November 2004

Contact	Phone
New York	
Michael Levesque	1.212.553.1653
Dia Martin	
Chris Hibbard	
Patrick Finnegan	
Pamela Stumpp	
Europe	
Jean-Michel Carayon	49.69.707.30.700
Jacques Ouazana	
Eric de Bodard	
Tokyo	
Shinsuke Tanimoto	81.3.5408.4000
Takahiro Morita	

Global Pharmaceutical Industry

Executive Summary

Globally, Moody's rates 36 pharmaceutical companies, with approximately $100 billion of rated debt and credit facilities. Our ratings reflect Moody's opinion as to the relative competitive position, profitability and financial strength of each of these companies. The primary goals of this rating methodology are to improve transparency and to frame and demonstrate global consistency in our ratings approach.

This methodology in not an exhaustive treatment of all factors reflected in Moody's ratings of pharmaceutical companies, but should enable the reader to understand the key considerations and financial ratios used by Moody's in determining a rating in this sector.

Highlights of this report include:

- an overview of the current rating trends and market risk factors for the global pharmaceutical industry;
- a description of our rating methodology and six primary factors which we believe drive credit quality in this sector;
- application of the rating framework to 18 sample pharmaceutical companies; and
- a summary of our results.

Industry Overview

CURRENT INDUSTRY RATINGS TRENDS AND MARKET RISK FACTORS

Moody's ratings for pharmaceutical companies are among the highest of any industry group. This is attributable in part to rising pharmaceutical utilization generally unrelated to economic cycles, high margins on "brand" products, and future growth opportunities from pipeline products, which may satisfy currently unmet medical needs. Over the last several years, however, several large U.S. pharmaceutical companies – namely Bristol-Myers Squibb and Schering -Plough Corporation – have faced credit downgrades related primarily to patent expirations on core products, and the inability to fully offset this exposure with new product introductions. The ratings trend among European and Japanese companies has been considerably more stable, resulting primarily from lower exposure to patent expirations thus far. All companies operating in the pharmaceutical industry face high event risk related to product safety, government investigations, and a changing regulatory environment. Merck's recent safety-related withdrawal of Vioxx from the global market highlights these risks.

Moody's rating outlook for large U.S. pharmaceutical companies is negative, while the outlook remains stable for European and Japanese pharmaceutical companies. Our rating outlook for large U.S. biotech companies is positive due to our belief that the risk of generic entrants is low, and our outlook for specialty U.S. pharmaceutical companies is mixed, owing to the diverse business models and strategies of these companies. Among the specific issues shaping Moody's ratings of the global pharmaceutical industry are the following:

Patents – Many of the large U.S. companies and the three or four very large European companies are becoming increasingly exposed to scheduled patent expirations and patent challenges from generic manufacturers, contributing to our negative outlook. More locally-focused European companies and Japanese companies currently face lower exposure to patent risk because the generic drug markets are not as well established in these regions – particularly in Japan. However, as Japanese and mid-sized European companies expand their presence in the more lucrative U.S. market, they will become more exposed to this risk.

Pipelines – The lifeblood of every pharmaceutical company is to develop and commercialize innovative products that can improve public health. There are many significant areas of unmet medical need, and pharmaceutical companies have many interesting compounds in their pipelines. For U.S. companies, however, we generally expect that near term launches from the "late-stage" pipeline do not sufficiently offset the risks of patent expirations and challenges. Over the near-term, we are somewhat less concerned about the robustness of Japanese and European companies' pipelines because of their lower exposure to patent risk. Over time, however, it will remain critical for all global players to demonstrate efficiency and productivity from their R&D efforts.

Pricing – Pricing constraints in the large U.S. market were historically benign, but flexibility is eroding. The consolidation of the payer sector (health benefits companies and pharmacy benefit managers) has created entities that significantly influence the discounts and rebates pharmaceutical manufacturers must offer to successfully launch a new product. Pricing pressures are not a new challenge in Japan and Europe because the governments have already played a large role in pricing for quite some time.

Competition – Many therapeutic areas are becoming increasingly crowded, and Moody's expects that intensifying competition will also negatively influence pricing over time. Also, we believe it will become increasingly difficult to launch blockbuster products in well-penetrated product categories (cholesterol, depression, allergy) unless they can demonstrate very significant efficacy or safety advantages over existing therapies, which are continuing to shift from branded products to generic products as their patents expire.

KEY RATING ISSUES GOING INTO NEXT DECADE

Moody's anticipates that these risk factors will continue into the next decade, and that the potential for upward rating pressure on the industry is somewhat limited, especially since the ratings remain relatively high. We believe that the key long term dynamics facing the pharmaceutical industry are:

R&D Challenges – As a greater number of blockbuster patents expire each year through the end of the decade, the importance of pharmaceutical R&D will become even more critical. The challenge will compound as more blockbuster products go generic, pinching revenues and margins. Taking the cholesterol market as an example, we believe that once existing blockbuster cholesterol drugs become generic, any future product entrants will need to demonstrate very clear and highly significant advantages over these products, which will eventually be available at very low cost. We expect that large pharmaceutical companies – regardless of their geography – will have to increasingly de-emphasize "me too" products. We find it interesting that Merck, Pfizer and Takeda all have late stage pipeline products for insomnia – an area with "me too" characteristics and somewhat less innovative in Moody's view because the success of

Sanofi-Aventis' Ambien, as well as the availability of a variety of over-the-counter products. Over time, we expect that companies will need to increasingly diversify away from traditional categories into non-traditional areas involving proteins and other biological therapeutics. We believe one of the larger challenges in analyzing the industry is to assess the effectiveness of R&D, and that effectiveness cannot be measured by R&D expenditures, but by the result of product launches.

Medicare Drug Bill – The passage of the Medicare Drug Improvement and Modernization Act of 2003 (MMA) presents one of the most important legislative changes ever to the pharmaceutical industry. We believe pharmaceutical companies could achieve near-term benefits from this legislation due to improved patient access and greater utilization of pharmaceuticals. However, the longer term impact of this legislation will not be known until details are ironed out prior to actual implementation of the program. In addition, we believe the future funding needs of this program, combined with a growing U.S. national deficit, could cause these benefits to be short-lived. As Japanese and European companies increase their exposure to the U.S. market, we believe that they too will face these same opportunities and uncertainties.

Consolidation and Globalization – The combination of all of the risk factors outlined above may lead to continued consolidation in an industry which remains relatively fragmented, with no single company generating more than 10% of global pharmaceutical sales. However, the advantages of the mega-merger strategy over the "go-it-alone" approach are yet unproven. Smaller companies may face challenges in competing with larger entities that have much larger R&D budgets as well as physician sales forces. However, large mergers have not demonstrated increased productivity in R&D, and the integration of two large organizations can be challenging.

Rating Methodology

Moody's rating methodology for pharmaceutical companies includes the following steps:

1. IDENTIFICATION OF KEY RATING FACTORS

We identify six key rating factors that are critical to the credit analysis of global pharmaceutical companies. These factors are:

1. Quality of the existing product portfolio
2. Ability to offset patent expirations with new product development
3. Capital structure and cash coverage of debt
4. Profitability and return
5. Cash flow relative to debt levels
6. Exposure to loss contingencies

These factors: (1) are critical to the credit analysis of pharmaceutical companies, and (2) can be quantified and benchmarked across the global pharmaceutical industry. Several additional factors often considered by rating committees are described at the end of this report.

2. MEASUREMENT OF THE SIX KEY RATING FACTORS

We present a set of metrics that can be used to quantify the six key rating factors. Our metrics comprise both financial statement measurements (e.g. cash flow relative to debt) as well as other measurements that cannot be derived directly from financial statement analysis (e.g. as exposure to patent expirations) but which can be approximated based on additional research.

In some cases we describe more than one measurement for a factor. For example, we use five different metrics to measure Factor 1 (the quality of the existing product portfolio). In total, the rating methodology incorporates 15 separate measurement criteria spanning the six key rating factors.

3. MAPPING TO THE RATING CATEGORIES

For each of the 15 measurement criteria, we describe "appropriate" ranges for Moody's broad rating categories, i.e. Aaa, Aa, A, Baa, Ba, B and Caa. For example, we identified what level of free cash flow to debt is generally acceptable for a triple-A credit versus a double-A credit, as well as what level of product concentration risk is acceptable for a single-A credit versus a Baa credit. In this report, we specify these ranges for each of the 15 measurement criteria.

4. ILLUSTRATION OF THE RATING METHODOLOGY

To illustrate the global rating methodology, we have applied the methodology to 18 representative credits that span the three broad geographic regions – Europe, Japan, and the United States. For each of the selected companies, we show the 15 measurements which represent the six key rating factors, and how the indicated rating for each measurement compares to the company's actual rating.

We identified companies that have rating metrics that are two or more full rating bands higher or lower than their existing rating categories (e.g. an A-rated company with a metric more appropriate for the Aaa-rating category). These companies are identified as favorable and unfavorable outliers on each of our rating factor tables. We also comment on geographic and other differences which may help to explain the outliers.

The Six Key Rating Factors

FACTOR 1: QUALITY OF EXISTING PHARMACEUTICAL PRODUCT PORTFOLIO

Why It Matters

The quality of a company's currently marketed pharmaceutical products provides the key revenue stream necessary to reinvest in R&D, the returns expected by shareholders, and the excess cash flow to build a strong balance sheet and make capital investments.

In assessing product portfolio quality, the most relevant attributes are scale, market position, and revenue diversity. Scale is critically important as pharmacy benefit managers and managed care organizations increasingly influence market shares in the U.S. market. We believe that larger companies operating in multiple therapeutic categories may have better formulary negotiating leverage with these payers. In addition, a strong market position, a well-recognized brand name, and longer term health-outcomes data can help mitigate the impact of new competition in a product category. Revenue diversity also helps to reduce the risk associated with competition, patent expirations, or other unforeseen issues such as product safety.

The selected measures do not take into account geographic diversification, which is more difficult to quantify and map to rating categories. However, diversification across countries can lessen overall risk, as patent expirations and patent challenges may vary by country.

Positive Rating Implications

- Large revenue base
- Large number of blockbuster and market leader products
- Products that are leaders in their therapeutic category
- Diversity across therapeutic categories and across product franchises
- Limited concentration in revenues by product

Measurement Criteria

The metrics which Moody's analysts consider in rating pharmaceutical companies include:

a) Total revenue
b) Number of blockbuster products (> U.S. $1 billion)
c) Number of major therapeutic categories
d) Top 3 products as a % of total revenue
e) Top 5 products as a % of total revenue

Moody's acknowledges that the "blockbuster" model may change over time as companies focus on under-penetrated areas of medical need. However, we believe the number of blockbuster products in a company's current portfolio is a good proxy for market position.

Rating Mapping

The expected value for key rating metrics at each rating band, other things equal, are as follows:

FACTOR 1: PRODUCT PORTFOLIO	Aaa	Aa	A	Baa	Ba	B
a) Revenue	$20B +	$10-20B	$5-10B	$2-$5B	$1-$2B	<$1B
b) # Blockbusters	6+	3-5	1-2	0	0	0
c) Therapeutic Categories	8+	6-7	4-5	2-3	1	N/A
d) Concentration (top 3 products)	<30%	30%-35%	35%-40%	40%-50%	50%-75%	>=75%
e) Concentration (top 5 products)	<40%	40%-50%	50%-60%	60%-70%	70%-80%	>=80%

Results

FACTOR 1: QUALITY OF EXISTING PHARMACEUTICAL PRODUCT PORTFOLIO

Company	Current Rating	2003** Revenue $U.S. Mil.	Indicated Rating Category	# of $1 Billion Products	Indicated Rating Category	# of Major Therapeutic Categories	Indicated Rating Category	Top 3 Products % Total	Indicated Rating Category	Top 5 Products % Total	Indicated Rating Category
Johnson & Johnson	Aaa	$41,862	"Aaa"	7	"Aaa"	12	"Aaa"	20%	"Aaa"	26%	"Aaa"
Novartis	Aaa	$24,864	"Aaa"	3	"Aa"	8	"Aaa"	18%	"Aaa"	26%	"Aaa"
Pfizer	Aaa	$45,188	"Aaa"	9	"Aaa"	9	"Aaa"	37%	"A"	47%	"Aa"
Takeda	P-1	$10,249	"Aa"	4	"Aa"	5	"A"	37%	"A"	59%	"A"
Astellas	Aa2	$8,599	"A"	2	"A"	6	"Aa"	34%	"Aa"	46%	"Aa"
AstraZeneca	Aa2	$18,849	"Aa"	4	"Aa"	6	"Aa"	39%	"A"	51%	"A"
GlaxoSmithKline	Aa2	$36,398	"Aaa"	8	"Aaa"	9	"Aaa"	24%	"Aaa"	32%	"Aaa"
Merck	Aa2*	$22,486	"Aaa"	5	"Aa"	10	"Aaa"	46%	"Baa"	66%	"Baa"
Eli Lilly	Aa3	$12,583	"Aa"	3	"Aa"	5	"A"	44%	"Baa"	57%	"A"
Yamanouchi	Aa3	$4,869	"Baa"	1	"A"	3	"Baa"	55%	"Ba"	60%	"Baa"
Bristol-Myers Squibb	A1	$20,894	"Aaa"	2	"A"	5	"A"	30%	"Aa"	38%	"Aaa"
Daiichi	A1	$3,054	"Baa"	0	"Baa"	3	"Baa"	42%	"Baa"	50%	"A"
Eisai	A1	$4,719	"Baa"	2	"A"	3	"Baa"	60%	"Ba"	67%	"Baa"
Amgen	A2	$7,868	"A"	5	"Aa"	3	"Baa"	63%	"Ba"	93%	"B"
Chugai	A2	$2,175	"Baa"	0	"Baa"	3	"Baa"	41%	"Baa"	53%	"A"
Fujisawa	A2	$3,730	"Baa"	1	"A"	3	"Baa"	40%	"Baa"	48%	"Aa"
Schering AG	A2	$5,574	"A"	0	"Baa"	4	"A"	28%	"Aaa"	39%	"Aaa"
Chiron	Baa1*	$1,766	"Ba"	0	"Ba"	4	"A"	40%	"Baa"	49%	"Aa"
Schering-Plough	Baa1	$8,334	"A"	1	"A"	5	"A"	37%	"A"	49%	"Aa"
Wyeth	Baa1	$15,851	"Aa"	3	"Aa"	6	"Aa"	35%	"A"	46%	"Aa"

* Ratings are under review for possible downgrade

** Revenues are 2003 revenues for European and U.S. companies, FYE 3/31/04 revenues for Japanese companies

Yamanouchi and Fujisawa are merging to become Astellas. Data for Astellas on a pro forma basis

= Favorable Outlier

= Unfavorable Outlier

Observations

Generally, Moody's existing ratings correlate very well with the ratings indicated by the mapping criteria for scale and market position, but not for product concentration. The highest rated companies tend to have large scale, strong market positions as measured by the number of blockbuster products, and presence in many different therapeutic categories. Favorable outliers for scale and market position include Schering-Plough and Wyeth; the product portfolios of these companies are reasonably strong. However, a combination of other rating issues – exposure to loss contingencies (Factor 6) in Wyeth's case, and poor margins and cash flow (Factors 4 and 5) in Schering-Plough's situation – are the major offsetting characteristics which are reflected in their current ratings. Although most Japanese companies are low outliers for size and market position, we believe these factors are offset by greater stability in the Japanese pharmaceutical market as well as the strength of their balance sheets.

For product concentration, most of the outliers are unfavorable outliers, particularly for U.S. companies. Japanese and European companies generally exhibit better revenue diversity than their U.S. counterparts. In the case of Amgen, its A2 rating has been limited to a great extent by product concentration, since its financial metrics alone (Factors 3, 4 and 5) would indicate a higher rating level. Examples of other attributes that help to offset product concentration include very strong capital structures (in the case of Merck and Esai), and the expectation that a very strong pipeline (Eli Lilly) will help to reduce product concentration risk over time.

We continue to note, however, that high product concentration can lead to some instability in ratings. Merck's withdrawal of Vioxx, for instance, has created rating pressure, and the rating of Eli Lilly would face pressure if the company does not prevail in the Zyprexa patent challenge.

FACTOR 2: ABILITY TO OFFSET PATENT EXPOSURES WITH NEW PRODUCTS FROM PIPELINE

Why It Matters

The loss of marketing exclusivity following a patent expiration can have a dramatic effect on a pharmaceutical company's financial profile. The impact on profits and cash flow is often much more pronounced than the impact on revenue because products near the end of their life cycle may have very high gross margins after many years of price increases. In addition, marketing expenses (which are more heavily weighted to recently launched products) and R&D costs are not easily scaled back following a patent expiration. The ability to offset these lost revenues by commercializing products from the pipeline is critical to the long term viability of the organization.

Positive Rating Implications

Limited exposure to patent expirations & challenges

Robust pipeline of innovative compounds and limited reliance on "me-too" products

Diversification into non-traditional areas, e.g. biotech

Late stage products (Phase III and beyond)

Measurement

Moody's uses the following metrics to quantify a company's patent exposure and challenges, and to assess the strength of its late stage pipeline:

a) % of 2003 revenues facing patent risk through 2007

b) % of 2003 revenues facing patent challenges from generic drug companies

c) Moody's estimated "peak sales" of compounds in Phase III pipeline, as % of 2003 revenues

Pipeline evaluations are the most subjective part of pharmaceutical company analysis because of the uncertainty related to timing of approval and launch, pricing, labeling (narrow vs. broad, safety warnings), the impact of related products going generic, and the impact of future market entrants from other companies' pipelines. Peak product sales may not occur until 8-10 years after launch, and that even some Phase III products may be three to four years away from launch. The approach outlined below primarily values new chemical entities, using both internally-developed and in-licensed products in the late stage pipelines. The rating methodology values line extensions of existing products on a case-by-case basis, since line extensions frequently do not lead to significant incremental sales.

We project peak sales from each product in the late stage pipeline (and contrast our estimations to those from other market participants when available) and assess peak sales relative to each company's current revenue base. For this analysis we are not including products in Phase II or earlier, since the probability of success is much less certain. Moody's rating analysis typically considers other criteria such as the percentage of sales achieved by products launched in the last 3 years, the organic growth rates, and the growth potential of the therapeutic areas covered by the company; we believe, however, that the three measures selected provide a reasonable assessment of the ability of the pipeline to offset patent expiration risk. We have included in these calculations two very recent product launches – Merck/Schering-Plough's Vytorin, and Eli Lilly's Cymbalta, because these products are not reflected in 2003 sales and because we see high commercial potential for both products.

Our calculations for exposure to patent expirations include all revenues of the drug if its patent is being challenged by at least one generic drug company. The calculation is not probability-adjusted, although in practice Moody's evaluates these situations on a case-by-case basis.

Rating Mapping

The expected value for key rating metrics at each rating band, other things equal, are as follows:

FACTOR 2: PIPELINE VS. PATENTS	Aaa	Aa	A	Baa	Ba	B
a) Exposure to sched. patents through 2007	<15%	15%-20%	20%-25%	25%-30%	30%-35%	35%-40%
b) Exposure to pat. challenges through 2007	<25%	25%-30%	30%-35%	35%-40%	40%-50%	>50%
c) Quality of pipeline: Peak Sales	30%+	25%-30%	20%-25%	15%-20%	10%-15%	<10%

Results

FACTOR 2: ABILITY TO OFFSET PATENT EXPIRATIONS & CHALLENGES WITH PIPELINE

Company	Current Rating	Patent Exp. Thru 2007**	Indicated Rating Category	Patent Exp. + Challenges Thru 2007**	Indicated Rating Category	Pipeline: Peak Sales**	Indicated Rating Category
Johnson & Johnson	Aaa	17%	"Aa"	23%	"Aaa"	9%	"B"
Novartis	Aaa	2%	"Aaa"	6%	"Aaa"	32%	"Aaa"
Pfizer	Aaa	33%	"Ba"	59%	"B"	40%	"Aaa"
Takeda	P-1	20%	"Aa"	32%	"A"	8%	"B"
Astellas	Aa2	9%	"Aaa"	9%	"Aaa"	16%	"Baa"
AstraZeneca	Aa2	14%	"Aaa"	22%	"Aaa"	27%	"Aa"
GlaxoSmithKline	Aa2	11%	"Aaa"	31%	"A"	21%	"A"
Merck*	Aa2*	28%	"Baa"	39%	"Baa"	29%	"Aa"
Eli Lilly	Aa3	6%	"Aaa"	48%	"Ba"	40%	"Aaa"
Yamanouchi	Aa3	17%	"Aa"	17%	"Aaa"	18%	"Baa"
Bristol-Myers Squibb	A1	32%	"Ba"	44%	"Ba"	21%	"A"
Daiichi	A1	21%	"A"	28%	"Aa"	22%	"A"
Eisai	A1	0%	"Aaa"	39%	"Baa"	10%	"Ba"
Amgen	A2	10%	"Aaa"	35%	"Baa"	65%	"Aaa"
Chugai	A2	24%	"A"	24%	"Aaa"	13%	"Ba"
Fujisawa	A2	0%	"Aaa"	0%	"Aaa"	14%	"Ba"
Schering AG	A2	9%	"Aaa"	9%	"Aaa"	26%	"Aa"
Chiron*	Baa1*	8%	"Aaa"	8%	"Aaa"	37%	"Aaa"
Schering-Plough	Baa1	12%	"Aaa"	12%	"Aaa"	56%	"Aaa"
Wyeth	Baa1	11%	"Aaa"	13%	"Aaa"	25%	"Aa"

* Ratings are under review for possible downgrade
** As a percentage of 2003 revenues

= Favorable Outlier

= Unfavorable Outlier

Observations

As indicated in the chart above, higher-rated companies currently have relatively high exposure to patent expirations and patent challenges, and lower-rated companies tend to have lower exposure. Moody's is concerned about the high level of exposure facing many of the large U.S. companies, and this is the foremost factor in our negative rating outlook for this segment of the global pharmaceutical industry. In contrast, Japanese and European companies have lower exposure to this risk, which contributes to the more stable outlook in those sectors. In addition, patent expirations can be less detrimental in certain geographies. In the Japanese market, for instance, generic products are not popular and price erosion of branded products is not very substantial even after the emergence of generics. As Japanese companies expand their presence in the U.S. market, however, their results will become more affected by patent expirations.

When patent challenges from generic manufacturers are included, negative outliers include Pfizer and Eli Lilly, both of which face challenges on their key products (Lipitor and Zyprexa respectively). Moody's currently ascribes a very low probability to the generic companies prevailing, although it is impossible to rule out this type of event risk.

Favorable outliers for patent risk generally have other credit issues constraining their ratings. Schering AG, for example, has more limited scale than higher-rated entities (Factor 1), and its free cash flow has been constrained because of moderate margins, relatively high capital expenditures and an increase in working capital (Factors 4 and 5). Schering-Plough and Wyeth, meanwhile, face operating issues we have already highlighted.

The pipeline valuation data shown above is based on "peak" sales rather than near-term sales (i.e., sales through 2007). Using a more near-term outlook would show that many companies are not likely to have adequate pipeline sales to offset patent expirations over the next several years. A longer-term outlook, however, may provide a better picture of the ultimate potential of each pipeline, although we wish to re-emphasize the inherent difficulty in making these estimates. The pipeline valuations show that on a relative basis, Japanese companies have weaker pipelines than their European and U.S. counterparts. Currently, this risk is offset by the lower exposure to patent expirations faced by Japanese companies. Eventually, we believe that if pricing erosion and severe competition in Japan continues, weak pipelines could begin to pressure some ratings.

FACTOR 3: CAPITAL STRUCTURE AND CASH COVERAGE OF DEBT

Why It Matters

Although not an ideal measure, debt to capital – when adjusted for certain debt-like items – is a simple way to compare the capital structure of companies operating within an industry. It also provides some insight into the company's financial policies, including its tolerance for debt levels.

Healthy liquidity, including large cash and investment balances, factor heavily in our high ratings of pharmaceutical companies because of the tremendous financial flexibility provided by this accumulation of past profits. We also believe that these investments buffer many of the operating risks of the industry and permit most companies to absorb setbacks such as litigation payments without affecting their credit ratings.

It should be noted that Moody's Liquidity Risk Assessments provide more comprehensive analyses of liquidity than can be obtained from simple ratio analysis, and these assessments are incorporated into our long term credit ratings.

Positive Rating Implications

- Conservative capital structure
- Cash in excess of debt levels
- Cash as a large portion of assets
- Investments in high-quality, highly-liquid securities

Measurement

a) Adjusted debt / Adjusted capital. Our metric is based on gross debt levels, and we adjust both debt and capital to reflect the following items: unfunded pension obligations, off-balance sheet debt (e.g. synthetic leases), hybrid instruments, and operating leases (for the purpose of simplification using 8 x rent in this analysis).

b) Adjusted cash & investments / Adjusted debt. This metric assesses the level of cash and investments relative to adjusted debt. We adjust reported cash and investments to reflect taxes and liquidity, as follows:

For these metrics and all other financial statement metrics, we used U.S. GAAP financial statements where available, in order to make the numbers as comparable as possible.

For U.S. companies, we apply a 30% haircut to cash, short term investments and long term fixed income investments, primarily to reflect the incremental U.S. taxes that would be due if earnings were repatriated from foreign subsidiaries. (For Amgen and Chiron, we used 15% because these companies have accumulated substantially less profit in their foreign subsidiaries.) To a lesser extent the haircut also represents potential market losses in the event that investments needed to be liquidated over a very short time horizon. Moody's may revise these assumptions in the future depending on a company's ability to access off-shore profits under the American Jobs Creation Act of 2004.

For European and Japanese companies, we apply a 15% haircut to short term and long term fixed income investments, to capture potential market losses if there is a need to liquidate them over a very short time horizon. We do not apply a haircut to cash balances, based on our expectation that European and Japanese companies generally do not face the same tax issues as their U.S. counterparts.

For this analysis we do not give credit for equity investments, although on a case-by-case basis these investments may be taken into account in rating assessments, depending on the liquidity of the security.

Rating Mapping

The expected value for key rating metrics at each rating band, other things equal, are as follows:

FACTOR 3: BALANCE SHEET & CASH COV.	Aaa	Aa	A	Baa	Ba	B	Caa
a) Capital structure (Adj. Debt/Capital)	<20%	20%-25%	25%-30%	30%-40%	40%-50%	50%-75%	>=75%
b) Cash Coverage of Debt (Adj. Cash/Debt)	>75%	60%-75%	50%-60%	40%-50%	25%-40%	10%-25%	<10%

Results

FACTOR 3: BALANCE SHEET STRENGTH AND CASH COVERAGE OF DEBT

Company	Current Rating	Adj. Debt / Adj. Capital	Indicated Rating Category	Adj. Cash & Investments / Adj. Debt	Indicated Rating Category
Johnson & Johnson	Aaa	22.5%	"Aa"	84.5%	"Aaa"
Novartis	Aaa	21.3%	"Aa"	123.3%	"Aaa"
Pfizer	Aaa	22.3%	"Aa"	55.8%	"A"
Takeda	P-1	4.3%	"Aaa"	1740.2%	"Aaa"
Astellas	Aa2	13.3%	"Aaa"	324.4%	"Aaa"
AstraZeneca	Aa2	6.3%	"Aaa"	153.4%	"Aaa"
GlaxoSmithKline	Aa2	20.7%	"Aa"	38.8%	"Ba"
Merck*	Aa2*	33.7%	"Baa"	72.5%	"Aa"
Eli Lilly	Aa3	44.6%	"Ba"	60.4%	"Aa"
Yamanouchi	Aa3	12.5%	"Aaa"	374.0%	"Aaa"
Bristol-Myers Squibb	A1	49.8%	"Ba"	36.1%	"Ba"
Daiichi	A1	18.0%	"Aaa"	209.8%	"Aaa"
Eisai	A1	13.9%	"Aaa"	302.8%	"Aaa"
Amgen	A2	13.9%	"Aaa"	127.2%	"Aaa"
Chugai	A2	23.0%	"Aa"	78.6%	"Aaa"
Fujisawa	A2	14.7%	"Aaa"	243.9%	"Aaa"
Schering AG	A2	31.3%	"Baa"	59.8%	"A"
Chiron*	Baa1*	37.7%	"Baa"	67.3%	"Aa"
Schering-Plough	Baa1	37.5%	"Baa"	73.4%	"Aa"
Wyeth	Baa1	54.7%	"B"	44.6%	"Baa"

* Ratings are under review for possible downgrade

= Favorable Outlier

= Unfavorable Outlier

Observations

The debt to capital figure tends to be lower for companies that have made large acquisitions in the past that were financed by issuing equity securities.

In addition, geographic differences play a key role in the outliers related to capital structure and cash coverage of debt. Japanese companies employ minimal levels of debt in their capital structures and have accumulated very large cash and investment balances. Fewer cash-financed acquisitions, limited shareholder dividends and share repurchases, and a more benign litigation environment in Japan are the key factors explaining such large differences in capital structure relative to European and U.S. pharmaceutical companies. However, low leverage is offset by more limited product portfolios (Factor 1) and much lower profitability (Factor 4) in the Japanese pharmaceutical industry.

Among unfavorable outliers are several large U.S. companies, including Eli Lilly on adjusted debt to capital, and Bristol-Myers Squibb on both measurements. Together with the cash flow metrics (Factor 5), we believe that these issues could place pressure on the ratings of some U.S. companies. As we have noted, however, the American Jobs Creation Act of 2004 could result in a significant improvement in these measurement criteria depending on the magnitude of repatriated funds and the usage.

FACTOR 4: PROFITABILITY AND RETURN

Why It Matters

High profit margins and returns are a key determinant of success in the pharmaceutical industry. Successful companies have been able to command favorable pricing of their products, and have sustained high operating margins even after allowing for R&D investment as well as the high costs associated with marketing pharmaceutical products. Although lower R&D expenses would result in higher profit margins over a short term, a pharmaceutical company will not be able to sustain this strategy over time.

Several issues have constrained the profit margins for a number of pharmaceutical companies, particularly the large U.S. players. One issue is the inability to sustain a portfolio of blockbuster patents, which depresses gross margins. Another is the growth of R&D spending, especially for those companies whose projects are skewed towards large Phase III trials, which are extremely costly. Finally, the marketing expenses associated with the initial launch of block-

buster products are very large; typically, it may take 2-3 years after launch for a new product to make a positive contribution to the bottom line.

Positive Rating Implications

High margins and returns

Stable or rising margins and returns

Measurement Criteria

a) EBITA / Revenue

b) ROE

This methodology incorporates one margin measurement and one return measurement. Our margin metric uses EBITA instead of EBIT in order to normalize the operating earnings for companies that made major acquisitions and are amortizing large intangible assets related to patents, trademarks and other identifiable intangibles. Our return on average equity metric is based on net income, unadjusted for special charges. Although the tables below show historical results (generally the year ending December 31, 2003), rating decisions are also based on financial projections and forward looking information.

Rating Mapping

The expected value for key rating metrics at each rating band, other things equal, are as follows:

FACTOR 4: PROFIT & RETURN	Aaa	Aa	A	Baa	Ba	B	Caa
a) EBITA Margin	>25%	20%-25%	15%-20%	10%-15%	5%-10%	0%-5%	<0%
b) ROE	>15%	12%-15%	8%-12%	5%-8%	0-5%	<0%	N/A

Results

FACTOR 4: PROFIT & RETURN

Company	Current Rating	EBITA Margin	Indicated Rating Category	ROE	Indicated Rating Category
Johnson & Johnson	Aaa	28.0%	"Aaa"	29.0%	"Aaa"
Novartis	Aaa	26.0%	"Aaa"	11.1%	"A"
Pfizer	Aaa	29.7%	"Aaa"	9.2%	"A"
Takeda	P-1	34.4%	"Aaa"	18.0%	"Aaa"
Astellas	Aa2	17.4%	"A"	10.2%	"A"
AstraZeneca	Aa2	21.9%	"Aa"	7.1%	"Baa"
GlaxoSmithKline	Aa2	33.6%	"Aaa"	7.0%	"Baa"
Merck*	Aa2*	43.8%	"Aaa"	40.4%	"Aaa"
Eli Lilly	Aa3	30.1%	"Aaa"	28.4%	"Aaa"
Yamanouchi	Aa3	19.8%	"A"	9.1%	"A"
Bristol-Myers Squibb	A1	26.5%	"Aaa"	33.5%	"Aaa"
Daiichi	A1	14.3%	"Baa"	6.9%	"Baa"
Eisai	A1	16.6%	"A"	13.2%	"Aa"
Amgen	A2	42.8%	"Aaa"	12.0%	"A"
Chugai	A2	20.6%	"Aa"	12.4%	"Aa"
Fujisawa	A2	14.4%	"Baa"	12.3%	"Aa"
Schering AG	A2	16.5%	"A"	17.4%	"Aaa"
Chiron*	Baa1*	23.7%	"Aa"	10.0%	"A"
Schering-Plough	Baa1	9.1%	"Ba"	-1.2%	"B"
Wyeth	Baa1	28.2%	"Aaa"	23.5%	"Aaa"

* Ratings are under review for possible downgrade

= Favorable Outlier

= Unfavorable Outlier

Observations

The data above indicate that margins and returns vary considerably based on geography. Most large U.S. and European companies enjoy very high profit margins, underpinning the high ratings across the industry. Typically, the greater the portion of a company's business in the U.S. market – regardless of whether the company is based in the U.S., Europe or Japan – the higher the margin. Return on equity figures can be somewhat more volatile because of special charges such as those related to restructuring and litigation, as well as the immediate write-off of acquired in-process R&D for companies making acquisitions. The EBITA margins of Japanese companies are notably lower, resulting from a high mix of revenue from the Japanese market, where the government plays a major role in limiting the pricing flexibility of drug companies. Currently, healthy balance sheets (Factor 3) as well as the stability of the Japanese market help to offset the lower margin levels of Japanese pharmaceutical firms, although we have some concerns that market stability could erode due to severe competition and continuous pressure on healthcare expenditures.

Merck demonstrated the highest margins and return in the global industry in 2003, offset recently by litigation and product loss risk. Although Schering-Plough is a high outlier for several of the other rating factors, the profit and return data above highlight the major challenges the company has faced, stemming in large part from the loss of marketing exclusivity for Claritin in late 2002.

The ROE figure tends to be lower for companies that have made large acquisitions in the past, including many of the European companies as well as Pfizer. In part, this stems from the accounting treatment of such acquisitions, in which the values of assets of the acquired company were written up to fair value on the acquisition date (and where goodwill is recognized in purchase business combinations). We also believe that for European names, ROE is not a primary focus as a management objective, and that for Japanese companies, fewer share repurchases have resulted in larger equity bases compared to U.S. companies. For these reasons, we may underweight the ROE factor in the ratings of European and Japanese companies.

FACTOR 5: CASH FLOW GENERATION RELATIVE TO DEBT LEVELS

Why It Matters

Cash flow directly impacts the financial flexibility a company has with respect to repaying its debt. Where heavily derived from products close to patent expirations, that flexibility is weakened. Unlike earnings measures, operating cash flow takes into account working capital uses (which may be increasing considerably for a company growing and launching new products), and, in the free cash flow number, the need for capital reinvestment and the payment of shareholder dividends. We do note, however, that the free cash flow metric shown below fails to take into account share repurchases, which must be factored in separately.

Positive Rating Implications

Strong or improving cash flow to debt metrics

Measurement

a) Cash flow from operating activities / Adjusted debt. Our operating cash flow number is cash flow from operating activities, usually taken directly from the statement of cash flows.

b) Free cash flow / Adjusted debt. Moody's free cash flow number is cash flow from operating activities less capital expenditures less dividends.

In accordance with previously published rating methodologies, Moody's adjusts reported debt levels for the following items: unfunded pension obligations, off-balance sheet debt (e.g. synthetic leases), hybrid instruments, and operating leases (for the purpose of simplification using 8 x rent in this analysis). In this analysis we have not "netted" a company's reported cash balances; rather, the strength of a company's balances is considered in Factor 3. As with the profit and return measures, the metrics shown below are historical (based on 2003 cash flow statements and year-end 2003 balance sheets), whereas Moody's rating decisions incorporate projections of cash flow and debt levels.

Rating Mapping

The expected value for key rating metrics at each rating band, other things equal, are as follows:

FACTOR 5: CASH FLOW	Aaa	Aa	A	Baa	Ba	B	Caa
a) Operating cash flow / Debt	>75%	50%-75%	40%-50%	25%-40%	15%-25%	5%-15%	<5%
b) Free cash flow / debt	>40%	30%-40%	25%-30%	15%-25%	10%-15%	<10%	<0%

Results

FACTOR 5: STRENGTH OF CASH FLOW RELATIVE TO DEBT LEVELS

Company	Current Rating	CFO / Total Adjusted Debt	Indicated Rating Category	FCF / Total Adjusted Debt	Indicated Rating Category
Johnson & Johnson	Aaa	133.2%	"Aaa"	70.2%	"Aaa"
Novartis	Aaa	70.2%	"Aa"	38.0%	"Aa"
Pfizer	Aaa	53.1%	"Aa"	21.4%	"Baa"
Takeda	P-1	376.7%	"Aaa"	237.5%	"Aaa"
Astellas	Aa2	42.9%	"A"	17.7%	"Baa"
AstraZeneca	Aa2	150.2%	"Aaa"	29.8%	"A"
GlaxoSmithKline	Aa2	54.3%	"Aa"	18.5%	"Baa"
Merck*	Aa2*	77.3%	"Aaa"	29.9%	"A"
Eli Lilly	Aa3	45.7%	"A"	6.2%	"B"
Yamanouchi	Aa3	41.6%	"A"	20.2%	"Baa"
Bristol-Myers Squibb	A1	39.0%	"Baa"	9.6%	"B"
Daiichi	A1	50.6%	"Aa"	28.4%	"A"
Eisai	A1	105.0%	"Aaa"	54.4%	"Aaa"
Amgen	A2	107.5%	"Aaa"	66.6%	"Aaa"
Chugai	A2	-41.5%	"Caa"	-64.4%	"Caa"
Fujisawa	A2	45.0%	"A"	13.6%	"Ba"
Schering AG	A2	45.1%	"A"	6.4%	"B"
Chiron*	Baa1*	29.8%	"Baa"	19.8%	"Baa"
Schering-Plough	Baa1	18.2%	"Ba"	-14.6%	"Caa"
Wyeth	Baa1	34.4%	"Baa"	6.6%	"B"

* Ratings are under review for possible downgrade

= Favorable Outlier

= Unfavorable Outlier

Observations

The favorable outliers for both operating cash flow and free cash flow are Amgen and Chugai. Amgen's ratings have been constrained at A2 due to very heavy product concentration risk (Factor 1), although our positive rating outlook recognizes the strength of Amgen's cash flow and its improving revenue diversity. Eisai also generates strong cash flow, but its product concentration and pipeline are major constraints for its rating.

There are a number of low outliers for cash flow. In particular, the erosion of free cash flow in recent years of companies such as Eli Lilly, Bristol-Myers Squibb, Schering Plough and Wyeth has been a concern. In the first three cases, blockbuster patent expirations are the key explanation for pronounced deterioration in free cash flow – typically well in excess of the impact on revenues and reported earnings. Relatively high dividends and capital expenditures have also constrained the free cash flow metrics of these companies. Inability to cause improvements in free cash flow may create rating pressure for these companies.

Other U.S. companies – namely Merck and Pfizer – are also low outliers for free cash flow, resulting more from high denominators (debt levels) than from low numerators (free cash flow). In fact, free cash flow has continued to be quite robust for both Merck and Pfizer. We believe the free cash flow to debt metrics may improve for both Merck and Pfizer because these companies have much greater discretion over items such as share repurchases, which influences their mix of cash and debt levels. Both companies have been repurchasing shares at a more modest rate in 2004, which should result in lower debt. In addition, the American Jobs Creation Act of 2004 (often referred to as the Homeland Investment Act) may provide an opportunity for U.S. companies to use repatriated funds to reduce gross debt levels, which would have a favorable impact on these ratios.

European companies tend to have cash flow to debt metrics consistent with our indicated rating mapping, although we note that GlaxoSmithKline has weak free cash-flow for its rating level, due to its high dividend pay-out.

Several of the Japanese companies are also outliers on the low side. However, relatively modest levels of cash flow are currently well offset by conservative financial policies and balance sheets. If these companies were to issue large amounts of debt – which we believe is unlikely in the near term – some rating pressure might develop.

FACTOR 6: EXPOSURE TO LITIGATION AND OTHER LOSS CONTINGENCIES

Why It Matters

Litigation exposures have been rising in recent years, particularly those related to product safety and sales and marketing practices. The cost of product safety litigation remains one of the primary credit considerations, contributing to Moody's recent downgrade of Merck and also incorporated into the Baa1 rating and negative rating outlook of Wyeth. Product-safety litigation is particularly worrisome, since these liabilities may represent large amounts that are difficult to predict. Merck's Vioxx-related liabilities are highly uncertain given the early stages of the litigation, resulting in very wide estimates.

Meanwhile, companies recently paying moderate amounts to resolve sales and marketing investigations include Pfizer, Astra-Zeneca, Bristol-Myers Squibb, and Schering-Plough.

Positive Rating Implications

Low or limited exposure to litigation

Limited number of unresolved product safety cases

Commitment to ethics

Measurement

Our measurement criterion is an estimate of the potential cost of resolving outstanding litigation, relative to shareholders' equity. We note that this type of measurement is extremely subjective, because companies are unlikely to take reserves for litigation until the costs become probable and can be reasonably estimated, which may not occur until the situation is very close to being resolved. In addition, details surrounding the exact nature of the legal matter are often not disclosed.

To make estimates, Moody's reviews the various types of exposures, and considers similar types of exposures that have already been resolved for other pharmaceutical companies. For pricing or marketing investigations, our estimates consider the revenue of the product being investigated. For product safety cases, our estimates consider the number of patients potentially affected, the size of potential claims, and the revenue of the product. We also include cost estimates for other types of exposures, such as tax disputes, shareholder lawsuits, and SEC investigations. We have generally not included an offset for insurance coverage because these amounts are rarely disclosed, may be minimal, and claims may be contested by the insurers.

Rating Mapping

The expected value for key rating metrics at each rating band, other things equal, are as follows:

FACTOR 6: LITIGATION & CONTINGENCIES	Aaa	Aa	A	Baa	Ba	B	Caa
a) Exposure % of Equity	<5%	5%-10%	10%-15%	15%-20%	20%-25%	25%-50%	>50%

Results

FACTOR 6: EXPOSURE TO LITIGATION AND OTHER LOSS CONTINGENCIES

Company	Current Rating	Potential Loss Contingencies % of Equity	Indicated Rating Category
Johnson & Johnson	Aaa	5-10%	"Aa"
Novartis	Aaa	<5%	"Aaa"
Pfizer	Aaa	<5%	"Aaa"
Takeda	P-1	<5%	"Aaa"
Astellas	Aa2	<5%	"Aaa"
AstraZeneca	Aa2	<5%	"Aaa"
GlaxoSmithKline	Aa2	10-15%	"A"
Merck	Aa2*	25-50%	"B"
Eli Lilly	Aa3	5-10%	"Aa"
Yamanouchi	Aa3	<5%	"Aaa"
Bristol-Myers Squibb	A1	10-15%	"A"
Daiichi	A1	<5%	"Aaa"
Eisai	A1	<5%	"Aaa"
Amgen	A2	5-10%	"Aa"
Chugai	A2	<5%	"Aaa"
Fujisawa	A2	<5%	"Aaa"
Schering AG	A2	5-10%	"Aa"
Chiron	Baa1*	5-10%	"Aa"
Schering-Plough	Baa1	15-20%	"Baa"
Wyeth	Baa1	>50%	"Caa"

* Ratings are under review for possible downgrade

= Favorable Outlier

= Unfavorable Outlier

Observations

There are two unfavorable outliers in the methodology for loss contingencies. For Merck, we have included approximately $2 billion of disputed taxes and interest payments – the outcome of which is difficult to predict – as well as preliminary estimates for Vioxx-related safety lawsuits – also highly difficult to predict because this litigation is in its earliest stages. In Wyeth's case, we have assumed not more than $5 billion of additional diet-drug litigation payments, which Wyeth's current rating is able to accommodate, all other factors being equal.

Although not an outlier, GlaxoSmithKline also faces tax disputes, which we have included in the analysis. On a relative basis, Japanese companies are less exposed to legal issues than U.S. and European pharmaceutical firms.

Other Rating Considerations

Moody's considers a large number of quantitative factors in addition to these key metrics, though we believe that in most cases the metrics presented here will enable a rough approximation of our view on the quantitative aspects of the credit. Our ratings also reflect a number of other qualitative factors that could not be easily presented in a grid, including the quality of management, business strategies related to mergers and acquisitions, and the continuity and reliability of financial policies. Worth noting are three important factors not uniquely related to the pharmaceutical business:

LIQUIDITY

Simple ratio analysis, such as that employed in Factor 3 (capital structure and cash coverage of debt), is no substitution for a more thorough liquidity analysis. Moody's considers all near-term sources of cash, including internal funds, investments, and cash flow generation, as well as external liquidity sources such as bank credit facilities and accounts receivable facilities, proceeds from asset sales, and tax refunds. We also consider all potential near term uses of cash, including debt maturities, capital expenditures, dividends and share repurchases, potential litigation payments, milestone payments, and pension obligations. Moody's Liquidity Risk Assessments provide a more detailed analysis of liquidity on this basis, typically on a one-year horizon.

THE ROLE OF CORPORATE GOVERNANCE

In 2004 we published corporate governance assessments on approximately 10 pharmaceutical companies. Our findings on these companies are incorporated into our ratings. For several of the companies, we identify weaknesses in board composition, audit committee financial expertise, and executive compensation strategies that may favor short term incentives by overly emphasizing revenue growth or EPS.

EXTERNAL SUPPORT

We believe it unlikely that a government would step in to help a troubled pharmaceutical company, even if its products were critical to patients. Instead, government involvement in this sector includes such activities as setting prices and determining access through the drug approval process. We believe that an important structural consideration is whether the regulatory environment encourages a large generic drug market. This has been the case in the United States, where the evolution and sophistication of the generic drug industry creates rapid price erosion upon patent expiration, and event risk from patent challenges. The regulatory environments in most European markets and in Japan have not encouraged a generic drug sector of this scale.

Summary and Conclusion

The chart on the next page summarizes the 15 measurement criteria for the 18 companies in the sample. We have highlighted favorable and unfavorable outliers of 2 or more rating bands (Aaa, Aa, A, Baa, Ba, B, Caa). Among the conclusions that we believe may be drawn:

- For many companies, the indicated rating categories vary considerably across the factors; a given company may represent a "high outlier" for some of the 15 measurements and a "low outlier" for others. There are no companies who rate consistently equal to or above their current rating, or companies who rate consistently equal to or below their current rating. Instead, all companies rate above their current rating for some factors and below for others.
- We believe the rating methodology is useful in identifying companies falling outside of the indicated ranges for any of the measurement criteria – either favorably or unfavorably – and determining whether there are offsetting factors to compensate.
- Because Moody's weighs these factors unequally, depending on context, it is not possible to simply average the 15 factors into a composite rating for each company. In fact, the ultimate rating decision represents the collective opinions of members of the rating committee, each of whom may use judgment to weigh some factors more than others.
- In general, the factors where we currently place most weight are the following:
  1. Loss contingencies
  2. Product concentration
  3. Total revenues

  Over time, however, Moody's expects that increasing weight may be appropriate on the following factors as well:
  1. Patent expirations
  2. Pipeline valuations

SUMMARY OF INDICATED RATING CATEGORIES

		FACTOR 1					FACTOR 2			FACTOR 3		FACTOR 4		FACTOR 5		FACTOR 6
Company	Current Rating	2003 Revenue $ U.S.	# of $1 Billion Products	# of Major Therapeutic Categories	Top 3 Products % Total	Top 5 Products % Total	Patent Exp. Thru 2007	Patent Exp. + Challenges Thru 2007	Pipeline: Peak Sales	Adjusted Debt / Adjusted Capital	Adjusted Cash & Invest-ments / Total Adjusted Debt	EBITA Margin	ROE	CFO / Total Adjusted Debt	FCF / Total Adjusted Debt	Potential Loss Contin-gencies % of Equity
Johnson & Johnson	Aaa	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aa"	"Aaa"	"B"	"Aa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aa"
Novartis	Aaa	"Aaa"	"Aa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aa"	"Aaa"	"Aaa"	"A"	"Aa"	"Aa"	"Aaa"
Pfizer	Aaa	"Aaa"	"Aaa"	"Aaa"	"A"	"Aa"	"Ba"	"B"	"Aaa"	"Aa"	"A"	"Aaa"	"A"	"Aa"	"Baa"	"Aaa"
Takeda	P-1	"Aa"	"Aa"	"A"	"A"	"A"	"Aa"	"A"	"B"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"
Astellas	Aa2	"A"	"A"	"Aa"	"Aa"	"Aa"	"Aaa"	"Aaa"	"Baa"	"Aaa"	"Aaa"	"A"	"A"	"A"	"Baa"	"Aaa"
AstraZeneca	Aa2	"Aa"	"Aa"	"Aa"	"A"	"A"	"Aaa"	"Aaa"	"Aa"	"Aaa"	"Aaa"	"Aa"	"Baa"	"Aaa"	"A"	"Aaa"
GlaxoSmithKline	Aa2	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"A"	"A"	"Aa"	"Ba"	"Aaa"	"Baa"	"Aa"	"Baa"	"A"
Merck*	Aa2*	"Aaa"	"Aa"	"Aaa"	"Baa"	"Baa"	"Baa"	"Baa"	"Aa"	"Baa"	"Aa"	"Aaa"	"Aaa"	"Aaa"	"A"	"B"
Eli Lilly	Aa3	"Aa"	"Aa"	"A"	"Baa"	"A"	"Aaa"	"Ba"	"Aaa"	"Ba"	"Aa"	"Aaa"	"Aaa"	"A"	"B"	"Aa"
Yamanouchi	Aa3	"Baa"	"A"	"Baa"	"Ba"	"Baa"	"Aa"	"Aaa"	"Baa"	"Aaa"	"Aaa"	"A"	"A"	"A"	"Baa"	"Aaa"
Bristol-Myers Squibb	A1	"Aaa"	"A"	"A"	"Aa"	"Aaa"	"Ba"	"Ba"	"A"	"Ba"	"Ba"	"Aaa"	"Aaa"	"Baa"	"B"	"A"
Daiichi	A1	"Baa"	"Baa"	"Baa"	"Baa"	"A"	"A"	"Aa"	"A"	"Aaa"	"Aaa"	"Baa"	"Baa"	"Aa"	"A"	"Aaa"
Eisai	A1	"Baa"	"A"	"Baa"	"Ba"	"Baa"	"Aaa"	"Baa"	"Ba"	"Aaa"	"Aaa"	"A"	"Aa"	"Aaa"	"Aaa"	"Aaa"
Amgen	A2	"A"	"Aa"	"Baa"	"Ba"	"B"	"Aaa"	"Baa"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"A"	"Aaa"	"Aaa"	"Aa"
Chugai	A2	"Baa"	"Baa"	"Baa"	"Baa"	"A"	"A"	"Aaa"	"Ba"	"Aa"	"Aaa"	"Aa"	"Aa"	"Caa"	"Caa"	"Aaa"
Fugisawa	A2	"Baa"	"A"	"Baa"	"Baa"	"Aa"	"Aaa"	"Aaa"	"Ba"	"Aaa"	"Aaa"	"Baa"	"Aa"	"A"	"Ba"	"Aaa"
Schering AG	A2	"A"	"Baa"	"A"	"Aaa"	"Aaa"	"Aaa"	"Aaa"	"Aa"	"Baa"	"A"	"A"	"Aaa"	"A"	"B"	"Aa"
Chiron*	Baa1	"Ba"	"Ba"	"A"	"Baa"	"Aa"	"Aaa"	"Aaa"	"Aaa"	"Baa"	"Aa"	"Aa"	"A"	"Baa"	"Baa"	"Aa"
Schering-Plough	Baa1	"A"	"A"	"A"	"A"	"Aa"	"Aaa"	"Aaa"	"Aaa"	"Baa"	"Aa"	"Ba"	"B"	"Ba"	"Caa"	"Baa"
Wyeth	Baa1	"Aa"	"Aa"	"Aa"	"A"	"Aa"	"Aaa"	"Aaa"	"Aa"	"B"	"Baa"	"Aaa"	"Aaa"	"Baa"	"B"	"Caa"

* Ratings are under review for possible downgrade

= Favorable Outlier

= Unfavorable Outlier

Related Research

Industry Outlooks:

European Pharmaceuticals, February 2004 (81190)

Japanese Pharmaceuticals Industry Outlook: Stable as Competition Intensifies with New Drugs and Increased Presence of Global Companies, February 2004 (81133)

U.S. Pharmaceutical Industry Outlook 2004, August 2004 (88085)

Special Comment:

The "Homeland Investment Act": Potential Impact On The Credit Profile Of U.S. Pharmaceutical Companies, February 2004 (81194)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

PAGE INTENTIONALLY LEFT BLANK

To order reprints of this report (100 copies minimum), please call 1.212.553.1658.
Report Number: 89947

Author	Associate Analyst	Senior Associate	Senior Production Associate
Michael Levesque	*Dia Martin*	*Chris Hibbard*	*Mark A. Lee*