stock price increased by 9%.

### **Reasons to hold stock**

Forest Laboratories has had a difficult year, more so, as Celexa lost its patent exclusivity in 2004. However, it has remained steadfast in its approach and initiated strategies to ensure that it remains viable.

Firstly, recent discussions with the Company's Vice President of Investor Relations revealed that it is in advanced stage of negotiations with several firms to obtain licenses and expects to announce its new product pipeline in the press within the next two (2) months. We recognise that it is critical for firms in the biotechnology sector to have lucrative pipelines. In lieu of this, they should have sufficient resources to acquire new drugs/ licenses. Undoubtedly, Forest Laboratories has ample amounts of cash that can be used to pursue new developmental opportunities. In fact, it is through this means it had acquired Celexa and Lexapro and at present, it is aggressively pursuing these licenses.

Secondly, it has increased its sales force to more effectively market its products. This is particularly important as one of its new products, Combunox, is a scheduled drug that cannot be sampled.

Thirdly, the Company has begun to receive proceeds from Benicar which will impact its bottom line in a positive manner. Its prediction that it will generate \$3 billion in sales revenue and earnings per share of \$2.32 during fiscal year 2006, appears feasible.

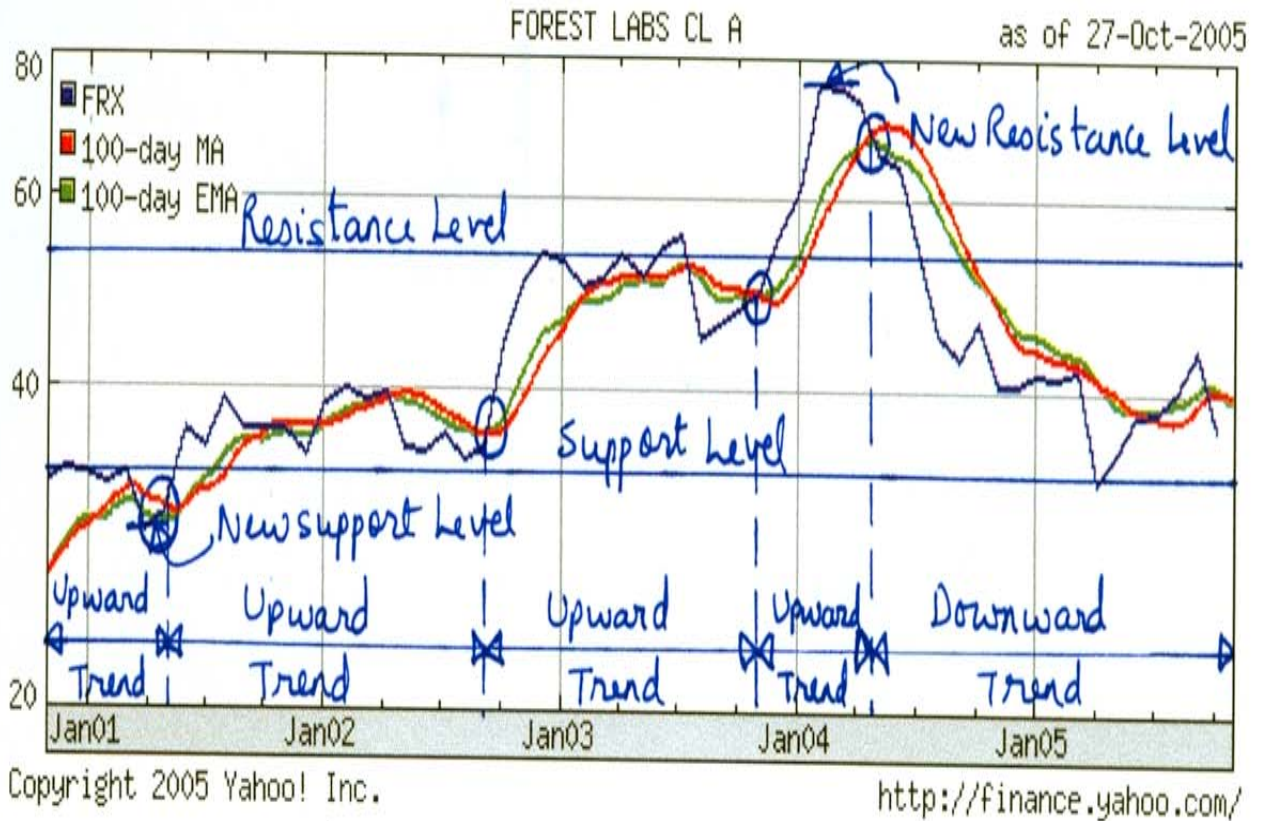
In addition, although it has a litigation case pending against IVAX, it is fairly confident that the outcome will be in its favour especially given its recent agreement with Aphapharm.

Further, at present it has two (2) superior products on the market, Namenda with a 27% market share and Lexapro with a 20% market share. We expect further penetration of the market. In particular, we anticipate Namenda may gain even more market share in the multi-billion dollar Alzheimer's disease (AD) market for moderate to severe AD and may continue to gain use in patients with mild disease, in spite of the lack of specific information on the label.

Of significance, Lexapro will be covered by nine of the fourteen major managed care plans under the New Medicare Drug Benefit.

These factors combined with company's financial position have influenced our decision to hold the stock.

## TECHNICAL ANALYSIS





Traders prefer to use exponential moving averages for shorter time periods to capture changes more quickly but simple moving averages are used over relatively long time periods to identify long-term trend changes. Since moving averages follow the trend, they work best when a security is trending and are generally ineffective when a security is moving in a trading range. As reflected in the above chart, when the analysis of the stock is conducted over a five (5) year period, the moving averages depict lagging indicators, i.e. they are always behind the price. A security's price could either trend upwards, downwards or in range. Forest Laboratories mostly trended upwards and downwards with limited activity in the trading range. There are several uses for moving averages, the most common being trend identification, support and resistance level identification and trading systems.

Trend identification allows us to see the direction, location and crossovers with the trend identification. As seen from the chart, an upward trend occurred as the SMA rose and vice-versa. Although there were a number of upturns and downturns, only 5 were significant (3 upturns and 1 downturn in the graph above).

The second technique often used is price location. The movements are listed below:

Between October 1999 and October 2002 there was a steady price increase. Between October 2002 and February 2004 there was a sharp increase. All of these suggest that there was an upward trend in the stock price. Since March 2004 there has been a sharp decline in the price, thereby reflecting a downward trend. The buy and sell signals are generated by crosses above and below the moving average as shown above. If the stock price crosses above and below the moving averages, buy and sell signals are generated.

Support and resistance represent key junctures where the forces of supply and demand meet. In the financial markets, prices are determined by supply and demand. Excess supply is synonymous with bearish market while excess demand is synonymous with a bullish market. All other things being held constant, as demand increases, prices advance and as supply increases, prices decline. When there is equilibrium prices move sideways as bulls and bears seek control.

Support is the price level at which demand is thought to be strong enough to prevent the price from declining further. At present, Forest Laboratories' support level is approximately \$35. In March

/April 2001 it dipped below the support level but bounced back and continued its upward trend until March /April 2004. The movement can be attributed to the sale of its antidepressant drug, Celexa which boosted its sales in 2000 and 2001. After generic drugs entered the market to compete with Celexa and this was the time when the stock price remained at around \$37 - \$39. Subsequently in September 2002, since Celexa's patent was due to expire in 2004, the company introduced an improved, alternative drug named Lexapro in September 2002. Thereafter, we see a sharp increase in the stock price which peaked in January 2004 at \$77.59. Logic dictates that as the price declines towards support and gets cheaper, buyers become more inclined to buy and sellers become less inclined to sell.

By the time the price reaches the support level, it is believed that demand will overcome supply and prevent the price from falling below support.

A decline below support indicates a new willingness to sell and/or a lack of incentive to buy. Support breaks and new lows signal that sellers have reduced their expectations and are willing sell at even lower prices. Support levels are usually below the current price, but it is not uncommon for a security to trade at or near support.

Forest Laboratories' current resistance level is approximately \$58. Resistance is the price level at which selling is thought to be strong enough to prevent the price from rising further. In mid 2003 the company's stock price exceeded the resistance level and created a new resistance level in January 2004. A break above resistance implies a new willingness to buy and/or a lack of incentive to sell. Resistance breaks and new highs indicate buyers have increased their expectations and are willing to buy at even higher prices. Resistance levels are usually above the current price, but it is not uncommon for a security to trade at or near resistance. Logic dictates that as the price advances towards resistance, sellers become more inclined to sell and buyers become less inclined to buy. By the time the price reaches the resistance level, it is believed that supply will overcome demand and prevent the price from rising any further. Support can be established with the previous reaction lows. Resistance can be established by using the previous reaction highs.

There are just two (2) significant trading ranges for Forest Laboratories. A trading range is a period of time when prices move within a relatively tight range. As seen from the graph above trading ranges occurred between mid 2001 and September of 2002. The second trading range transpired

between January 2003 and June 2003. This signals that the forces of supply and demand were evenly balanced.

## **VALUATION ANALYSIS CRITIQUE:**

Two valuation methods were used to determine whether or not Forest Labs was an undervalued or overvalued stock. The two methods were namely, the Discounted Free Cash Flow method or the FCFE discount model, and the Relative Multiple Analysis technique.

### **FCFE Model**

This model states that all cash flows, whether pre-debt or post debt models, forecasted to the terminal year and discounted back to the present, will comprise the current value of the company. Thorough regression analysis was conducted in preparing this complicated valuation model. Sales as a function of incremental change, employees, research and development (R&D) and operating lease were used to forecast future revenues (Strong correlation with an R-squared of 99%). Sales in 2012 were projected to be approximately \$3.5 Billion.

Regression Analysis was also conducted on:

- EBIT vs. Sales
- Sales vs. Capex
- Capex vs. Depreciation
- Non-cash working Capital vs. Sales

The FCFE discount model was designed to value the equity in a firm with three stages of growth.

1. An initial period of high growth
2. A transition period of declining growth
3. A final period of stable growth

With over seventeen (17) inputs into this model that was obtained via the NYU website, the previous group valued the stock at \$81.10. The group concluded from this valuation that the stock was undervalued as it was trading at around \$50 at the time of the valuation and made a recommendation to purchase the share.

With such a huge margin between prices, a problem, an inconsistency, or even a miscalculation had to occur.

Upon review, we believe the group did not make an error, but Industry Analysts tremendously over estimated the growth of this company. In 2003, Analysts predicted a 25% sustainable growth over the next five (5) years. In the previous group's valuation model, the extraordinary growth period was calculated as five (5) years from the day of purchase and these five (5) years were calculated with a base or initial year of 2004. Forest Laboratories experienced its extraordinary growth throughout 1998-2003 and as such, the group over compensated for this period of rapid growth, as illustrated in Table 1.

**Table 1: Earnings History and Analyst Forecast**

<b>Year</b>	<b>Earnings (\$mil)</b>	<b>% Change (prev yr)</b>	<b>E.P.S</b>	<b>% Change</b>	<b>Analysts Forecast</b>
Mar 2005	838.8	13%	2.25	15%	15%
<b>Mar 2004</b>	<b>735.9</b>	<b>18%</b>	<b>1.95</b>	<b>17%</b>	<b>33%</b>
Mar 2003	622.0	84%	1.66	82%	-
Mar 2002	338.0	57%	0.91	54%	-
Mar 2001	215.1	90%	0.59	84%	-
Mar 2000	112.7	46%	0.32	40%	-
Mar 1999	77.2	110%	0.23	110%	-
Mar 1998	36.7	-	0.11		-

In retrospect, we believe that the model used to forecast future growth and determine whether or not the stock was undervalued or overvalued grossly misstated the timeframe for the stages of growth.

As observed in Table 1, Forest Labs is already experiencing declining growth in 2004 and 2005. This particular company will now be valued by assuming they are currently in the stage in declining growth and will soon move into a state of constant perpetual growth.

### **Valuation: Forest Laboratories**

The valuation method that our group selected to evaluate the current stock price of Forest Laboratories was the Free Cash Flow Model. This method was chosen since the company does not issue dividends.

### **Capital Asset Pricing Model (Ke):**

In determining the discount rate to calculate the present value of the future cash flows, we used a risk free rate of 4.21% that was retrieved from the current 5 year Treasury note rate. Also, the return on the market was taken from the Standard and Poor's index by calculating the holding period return from the previous 10 years, followed by the average, which was 8.31%. Finally, the 36 month Beta for Forest Labs was 1.1.

After inputting the above information into the Capital Asset Pricing Model, a discount rate of 8.72% was formulated. This is illustrated in table 1.1

### Capital Asset Pricing Model

<b>Rf =</b>	4.21%
<b>β (36 months) =</b>	1.1
<b>Rm =</b>	8.31%
<b>Risk Premium =</b>	4.10%

<b>CAPM</b>
= $Ke = (\text{Beta} \times (Rm - Rf)) + Rf$
Discount Rate = $Ke = 8.72\%$

**Cost of Debt (Kd):**

Once the discount rate was computed, we calculated the cost of debt. Since Forest Laboratories does not carry any debt, the borrowing rate for this company is equal to zero. Thus, the weighted average of capital will be equal to the discount rate (Ke) of 8.7% as depicted in Table 1.2.

Cost of Debt ( Kd )				
Borrowing Rate	0.00%			
Tax Rate	22.0%			
Kd Calculation		<b>Rate</b>	<b>Percent</b>	<b>Weighted Total</b>
Kd = Borrowing Rate (1 - Effective Tax Rate)		Kd	0.0%	0.0%
<b>Kd =</b>	<b>0.0%</b>	Ke	8.7%	100.0%
		Weighted Average Cost of Capital		=
		<b>Rounded</b>		=
				<b>9.0%</b>
<b>Capitalization</b>		<b>Percentage</b>		
Long Term Debt	0.00%			
Shareholders Equity	100.00%			

### Regression Technique:

Once we determined the discount rate and cost of debt, we considered independent variables to forecast the Company's future revenues. We took several variables into consideration such as time, research and development, operating expense, number of employees, and selling and general administration expenses.

We first examined whether or not each independent variable had a strong individual correlation with revenues. Revenues as a function of R&D had an R-squared of 0.99 and a t-statistic of 12.21, both strong outputs in this analysis, illustrated in table the regression table 1.3.

#### SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.990094
R Square	0.980286
Adjusted R Square	0.973715
Standard Error	124476.3
Observations	5

#### ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2.31E+12	2.31E+12	149.1774	0.001182
Residual	3	4.65E+10	1.55E+10		
Total	4	2.36E+12			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	20971.31	181437.8	0.115584	0.915285	-556445	598387.4	-556445	598387.4
X Variable (X1)	10.58864	0.866939	12.21382	0.001182	7.829654	13.34763	7.829654	13.34763

We also took into account potential strategies Forest Labs management would adopt to increase revenues in the future. The Management's Discussion and Analysis Condition and Results of

Operations from the Annual Report of FYE 2005, stated that the Company hired an additional 525 sales representatives to assist with the launch of the drug, Namenda. As a result, we believe the number of employees is directly correlated with company revenues.

Through regression testing and managerial explanations, we have concluded that revenues as a function of incremental time change, one year lag in R&D and number of employees, would be the best fit model in forecasting revenues, given a strong R-squared and t-statistics as shown in Table 1.4.

Independent Variables:

(T) – Time

(X1) – Research and Development

(X2) – Number of Employees

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.999935
R Square	0.99987
Adjusted R Square	0.999478
Standard Error	17541.17
Observations	5

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	2.36E+12	7.86E+11	2554.043	0.014544
Residual	1	3.08E+08	3.08E+08		
Total	4	2.36E+12			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	185900	128322.7	1.448691	0.384628	-1444595	1816395	-1444595	1816395
X Variable (T)	231569.6	80108.05	2.890716	0.212026	-786300	1249439	-786300	1249439
X Variable (X1)	2.03389	1.464505	1.38879	0.397287	-16.5744	20.64219	-16.5744	20.64219
X Variable (X2)	214.9359	31.61168	6.799256	0.092964	-186.729	616.6003	-186.729	616.6003



**Regression Analysis:**

This strong relationship indicates that as time, R&D, and number of employee's increases at Forest Laboratories, an increase in revenues will surely follow. However, since the Company is approaching the stage in its life cycle of perpetual constant growth, we took into consideration that it will be experiencing increasing revenues at a decreasing rate.

Prior to projecting revenues for the next five (5) years, we conducted a forecast of the independent variables, R&D and number of employees, in order to insert corresponding variables to the regression equation.

Between the years 2001 and 2005, R&D increased between the range of 41,000,000 and 50,000,000 per year. Due to this close range, we took the annual average increase and applied it to the 5 years going forward at an average of 46,988,000. This is illustrated in table 1.5.

**Table 1.5: R&D Forecast**

Year	Annual R&D	Yearly Increase
2001	105,706	
2002	157,794	52,088
2003	204,883	47,089
2004	246,461	41,578
2005	293,659	47,198
2006	340,647	46,988
2007	387,635	46,988
2008	434,623	46,988
2009	481,611	46,988
2010	528,599	46,988

To forecast number of employees for the next 5 years, we used a simplistic approach by incorporating a single moving average (N=2), as depicted in table 1.6.

**Table 1.6 : Employee Forecast**

**SINGLE MOVING AVERAGE  
(N=2)**

Year	Employees	Employee Forecast
2001	2,474	-
2002	2,826	-
2003	4,240	2,650
2004	4,967	3,533
2005	5,136	4,604
2006		5,052
2007		5,094
2008		5,073
2009		5,083
2010		5,078

With this information, we are now able to project the annual revenues for the years 2006 through 2010. The equation that will be used, along with the variables and revenue forecasts are illustrated in table 1.7.

**Table 1.7: Regression Equation**

$$Y = 185900 + 231569(T) + 2.03(X1) + 215 (X2)$$

Where:

Y = Revenue

T = Time

X1 = R&D

X2 = Employees

**Forecasted Revenues Using Regression Equation**

Year	Revenue Forecast
2006	3353007
2007	3688992
2008	4011432
2009	4340536
2010	4666416

The following graph depicts all of the forecasts that were made, and exhibits the manner in which revenues increase at a decreasing rate as Forest Laboratories is currently in the second stage of slower growth. They approach the final stage of constant perpetual growth after 2010.

**Table 1.8: Forecast**

Year	Revenues	Rev. increase	Time	R & D	Employees
2001	1174527		1	105706	2474
2002	1566626		2	157794	2826
2003	2206706		3	204883	4240
2004	2650432		4	233916	4967
2005	3052408		5	293659	5136
2006	3353872		6	341,073	5052
2007	3688779	9.99%	7	387,530	5094
2008	4010141	8.71%	8	433,987	5073
2009	4338167	8.18%	9	480,444	5083
2010	4662971	7.49%	10	526,902	5078

**Capital Expenditures/Working Capital:**

In addition, we forecasted average capital expenditure as a percentage of revenues, and determined the average increase in working capital as a percentage of increase in revenues.

There was no noticeable trend in the prior five (5) years to forecast capital expenditures as a percentage of revenues. As a result, we sought to determine where the company's goals to see whether they will be expanding by increasing their capital expenditures. Through further investigation, taken from the annual report, Forest Laboratories intends to expand its current distribution facility in St. Louis by approximately 141,000 square feet in fiscal 2006. It also plans to refurbish a 90,000 square foot plant which will provide complete redundancy for the manufacturing of Lexapro and Namenda and additional capacity for future products. It was also stated that further property expansions and acquisitions are planned in the future to meet the needs from increases sales and related production, warehousing and distribution, sales training, and for the products under development.

Due to this planned expansion of facilities, we believe that capital expenditures as a percentage of revenues will slightly increase over the next five years. The average capital expenditures as a percentage of revenues between the years of 2006 and 2010 will be 3.86%, and the average increase in working capital as a percentage of increased sales will be 72%, as illustrated in table 1.9.

Table 1.9

**Working Capital Assumptions**

	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>
<b>Capital Expenditures</b>	\$ 30,872	\$ 36,446	\$ 79,574	\$ 101,511	\$ 89,020
As Percent of Rev.	2.6%	2.3%	3.6%	3.8%	2.9%

**Estimates**

	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	
	\$ 121,893	\$ 140,029	\$ 158,165	\$ 176,301	
	3.6%	3.8%	3.9%	4.1%	2006-2009

**Working Capital**

Revenue Increase		\$ 361,452	\$ 640,080	\$ 443,726	\$ 463,345
Total C.A	\$ 884,149	\$1,195,112	\$ 2,255,333	\$ 2,916,234	\$ 2,708,022
Total C.L	\$ 223,618	\$ 324,968	\$ 564,397	\$ 604,754	\$ 563,690
Working Capital	\$ 660,531	\$ 870,144	\$ 1,690,936	\$ 2,311,480	\$ 2,144,332
Working Capital Increase		\$ 209,613	\$ 820,792	\$ 620,544	\$ (167,148)
As % of Increase in Rev.		58%	128%	140%	-36%

average

72%

**Final Valuation - Free Cash Flow:**

We used the Free Cash Flow Method as the final step in valuing Forest Laboratories' stock. Three (3) different scenarios were used to obtain a more accurate idea of the stock's future price. The three scenarios include a pessimistic view with a perpetual growth rate of 2%, an optimistic outlook with perpetual growth rate of 6%, and finally a moderate growth of 4%.

**Cost of Goods Sold:**

Together with these various growth rates, cost of goods sold as a percentage of revenue was also forecasted using these three scenarios. We used the higher range from the previous 5 years for the pessimistic view, the lower range for the optimistic view, and an average for the moderate view. Based on this, we were able to get a sense of the company's cost of goods sold as a percentage of revenue based on the three scenarios.

**Selling and General Administration Expenses:**

With regard to selling, general and administration expenses (SG&A), Forest Laboratories will be increasing its sales forces in order to boost sales and integrate its new line of drugs. Its SG&A expenses increased \$92,653,000 in fiscal 2005 as compared with fiscal 2004 because of the sales force expansion in connection with the launch of Namenda. As previously mentioned, approximately 525 sales people were added (an overall 10% employee increase from the previous year).

Marketing expenses also increased in fiscal 2005 due to the pre-launch and launch costs for Campral and Combunox. As Forest Laboratories continues to launch new products and employ additional sales people, we observe that this expense will slightly increase as a percentage of revenue looking forward, mainly because of its slower growth.

**Research and Development:**

By observing the previous five (5) years data, research and development increases have ranged from \$41 to \$50 million dollars. Based on this trend, we took an average increase of \$46,988,000, and applied this incremental change over the next 5 years.

**Depreciation and Amortization:**

Depreciation and amortization declined slightly as a percentage of revenues over the past five (5) years, and we see this trend continuing over the next five (5) years. As mentioned in Forest Laboratories' Management Discussion and Analysis, the annual amortization expense expected for fiscal years 2006 through 2010 is \$41,272, \$39,073, \$38,486, \$35,753, and \$29,472 (all figures in 1000's). Due to this decreasing trend, we used an incremental decrease of \$500,000 to forecast the change in depreciation and amortization for the next 5 years.

**MODERATE**

figures in 000's

**Estimates**

	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	Terminal Year
<b>Revenue</b>	\$ 1,205,174	\$ 1,566,626	\$ 2,206,706	\$ 2,650,432	\$ 3,113,777	\$ 3,257,622	\$ 3,593,606	\$ 3,916,046	\$ 4,245,151	\$ 4,571,030
Revenue Growth		29.99%	40.86%	20.11%	17.48%	4.62%	10.31%	8.97%	8.40%	7.68%
<b>COGS</b>	\$ 284,079	\$ 316,433	\$ 453,361	\$ 548,916	\$ 630,864	\$ 706,325	\$ 776,856	\$ 844,535	\$ 913,617	\$ 982,021
% of Revenue	23.57%	20.20%	20.54%	20.71%	20.26%	21.68%	21.62%	21.57%	21.52%	21.48%
<b>Gross Profit</b>	\$ 921,095	\$ 1,250,193	\$ 1,753,345	\$ 2,101,516	\$ 2,482,913	\$ 2,551,297	\$ 2,816,750	\$ 3,071,511	\$ 3,331,534	\$ 3,589,009
<b>SGA Expenses</b>	\$ 516,662	\$ 602,791	\$ 715,432	\$ 888,517	\$ 993,715	\$ 1,115,373	\$ 1,239,356	\$ 1,363,339	\$ 1,487,323	\$ 1,611,306
% of Revenue	42.87%	38.48%	32.42%	33.52%	31.91%	34.24%	34.49%	34.81%	35.04%	35.25%
<b>R&amp;D</b>	\$ 105,706	\$ 157,794	\$ 204,883	\$ 246,461	\$ 293,659	340,647	387,635	434,623	481,611	528,599
% of Revenue	8.77%	10.07%	9.28%	9.30%	9.43%	10.46%	10.79%	11.10%	11.34%	11.56%
<b>Depreciation &amp; Amort</b>	\$ 40,644	\$ 54,628	\$ 51,561	\$ 59,558	\$ 56,646	\$ 54,000	\$ 53,500	\$ 53,000	\$ 52,500	\$ 52,000
% of Revenue	3.37%	3.49%	2.34%	2.25%	1.82%	1.66%	1.49%	1.35%	1.24%	1.14%
<b>Operating Income</b>	\$ 258,083	\$ 434,980	\$ 781,469	\$ 906,980	\$ 1,138,893	\$ 1,041,277	\$ 1,136,259	\$ 1,220,549	\$ 1,310,100	\$ 1,397,104
<b>Margins</b>	21.41%	27.77%	35.41%	34.22%	36.58%	31.96%	31.62%	31.17%	30.86%	30.56%
<b>Op Income Growth</b>						-8.57%	9.12%	7.42%	7.34%	6.64%
<b>Operating Income</b>	\$ 258,083	\$ 434,980	\$ 781,469	\$ 906,980	\$ 1,138,893	\$ 1,041,277	\$ 1,136,259	\$ 1,220,549	\$ 1,310,100	\$ 1,397,104
<b>Dep &amp; Amort</b>						\$ 54,000	\$ 53,500	\$ 53,000	\$ 52,500	\$ 52,000
<b>Effective Tax rate</b>						\$ (229,081)	\$ (249,977)	\$ (268,521)	\$ (288,222)	\$ (307,363)
<b>Increase in W.C</b>						\$ (103,568)	\$ (241,908)	\$ (232,157)	\$ (236,956)	\$ (234,633)
<b>Capital Expenditures</b>						\$ (125,744)	\$ (138,713)	\$ (151,159)	\$ (163,863)	\$ (176,442)
<b>Discount Rate</b>					Free C/F	\$ 636,883	\$ 559,160	\$ 621,712	\$ 673,560	\$ 730,666
<b>Perpetual Growth Rate</b>					PV	\$ 585,802	\$ 473,061	\$ 483,795	\$ 482,101	\$ 11,523,191

22.00%

72.00%

3.86%

8.72%

4.00%

**Market Data**

<b>Shares O/S</b>	339,890
<b>Market Price</b>	37.35
<b>Market Cap</b>	12,694,892

<b>Valuation =</b>	13,547,949
<b>Debt =</b>	-
<b>Equity =</b>	13,547,949

<b>Under/(Overvalued)</b>	853,058
<b>Target Stock Price</b>	\$ 39.86
<b>Percent Return</b>	6.72%

**Assumptions:**

Perpetual growth rate will grow at 4% per annum

COGS will be an average of last 5 years COGS



**OPTIMISTIC**

figures in 000's

Estimates

	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	Terminal Yr
Revenue	\$1,205,174	\$ 1,566,626	\$ 2,206,706	\$ 2,650,432	\$ 3,113,777	\$ 3,257,622	\$ 3,593,606	\$ 3,916,046	\$ 4,245,151	\$ 4,571,030
Revenue Growth		29.99%	40.86%	20.11%	17.48%	4.62%	10.31%	8.97%	8.40%	7.68%
COGS	\$ 284,079	\$ 316,433	\$ 453,361	\$ 548,916	\$ 630,864	\$ 677,482	\$ 745,133	\$ 810,048	\$ 876,309	\$ 941,920
% of Revenue	23.57%	20.20%	20.54%	20.71%	20.26%	20.80%	20.73%	20.69%	20.64%	20.61%
Gross Profit	\$ 921,095	\$ 1,250,193	\$ 1,753,345	\$ 2,101,516	\$ 2,482,913	\$ 2,580,140	\$ 2,848,473	\$ 3,105,998	\$ 3,368,842	\$ 3,629,110
SGA Expenses	\$ 516,662	\$ 602,791	\$ 715,432	\$ 888,517	\$ 993,715	\$ 1,115,373	\$ 1,239,356	\$ 1,363,339	\$ 1,487,323	\$ 1,611,306
% of Revenue	42.87%	38.48%	32.42%	33.52%	31.91%	34.24%	34.49%	34.81%	35.04%	35.25%
R&D	\$ 105,706	\$ 157,794	\$ 204,883	\$ 246,461	\$ 293,659	340,647	387,635	434,623	481,611	528,599
% of Revenue	8.77%	10.07%	9.28%	9.30%	9.43%	10.46%	10.79%	11.10%	11.34%	11.56%
Depreciation & Amort	\$ 40,644	\$ 54,628	\$ 51,561	\$ 59,558	\$ 56,646	\$ 54,000	\$ 53,500	\$ 53,000	\$ 52,000	\$ 51,500
% of Revenue	3.37%	3.49%	2.34%	2.25%	1.82%	1.66%	1.49%	1.35%	1.22%	1.13%
Operating Income	\$ 258,083	\$ 434,980	\$ 781,469	\$ 906,980	\$ 1,138,893	\$ 1,070,120	\$ 1,167,982	\$ 1,255,036	\$ 1,347,908	\$ 1,437,705
Margins	21.41%	27.77%	35.41%	34.22%	36.58%	32.85%	32.50%	32.05%	31.75%	31.45%
Op Income Growth						-6.04%	9.14%	7.45%	7.40%	6.66%
Operating Income	\$ 258,083	\$ 434,980	\$ 781,469	\$ 906,980	\$ 1,138,893	\$ 1,070,120	\$ 1,167,982	\$ 1,255,036	\$ 1,347,908	\$ 1,437,705
Dep & Ammort						\$ 54,000	\$ 53,500	\$ 53,000	\$ 52,000	\$ 51,500
Effective Tax rate	22.00%					(235,426)	(256,956)	(276,108)	(296,540)	(316,295)
Increase in W.C	72.00%					(103,568)	(241,908)	(232,157)	(236,956)	(234,633)
Capital Expenditures	3.86%					(125,744)	(138,713)	(151,159)	(163,863)	(176,442)
Discount Rate	8.72%				Free C/F	\$ 659,381	\$ 583,904	\$ 648,612	\$ 702,550	\$ 761,835
Perpetual Growth Rate	6.00%				PV	\$ 606,495	\$ 493,995	\$ 504,727	\$ 502,851	\$ 21,250,065

**Market Data**

Shares O/S	339,890
Market Price	\$ 37.35
Market Cap	12,694,892

Valuation =	23,358,133
Debt =	-
Equity =	23,358,133

Under/(Overvalued)	10,663,241
Target Stock Price	\$ 68.72
Percent Return	84.00%

Assumptions:

Perpetual growth rate will grow at 6% per annum

COGS as a % of Revenues will be in the lower range of previous 5 years

**PESSIMISTIC**

figures in 000's

Estimates

	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	Terminal Yr
Revenue	\$ 1,205,174	\$ 1,566,626	\$ 2,206,706	\$ 2,650,432	\$ 3,113,777	\$ 3,257,622	\$ 3,593,606	\$ 3,916,046	\$ 4,245,151	\$ 4,571,030
Revenue Growth		29.99%	40.86%	20.11%	17.48%	4.62%	10.31%	8.97%	8.40%	7.68%
COGS	\$ 284,079	\$ 316,433	\$ 453,361	\$ 548,916	\$ 630,864	\$ 790,507	\$ 869,445	\$ 945,200	\$ 1,022,505	\$ 1,099,062
% of Revenue	23.57%	20.20%	20.54%	20.71%	20.26%	24.27%	24.19%	24.14%	24.09%	24.04%
Gross Profit	\$ 921,095	\$ 1,250,193	\$ 1,753,345	\$ 2,101,516	\$ 2,482,913	\$ 2,467,115	\$ 2,724,161	\$ 2,970,846	\$ 3,222,646	\$ 3,471,968
SGA Expenses	\$ 516,662	\$ 602,791	\$ 715,432	\$ 888,517	\$ 993,715	\$ 1,115,373	\$ 1,239,356	\$ 1,363,339	\$ 1,487,323	\$ 1,611,306
% of Revenue	42.87%	38.48%	32.42%	33.52%	31.91%	34.24%	34.49%	34.81%	35.04%	35.25%
R&D	\$ 105,706	\$ 157,794	\$ 204,883	\$ 246,461	\$ 293,659	340,647	387,635	434,623	481,611	528,599
% of Revenue	8.77%	10.07%	9.28%	9.30%	9.43%	10.46%	10.79%	11.10%	11.34%	11.56%
Depreciation & Amort	\$ 40,644	54,628	51,561	59,558	56,646	54,000	53,500	53,000	52,000	51,500
% of Revenue	3.37%	3.49%	2.34%	2.25%	1.82%	1.66%	1.49%	1.35%	1.22%	1.13%
Operating Income	\$ 258,083	\$ 434,980	\$ 781,469	\$ 906,980	\$ 1,138,893	\$ 957,095	\$ 1,043,670	\$ 1,119,884	\$ 1,201,712	\$ 1,280,563
Margins	21.41%	27.77%	35.41%	34.22%	36.58%	29.38%	29.04%	28.60%	28.31%	28.01%
Operating Income Growth						-15.96%	9.05%	7.30%	7.31%	6.56%
Operating Income	\$ 258,083	\$ 434,980	\$ 781,469	\$ 906,980	\$ 1,138,893	\$ 957,095	\$ 1,043,670	\$ 1,119,884	\$ 1,201,712	\$ 1,280,563
Depreciation & Amort						\$ 54,000	\$ 53,500	\$ 53,000	\$ 52,000	\$ 51,500
Effective Tax rate						\$ (210,561)	\$ (229,607)	\$ (246,374)	\$ (264,377)	\$ (281,724)
Increase in W.C						\$ (103,568)	\$ (241,908)	\$ (232,157)	\$ (236,956)	\$ (234,633)
Capital Expenditures						\$ (125,744)	\$ (138,713)	\$ (151,159)	\$ (163,863)	\$ (176,442)
Discount Rate					Free C/F	\$ 571,221	\$ 486,941	\$ 543,193	\$ 588,517	\$ 639,265
Perpetual Growth Rate					PV	\$ 525,406	\$ 411,962	\$ 422,694	\$ 421,232	\$ 6,945,023

**Market Data**

Shares O/S	339,890
Market Price	\$ 37.35
Market Cap	12,694,892

Valuation =	\$ 8,726,318
Debt =	0
Equity =	\$ 8,726,318

Under/(Overvalued)	\$(3,968,574)
Target Stock Price	\$ 25.67
Percent Return	-31.26%

Assumptions:

Perpetual growth rate will grow at 2% per annum

COGS as a % of Revenues will be in the higher range of previous 5 years

**Conclusion:**

As the cash flows are produced and the present value is taken into consideration, three (3) different target stock prices are generated due to the different perpetual growth rates and the cost of goods sold applied to the appropriate scenario. In both the moderate and optimistic views on Forest Laboratories, we observe that the stock is currently undervalued and trading at a discount. However, the pessimistic outlook of the stock illustrates that the stock is currently overvalued and trading at a premium.

Based on the valuation of future cash flows, assuming a moderate outlook, we conclude that this stock should be held in the portfolio.

Our decision to hold the shares is fairly consistent with several those of the Analysts (refer to appendix III).

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## APPENDIX I

### Major strategies of management team

- The Company's longstanding Executive Vice President of Scientific Affairs and head of the Research Institute, Lawrence Olanoff, was recently succeeded by Gergel, M.D. Gergel was previously Vice President of Clinical Development and Medical Affairs at Forest for five years.
- In addition, a new Chief Financial Officer and Senior Vice President-Finance, Francis I. Perier, Jr., CPA, age 45, was also appointed during the last fiscal year.

Forest Laboratories' management decided to repurchase some number of shares in order to boost its earnings per share. As of May 11, 2005, 30,000,000 shares have been repurchased at a total cost of \$1,224,192. Additional 25,000,000 shares are authorized to be repurchased in the near future. Through the shares repurchase, management intends to reduce the number of outstanding shares by 8% and increase earnings per share by 7%.

## APPENDIX II

### COMMON SIZED INCOME STATEMENT

	2005		2004		2003		2002		2001	
Net sales	3052408	100%	2650432	100%	2206706	100%	1566626	100%	1174527	100%
Contract revenue	61369	2%	5810	0%	6552	0%	35198	2%	30647	3%
Other income	45862	2%	24032	1%	32548	1%		0%		0%
	<b>3159639</b>	104%	<b>2680274</b>	101%	<b>2245806</b>	102%	<b>1601824</b>	102%	<b>1205174</b>	103%
Cost of sales	687510	23%	608474	23%	504922	23%	371061	24%	284079	24%
<b>Gross Profit</b>	<b>2472129</b>	81%	<b>2071800</b>	78%	<b>1740884</b>	79%	<b>1230763</b>	79%	<b>921095</b>	78%
SG &A	993715	33%	901062	34%	715432	32%	602791	38%	516662	44%
R&D	293659	10%	233916	9%	204883	9%	157794	10%	105706	9%
<b>Income before taxes</b>	<b>1184755</b>	39%	<b>936822</b>	35%	<b>820569</b>	37%	<b>470178</b>	30%	<b>298727</b>	25%
Income tax expense	345950	11%	200948	8%	198581	9%	132224	8%	83631	7%
<b>Net income</b>	<b>838805</b>	27%	<b>735874</b>	28%	<b>621988</b>	28%	<b>337954</b>	22%	<b>215096</b>	18%
Diluted EPS	2.25		1.95		1.66		0.91		0.59	

## APPENDIX III

### ANALYSTS RECOMMENDATIONS

Mean recommendation has been around 2.8. (Strong Buy) 1.0 - 5.0 (Strong Sell)

- Nov 24<sup>th</sup> 2004- Bank of America downgraded from Neutral to Sell.
- June 2005- Prudential Upgraded from Neutral to Overweight.
- July 2005- Smith Barney Upgraded from Hold to Buy.
- September 2005- Morgan Stanley Downgraded from Overweight to Equal Weight.
- October 2005- Bank of America Upgraded from Sell to Neutral.

### ANALYST OPINION (RECOMMENDATION TRENDS)

	Current Month	Last Month	2 months ago	3 months ago
Strong Buy	3	4	4	4
Buy	3	4	4	4
Hold	22	18	18	18
Sell	1	1	1	0
Strong Sell	2	2	2	2

**APPENDIX IV****EARNINGS ESTIMATE**

	Current Qtr (Sep 05)	Next Qtr (Dec 05)	Current Yr (Mar 06)	Next Yr (Mar 07)
Avg. Estimate	0.56	0.61	2.33	2.71
No. of Analysts	31	30	28	31
Year Ago EPS	0.79	0.70	2.49	2.33

**GROWTH ESTIMATE**

	FRX (%)	Industry (%)
Current Qtr	-29.1	7.6
Next Qtr	-12.9	13.1
This Year	-6.4	7.3
Next Year	16.3	12.8
P/E ratio	14.6	21.1
PEG ratio	0.97	2.19