BSAS *Student Research*

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Industry: Early Drug Development Outsourcing Industry

Charles River Laboratories

December 22, 2008

Ticker: • CRL
Price: •$25.01

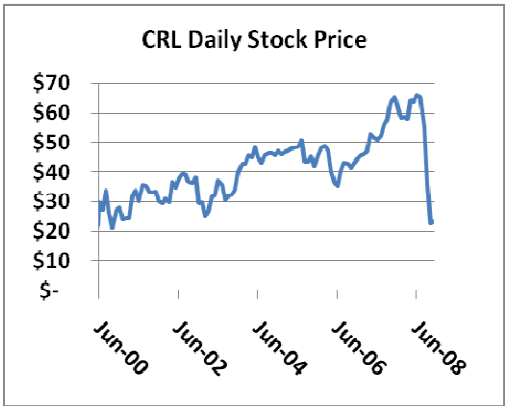
Recommendation: •BUY
1 Year Price Target: •$34.15

Earnings/Share

	Mar.	Jun.	Sept.	Dec.	Year	P/E Ratio
2007A	.544	.554	.619	.523	2.24	29.38
2008E	.640	.713	.630	.487	2.47	9.58
2009E	.529	.539	.602	.509	2.18	11.47
2010E	.607	.618	.691	.584	2.50	10.00

Highlights

- **BUY recommendation on continued customer outsourcing growth and attractive valuation:** We rate Charles River Laboratories a BUY with a target price of $34.15 for 12/09. We expect appreciation of 36.5% in the next 12 months.
- **Industry Revenues Dependent on Willingness to Outsource by Biotechnology/Pharmaceutical Companies:** An increase in the cost of introducing a new drug to the market forces biopharmaceutical companies to pursue outsourcing as an effective measure to cut costs and streamline the drug development process. Less than 25% of all drug R&D spending is currently outsourced, and we expect this ratio to increase to 50% in five years.
- **Expertise in Specialty Areas and Expansion to China Put Charles River Laboratories in an Excellent Position to Capitalize on Clients' Restructuring Efforts.** Threatened by competition from generics, large pharmaceutical companies have been investing in research & development of specialty therapeutics such as biologics and oncology drugs, and have been expanding into emerging markets. Charles River Laboratories is positioned well to capitalize on these trends because it has expertise in biologics testing, offers a wide range of disease-specific models, and has a presence in China.
- **Weak Guidance Driving Down Shares:** On November 6, shares dropped 23% on news that Charles River Laboratories only foresaw sales growth of 9% to 10% in 2008, down from 12 - 14%. The decline in growth is due to a slowdown in spending by the company's clients because biotech funding environment has become stringent and pharmaceutical companies have been refocusing on late stage drug development. In addition, Charles River Laboratories has been affected by strengthening dollar and overcapacity issues due to rapid expansion in 2007-2008. We believe these negative developments to be short lived.



Market Profile	
52-Week Price Range	$19.92-$69.19
Average Daily Volume	1,378,590
Beta	0.876
Dividend Yield (Est.)	N/A
Shares Outstanding	67,167,000
Market Capitalization	1.69B
Institutional Holdings	N/A
Insider Holdings	15%
Book Value per Share	28.71
Debt to Total Capital	0.218
Return on Equity	9.55%

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Important disclosures appear at the back of this report

Investment Summary

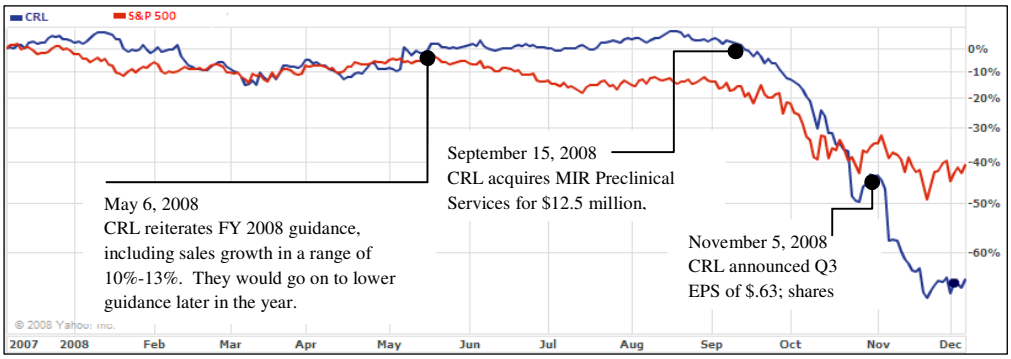
Revenue Growth of 6% over the Next 5 Years. Although Charles River Laboratories will be experiencing an unfavorable near-term operating environment due to retrenchment in the bio-pharmaceutical industry, we project revenues to grow at compound annual growth rate of 6% over the next 5 years. This is lower than short-term guidance, but is sufficient to support strong stock price upside. Demand for preclinical services and research tools will increase in the medium term due to on-going initiatives of biopharmaceutical companies to cut costs and speed up the drug development process, as the cost of introducing a new drug to the market has been increasing and need to develop new drugs increases.

Pressures to Improve Drug Pipelines Force Large Pharmaceutical Companies to Outsource. The amount of research & development expenditures as a ratio of sales for 12 largest pharmaceutical companies has steadily increased in the past eight years, from 14.05% in 2001 to 16% in 2007, while operating margins have declined from 28% in 2001 to 23% in 2007. Lower margins have been due to stricter regulations imposed on Big Pharma, with only 19 FDA approved drugs in 2007, the fewest in 24 years. Outsourcing providers like Charles River Laboratories represent a more efficient alternative to developing in-house, because they are capable of improving Big Pharma's drug pipelines and protect its margins as well. Outsourcing streamlines the process of introducing a new drug to the market by 4-5 months, which translates into $120-150 million in incremental prescription revenue per drug.[1]

Strong Financial Position Supports Charles River Laboratories Buy Recommendation. Despite rough economic times, Charles River Laboratories possesses adequate access to capital via an untapped $200 million credit line and a cash & equivalents balance of $213 million. The company does not plan to undertake any significant capital expenditures in the next 2-3 years, and its senior debt of $350 million is not due until 2013. We project annual free cash flow of $181 million, on average, for 2009-2013.

Expertise in Specialty Areas and Expansion to China Will Enable Charles River Laboratories to Capitalize on their Clients' Restructuring Efforts. CRL's clientele have been shifting their strategic focus towards high margin, specialist-driven products such as biologics and oncology. Charles River Laboratories will capitalize on this trend, as it offers biopharmaceutical services and a wide range of disease-specific animal research models. In addition, with its recently opened preclinical research facility in China, the company will be able to support clients' expansion to emerging markets.

Figure 1: One Year Return vs. S&P 500



Source: Yahoo! Finance

The above chart shows Charles River's performance during 2008. In addition to the price impact from the November 5 announcement, of note is an acquisition of MIR Preclinical for $12.5 million, which occurred in mid-September. The acquisition has enabled Charles River Laboratories to expand its capabilities across a range of therapeutic areas, including oncology, inflammation, metabolic, and

[1] PAREXEL's Pharmaceutical R&D Statistical Sourcebook 2004/2005

cardiovascular. 80% of the current MIR business is in oncology, which is one of the fastest growing therapeutic areas.

Valuation

We valued Charles River Laboratories using discounted cash flow and comparable company analysis techniques. We used an equal weighted average to arrive at our share price projections for 12/31/2008 and 12/31/2009. The resulting one-year price target is $34.15, with a one-year expected return of approximately 36.5%.

Price Target

Valuation Method	Resulting Price	Weight
DCF	$49.33	50%
Comparable Company Analysis	$28.40	50%

One Year Price Target

Target Price (12/2008)	$38.86
1Year Price Target	$34.15
Today's Price (12/19/2008)	$25.01
Expected 1 Year Return	36.5%

Discounted Cash Flow Model

Revenues. Charles River Laboratories generates revenues from two lines of business: Research Models (RMS) and Preclinical Services (PCS).

- We expect revenues to grow by 6.7% and 0.43% in 2008 and 2009 due to lower spending on research & development by pharmaceutical companies, cost cutting, and biopharmaceutical companies lowering spending as they face a more challenging funding environment. We project a compound annual growth rate of 10% for 2010-2013 due to improving market conditions, as pharmaceutical companies refocus their efforts on early stage drug development to replenish their pipelines. Please see Figure 13 for a more detailed description of our revenue model.

Capital Expenditures. We project capital expenditures to decrease from $210 million in 2008 to $68 million in 2009 and 2010 since Charles River Laboratories has delayed preclinical facilities construction in Ohio. Furthermore, they do not plan to undertake any projects that would require significant cash outflows in the near-term. We project higher annual capital expenditures for 2011-2012 of $114 million.

Terminal Value. We computed the terminal value in 2013 using a combination of two methods:

- Perpetual growth model assuming a 2.5% perpetual growth rate
- Multiples method, applying average historical TEV/EBITDA multiple of 12x to the pro forma 2013 EBITDA to achieve the terminal value. See Figure 20 for average historical TEV/EBITDA multiple figure. As is evident from the chart, 12x is a fairly conservative estimate.

Our DCF price is $49.33. Given the fact that use of a conservative terminal multiple still led to a target price well in excess of the current one, we have strong conviction in our buy recommendation; if the multiple were to return to near-average levels, we would expect to see almost a three-fold increase in share price. See Figure 17 for further explanation of the DCF model.

Comparable Company Analysis

A second valuation approach we used was a comparable company analysis. We evaluated Charles River Laboratories relative to its major competitors in the Preclinical Services market – Covance, Life Sciences Research, and MDS. CRL's major competitors in the Research Models market, Taconic Farms, Harlan and Jackson Laboratories, were not included in the analysis because these companies are private.

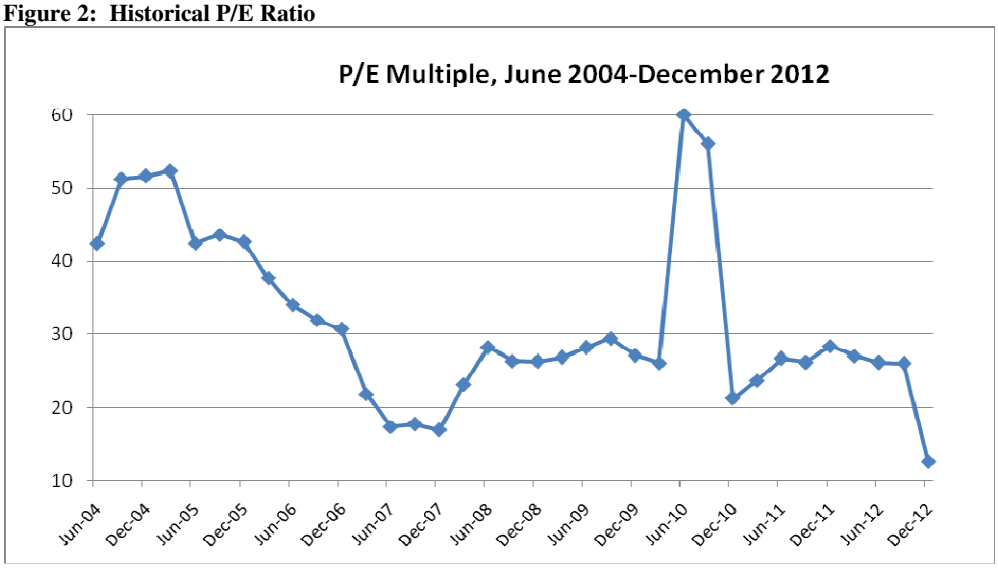
To evaluate CRL's equity per share value we used the following metrics: EV/EBIT and P/E. CRL currently trades at a discount to EV/EBIT, and at a slight premium to P/E. See Figure 29 for cross-sectional analyses. To determine CRL's target prices for 12/2008 and 12/2009, we used the peer median multiples calculated based on analysts' consensus estimates, and applied these multiples to our projected Operating Income and Net Earnings for 2008 and 2009. We used an equal weighted average to arrive at

our share price projections of $28.40 and $18.97 for 12/2008 and 12/2009. See Figure 21 for further explanation of our Comparable Company valuation analysis.

Current Implied Valuation

The following chart shows Charles River's historical P/E multiple. The graph shows that Charles River is trading near historically-low levels. We do not feel that the depressed price levels are warranted, as the Company still has strong growth prospects going forward.

Figure 2: Historical P/E Ratio

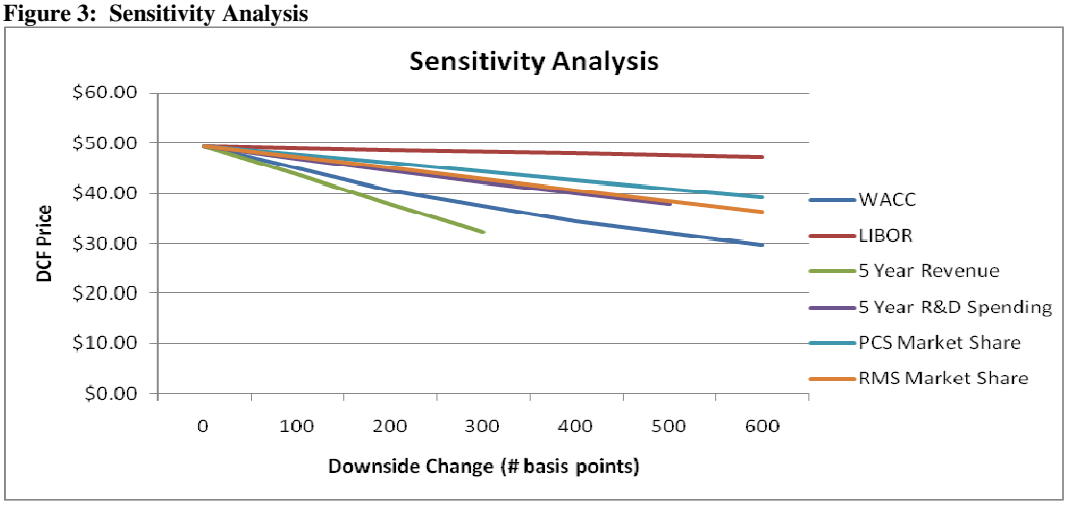


Source: Capital IQ

Risks to Valuation

Our financial model depends on multiple assumptions; therefore, we conducted sensitivity analyses to test the sustainability of our valuation. We factored changes in WACC, revenue growth, increases in LIBOR, changes in market share, and R&D spending growth. We found that Charles River Laboratories was the most sensitive to changes in WACC and market share. The following chart displays how negative changes to our DCF would affect the target price derived from the DCF model:

Figure 3: Sensitivity Analysis



Source: Student Analysis

We do not foresee an increase in WACC in medium term, because the capital structure of Charles River Laboratories is stable. The company does not plan to undertake excessive capital expenditures in the next 2-3 years and it will need to refinance its long-term debt only in 2013.

We believe that Charles River Laboratories will be able to maintain its market share for the next 6 years due to its expertise in specialty areas such as disease-specific mice and biotechnological services to support its clients' initiatives to develop oncology therapeutics and biologics. In addition, Charles River Laboratories has a pool of renovated facilities and a wide geographical presence across 15 countries, which will enable the company to support simultaneous preclinical trials across countries.

Business Description

Charles River Laboratories (NYSE: CRL) is a global provider of drug development solutions that advance the drug discovery and development process. CRL is a multinational company with approximately 10,000 employees worldwide and 60 facilities in 15 countries. The company was founded in 1947 and is headquartered in Wilmington, Massachusetts. The company operates two divisions, Preclinical Services (PCS) and Research Models & Services (RMS). Large biotech and pharmaceutical companies account for 60% of CRL's revenues, while 20% comes from small biotechs, and CRL non-profit clients represent another 20%.

Preclinical Services Business (PCS)

The Preclinical Services business discovers and develops new treatments, drugs, and devices. Specific solutions include efficacy studies, safety studies (general and specialty toxicology), expert pathology studies, pharmacokinetics, bioanalysis, and global Phase I clinical trials. The preclinical services segment generated $653 million in 2007, or 53% of their total revenues. Charles River Laboratories is also the second largest player in the Preclinical Services market with a share of 19%. See Figure 22 for a detailed description of Charles River's offerings and Figure 23 for the market revenue breakdown in Preclinical Services.

Research Models and Services Business (RMS)

The Research Models & Services business involves the production and sale of research models for use by research teams. Key strains include outbred rats (60% of the business, primarily used in toxicology), inbred mice (basic research), immunodeficient mice (oncology, infectious disease research), and disease-specific models, which target cardiovascular, metabolic, renal, and oncology research. The RMS business also provides vaccine services, in-vitro technology services, research animals diagnostics, transgenic services, and consulting and staffing services (see Figure 22 for a more detailed description). The RMS business generated $577 million in revenues in 2007, making it the market leader with a share of 48%. See Figure 24 for a breakdown of the Research Models market.

Figure 4: Charles River Laboratories Historical Finanial Performance by Segment

	2003	2004	2005	2006	2007
Research Models and Services Business					
Revenues	428.2	476.7	503.2	515.0	577.2
Revenue Growth	15.0%	11.3%	5.6%	2.4%	12.1%
Operating Margin	31.9%	32.0%	31.8%	28.7%	30.7%
Preclinical Services Business					
Revenues	185.5	247.6	490.2	543.4	653.4
Revenue Growth	2%	33%	98%	11%	20%
Operating Margin	9%	13%	14%	15%	16%

Source: Company Financials

Major Expansions and Acquisitions

Over the last two years, Charles River Laboratories has been expanding its operations dramatically. To support its preclinical services business, the company has been adding nearly 1 million square feet of additional capacity, which is expected to be completed in 2009 with two new sites in the US, one new site in Canada, and one in China. In addition, on its RMS business side, the company opened a new research models facility in Maryland to support its partnership with the National Cancer Institute. Over the last year, the company acquired an in-vivo imaging company called MIR Preclinical Services, and a Germany-based provider of safety and quality control services called NewLab BioQuality AG. The acquisition of MIR Preclinical Services has enabled Charles River Laboratories to expand its capabilities

across a range of therapeutic areas, including oncology, inflammation, metabolic, cardiovascular, etc. 80% of the current MIR business is in oncology, which is one of the fastest growing therapeutic areas.

Industry Overview and Competitive Positioning

The early drug development outsourcing industry provides services and tools that advance the early drug development process. Companies generate revenues by offering preclinical services, animal research models, and Phase 1 clinical services to biopharmaceutical companies and other life science research vendors. Customers include large biotechnology and pharmaceutical companies, small biotechnology shops, not-for-profit research institutions, and other life science vendors. See Figure 25 for a full description of drug development process.

The size of the Early Drug Development Outsourcing industry is estimated at $4.7 billion with preclinical services and Phase I market of $3.5 billion[2] and animal research models market of $1.2 billion[3]. See Figure 26 for Early Drug Development Outsourcing Industry Sector Breakdown.

Within **the preclinical services and Phase I clinical trials market**, the top 4 competitors are Covance (22%), Chares River Laboratories (19%), MDS (16%), and Life Sciences Research (7%). Along with internal competition, the micro-industry participants compete with in-house departments of pharmaceutical companies, and to a lesser extent selected universities and teaching hospitals. See Appendix 3 for Preclinical Service market revenues breakdown pie chart. Within **the animal research models market**, Charles River's competitors are private companies such as Taconic Farms (9%), Jackson Laboratory (8%), and Harlan (4%). Revenue from animal models is stable due to the limited price sensitivity of the buyers, as expenditures on animal models represent a small portion of total R&D costs by biopharmas, and animal models are essential to drug development. See Appendix 4 for Animal Research Models market revenues breakdown pie chart.

Revenues for the four largest companies in the micro-industry have been growing for the last five years with CAGR of 13.35%, as they rose from 1.4 billion in 2003 to 2.8 billion in 2007. Charles River Labs' revenues fluctuated over the period from 37% in 2005 to 7% in 2006. However, except for 2006, CRL's revenue growth was higher than the rest of the industry. The most consistent double-digit performance has been demonstrated by Covance, with 5YR CAGR of 16%. Life Sciences Research has been enjoying increasing revenue growth since 2004, while MDS has been struggling.

Figure 5: Revenue Growth of Major Industry Players versus Industry Revenue Growth

Revenue Growth	Ticker	2004	2005	2006	2007	5YR CAGR
Charles River Labs	CRL	18.0%	37.2%	6.6%	16.3%	17.3%
Covance	CVD	16.4%	17.4%	12.6%	22.9%	16.2%
MDS	MDZ	-24.4%	26.9%	6.4%	0.9%	4.1%
Life Sciences Research	LSR	19.0%	9.1%	11.7%	23.2%	15.4%
Industry		4.0%	27.0%	8.4%	15.0%	13.4%

Source: Company Financials

Industry operating margins have declined from an average of 16.1% in 2004 to 11.8% in 2007, as the major players have been expanding their operations by building new research facilities worldwide to meet increased demand from buyers. Charles River Laboratories, however, has consistently demonstrated a higher operating margin compared to the rest of the industry.

[2] "Global Growth Story Remains Strong for CROs in 2008, Beyond", CenterWatch Monthly, March 2008
[3] Charles River Laboratories UBS Life Sciences Tools and Services Presentation, September 2008

Figure 6: Operating Margins of Major Industry Players vs Industry Average

Operating Margin	Ticker	2004	2005	2006	2007	5 YR Median
Charles River Labs	CRL	21.8%	18.6%	17.8%	18.5%	18.6%
Covance	CVD	23.3%	24.9%	24.3%	25.2%	24.3%
MDS	MDZ	0.2%	-12.1%	-9.8%	-21.5%	-9.8%
Life Sciences Research	LSR	10.0%	12.2%	5.0%	13.5%	10.0%
Industry		16.1%	12.5%	12.1%	11.8%	12.5%

Source: Company Financials

The above results demonstrate that Covance and Charles River Laboratories are the major players in the micro-industry with revenue growth and operating margins above the micro-industry averages.

Higher Outsourcing Activity by Bio-Pharmaceutical Companies

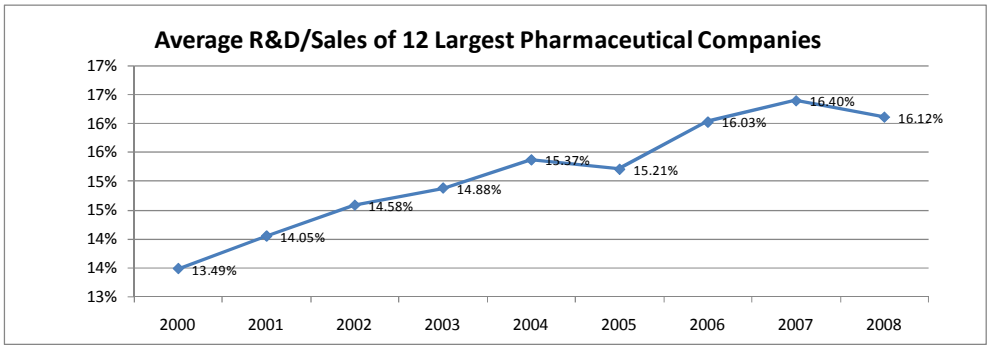
The trend towards outsourcing can mainly be attributed to the following factors:

- Stringent FDA regulations have resulted in a higher cost of introducing a new drug to the market and, consequently, in a higher amount of R&D expenditures as a percentage of sales and depressed operating margins.
- More efficient and faster results obtained if the drug development process is outsourced.

The Cost of Introducing a New Drug to the Market Has Increased Substantially

The average R&D/Sales ratio for 12 largest pharmaceutical companies increased to 16% in 2007 from 13.5% in 2000, suggesting that the cost of introducing a new drug to the market has increased substantially. A 2007 study by McKinsey & Co estimated that the average R&D spending per FDA approval climbed from $660 million in 2000 to $1.626 billion in 2005. The average operating margin has declined from 28.1% in 2001 to 24.3% as of June 30, 2008. See Figure 27 for historical average operating margin of 12 largest pharmaceutical companies.

Figure 7: Historical Average R&D/Sales Ratio for 12 Largest Pharmaceutical Companies[4]



Source: Company Financials

Stringent government regulations have been one of the main reasons behind the increase in the cost of introducing a new drug. Pharmaceutical companies are required to conduct higher number of costly safety testing before the drug's introduction to the market. According to Accenture, a consulting company, in 2005, 72% of U.S. clinical studies involved more than 85 procedures, an increase of 70% over 2000. Despite increased R&D spending, the FDA only approved 19 new drugs in 2007, the fewest in 24 years. Therefore, the cycle time for drug development has become elongated. According to a study conducted by the Tufts Center for the Study of Drug Development in 2001, it takes an estimated 15 years to bring a single new drug to the market.

Outsourcing Represents a More Efficient Alternative to In-House Drug Development

[4] Abbott Laboratories, AstraZeneca, Bristol-Myers Squibb, Eli Lilly & Co., GlaxoSmithKline, Merck & Co, Novartis AG, Pfizer Inc, Roche Holding AG, Sanofi-Aventis, Schering-Plough Corp., Wyeth

Outsourcing providers like Charles River Laboratories represent more efficient alternative to developing in-house because they are capable of improving Big Pharma's drug pipelines and protect its margins. Outsourcing streamlines the process of introducing a new drug to the market by 4-5 months which translates into $120-150 million in incremental prescription revenue per drug.[5]

Strategic Alliances Between Outsourcing Providers and Large Pharmaceutical Companies

In the beginning of October, 2008, Covance finalized its 10-year, $1.6 billion research agreement with Eli Lilly. According to the details of the contract, Covance gains $90 million in annual business in addition to the $70 million in annual work they had already been performing for Eli Lilly. Under this strategic partnership agreement, Lilly will transfer all responsibilities to Covance for its non-GLP toxicology, in vivo pharmacology, quality control laboratory, and imaging services. In addition, the contract includes a committed level of clinical pharmacology, central laboratory, GLP toxicology studies, and clinical Phase II-IV services.

Generally speaking, the contract represents a major positive for the industry, as it shows that major industry players in the pharmaceutical industry see increasing benefits to outsourcing a significant portion of their R&D.

Pharmaceutical Companies Have Been Reorganizing Drug Development Pipelines Toward Biotech and Specialist-Driven Products

A refocusing on biologics and oncology therapeutics represents a substantial profit opportunity for Charles River Laboratories, as the company provides biopharmaceutical services and also offers a wide range of disease-specific animal research models such as immunodeficient mice.

Faced with blockbuster drug expirations and lost market share to generics, large pharmaceutical companies have been reshaping their drug development pipelines to specialist-driven products such as ***biologics and oncology therapeutics***. These products command higher prices than traditional medicines, resulting in higher margins due to higher efficacy and limited competition.

According to IMS Health, specialty therapy sales are expected to grow 14% to 15% in 2008, compared to 5% to 6% for the global pharmaceutical market overall. IMS projects that 24-29 new medicines will be introduced into the global pharmaceutical market in 2008, of which 80% represent specialty products. Oncology is the fastest growing therapeutic areas. In 2008, sales of oncology products are expected to exceed $45 billion, and account for close to 17% of projected market growth.

According to Standard & Poors, in the past five years, large pharmaceutical companies have spent more than $80 billion to buy 19 biological companies (with 13 being purchased between September 2006 and December 2007) and closed about 200 licensing deals. One of the most prominent deals was AstraZeneca's $15.6 billion purchase of MedImmune, which accounted for over half of the total value of 2007 acquisitions.

Bio-Pharmaceutical Companies Expand into Emerging Markets

Charles River Laboratories, with its recently-opened preclinical research facility in China, is positioned well to capture this market opportunity. None of the company's major competitors (Covance, MDS, and Life Sciences Research) have presence in China. Charles River Laboratories has advantage over chinese internal competition (Wuxi PharmaTech) because of its high safety standards. Having high safety standards are of special importance because the US Food and Drug Administration (FDA) opened three Chinese offices in the end of 2008 to implement inspection procedures.

According to Standard & Poors, the US pharmaceutical industry currently derives about 2/5 of its revenues from sales outside of the United States. Pharmaceutical sales in developing countries are expanding much faster than those in the domestic market. IMS Health forecasts that aggregate pharmaceutical volume in seven key emerging markets – China, Russia, Brazil, Mexico, South Korea, and Turkey – will increase 12-13%, to 85 billion to $90 billion, in 2008.

Financial Analysis

Earnings

[5] PAREXEL's Pharmaceutical R&D Statistical Sourcebook 2004/2005

In 2007, Charles River earned $154.4 million on revenues of $1.23 billion, for a margin of about 12.55%. Although they have been able to sustain this margin through the first three quarters of 2008, EPS is beginning to show signs of decline, as Q3 EPS came in at $.76, or $.03 less than Q2. Historically, Q3 earnings have come in higher than Q2, so a decline is slightly troublesome. For Q4, earnings should dip to $.49, making total EPS for 2008 $2.47 as compared to $2.24 a year ago.

Cash Flow

Cash flows for the Company have remained strong thus far, with cash flows from operating activities growing 72.9% from 2006 to 2007 to $284.2 million. This number looks like it will come in at or around the 2007 figure. We foresee free cash flows dipping in 2008 to $24.4 million; however, the dip is mainly attributed to a substantial increase in capital expenditures, as Charles River has undertaken projects to expand capacity to meet client demands worldwide. These projects are expected to be completed in 2009, and capital expenditures should decrease going forward, boosting free cash flow to $157.4 million by 2010.

Balance Sheet and Financing

Charles River's balance sheet remains strong, and puts them in a good position for the future. As of September 27, they had approximately $216 million in cash, which provides them with an adequate cushion to handle any turbulent periods in the next year. In addition, despite the extensive capital expenditures they have undertaken in the past two years, their debt to equity ratio remains at just 48%, while property, plant, and equipment has more than doubled since 2005 to $845 million.

In addition, Charles River's financing remains relatively stable despite the current environment. They issued $350 million in debt due in 2013, and also have access to a $200 million credit line, which at the moment remains untapped.

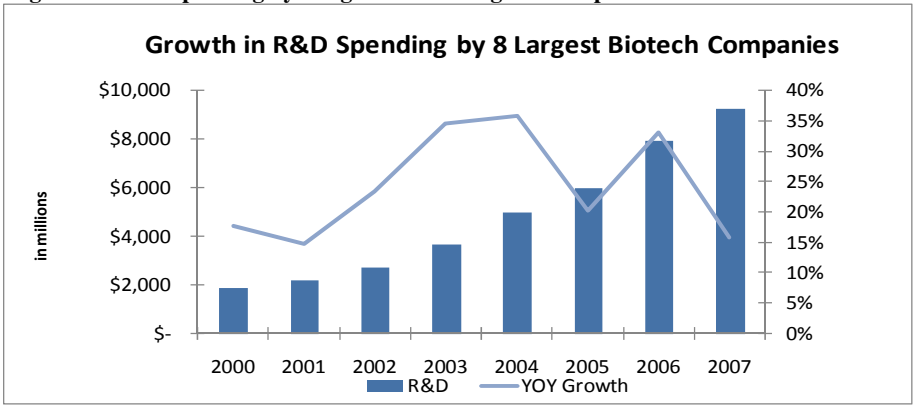
Investment Risks

Although we feel that Charles River is a buy due to strong fundamentals and a cheap price due to the recent market downturn, we cannot afford to overlook potential risks to our model that would negatively affect our recommendation.

Biotech Funding Environment Has Worsened Since 2007

Since 2007, the growth in biotech R&D spending has declined substantially from 33% in 2006 to 16% in 2007. In 2007, for the 8 largest biotech companies, the amount of long-term debt increased only by 8%, while in 2005 and 2006, long-term debt rose by 21% and 39% respectively. This trend can be attributed to difficult market conditions as it has become much more difficult to obtain funds to finance risky activities such as drug research and development. Small biotechnological firms are the hardest hit as due to limited number of drug candidates in their pipelines and lack of stable cash flows from sales, they rely heavily on venture capital to fund R&D activities.

Figure 8: R&D Spending by Large Biotechnological Companies



Source: Company Financials

The current stringent biotech funding environment represents a significant risk to Charles River Laboratories because the company generates 20% of its revenues from small biotechs. Stringent funding environment is offset by an increase in a number of partnerships between large pharmaceutical companies and biotechnological companies because of increased interest in the development of biologics.

Large Pharmaceutical Companies Refocus Toward Late-Stage Drug Development Outsourcing

Patent expirations make large pharmaceutical companies reprioritize their development pipelines towards late-development drug candidates to bring new drugs to market quicker to compensate for lost revenues from patent expirations. This represents a substantial risk for Charles River Laboratories, because the company focuses exclusively on early drug development, and delays in preclinical research could result in lower utilization levels. The latest conference calls for Charles River Laboratories and Covance highlighted a substantial study slippage and delays in the preclinical services segment.

According to Standard & Poors, 27 of the world's bestselling drugs (known as blockbusters, i.e. those with $1 billion or more in annual sales) have lost or will lose patent protection between 2007 and 2010. Most notably, Pfizer's Lipitor, with $12.9 billion in annual sales, will lose patent protection in 2010 (see Figure 28 for the list of major patent expiration in 2008-2009). Expiration losses are estimated at $20 billion in 2008. Loss of patents means higher competition from generics, lost market share, and lower revenues and profits as a consequence. According to IMS Health, in the 12 months through June 2007, US generic sales reached $34.4 billion, which represented 16% of US sales in that period, however, they accounted for 63% of the total number of prescriptions dispensed, up from 11% and 48%, respectively in 2002.

Pricing Pressures due to Cut-Cost Initiatives of Large Pharmaceutical Companies
Large pharmaceutical companies attempt to cut expenditures with tighter cost controls and more astute, centralized purchasing departments. As a result, there is more emphasis on price when negotiating terms of outsourcing agreements.

According to the most recent conference call, Charles River Laboratories experience study slippage and increased price pressure in European (Edinburgh) and Canadian offices, due to restructuring efforts of their clients. Management of Charles River Laboratories expects margin compressions of 3-4% in 2009 in its Research Models segment, and a possible margin compression of 4-6% in its Preclinical Services segment.

Excess Capacity

Charles River has expanded considerably in 2007 and 2008 completing a number of preclinical services facilities in Massachusetts, Nevada, Shanghai, and Sherbrooke (Quebec). Facilities construction in Ohio has been delayed, but the firm still may face excess capacity in 2009 due to study slippage. Lower utilization rates could potentially lead to margin compression of 2-3% in 2009.

Foreign Exchange Risk

According to Charles River management, the company's bottom line has been impacted between -30 and 400 basis points due to foreign exchange impact over the last 10 quarters. Depending on the strength of the dollar versus the Euro and Asian currencies over the next four quarters, net income could continue be positively impacted by as much as 100 bps or could fall by as much as 4% if the dollar strengthens.

Figure 9: Projected Income Statement
$ in millions

	Projected			Estimated		
	2008	**2009**	**2010**	**2011**	**2012**	**2013**
Research models and services	666.77	627.02	624.50	639.03	663.09	700.08
Preclinical services	645.96	691.34	735.24	851.57	971.96	1,108.66
Total Revenues	**1,312.73**	**1,318.36**	**1,359.75**	**1,490.59**	**1,635.04**	**1,808.73**
Research models and services	(372.72)	(388.75)	(374.70)	(377.03)	(391.22)	(406.04)
Preclinical services	(432.79)	(504.68)	(522.02)	(596.10)	(660.93)	(742.80)
Cost of Revenues	**(805.52)**	**(893.43)**	**(896.72)**	**(973.12)**	**(1,052.15)**	**(1,148.84)**
Research models and services	294.04	238.27	249.80	262.00	271.87	294.03
Preclinical services	213.17	186.66	213.22	255.47	311.03	365.86
Gross profit	**507.21**	**424.93**	**463.02**	**517.47**	**582.89**	**659.89**
Research models and services	(82.68)	(75.25)	(74.95)	(76.69)	(79.58)	(84.02)
Preclinical services	(89.14)	(91.98)	(97.82)	(113.29)	(129.31)	(147.50)
Unallocated corporate overhead	(55.29)	(55.52)	(57.27)	(62.78)	(68.86)	(76.18)
SG&A	**(227.11)**	**(222.75)**	**(230.04)**	**(252.77)**	**(277.75)**	**(307.69)**
Research models and services	211.37	163.02	174.85	185.31	192.28	210.01
Preclinical services	124.02	94.69	115.40	142.18	181.72	218.36
Unallocated corporate overhead	(55.29)	(55.52)	(57.27)	(62.78)	(68.86)	(76.18)
EBITDA	**312.10**	**298.78**	**334.03**	**378.37**	**432.21**	**494.89**
Research models and services	(25.60)	(24.21)	(24.11)	(24.67)	(25.60)	(27.03)
Preclinical services	(37.40)	(31.47)	(33.47)	(38.77)	(44.25)	(50.47)
Depreciation	**(63.00)**	**(55.68)**	**(57.58)**	**(63.44)**	**(69.85)**	**(77.50)**
Research models and services	(1.76)	0.90	0.89	0.91	0.95	1.00
Preclinical services	(29.24)	40.03	42.57	49.31	56.28	64.20
Research models and services	209.61	163.91	175.74	186.22	193.23	211.01
Preclinical services	94.78	134.72	157.98	191.49	238.00	282.56
Unallocated corporate overhead	(55.29)	(55.52)	(57.27)	(62.78)	(68.86)	(76.18)
Operating Income (EBIT)	**249.10**	**243.10**	**276.45**	**314.93**	**362.37**	**417.39**
Interest income	7.00	7.00	7.00	7.00	7.00	7.00
Interest expense	(13.00)	(29.78)	(29.78)	(29.78)	(29.78)	(29.78)
Other	0.11	0.10	0.10	0.10	0.11	0.11
Pre-Tax Income (EBT)	**243.21**	**220.43**	**253.77**	**292.25**	**339.69**	**394.72**
Income taxes	(68.10)	(66.13)	(76.13)	(87.68)	(101.91)	(118.42)
Income from continuing operations	**175.11**	**154.30**	**177.64**	**204.58**	**237.79**	**276.31**

Source: Company Documents, Student Estimates

Figure 10: Historical Income Statement
$ in millions

	2003	2004	2005	2006	2007	
Research models and services	428.20	476.70	503.20	515.00	577.20	
Preclinical services	185.50	247.60	490.20	543.40	653.40	
Total Revenues	**613.70**	**724.30**	**993.40**	**1,058.40**	**1,230.60**	
Research models and services	(245.90)	(269.80)	(287.60)	(300.90)	(327.90)	
Preclinical services	(134.20)	(165.70)	(316.00)	(350.90)	(424.60)	
Cost of Revenues	**(380.10)**	**(435.50)**	**(603.60)**	**(651.80)**	**(752.50)**	
Research models and services	182.30	206.90	215.60	214.10	249.30	
Preclinical services	51.30	81.90	174.20	192.50	228.80	
Gross profit	**233.60**	**288.80**	**389.80**	**406.60**	**478.10**	
Research models and services	(45.00)	(54.10)	(55.50)	(65.90)	(70.30)	
Preclinical services	(29.70)	(35.80)	(59.50)	(73.00)	(93.70)	
Unallocated corporate overhead	(15.50)	(27.00)	(43.00)	(41.90)	(53.50)	
SG&A	**(90.20)**	**(116.90)**	**(158.00)**	**(180.80)**	**(217.50)**	
Research models and services	153.50	170.47	179.80	168.50	200.50	
Preclinical services	30.10	56.59	135.90	144.10	166.50	
Unallocated corporate overhead	(15.50)	(27.00)	(43.00)	(41.90)	(53.50)	
EBITDA	**163.20**	**186.16**	**225.70**	**233.00**	**280.00**	
Research models and services	(16.20)	(17.67)	(19.70)	(20.30)	(21.50)	
Preclinical services	(8.50)	(10.49)	(21.20)	(24.60)	(31.40)	
Depreciation	**(24.70)**	**(28.16)**	**(40.90)**	**(44.90)**	**(52.90)**	
Research models and services	(0.80)	(0.20)	(0.30)	(0.50)	(1.90)	
Preclinical services	(4.10)	(13.70)	(46.70)	(37.20)	(31.60)	
Amortization of goodwill&other intgbls		**(4.90)**	**(13.90)**	**(47.00)**	**(37.70)**	**(33.50)**
Research models and services	136.50	152.60	159.80	147.70	177.10	
Preclinical services	17.50	32.40	68.00	82.30	103.50	
Unallocated corporate overhead	(15.50)	(27.00)	(43.00)	(41.90)	(53.50)	
Operating Income (EBIT)	**138.50**	**158.00**	**184.80**	**188.10**	**227.10**	
Interest income	1.80	3.26	3.70	6.80	9.70	
Interest expense	(8.50)	(11.72)	(24.30)	(19.40)	(18.00)	
Other	0.80	0.94	(0.20)	1.00	(1.50)	
Pre-Tax Income (EBT)	**132.60**	**150.48**	**164.00**	**176.50**	**217.30**	
Income taxes	(51.10)	(60.16)	(16.30)	(49.70)	(59.40)	
Minority interest	(1.40)	(1.58)	(1.80)	(1.60)	(0.50)	
Net Income	**80.10**	**88.75**	**145.90**	**125.20**	**157.40**	

Source: Company Documents

Figure 11: Balance Sheet
$ in millions

ASSETS	2008	2009	2010	2011	2012	2013
Cash And Equivalents (for ongoing operations)	294.8	287.6	296.7	325.2	356.7	394.6
ST investments						
Excess cash from operations		108.6	266.6	379.9	538.9	725.3
Total Cash & ST Investments	**294.8**	**396.2**	**563.3**	**705.1**	**895.6**	**1,119.9**
Accounts Receivable	237.5	231.7	239.0	262.0	287.3	317.9
Total Receivables	**237.5**	**231.7**	**239.0**	**262.0**	**287.3**	**317.9**
Inventory	99.3	110.1	110.5	119.9	129.6	141.6
Prepaid Exp.	27.9	31.0	31.1	33.7	36.5	39.8
Deferred Tax Assets, Curr.	0	0	0	0	0	0
Restricted cash	3.2	3.2	3.2	3.2	3.2	3.2
Other Current Assets	5.4	5.4	5.4	5.4	5.4	5.4
Total Current Assets	**668.1**	**777.6**	**952.4**	**1,129.3**	**1,357.7**	**1,627.7**
Gross Property, Plant & Equipment	1,459.2	1,528.8	1,598.5	1,713.1	1,827.8	1,942.4
Accumulated Depreciation	(467.1)	(522.7)	(580.3)	(643.8)	(713.6)	(791.1)
Net Property, Plant & Equipment	**992.1**	**1,006.1**	**1,018.2**	**1,069.4**	**1,114.2**	**1,151.3**
Long-term Investments	20.5	20.5	20.5	20.5	20.5	20.5
Goodwill	1,154.9	1,154.9	1,154.9	1,154.9	1,154.9	1,154.9
Other Intangibles	152.5	152.5	152.5	152.5	152.5	152.5
Deferred Tax Assets, LT	0	0	0	0	0	0
Deferred charges, LT	0	0	0	0	0	0
Other Long-Term Assets	35.2	35.2	35.2	35.2	35.2	35.2
Total Assets	**3,023.2**	**3,146.7**	**3,333.6**	**3,561.6**	**3,834.8**	**4,142.1**
LIABILITIES						
Accounts Payable	39.3	39.0	43.8	42.4	51.3	50.1
Accrued Exp.	129.0	143.1	143.6	155.9	168.5	184.0
Short-term Borrowings						
Curr. Port. of LT Debt	239.0	239.0	77.9	31.2	48.0	146.5
Curr. Income Taxes Payable	24.6	24.6	24.6	24.6	24.6	24.6
Unearned Revenue, Current	129.6	126.5	130.4	143.0	156.9	173.5
Def. Tax Liability, Curr.	0.6	0.6	0.6	0.6	0.6	0.6
Other Current Liabilities	0.1	0.1	0.1	0.1	0.1	0.1
Total Current Liabilities	**562.3**	**572.9**	**421.1**	**397.9**	**450.1**	**579.5**
Long-Term Debt	303.7	303.7	464.8	511.5	494.7	396.2
Minority Interest	0.8	0.8	0.8	0.8	0.8	0.8
Pension & Other Post-Retire. Benefits	47.9	47.9	47.9	47.9	47.9	47.9
Def. Tax Liability, Non-Curr.	71.5	71.5	71.5	71.5	71.5	71.5
Other Non-Current Liabilities	54.6	13.1	13.1	13.1	13.1	13.1
Total Liabilities	**1,040.9**	**1,010.0**	**1,019.3**	**1,042.8**	**1,078.2**	**1,109.1**
Common Stock	0.8	0.8	0.8	0.8	0.8	0.8

Additional Paid In Capital	1,959.2	1,959.2	1,959.2	1,959.2	1,959.2	1,959.2
Retained Earnings	352.6	506.9	684.6	889.2	1,126.9	1,403.2
Treasury Stock	(401.1)	(401.1)	(401.1)	(401.1)	(401.1)	(401.1)
Comprehensive Inc. and Other	70.9	70.9	70.9	70.9	70.9	70.9
Total Common Equity	**1,982.4**	**2,136.7**	**2,314.3**	**2,518.9**	**2,756.7**	**3,033.0**
Total Equity	**1,982.4**	**2,136.7**	**2,314.3**	**2,518.9**	**2,756.7**	**3,033.0**
Total Liabilities And Equity	**3,023.2**	**3,146.7**	**3,333.6**	**3,561.6**	**3,834.8**	**4,142.1**

Balance Sheet Assumptions	2008	2009	2010	2011	2012	2013
Assets						
Cash And Equivalents (for ongoing operations) (% sales)	22%	22%	22%	22%	22%	22%
Accounts Receivable (% sales)	18%	18%	18%	18%	18%	18%
Inventory (% COGS)	12%	12%	12%	12%	12%	12%
Prepaid Exp. (% COGS)	3%	3%	3%	3%	3%	3%
Liabilities						
Accounts Payable (% COGS)	5%	4%	5%	4%	5%	4%
Accrued Exp. (% COGS)	16%	16%	16%	16%	16%	16%
Unearned revenue (% sales)	10%	10%	10%	10%	10%	10%

Source: Company Documents, Student Estimates

Figure 12: Income Statement Assumptions

- In conjunction with the current stringent biotech funding environment and the near term focus on later stage drug development in North America and Europe, we project lower utilization rates for 2009-2010 due to study spillage and cancellations. Our model incorporates fairly conservative estimates for 2009 and 2010 gross margins. We project gross margins for the RMS segment of 62% in 2009 and 60% in 2010, while gross margins for the PCS segment are 73% and 71% respectively. By 2013, we project gross margins to align with the company's five year average of 58% for RMS segment and 67% for PCS segment.
- We project selling, administrative & general expenses margin at 3 year average (12% for RMS and 13.3% for PCS), effective tax rate of 30% (5 year average), and depreciation expense at 3 year average (3.86% for RMS and 4.55% for PCS).

Income Statement Support	**Estimated**	**Projected**				
($ in thousands, except per share data)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Research models and services	15.5%	-6.0%	-0.4%	2.3%	3.8%	5.6%
Preclinical services	-1.1%	7.0%	6.4%	15.8%	14.1%	14.1%
Total Revenue growth	**6.7%**	**0.4%**	**3.1%**	**9.6%**	**9.7%**	**10.6%**
% of Revenues						
Research models and services	55.9%	62.0%	60.0%	59.0%	59.0%	58.0%
Preclinical services	67.0%	73.0%	71.0%	70.0%	68.0%	67.0%
COGS						
Research models and services	12.40%	12.00%	12.00%	12.00%	12.00%	12.00%
Preclinical services	13.80%	13.30%	13.30%	13.30%	13.30%	13.30%
Unallocated corporate overhead	4.21%	4.21%	4.21%	4.21%	4.21%	4.21%
SG&A						
Effective Tax Rate	28.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Research models and services	(59.70)	(41.35)	(41.35)	(29.85)	(29.85)	(29.85)
Preclinical services	(150.30)	(28.30)	(28.30)	(84.80)	(84.80)	(84.80)
Capex	**(210)**	(70)	(70)	(115)	(115)	(115)
Research models and services	3.84%	3.86%	3.86%	3.86%	3.86%	3.86%
Preclinical services	5.79%	4.55%	4.55%	4.55%	4.55%	4.55%
Depreciation	**4.80%**	**4.22%**	**4.23%**	**4.26%**	**4.27%**	**4.28%**
Research models and services	0.26%	0.14%	0.14%	0.14%	0.14%	0.14%
Preclinical services	4.53%	5.79%	5.79%	5.79%	5.79%	5.79%
Amortization	**2.36%**	**3.10%**	**3.20%**	**3.37%**	**3.50%**	**3.60%**
Other expense	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%

Source: Company Documents, Student Estimates

Figure 13: Revenue Model
$ in millions

	2007	2008	2009	2010	2011	2012	2013
Total theraputics R&D	58800.00	60235.90	59696.78	59456.80	60839.77	63130.39	66651.80
Growth	*7%*	*2.4%*	*-0.9%*	*-0.4%*	*2.3%*	*3.8%*	*5.6%*
Preclinical & Phase I spending	14030.39	13826.84	12058.72	11770.03	12646.00	13515.78	14555.09
% of R&D spending	*24%*	*23%*	*20%*	*20%*	*21%*	*21%*	*22%*
Growth of preclinical spending	*8%*	*-4%*	*-12%*	*-2%*	*5%*	*3%*	*2%*
Pre-clinical CRO penetration	24.46%	27.36%	30.17%	32.88%	35.44%	37.85%	40.09%
Growth in penetration	*13.7%*	*11.9%*	*10.3%*	*9.0%*	*7.8%*	*6.8%*	*5.9%*
CRL Market share	19%	19%	19%	19%	19%	19%	19%
Pre-clinical & Phase I services revenue	**653.40**	**645.96**	**691.34**	**735.24**	**851.57**	**971.96**	**1108.66**
Growth	*20%*	*-1%*	*7%*	*6%*	*16%*	*14%*	*14%*
Total theraputics R&D	58800.00	60235.90	59696.78	59456.80	60839.77	63130.39	66651.80
Growth	*6.5%*	*2.4%*	*-0.9%*	*-0.4%*	*2.3%*	*3.8%*	*5.6%*
Total RMS Revenue	1200	1,229.3	1,218.3	1,213.4	1,241.6	1,288.4	1,360.2
CRL Market Share (%)	48.1%	51.5%	51.5%	51.5%	51.5%	51.5%	51.5%
Mkt share growth		7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CRL RMS Revenue	**577.20**	**666.77**	**627.02**	**624.50**	**639.03**	**663.09**	**700.08**
Growth	*12%*	*16%*	*-6%*	*0%*	*2%*	*4%*	*6%*
Total Revenue (CRL)	**1230.60**	**1312.73**	**1318.36**	**1359.75**	**1490.59**	**1635.04**	**1808.73**
Growth	*16.3%*	*6.7%*	*0.4%*	*3.1%*	*9.6%*	*9.7%*	*10.6%*

ASSUMPTIONS

1. **Total Therapeutics R&D**
   - We believe that total therapeutics R&D will experience a CAGR of 2% over the period 2009-2013. To project R&D growth we built a regression of historical R&D growth on EBITDA growth for 14 largest pharmaceutical companies. See Figure 15 for the full regression output.
2. **Preclinical Spending**
   - According to Goldman Sachs research, preclinical R&D represented 23% of total drug development R&D spending in 2004. We believe that preclinical R&D increased to 24% in 2007.[6]
   - We expect preclinical spending to decrease by 12% in 2009 because large pharmaceutical companies refocus on late stage drug development to commercialize more drugs in short-term to compensate for lost sales to generics. We also factored lower spending by biotechnological companies due to current stringent biotech funding environment. We believe that preclinical spending will increase in 2011-2013 as large pharmaceutical companies refocus back on early stage drug development and biotech funding improves.
3. **Penetration of Outsourced Preclinical Services**
   - We project that 40% of preclinical research will be conducted by outsourcing providers in 2013 (CAGR of 8%). Large pharmaceutical companies experience increased restructuring pressure to improve their drug pipelines and conserve margins. Outsourcing represents more efficient alternative to developing in-house.
   - To model the penetration of outsourced preclinical services we used the Gompertz curve. We believe that the penetration of outsourced preclinical services will slow down doing forward due to signs of improved profitability of large pharmaceutical companies as their cost-cutting initiatives starts to pay off. Average R&D/Sales ratio rose with CAGR of 2.2% in 2004-2007 compared to CAGR of 3.3% in 2000-2003, while average operating margin improved with CAGR of 1.4% in 2004-2007 compared to CAGR of -1.2% in 2000-2003.
   - According to Leerink Swann, 25% of preclinical research conducted by the bio-pharmaceutical industry in 2007 was outsourced.[7] According to industry reports, preclinical outsourcing enjoyed explosive growth in the mid to late 90s of more that 50% year over year.[8] We believe that no more than 60% of all pre-clinical research will be

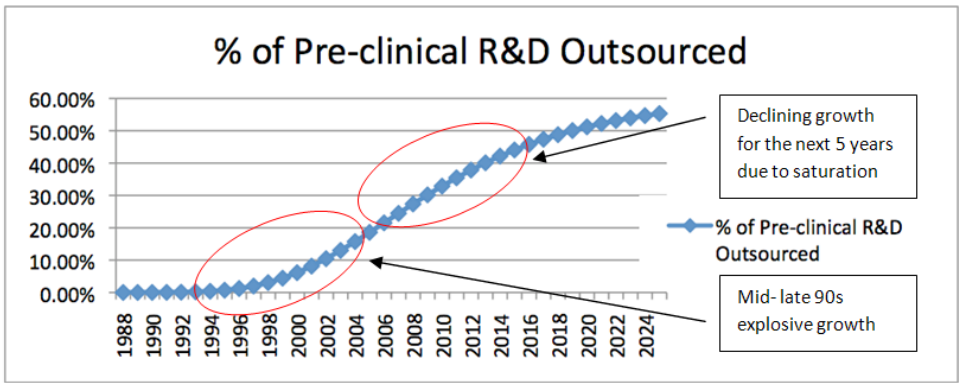
[6] A New Global Outsourcing Market Model to 2007, Goldman Sachs, September 2003.

[7] Contractors gain as more drug trials are outsourced, The International Herald Tribune, July 22, 2008

[8] Outsourcing in the bio-pharmaceutical industry – an Indian perspective

outsourced due to necessity to control sensitive IP and keep pre-clinical analysis close to company R&D programs.

Figure 14: Gompertz Curve



Source: Student Estimates

4. Charles River Laboratories Market Share

- *Research Models Segment*. We believe that CRL will be able to maintain its current market share of 48.1% in the next 6 years due to its leadership position, geographical reach (being close to customers yields benefits, since research animals cannot be transported over long distances), and expertise in production of disease-specific models like immunodeficient mice.
- *Preclinical Services Segment.* The current market share of 19% is sustainable due to the company's pool of renovated facilities across fifteen countries, its expertise in fast growing specialty therapeutics areas as such biologics and oncology drugs, and its expansion to China.

Figure 15: R&D Therapeutics Regression Model

We used EBITDA and R&D data for 2000-2007 for the following companies to project future R&D growth: ***Abbott Laboratories, Amgen Inc., AstraZeneca plc, Bristol-Myers Squibb Co., CSL Ltd, Eli Lilly & Co., Genzyme Corp., GlaxoSmithKline plc, Merck & Co. Inc., Novartis AG, Pfizer Inc., Roche Holding AG, Sanofi-Aventis, Schering-Plough Corp., Wyeth***

We chose these 14 companies using the following criteria:

1. The companies are in the top 25 Pharmaceutical and Biotech firms
2. The companies all made over 2.5 billion in EBITDA towards the end of our data series

Our approach was as follows

1. Since both EBITDA and R&D observations are non-stationary data series, we transformed both data series using natural log growth rates. This makes both data series stationary. Non-stationary data would lead to biased results and a falsely high R^2.
2. Since much R&D is determined before the year when actual expenditures are made, we lagged EBITDA growth by one year.
3. We then regressed R&D on EBITDA and obtained the following ANOVA output. The F statistic supports the regression, the R^2 is respectable for a regression on financial data, and the sign of the EBITDA Growth coefficient indicates that positive EBITDA growth is correlated with positive R&D growth.

Regression Statistics						
Multiple R	0.4211					
R Square	0.1773					
Adjusted R Square	0.1653					
Standard Error	0.135					
Observations	70					
	df	SS	MS	F	Significance F	
Regression	1	0.2681	0.2681	14.6595	0.00028	
Residual	68	1.2436	0.0182			
Total	69	1.5117				
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.057	0.024	2.383	0.0199	0.0092	0.1043
EBITDA Growth if EBITDA > 2500	0.487	0.127	3.829	0.00028	0.2331	0.7406

4. Using the equation R&D growth = .056782 + .486898*(EBITDA Growth) we projected the following R&D growth rates using analyst consensus EBITDA estimates for 2008-2013:

2008	4.60%
2009	4.50%
2010	5.90%
2011	7.90%
2012	7.60%
2013	8.50%

Note that the 2009 and 2010 figures incorporate a 10% and 5% EBITDA reduction versus analysts' consensus, due to combination of the current economic conditions and the fact that some of our estimates were not recently revised.

Source: Company Documents, Student Estimates

Figure 16: Working Capital Projections
$ in millions

Incremental Working Capital (% of sales)		**13.2%**				
	2008	**2009**	**2010**	**2011**	**2012**	**2013**
Incremental Revenue	82.13	5.64	41.38	130.85	144.45	173.69
Incremental Working Capital	2.97	0.74	5.45	17.24	19.03	22.88

Source: Company Documents, Student Estimates

Figure 17: DCF Model
$ in millions

Charles River Laboratories Discounted Cash Flow Analysis	Estimated 2008	Projected 2009	2010	2011	2012	2013
($ in thousands, except per share data)						
EBITDA	$ 312.1	$ 298.8	$ 334.0	$ 378.4	$ 432.2	$ 494.9
EBIT	$ 249.1	$ 243.1	$ 276.5	$ 314.9	$ 362.4	$ 417.4
Less: Cash Taxes @ 30.0%	$ (74.7)	$ (72.9)	$ (82.9)	$ (94.5)	$ (108.7)	$ (125.2)
Tax-effected EBIT	$ 174.4	$ 170.2	$ 193.5	$ 220.5	$ 253.7	$ 292.2
Plus: Depreciation	$ 63.0	$ 55.7	$ 57.6	$ 63.4	$ 69.8	$ 77.5
Less: Capital expenditures	$ (210.0)	$ (69.7)	$ (69.7)	$ (114.7)	$ (114.7)	$ (114.7)
Less: Change in net working capital	$ (3.0)	$ (0.7)	$ (5.5)	$ (17.2)	$ (19.0)	$ (22.9)
Unlevered free cash flow	**$ 24.4**	**$ 155.5**	**$ 176.0**	**$ 152.0**	**$ 189.8**	**$ 232.1**

WACC @ 9.5%
NPV of Unlevered free cash flow @ 9.5% $646.70

PERPETUITY GROWTH METHOD

Terminal Value		Undiscounted	Discounted
Perpetuity Growth Rate	2.0%	$ 3,968	$ 2,300
	2.5%	$ 4,271	$ 2,476
	3.0%	$ 4,622	$ 2,680

Total debt	542.71
Preferred equity	0
Minority interest	0.336
Cash	213
S/Out	67.167

	Target EV	3,123.08
DCF Range (Implied Enterprise Value)	$ 2,947–	$ 3,123
Equity Value [a]	$ 2,617–	$ 2,793
Implied Price per Share [b]	$ 38.96–	$ 41.58
	Target Price	**$41.58**

Weighted Average
48.78

EBITDA MULTIPLE METHOD

Terminal Value		Undiscounted	Discounted
EBITDA Multiple	10.0x	$ 4,949	$ 2,869
	12.0x	$ 5,939	$ 3,443
	14.0x	$ 6,928	4,017

DCF Range (Implied Enterprise Value)	$ 3,516–	$ 4,664
Equity Value [a]	$ 3,186–	$ 4,333
Implied Price per Share [b]	**$ 47.43–**	**$ 64.52**
	Target price	**$55.97**

Source: Company Documents, Student Estimates

Figure 18: WACC Calculations
$ in millions

WACC Calculations	
Debt+Equity	2,370.11
1. Debt component	
Long term debt	303.681
Short-term debt	239.03
Total debt	542.711
Pre-tax cost of LT debt	8.51%
Pre-tax cost of ST debt	3.92%
Weight (LT)	55.96%
Weight (ST)	44.04%
Pre-tax cost of total debt	6.49%
Effective tax rate	30.00%
After tax cost of debt	**4.54%**
2. Equity component	
Market capitalization	1,827.40
Risk free rate (Tbonds10yr)	3.83%
Beta (raw)	0.815
Beta adjusted	0.876
Market risk premium	0.08
Cost of equity	**10.99%**
WACC	**9.51%**

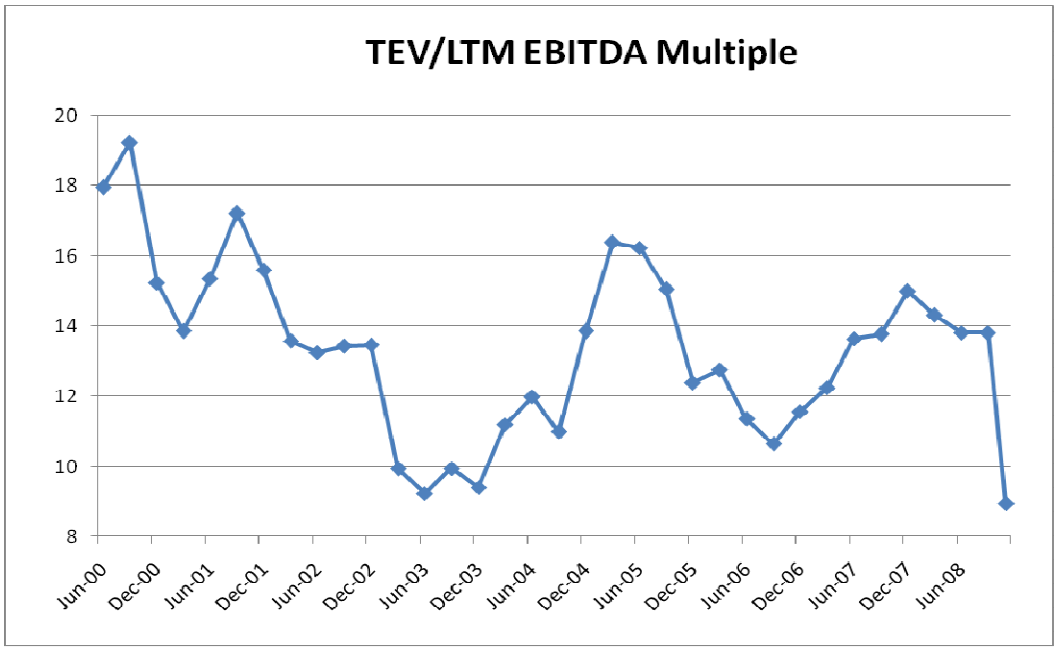
Source: Company Documents, Student Estimates

Figure 19: Sensitivities

	Perpetuity	EBITDA	Combined
Base Case	**$56.52**	**$42.13**	**$49.33**
WAAC + 2%	$50.72	$30.47	**$40.59**
WAAC + 4%	$45.57	$23.17	**$34.37**
WAAC + 6%	$41.01	$18.21	**$29.61**
LIBOR + 2%	$56.09	$41.09	**$48.59**
LIBOR + 4%	$55.66	$40.08	**$47.87**
LIBOR + 6%	$55.23	$39.12	**$47.18**
2009 Rev - 10%	$56.24	$41.85	**$49.04**
2009 Rev - 30%	$55.67	$41.27	**$48.47**
2009 Rev - 50%	$55.09	$40.70	**$47.90**
2009-2013 Rev - 10%	$50.08	$37.13	**$43.60**
2009-2013 Rev - 20%	$43.63	$32.12	**$37.87**
2009-2013 Rev - 30%	$37.18	$27.11	**$32.15**
2009-2013 Theraputics R&D Growth - 100 basis points	$53.70	$40.00	**$46.85**
2009-2013 Theraputics R&D Growth - 300 basis points	$48.36	$35.97	**$42.17**
2009-2013 Theraputics R&D Growth - 500 basis points	$43.42	$32.23	**$37.82**
Pre-clinical & Phase I services Marketshare - 200 basis points	$52.69	$39.23	**$45.96**
Pre-clinical & Phase I services Marketshare - 400 basis points	$48.86	$36.33	**$42.60**
Pre-clinical & Phase I services Marketshare - 600 basis points	$45.03	$33.43	**$39.23**
CRL RMS Marketshare - 200 basis points	$51.65	$38.34	**$45.00**
CRL RMS Marketshare - 400 basis points	$46.78	$34.55	**$40.66**
CRL RMS Marketshare - 600 basis points	$41.90	$30.76	**$36.33**

Source: Company Documents, Student Estimates

Figure 20: TEV/LTM EBITDA Multiple



Source: Company Documents, Student Estimates

Figure 21: Comparable Company Analysis
$ in millions

Company	Market / Ticker	Price 11/10/2008	Equity Value	Net Debt	Enterprise Value	Operating Profit Multiples LTM	2008E	2009E	Net Earnings Multiples LTM	2008E	2009E
Covance Ltd.	CVD	$ 41.0	$ 2,595.3	$(186.1)	$ 2,409.2	9.2x	8.7x	7.2x	12.8x	12.5x	10.4x
Life Sciences Research	LSR	9.1	115.7	45.2	160.9	4.1x	3.9x	3.3x	-9.1x	3.8x	3.0x
MDS, Inc.	MDZ	6.2	752.0	162.0	914.0	130.6x	14.5x	9.8x	-3.2x	14.5x	8.2x

Median	**9.2x**	**8.7x**	**7.2x**	**-3.2x**	**12.5x**	**8.2x**
Average	48.0x	9.0x	6.8x	0.2x	10.3x	7.2x
High	130.6x	14.5x	9.8x	12.8x	14.5x	10.4x
Low	4.1x	3.9x	3.3x	-9.1x	3.8x	3.0x

As of December 20, 2008

	Operating Profit			Net Earnings		
	LTM	2008E	2009E	LTM	2008E	2009E
Charles River Labortory Figure	$ 256.0	$ 249.1	$ 243.1	$ 177.0	$ 175.1	$ 154.3
Comparable Company Multiple	9.2x	8.7x	7.2x	9.0x	12.5x	8.2x
	2,362.1	2,167.0	1,753.1	1,593.0	2,191.2	1,267.9
Less: Net Debt	329.8	329.8	329.8	-	-	-
Charles River Labortory Equity Value	**2,032.3**	**1,837.2**	**1,423.3**	**1,593.0**	**2,191.2**	**1,267.9**
Shares Outstanding	70.9	70.9	70.9	70.9	70.9	70.9
Charles River Labortory Equity Value Per Share	**$ 28.66**	**$ 25.90**	**$ 20.07**	**$22.46**	**$ 30.90**	**$17.88**

	Composite Valuation (Weighted Average)		
	LTM	2008E	2009E
Operating Profit Based Value	$ 28.66	$ 25.90	$ 20.07
Earnings Based Value	22.46	30.90	17.88
Composite Per Share Value	**$ 25.56**	**$ 28.40**	**$ 18.97**

Source: Company Documents, Student Estimates

Figure 22: Charles River's Products and Services

Pathology Services are critical for the safety of a new drug as they used to identify compound-related changes within tissues, fluids and cells, as well as at the molecular level in research animal models. Pathology studies provide key "go/no go" decisions regarding the continuation of drug development.

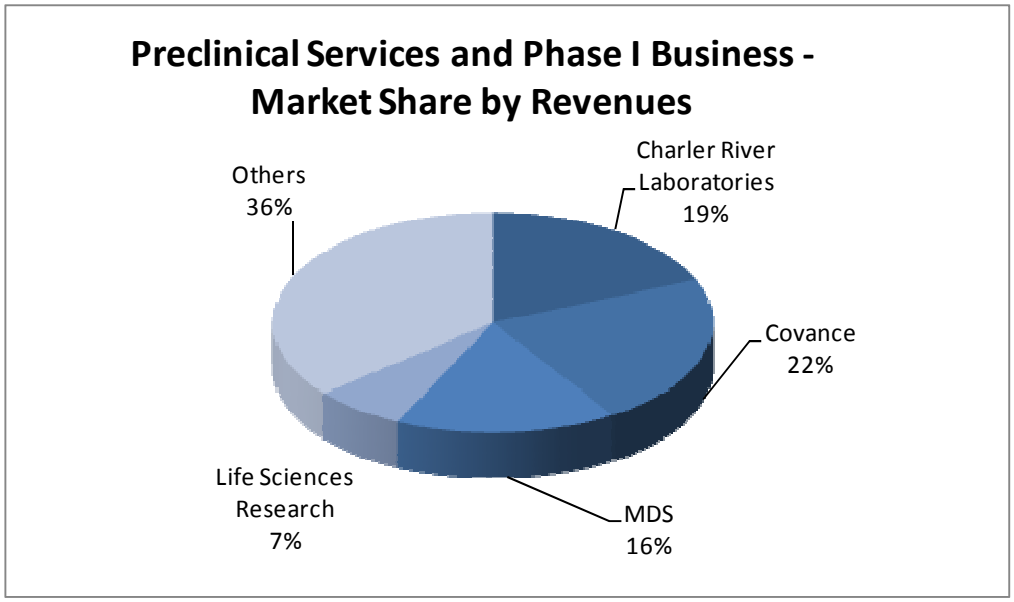
Toxicology studies are performed on animal models to understand the toxic effects that a compound has on an organism over a variety of doses and over various time periods, and focus on safety and potential harmful effects.

Bioanalytical Services and Pharmacokinetics. Bioanalytical services represent a number of drug safety testing procedures such as stability in the collected sample, the presence of anti-drug antibodies, and others. Pharmacokinetics refers to understanding what the body does to a drug once administered.

Animal Models Production and Services includes the commercial production and sale of research models, primarily rodents for use by researchers. Animal models include both standard strains and disease models such as those with compromised immune systems. Along with animal models themselves, companies offer supporting research models services such as *transgenic services* and *research model diagnostics*. Transgenic services include validating, maintaining, improving, breeding and testing research models purchased or created by customers on their own for biomedical research activities. Research animal diagnostics comprises of monitoring and analyzing the health and genetics of the research models used in their research protocols.

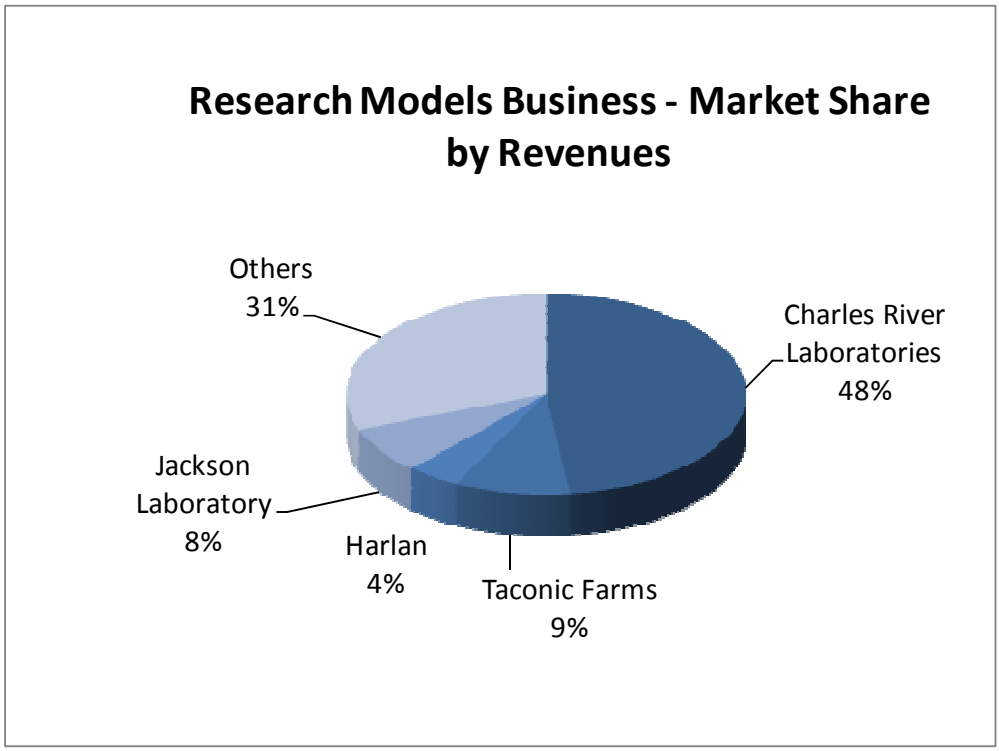
Source: Company Documents

Figure 23: Preclinical Services Market Share Breakdown



Source: Company Documents, Student Estimates

Figure 24: Research Models Market Share Breakdown

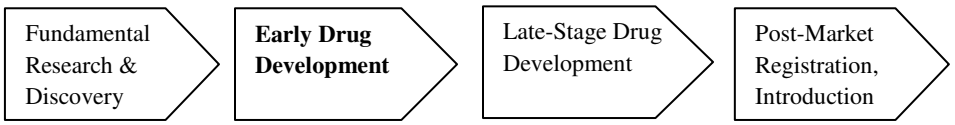


Source: Company Documents, Student Estimates

Figure 25: Drug Development Process

The drug discovery and development process is extremely lengthy and expensive. In 2001, the Tufts Center for the Study of Drug Development estimated the cost of developing a new drug to be $802 million. It takes an estimated 15 years to bring a single new drug to the market. Since 1964, the time from synthesis of the molecule to marketing approval has more than doubled, from 6.5 years to 15 years. For every 5,000 to 10,000 potential drug candidates that enter the discovery research stage, only about 2.5 to 5% will make it through to the preclinical phase. Of that percentage, only 0.05 to 0.1% will enter the clinical trial testing phase. The result of those 5,000 to 10,000 candidates is just one regulatory-approved drug to market.

The Drug Discovery and Development Process consists of four stages:



Fundamental Research & Discovery is the earliest stage in drug introduction process, and is directed toward identification, screening and selection of a lead compound for future drug development. Discovery activities typically last from 4-6 years. Drug Development activities are directed at demonstrating the safety, tolerability, and clinical efficacy of the selected drug candidates. Development can take up to 10-15 years and consists of two stages: early stage and late stage.

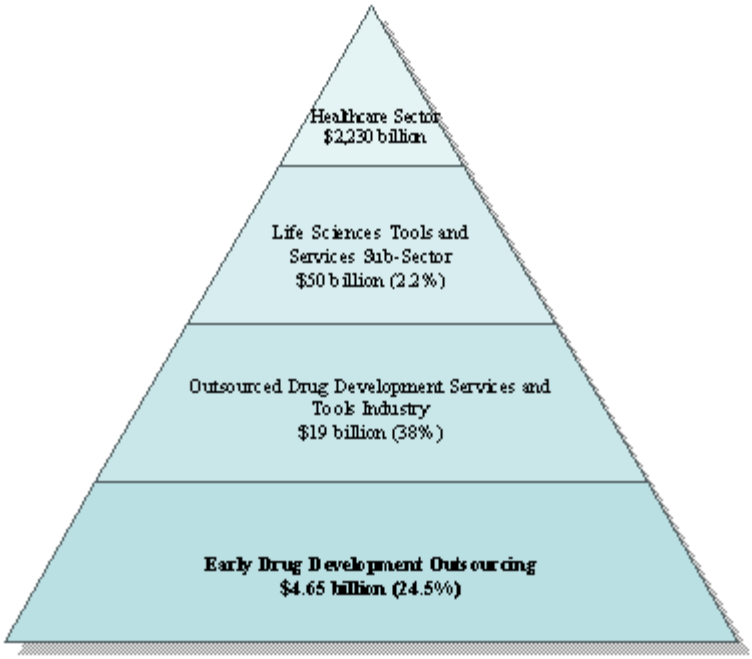
Early Stage Drug Development stage comprises of preclinical services and *Phase I* clinical services. For preclinical services, a drug candidate is tested *in vitro* (typically on a cellular or sub cellular level in a test tube or multi petri plate) and *in vivo* (in animals) to support subsequent human trials. Pre-clinical research lasts one to three years. After successful preclinical testing, the new drug can be tested on humans. Phase I trials involve testing the drug on a limited number of healthy individuals, typically 20 to 80 people, to determine the drug's basic safety data, including tolerance, absorption, metabolism and excretion. This phase lasts an average of six months to one year.

Late-Stage Drug Development stage comprises of Phase II-IV human trials. *Phase II* trials involve testing a small number of volunteer patients, typically 100 to 200 persons, who suffer from the targeted disease or condition, to determine the drug's effectiveness and how different doses work. This phase lasts an average of 1-2 years. *Phase III* trials involve testing large numbers of patients, typically several hundred to several thousand people, to verify efficacy on a large scale, as well as long- term safety. Phase III is broken into two segments: *Phase IIIa* focuses on regulatory issues and is conducted at a variety of sites. Once Phase IIIa is complete, the drug's sponsor submits all pre-clinical, pharmacologic, efficacy, and safety data to local regulatory agencies. Information on the drug's composition and plans for producing, packaging, and labeling are also included. The resulting regulatory review can take up to 30 months to complete, sometimes more, depending on the country and type of drug. Meanwhile, Phase IIIb trials begin. Involving a large number of patients, *Phase IIIb* focuses on issues such as cost-effectiveness and efficacy compared with approved drugs in the same therapeutic class or that are used to treat the same disease. After the product has received regulatory approval, Phase IV trials begin. These address the safety and efficacy of uses beyond the drug's original application, test different dosage strengths and formulations - for example, a sustained release capsule or a flavored solution for children - or confirm extra-clinical benefits such as cost-effectiveness or improved quality of life. Phase IV trials also collect and analyze long-term safety data on patients treated in normal practice.

Post-Market Registration and Introduction. After the successful completion of all clinical phases, a company submits to the FDA a new drug application, or NDA, for a drug, or a biologic license application, or BLA, for a biologic, requesting that the product be approved for marketing. The NDA/BLA is a comprehensive, multivolume filing that includes, among other things, the results of all preclinical and clinical studies. The FDA's review can last from a few months to several years, depending on the drug and the disease state that is being treated. Drugs that successfully complete this review may be marketed in the United States.

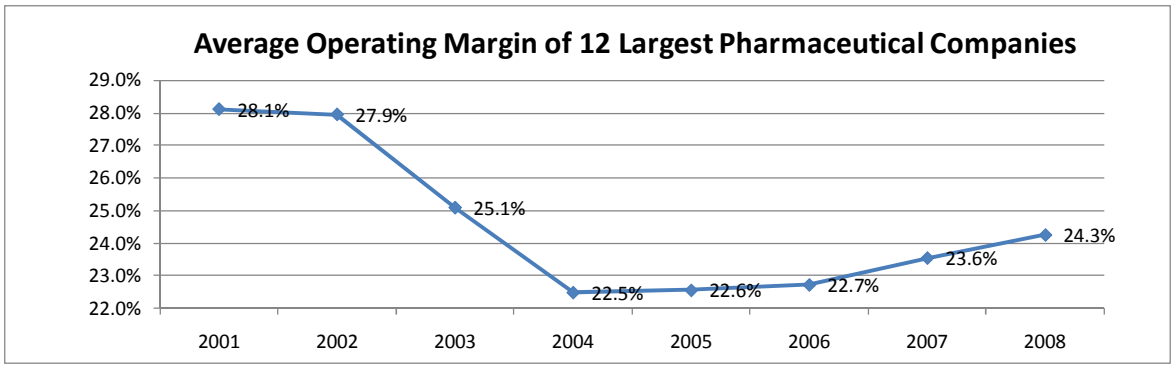
Source: Association of Clinical Research Organizations (ACRO)

Figure 26: Sector Breakdown



Source: Capital IQ, Student Estimates

Figure 27: Average Operating Margins of 12 Largest Pharmaceutical Companies



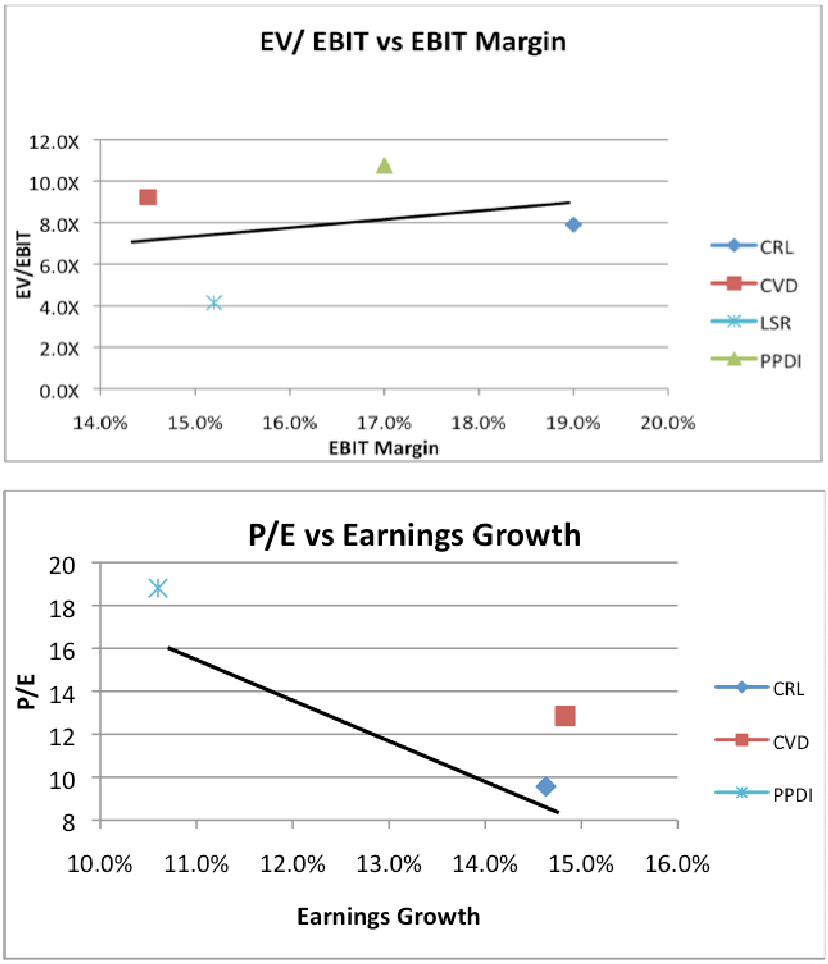
Source: Company Documents, Student Estimates

Figure 28: Patent Expirations in 2008-2009

Major Potential Patent Expirations (2008-2009)			
	Brand Name	Company	2006 Sales (Bil $)
2008	Risperdal	Janssen	2,544
	Fosamax	Merck	1,971
	Zyrtec	Pfizer	1,457
	Depakote	Abbott	769
2009	Requip	GlaxoSmithKline	327
	Revacid	Novartis	3,590
	Topamax	Orth-McNeil	1,822
	Lamictal	GlaxoSmithKline	1,681
	AcipHex	Eisai	1,296
	Imitrex	GlaxoSmithKline	1,207

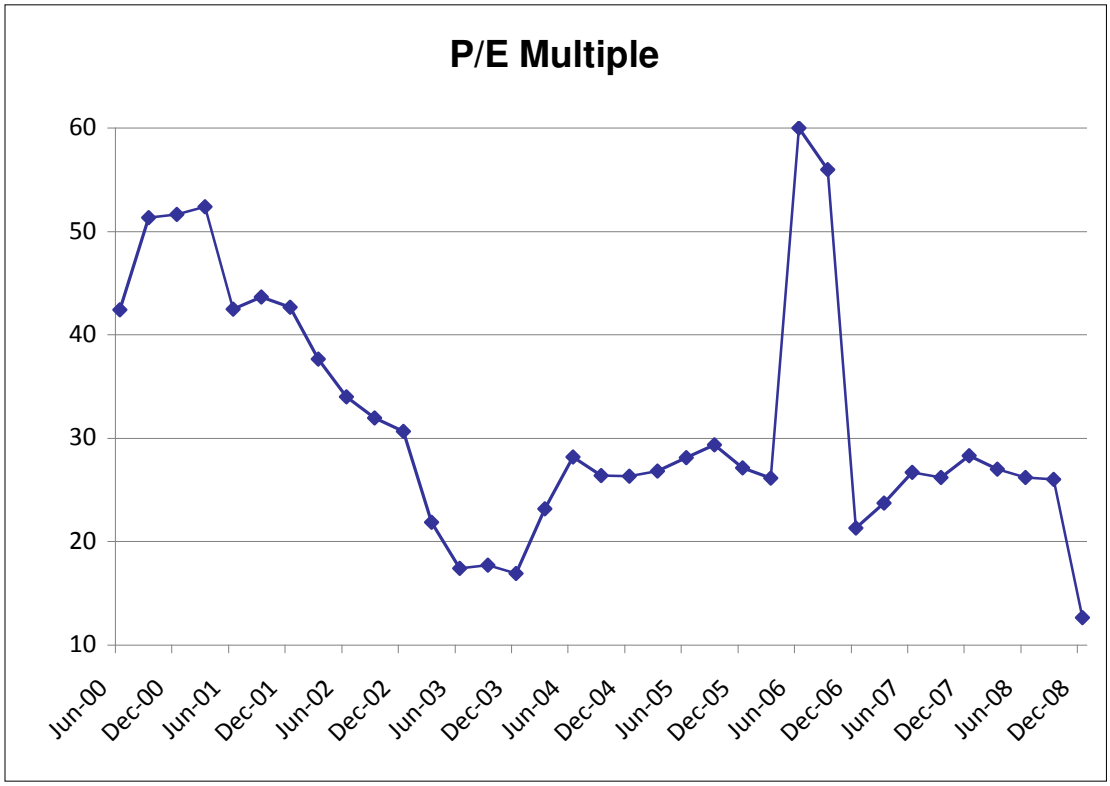
Source: Standard & Poors Pharmaceutical Industry Report, 2008

Figure 29: Cross-Sectional Analysis



Source: Company Documents, Student Estimates

Figure 30: Historical P/E Multiple



Source: Company Documents, Student Estimates

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