

# Yale

# SCHOOL of MANAGEMENT

September 30, 2002

#### **Definition of Ratings:**

Outweight: Expect to outperform

market by 15%

**Neutral:** Expect to perform in line

with market

**Underweight:** Expect to

underperform market by 15%

#### **Industry Analysis:**

**Generic Pharmaceuticals** 

#### **Companies:**

Teva Pharmaceutical (TEVA)
Watson Pharmaceuticals (WPI)
Mylan Laboratories, Inc. (MYL)
Pharmaceutical Resources, Inc (PRX)
IVAX Corporation (IVX)
Barr Laboratories, Inc. (BRL)

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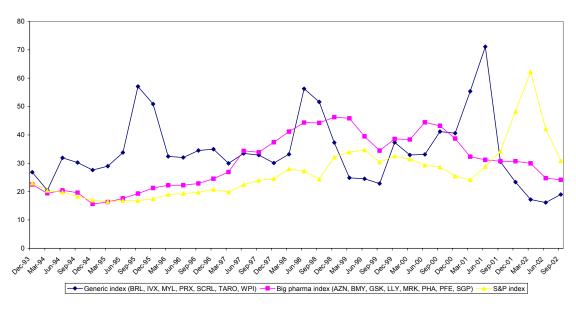
#### **Executive Summary**

- Generic Pharmaceuticals are currently trading at a low attributed to the overhang effect from Wall Street analysts' overenthusiastic outlook of the generic industry.
- We believe that this over-reaction will not last long as the generic industry has a convincing growth story and is poised for double-digit annual growth for the next 5 years.
- We expect generic pharmaceuticals to benefit from the proportional increase of senior citizens in the population, Medical care benefit plan expansion, and increase in substitution for branded patent drugs.
- A cycle of patent expirations in the next 5 years and a more favorable regulatory environment will bring to generic pharmaceuticals great growth opportunities
- Generic Pharmaceuticals EPS and improved profit margins is sustainable and likely to continue to grow with the development of a mature market and older products



#### **Outlook: Stock Performance versus Fundamentals**





Source: Bloomberg

P/E ratios for the market in general have declined because of the recessionary environment and the uncertainty surrounding the possible war with Iraq. However, it appears that the P/E ratio of the generic industry has declined more in the past year than the big pharmaceutical index and S&P index. The decline was attributed to an overhang effect from Wall Street analysts' overenthusiastic outlook of the generic industry. However, we believe that the market has over-reacted in the recent months and has unfairly depressed the generic industry.

We believe that the short-term market momentum will not last long, and generic industry has a convincing growth story for the next 5 years unlike the market where growth is likely to remain in the low single digits, if any. Prospects for the big pharmaceutical sector are not great either given the dearth of blockbuster drugs and patents filed and the increasingly unfavorable political and regulatory environment. In fact, EPS growth rates for the generic industry were generally higher than those of big pharmaceutical firms in the recent years.

## EPS Growth Comparison

<sup>&</sup>lt;sup>1</sup> Salomon Smith Barney



TDC	$\sim$ $^{\prime}$ 1	CD.	D1	. 1 1	1	1 1
HPN	( trowth	Of Rio	Pharmaceu	ficals ha	s heen	declining.
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	1997	1998	1999	2000	2001	2002E	2003E
AstraZeneca			-2%	6%	8%	-12%	10%
Aventis				57%	41%	25%	17%
Bristol-Myers Squibb (#)	12%	14%	15%	5%	12%	-41%	27%
Eli Lilly (#)	21%	23%	18%	16%	4%	-3%	17%
GlaxoSmithKline					13%	15%	12%
Merck (#)	17%	15%	14%	18%	8%	0%	10%
Novartis	7%	18%	1%	0%	1%	10%	10%
Pfizer (#)	6%	26%	22%	24%	28%	21%	16%
Pharmacia (#)	-26%	12%	-30%	31%	20%	11%	15%
Schering-Plough (#)	18%	22%	20%	15%	-4%	11%	-3%
Wyeth	13%	8%	0%	7%	15%	20%	15%
Average:	8%	17%	7%	18%	13%	5%	13%

#### ...BUT EPS GROWTH IN GENERICS IS STILL ROBUST...

	1997	1998	1999	2000	2001	2002E	2003E
Alpharma	1420%	34%	31%	23%	-57%	56%	23%
Andrx (#)	56%	-193%	662%	-1%	3%	149%	34%
Barr Labs			23%	-11%	210%	-11%	10%
VAX (#)	39%	-111%	209%	103%	61%	-8%	27%
Mylan (#>)	20%	70%	2%	-9%	75%	8%	7%
Teva (#)	38%	-19%	35%	31%	49%	19%	19%
SICOR				129%	20%	26%	
Watson (#)	17%	27%	14%	-28%	36%	-2%	14%
Average:	265%	-32%	139%	15%	63%	29%	20%

Data source: Yahoo! Finance, company reports and US Bancorp Piper Jaffray

As such, with its higher growth potential, we believe that the generic industry would see higher P/E ratios than the market and big pharmaceutical industry in the near future.

It is time to look at the fundamentals again.

## Generic Drugs Demand Increase as a Long-term Trend

We expect the whole pharmaceutical market demand to grow at a fast pace in the future several years. Current annual prescription value is \$3B and is projected to grow to \$3.7B in 2005, and current annual pharmaceutical revenue of \$160B is projected to grow to \$265B in 2005<sup>1</sup>. Demand growth on generic pharmaceuticals mainly derive from senior

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<sup>&</sup>lt;sup>1</sup> Source: IMS Health

citizen population and drug consumption growth, Medicare benefit plan expansion and substitution for expensive branded patent drugs, due to lower cost of generic products.

The elderly comprise 13% of the U.S. population, and currently consume approximately 25% to 28% of all prescription drugs. Population of people age 65 and older is also projected to increase from 35 million in 2000 to 39.7 million in 2010 and 70.3 million in 2030. Approximately 65% of individuals older than 65 years of age suffer from two or more chronic diseases. Prescription drug utilization in the elderly, who are also the age group least able to pay, averaged 19.6 prescriptions per person in 1992, grew to 28.5 prescriptions per person in 1999 and is expected to rise to around 39 prescriptions per senior citizen by 2010. Families USA reports that the average cost of a prescription for someone older than age 65 was \$28.50 per prescription in 1992, \$42.80 in 1999, and is projected to rise to almost \$73 per prescription by 2010. The average drug cost per senior citizen of over \$1200 per year in 1999 is projected to rise to over \$2800 per person by 2010<sup>2</sup>.

Approximately 40 million Americans are uninsured. Currently policy makers are considering different ways to expand the Medicare prescription benefit plan to uninsured. Medicare enrollment is expected to increase from the current 39 million to 75 - 77 million enrollees by 2030. Those without coverage spent only \$546 per year, compared to \$999 spent by patients with coverage. Therefore, we also expect a potential increase in demand from this source<sup>3</sup>.

While the whole market demand for drugs keeps on increasing, health care spending as a percentage of GDP has been growing from 12% in 1990 to above 14% in 2001, and pharmaceutical expenditures continue to grow at twice the rate of overall health care spending, mainly due to increased drug utilization, and a mix shift toward newer, higher-priced therapies exacerbate the problem and highlight the need for prescription drug benefits.

<sup>&</sup>lt;sup>3</sup> Source: Health Fairs, 2001 March/April Edition



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<sup>&</sup>lt;sup>2</sup> Source: The Managed Care Institute, Stanford University

	1960	1970	1980	1990	1995	2000	2001	2002E
GDP	\$527	\$1040	\$2796	\$5803	\$7401	\$9873	\$10208	\$10509
Y/Y Change		7.0%	10.0%	8.0%	5.0%	6.5%	3.4%	2.9%
National Health Care Expenditure	\$27	\$73	\$247	\$700	\$990	\$1300	\$1424	\$1546
Y/Y Change		11.0%	13.0%	11.0%	7.0%	6.9%	9.6%	8.5%
Health Care as a % GDP	5.1%	7.1%	8.8%	12.1%	13.4%	13.2%	14.0%	14.7%

Source: HCFA Data, STAT USA Economic Bulletin Board; \*2001 is estimate

The escalating health cost has been pushing various medical care plans to contain costs and shift to more utilization of generic drugs. A recent study by the Managed Care Institution of Stanford University revealed that every one percent increase in generic drug utilization results in savings of \$1.16 billion. The most recent innovation in commoditybased cost containment by commercial insurers and managed care organizations has simply been to encourage their clients (i.e., corporate America) to increase coinsurance so that escalating drug expenditures are cost-shifted to employees in the form of (1) paying a higher share of the health benefit premium, (2) raising drug benefit deductibles and/or (3) implementing a three-tiered co-payment structure. Higher prescription drug benefit deductibles and co-payments have not generally provided an adequate financial risk to prevent patients from paying unnecessarily for selected high cost drugs. There is an also significant move to the three-tiered co-pay system: co-pays for generics, for brand products on the formulary, and for brand products not on the formulary. About 80% of health plans now offer the three-tier co-pay structure. In 1996, the average generic co-pay was \$5, compared to \$6.93 for a brand product on the formulary, and \$8.77 for a brand product not on the formulary. In 2000, the generic co-pay rose to \$7, compared to \$14 for a brand product on the formulary, and \$29 for a brand product not on the formulary. Clearly, consumers have heavy financial incentives when they have to choose which product to buy. Through those efforts, Medicare's 40 million beneficiaries alone can have a total savings potential of \$14 billion in 2003, and over a ten-year period, more than \$250 billion in savings could be achieved.

With the heavy emphasis on substituting branded drugs for generic drugs, the current number of generic drug prescriptions is 49% of total number of prescriptions and is



expected to grow 4% annually to 57% by 2005<sup>1</sup>. As a result, the US prescription generic drug market is projected to grow from an estimated \$11.1B in 2001, to over \$19B in 2006. This represents an average annual growth rate of 11.4%<sup>2</sup>.

## **Growth from New Products (Patent Expirations)**

One of the key drivers for growth in the generic industry is the number of new products that enters the market every year. The significant growth of the generic industry over the last two years is partly due to the increase in patent expirations. Indeed, the generic market had been seeing mid-single digit growth over the last few years and had only recently experienced higher growth rates due to increase patent expirations.

Historically, when the patent for a brand product expires, generics usually capture about 70% of the prescription market share (volume) over the next two years (ranging from a few weeks to two years). However, by the end of the two-year period, the product will usually sell at about 30% of the original sales price (estimates by SSB).

Making conservative assumptions, we project the minimum growth for the industry in the following table. The key assumptions for the forecast include assuming that brand product sales will convert to generic sales overnight instead of over the next two years and that current volume sales of the brand products remain the same although they are likely to have some growth.

Conservative growth forecast of generic industry from patent expirations (\$MM)

<sup>&</sup>lt;sup>2</sup> Source: BCC Inc.



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<sup>&</sup>lt;sup>1</sup> S&P and National Economic Research Associates

				%
Year of Patent	2001 Annual	Growth in generic	<b>Total Generic</b>	Growth
Expirations	Sales	market from	Market	
		patent expirations		
2000			13,094	
2001			15,262	17%
2002	11,960	2,512	17,774	16%
2003	6,700	1,407	19,181	8%
2004	8,286	1,740	20,921	9%
2005	4,749	997	21,918	5%
2006	20,695	4,346	26,264	20%
2007	11,374	2,389	28,652	9%
2008	4,486	942	29,595	3%
2009	2,417	508	30,102	2%
2010	9,004	1,891	31,993	6%
2011	5,949	1,249	33,242	4%
2012	4,965	1,043	34,285	3%
2013	9,141	1,920	36,204	6%

Source: IMS America, FDA Orange Book, Salomon Smith Barney

The forecasted growth from patent expirations is showing stronger growth compared to the growth of the generic industry over the last few years. Depending on the generic substitution efforts by managed healthcare programs and the increase in senior citizens (resulting in an increased consumption in healthcare products), it is likely that we will see overall compounded annual growth rates to be at least in the mid-teens for the industry from 2002-2006<sup>1</sup>.

However, just as the trickling flow of new patents is affecting the current growth of big pharmaceutical companies, we expect to see a similar situation from 2008 onwards when the generic industry will face the trough of the patent expiry cycle.

<sup>&</sup>lt;sup>1</sup> 2002-2006 CAGR from patent expirations is about 11%. Generic substitution is estimated to bring about 4% annual growth to the generic industry. Annual increase in prescription drugs consumption is not taken into account.



## **Favorable Regulatory Environment Supporting Growth**

Since the Hatch-Waxman Act was passed in 1984, it had increased generic drug availability and shaped the mechanics of the generic drug industry. However, over the years, pharmaceutical companies had made use of loopholes in the Act to delay the introduction of generic alternatives to their branded products. With the increasing political awareness of rising drug costs, it was only a matter of time that politicians would get their act together to close these loopholes.

The Senate recently passed a bill in August 2002 to close these loopholes. The changes made to the Hatch-Waxman Act positively affect the generic industry in two ways.

Previously, whenever a generic drug manufacturer filed for an abbreviated new drug application (ANDA), alleging that the patent is invalid or not infringed upon by the proposed generic product (Paragraph IV), the patent drug manufacturer has 45 days to sue the generic manufacturer or forever hold its peace resulting in an automatic 30 month delay in FDA approval (awaiting the litigation process) for the ANDA. However, there are instances where after the 30 month delay had triggered, the patent drug manufacturers will file new patents, adding a further 4 to 40 months of delay. With the recent approved bill, patented drug manufacturers will only receive only one 30-month delay period. Thus, the bill has effectively reduced the ability of patented drug manufacturers to delay genetic alternatives to enter the market.

In exchange for the litigation risks, the first generic drug manufacturer to file for an ANDA under Paragraph IV will be given a 180-day exclusivity rights, effectively making it the only generic drug available for the first six months. Aside from earning duopoly margins for the first six months, the manufacturer is also likely to capture a larger share of the generic market after the first six months. In some cases, the manufacturer may enter into an agreement with the patent drug manufacturer to keep the generic drug off the market for the first six months. This loophole was addressed in the recent bill where the exclusivity right would be passed the next generic drug manufacturer with an approved product if such situations occur, preventing the patent drug manufacturer from delaying the entrance of generic alternatives.



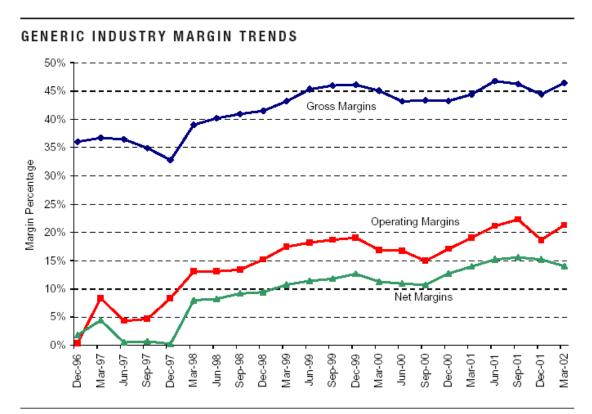
Keeping in mind the political power that the big pharmaceutical companies had wielded in the past few years, we see the passing of the recent bill not only as a boon to the generic industry, but also as a sign of the change in political tide and anticipate possible regulatory changes that will benefit the generic industry.

Summary of changes made to Hatch-Waxman Act

Before Bill	After Bill	Impact to Generic Sector
Patent drug pharmas can	Patent drug pharmas is only	Allow generic alternatives
repeatedly delay	allowed one 30-month stay	to be introduced earlier.
introduction of generic	period.	Reduced patent drug
alternatives by filing for	Generic Drug Utilization	pharmas ability to delay
new patents 56		generic alterna
Generic manufacturer with	Generic manufacturer will	Minimal.
180 days market ex vity	e market exclusivity to	50.4
can strike deal wi	t qu ng	
drug pharmas	Janes Jack	
introduce generic drug.	998. 1999 2000 2001 with patent drug pharmas.	2002 1Q 2005



#### **Improved Industry Margins**



Source: U.S. Bancorp Piper Jaffray estimates

It is interesting to note that despite the seemingly competitive environment (the largest 10 companies occupied 70% market share, and there're about 100 smaller players, according to SG Cowen Securities), operating margins for the industry have been growing over the years. We believe the following are possible reasons for this unusual trend:

#### Maturing industry

Major investments were made in the generic industry after the Hatch-Waxman Act was passed in 1984, leveling the playing field for the generic manufacturers. However, the over-investment in the industry resulted in many small players making the market more competitive than ever. However, over the years, with the exit of weaker players and the emergence of bigger players, the industry had grown more cost-efficient. What's interesting is that not like other industries whose profit margin contracts when the industries get matured, generic drugs market evolved into oligopoly from a near-perfect competition, which we will



elaborate later. While the major producers realized a scale of economy, smaller new entries faced more difficult barriers. At the same time, big pharms don't want to enter into this sector because of the lower margin than branded drugs.

#### Older drugs

➤ Generic manufacturers in older drugs who survived the fierce competition in the initial phase generally tend to achieve the economics of scale in production and hence enjoy higher margins. The second advantage for these manufacturers is that there exists an opportunity for oligopolistic pricing because of the fewer number of players for the market of that particular drug. Indeed, generic drug prices have been increasing steadily in the past few years. We believe that with fewer players in the market and the continual growth brought about by patent expirations, we will less-cost efficient players in a particular drug moving on to capture growth in drugs that are off patent and continue to see higher margins for older drugs.

#### Consolidation

➤ It may also appear that consolidation for the industry may cause a reduction in margins although this may not appear conclusive. We will further elaborate when we discuss potential growth opportunities in the next section.

#### Branded proprietary drugs

➤ Over the years, several generic drug manufacturers have been trying to enter the branded proprietary drug market, believing that the shift to branded drugs will help them to leverage their existing facilities and expertise, and reduce the reliance on external forces and uncertainty of regulations and lawsuits. Also, the life cycle of patented drug provides more profitable and predictable earnings. The story has merit and does seem to enable generic companies to capture higher margins and firms have successes in varying degrees. For example, proprietary drugs make up 10% of Teva's revenue and 50% of Watson's revenue.



However, the road to producing a successful proprietary drug is not an easy one. With the numerous biotechnology firms and strong R&D expertise in the big pharmaceutical firms, it is difficult to imagine how generic manufacturers are able to move from their expertise of producing drugs cheaply to researching for the next blockbuster drug.

Indeed, the market does not view favorably to generic manufacturers that focus heavily on branded proprietary drugs. For example, when Mylan announced that it was seeking to play a stronger role in the branded market last year, Mylan's share price dipped after the announcement with more than 5 times its average traded volume trading that day. Despite this, we recognize the benefits of having selling branded proprietary drugs. However, we believe that the effects of focusing on branded proprietary drugs are better analyzed on a company by company basis.

In conclusion, we believe that the higher net margins are mainly due to the maturity of the industry and the increase in proportion of older drugs with fewer players. As the industry continues to grow with patent expirations, older drugs will continue to enjoy their higher margins, signifying increasing or stable margins for the industry.

#### **Potential Growth Areas for the Industry?**

With regards to strategy, the generic companies have attempted to implement two major growth-driving strategies:

- Industry consolidation
- International Expansion

The hypothesis is that these strategies can ultimately drive growth by helping deliver more predictable earnings streams, increasing revenues and lowering costs, and thereby improving margins.



#### **Industry consolidation**

Over the past decade, the generic pharmaceutical industry has undergone increased consolidation and mergers as the table below indicates:

Date	Surviving	Entity Acquired
December 2001	Alpharma	Faulding (Generics)
October 2001	Barr	Duramed
May 2000	Watson	Schein
April 2000	Teva	Novopharm
August 1999	Teva	Copley Labs
June 1998	Mylan	Penederm
May 1998	Teva	Pharmachemie
December 1997	Boehringer Ingelheim	Ben Venue
August 1997	Watson	Rugby
July 1997	Sobel	Sidmak
December 1996	Watson	Royce
March 1996	Hexel AG	Eon Labs
March 1996	Nale	Warner Chilcott
January 1996	Teva Biocraft,	Pharmachemie, Lemmon
October 1995	Duramed	Hallmark
October 1995	Mylan	UDL
September 1995	Ranbaxy	Ohm
August 1995	Schein	Marsam
June 1995	Schwarz Pharma	Central Pharmaceuticals
August 1994	American Home Products	American Cyanamid (Leaderle)
November 1991	Sobel	Banner

Source: Salomon Smith Barney

The argument for acquisitions in the industry lies mainly in cost synergies. A hidden agenda may be to "buy out" smaller players that are competing in similar generic drug markets. Nevertheless, it seems inconclusive that acquisitions by companies have brought about cost synergies within the industry. Looking at the margins of Teva and Watson before and after their acquisitions in the 1990s, we do not find conclusive evidence that the acquisitions had improved cost margins.

However, consolidation within the industry has some benefits to the industry. The idea of having fewer players in a competitive industry is certainly an attractive one. Indeed, the existing players have grown larger with top 5 of the generic players capturing 57% of



the market share. The existence of such big players has allowed them to establish "preferred" relationships with suppliers. These "preferred" suppliers are now just 5-7 of the largest manufactures, down from about 25 previously<sup>1</sup>.

With 23 firms in the generic industry, it is difficult to assess whether further consolidation will occur or what the ideal number of generic firms should be for the industry that is still relatively young. However, given the slow spate of acquisitions in the past few months and the lack of market rumors, it is not likely that we will see further significant consolidation in the industry.

#### **International Expansion**

As the generic market in the US has matured, firms are increasingly looking to international markets to drive growth. The idea here is that international expansion of sales allows consumers in other countries access to cheaper drugs, which should lead to a reduction in the escalating cost of healthcare in those countries. Furthermore, it is suggested that moving manufacturing overseas lowers costs and can help drive higher margins. Overseas manufacturing also carries the issue of transfer pricing and tax management. In general, firms tend to employ various tax planning strategies to lower the current taxable income. On an industry wide basis, this factor is priced into the shares. Another important factor is the supply chain and operations management. This may be a way for further value creation.

While international expansion is worth examining closely, it may be hasty to assume that these markets automatically guarantee a growth opportunity. These markets carry with them country-specific risks. Sometimes, these risks can be extremely high and must therefore be measured on a country-by-country basis. Additionally, it may be safe to assume that if attractive opportunities exist in international markets, local firms may be in a better position to meet the demand, as they understand those markets better. Furthermore, if higher than normal profit opportunities exist internationally, it is generally the case that it is because of the country premium associated with investing in higher-risk regions.

<sup>&</sup>lt;sup>2</sup> Source: Company reports; SG Cowen



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<sup>&</sup>lt;sup>1</sup> Source: Company reports; SG Cowen

A prudent approach to estimating the impact of international expansion may be to incorporate the estimates into individual company projections as opposed to industry-wide ones. This is because some companies have the expertise necessary to perform well internationally, while others may not. For instance, Teva Pharmaceutical has a solid track record of international expansion, with about half of their sales from outside the United States.

#### **Import Disclaimer**

Please read this document before reading this report.

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# **Appendix Generic Pharmaceutical Company Profiles**



#### Teva Pharmaceutical

#### Company Description

Teva is an Israeli based pharmaceutical that has established itself as an international player in the generic market. About half of Teva's revenue comes from North America. Teva also has a branded prescription drug business that makes up about 10% of its revenue (mostly from sales of Copaxone).

## Recently Stock Price Performance

Despite the lackluster performance of the S&P 500, Teva's share price has remained resilient and has been increasing in the recent months because of the strong growth of Copaxone and Teva's strong generic product pipeline (16 first to file paragraph IV ANDAs).

#### Major News

Teva's motion to invalidate Abbot's Vicoprofen was successful and Teva will most likely get the 180 days market exclusivity as the first to file paragraph IV ANDA, indicating potential upside for the company.

Teva is likely to be one of three generic players in GlaxoSmithKline's blockbuster drug, Augmentin (patent was recenltly invalidated by the court) as very few generic manufacturers have manufacturing capabilities for antibiotics.

#### Financial Performance

Teva has been consistently beating analyst's consensus estimate, which partly explains for the increasing share price.

Quarterly	Earnings		Sı	ırprises
Estimated In US Dollar	vs. Actua	al Earnings	Per	Share
	Estimate	Actual	Differen	ice
June 2002	0.62	0.68	0.06	
March 2002	0.55	0.64	0.09	
December 2001	0.61	0.66	0.05	
September 2001	0.51	0.58	0.07	
June 2001	0.42	0.47	0.05	

Source: Yahoo Finance



#### **Recent Stock Price Performance**







# **Financial Performance**

(\$MM)	2000 A	2001 A
Revenue	1,749.90	2,077.40
Growth %	36.46%	18.72%
EBITDA	356.28	496.50
EBITDA Margin	20.36%	23.90%
EBIT	261.44	387.23
EBIT Margin	14.94%	18.64%
Net Income	184.00	287.90
Profit Margin	10.51%	13.86%
Depreciation		
Amortization	94.84	109.27
Free Cash Flow	189.70	282.30
Capital Expenditure	89.40	114.80
T-4-1 D-1-4	(05.40	542.40
Total Debt	605.40	543.40
Total Equity	1,151.30	1,380.70
D/E	52.58%	39.36%
Interest Coverage	4.9	8.3
ROE	15.98%	20.85%
ROC	10.47%	14.96%

# **Trading Multiples**

	9/20/2002
Price \$/share (9/20)	67.60
Shares outstanding (MM shares)	128.10
Market Capitalization (\$MM)	8,659.29
Enterprise Value (\$MM)	8,904.79
EPS (\$/share)	2.04
P/E Ratio	27.04
Price / Revenue	4.37
Price / Cash Flow	28.60
Price / Book	5.64
EV/EBITDA	17.94



#### Watson Pharmaceuticals

#### Company Description

Watson develops, manufactures and markets generic and brand prescription drugs mainly for the women health, nephrology and general care markets. 50% of Watson's sales comes from generic prescription drugs and 50% comes from branded prescription price.

# Recently Stock Price Performance

Watson's share price has not recovered ever since Watson's announcement to focus its business on brand prescription drugs. It is yet to be seen whether Watson's new strategy will materialize.

#### **Major News**

Watson received a non-approvable letter from FDA for its new drug, Oxytrol in Auguest 2002. Oxytrol is Watson's key potential revenue driver for the brand prescription drug business expecting to bring several hundred million of business. Watson is resubmitting its application.

Genelabs has received an approvable letter for Prestara in end August. Watson has the exclusive license to sell in North America. Excluding any good news on Oxytrol, Prestara is expected to be the significant product launch for Watson. However, sales from Prestara are not expected to exceed 10% of Watson's brand presciption drug business.

#### Risks

Aside from the standard industry risks, further failure to get FDA approval for Oxytrol is likely to bring little or no growth to the company, depressing the stock price further.



#### **Recent Stock Price Performance**







# **Financial Performance**

(\$MM)	2000 A	2001 A
Revenue	811.50	1,160.70
Growth %	15.12%	43.03%
EBITDA	451.11	328.01
EBITDA Margin	55.59%	28.26%
EBIT	379.70	226.80
EBIT Margin	46.79%	19.54%
Net Income	116.90	177.00
Profit Margin	14.41%	15.25%
Depreciation		
Amortization	71.41	101.21
Free Cash Flow	152.80	216.10
Capital Expenditure	35.50	62.00
Total Debt	536.20	483.80
Total Equity	1,548.00	1,672.10
D/E	34.64%	28.93%
Interest Coverage	15.6	8.2
ROE	7.55%	10.59%
ROC	5.61%	8.21%

# **Trading Multiples**

	9/20/2002
Price \$/share (9/20)	25.13
Shares outstanding (MM shares)	106.85
Market Capitalization (\$MM)	2,685.07
Enterprise Value (\$MM)	2,771.37
EPS (\$/share)	1.07
P/E Ratio	34.19
Price / Revenue	2.34
Price / Cash Flow	16.04
Price / Book	1.55
EV/EBITDA	8.45



# Mylan Laboratories Inc.

#### Company Description

Mylan Laboratories Inc. (MYL) is one of the top generic pharmaceutical companies in the United States, with more than 14% market share by total prescription unit volume. The company's key strengths are its strong corporate culture of high-quality manufacturing, its broad product line, drug delivery capabilities, and high-quality regulatory and development departments. The company's four devisions, Mylan Pharmaceuticals, Bertek, Mylan Technologies, and UDL, are split operationally, with individual budgets and P&Ls.

#### **Major News**

U.S. Food and Drug Administration (FDA) has approved its Abbreviated New Drug Application (ANDA) for Nizatidine Capsules, 150 mg and 300 mg. Mylan Nizatidine is the generic equivalent of Reliant Pharmaceuticals' Axid® Capsules. Axid is indicated for the treatment of active duodenal ulcer and maintenance therapy for duodenal ulcer patients and also for the treatment of endoscopically diagnosed esophagitis and benign active gastric ulcer. The product will be shipped immediately.

U.S. Food and Drug Administration (FDA) has approved its Abbreviated New Drug Applications (ANDAs) for Lisinopril Tablets and Hydrochlorothiazide Tablets. Mylan's Lisinopril is the generic equivalent of AstraZeneca's Zestril® Tablets and Merck's Prinivil® Tablets. Mylan's Lisinopril and Hydrochlorothiazide is the generic equivalent of AstraZeneca's Zestoretic® Tablets and Merck's Prinzide® Tablets. Both products were shipped immediately upon FDA approval.

#### Risks

As with any stock, there are numerous risks associated with Mylan shares. These include, but not limited to, price or market share declines among its current product line, delays to its key pipeline drugs, losses in patent infringement cases on pipeline drugs, and potential regulatory changes, all of which could adversely affect Mylan shares.

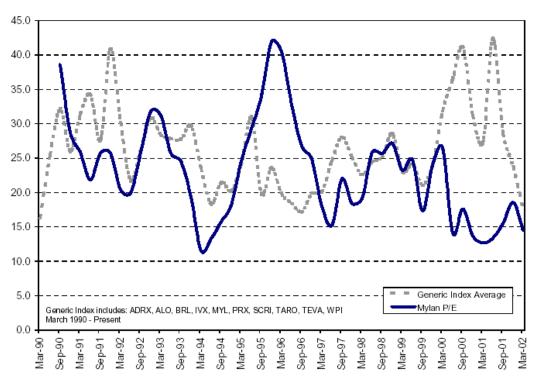


#### **Recent Stock Price Performance**





#### MYLAN 12-MONTH FORWARD P/E



Source: Company reports, FactSet, FirstCall, and U.S. Bancorp Piper Jaffray estimates



# **Financial Performance**

(\$MM)	2001 A	2002 A
Revenue	846.70	1,104.05
Growth %	7.16%	30.40%
EBITDA	217.60	455.20
EBITDA Margin	25.70%	41.23%
EBIT		
EBIT Margin		
Net Income	37.13	260.25
Profit Margin	4.39%	23.57%
Depreciation	42.40	46.10
Amortization		
Capital Expenditure	24.70	20.60
Dividend	20.30	20.40
Free Cash Flow	128.70	265.40
Total Debt	28.50	21.90
Total Equity	1,132.50	1,402.20
D/E	2.52%	1.56%
Interest expense	0.9	0.2
Interest Coverage	42.3	1,302.3
ROE	11.23%	20.53%
ROC	10.98%	20.17%

# **Trading Multiples**

	9/20/2002
Price \$/share (9/20)	30.92
Shares outstanding (MM shares)	125.30
Market Capitalization (\$MM)	3,970.00
Enterprise Value (\$MM)	3,991.90
EPS (\$/share)	2.04
P/E Ratio	15.16
Price / Revenue	3.54
Price / Cash Flow	12.73
Price / Book	2.83
EV/EBITDA	8.77



# Pharmaceutical Resources, Inc.

#### Company Description

Pharmaceutical Resources, Inc. (PRX) is a holding company that, through its subsidiaries, is in the business of developing, manufacturing and distributing a broad line of generic drugs in the United States. PRI operates primarily through its wholly owned subsidiary, Par Pharmaceutical, Inc., a manufacturer and distributor of generic drugs. The Company's product line consists of prescription and, to a lesser extent, over-the-counter generic drugs consisting of approximately 119 products representing various dosage strengths for 51 drugs. In addition to manufacturing its own products, the Company has strategic alliances with several pharmaceutical and chemical companies providing it with products for sale through distribution, development or licensing agreements. The Company markets its products primarily to wholesalers, retail drug store chains, drug distributors and repackagers.

#### **Major News**

Pharmaceutical Resources Inc., on Sep. 12th raised its profit forecast amid strong sales of its anorexia drug and the launch of copycat versions of an ulcer drug and a treatment for muscle spasms. The company raised its forecast to between 54 cents to 58 cents a share, above a Thomson First Call projection of 48 cents a share.

July 9, Par Pharmaceutical Announced Immediate Shipment Of Nizatidine 150 mg and 300 mg Capsules.

June 25, Par Pharmaceutical Expands Strategic Alliance With Nortec/Glatt Companies Collaborate to Develop Additional Sustained Release Product; Partnership Now Has Two Extended Release Generic Drugs Under Development

#### Risks

As with any stock, there are numerous risks associated with Pharmaceutical Resources shares. These include, but are not limited to, price or market share declines among its current product line, delays to its pipeline products, and legal risks associated with its Paragraph IV filings. In addition, difficulties associated with its distribution partners could affect the availability of partnered drugs.



#### **Recent Stock Price Performance:**







## **Financial Performance**

(\$MM)	2000A	2001A
Revenue	85.00	271.00
Growth %	5.85%	218.82%
EBITDA	1.80	80.00
EBITDA Margin	25.70%	41.23%
EBIT	-0.50	76.70
EBIT Margin	-0.59%	28.30%
Net Income	-0.90	53.90
Profit Margin	-1.06%	19.89%
Depreciation&Amortizat	2.30	3.30
Capital Expenditure	4.60	3.20
Dividend	0.00	0.00
Free Cash Flow	-1.80	43.50
Total Debt	11.30	1.30
Total Equity	64.80	138.40
D/E	17.44%	0.94%
Interest expense	0.9	0.4
Interest Coverage	0.0	135.8
ROE	NA	44.12%
ROC	-2.51%	43.18%

#### **Trading Multiples**

	9/20/2002
Price \$/share (9/20)	26.84
Shares outstanding (MM shares)	32.50
Market Capitalization (\$MM)	872.30
Enterprise Value (\$MM)	873.60
EPS (\$/share)	2.78
P/E Ratio	9.65
Price / Revenue	2.30
Price / Cash Flow	11.09
Price / Book	5.17
EV/EBITDA	10.92



# Barr Laboratories, Inc.

#### Company Description

Barr Laboratories, Inc. is a specialty pharmaceutical company primarily engaged in the development, manufacture and marketing of generic and proprietary pharmaceuticals. prescription Company manufactures and distributes more than 100 different dosage forms and strengths of pharmaceutical products in core therapeutic categories, including oncology, female healthcare (including hormone replacement and oral contraceptives). cardiovascular. antiinfective and psychotherapeutics. addition, the Company has a proprietary, novel vaginal ring drug delivery system it is using to develop products intended to address a variety of female health issues and unmet medical needs. On October 24, 2001, Company merged with the Duramed Pharmaceuticals, Inc. On June 6, 2002, the Company purchased certain assets of Enhance Pharmaceuticals, Inc., including a proprietary, novel, vaginal ring drug delivery system.

Recently Stock Price Performance

Barr Lab's share price has declined with the major averages in the last year. Fundamentals remain strong.



#### **Major News**

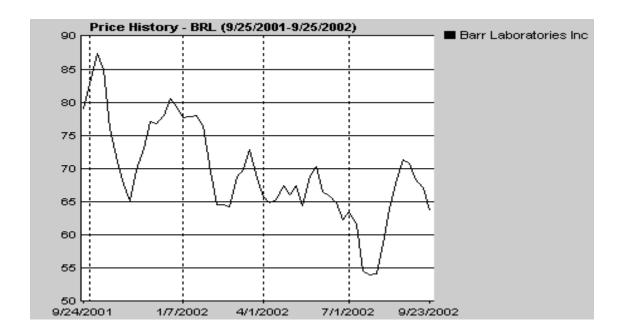
 Barr Laboratories, Inc. announced on Wednesday, September 25, 2002, that the firm has received Food and Drug Administration approval to produce and market a generic version of Otho-Cyclen Tablets with sales estimated at about \$142 Million annually.

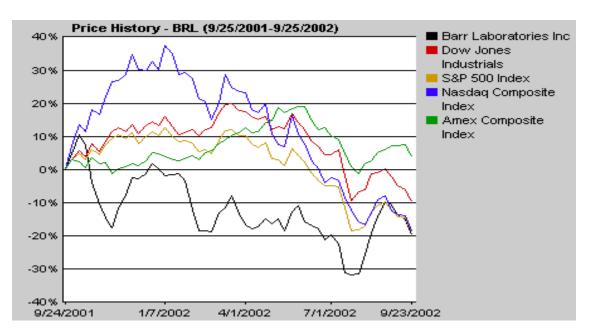
- On September 24, 2002, Barr laboratories, Inc. announced a raise for the Chairman of the board Bruce Downey.
- On Monday, September 23, 2002, Barr Laboratories Inc., announced that said on U.S. regulators have delayed the launch of a generic version of the cancer drug tamixifen. Presently, the delay is estimated at about six months.

Risks

As with any stock, there are numerous risks associated with Barr Laboratories shares. These include, but are not limited to, price or market share declines among its current product line, delays to its pipeline products, and legal risks associated with its Paragraph IV filings. In addition, difficulties associated with its distribution partners could affect the availability of partnered drugs.







# **Financial Information**

(\$MM)	2000	2001
Revenue	482.3	509.7
Growth %		6%
EBITDA	94.0485	72.5
EBITDA Margin	20%	14%
EBIT		61.7
EBIT Margin		12%
Net Income	42.3	62.5
Profit Margin	9%	12%
Depreciation	10.4	10.8
Amortization		
Capital Expenditure	12.3	17.8
Dividend	0	0
Free Cash Flow	40.5	55.5
otal Debt	28.1	27.8
otal Equity	282.2	365.6
D/E	10%	8%
Interest expense		3.5
Interest Coverage		
ROE	15	17.1
ROC	14	16.2

# **Trading Multiples**

Price \$/share (9/20)	61.07
Shares outstanding (MM shares)	43.6
Market Capitalization (\$MM)	2300
Enterprise Value (\$MM)	2350
EPS (\$/share)	4.62
P/E Ratio	13.21
Price / Revenue	2.34
Price / Cash Flow	11.6
Price / Book	4.0
/EBITDA	7.6
Per Share	15.29
	5.25



# IVAX Corporation

#### Company Description

IVAX Corporation is a multinational company engaged in the research, development, manufacture and marketing pharmaceutical products. manufactures and/or markets several brand name pharmaceutical products and a wide variety of brand equivalent and over-thecounter pharmaceutical products, primarily in the United States and the United Kingdom. The Company also subsidiaries located throughout the world. some of which are significant pharmaceutical companies in their markets. The Company maintains manufacturing operations in Argentina, Chile, China, the Czech Republic, Germany, Ireland, Italy, Mexico, the United Kingdom, Uruguay and Venezuela. The Company also has marketing and sales operations in Finland, France, Hong Kong, Kazakhstan, Latvia, Peru, Poland, Russia, the Slovak Republic, Sweden, Switzerland, Taiwan and the Ukraine, and markets its products through distributors or joint ventures in other foreign markets.

Recent Stock Price Performance

Ivax Corporation's share price has depreciated significantly over the past 12 months. Concerns about earnings going forward are keeping the shares depressed. There is no current information to suggest a turnaround.



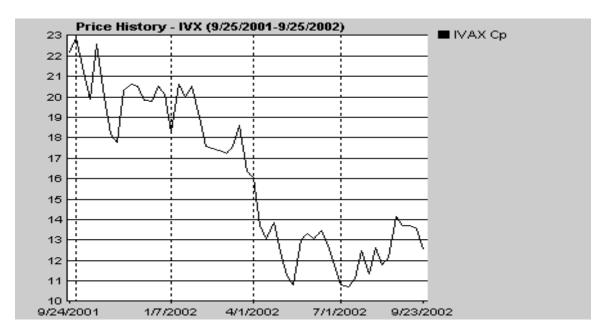
#### **Major News**

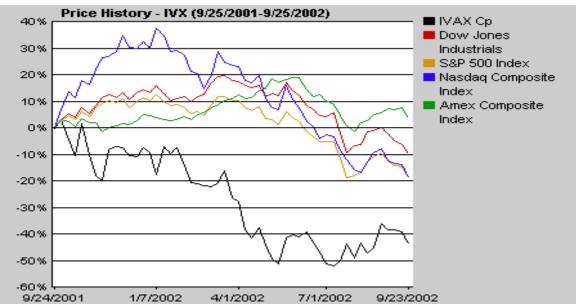
Sept. 24, 2002-- IVAX Corporation launched an educational initiative to inform the medical community and asthma patients that its asthma product, QVAR® (beclomethasone dipropionate HFA), can suitably replace Schering-Plough Corporation's soon to be discontinued asthma product Vanceril® 42 mcg Inhalation Aerosol (beclomethasone dipropionate CFC).

On Tuesday September 3<sup>rd,</sup> in an effort to cut costs, IVAX Corporation, announced its decision to consolidate its manufacturing facilities in Argentina into a single plant which it acquired from GlaxoSmithKline PLC.

Aug. 30, 2002--IVAX Corporation announced that it received tentative approval from the FDA for a breast cancer treatment drug - tamoxifen citrate. This drug is the generic version of AstraZeneca's Nolvadex®







# **Financial Information**

(\$MM)	2000	2001
Revenue	793.4	1215.4
Growth %		53%
EBITDA	165	322
EBITDA Margin	21%	26%
EBIT	132	270
EBIT Margin	17%	22%
Net Income	117.8	224.2
Profit Margin	15%	18%
Depreciation	32.9	52.2
Amortization		
Capital Expenditure	49	72.002
Capital Expenditure Dividend	49 0	72.002 0
Dividend	0	0
Dividend	0	0
Dividend Free Cash Flow	0 101.7	0 204.4
Dividend Free Cash Flow Total Debt	0 101.7 253.8	0 204.4 978.9
Dividend Free Cash Flow  Total Debt Total Shr Equity	0 101.7 253.8 484.1	0 204.4 978.9 718.4
Dividend Free Cash Flow  Total Debt Total Shr Equity D/E	0 101.7 253.8 484.1	0 204.4 978.9 718.4 136%
Dividend Free Cash Flow  Total Debt Total Shr Equity D/E Interest expense	0 101.7 253.8 484.1	0 204.4 978.9 718.4 136%

# **Trading Multiples**

Trading Multiples	_
Price \$/share (9/20)	12.34
Shares outstanding (MM shares)	194.6
Market Capitalization (\$MM)	2400
Enterprise Value (\$MM)	3300
EPS (\$/share)	0.8
	15.52
enue	2.07
ice / Cash Flow	
	3.88
/EBITDA	10.28
Per Share	3.18
	0.79

