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Global Medical Products & Device Industry

Summary

This rating methodology identifies the key considerations and financial ratios that drive Moody's ratings of medical products and device companies.

The purpose of this rating methodology is to help issuers, investors and other market participants understand how Moody's assesses credit risk for companies in this sector, and to explain how key quantitative and qualitative risk factors map to specific rating outcomes. Our objective is for readers to be able to gauge the final credit rating for a medical products and device company within two notches.

Moody's analysis of medical products and device companies focuses on four main rating factors:

1. Size, scale and diversification
2. Product portfolio and profitability
3. Financial strength
4. Financial policies

Highlights of this report include:

- An overview of characteristics and challenges facing the medical products and device sector
- A description of our rating methodology and the four key factors that drive ratings quality
- Tables showing Moody's actual application of the rating framework
- A summary discussion of our results

This methodology is not an exhaustive treatment of every factor reflected in Moody's ratings of medical products and device companies, but it should enable the reader to understand the key risk factors used by Moody's in the final rating determination.

About the Rated Universe

Although Moody's currently does not rate any medical products and device companies that are based outside of the US, we intend for this methodology to be applied globally.

Moody's maintains ratings on 28 medical products and device companies with approximately \$28 billion in total reported debt. Three of these companies are privately held and do not file reports with the Securities and Exchange Commission (SEC), one is expected to become privately held, while another two have only short-term debt ratings.

Medical products and device manufacturers are an extraordinarily diverse group, united primarily by the customers -- health care providers -- they serve. Some, such as Beckman Coulter (Baa3), supply laboratories with the equipment, instruments and consumables needed to conduct research or diagnostic testing. Others, including Medtronic (A1), Boston Scientific (Baa3), and Advanced Medical Optics (B1), market devices to physicians. Still others, such as Becton Dickinson (A2), Baxter International (Baa1), and Hospira (Baa3) market less technology-intensive products to hospitals.

Ratings for medical products and device companies range from A1 to B3, highlighting significant differences in the credit quality of rated companies. Higher-rated companies tend to be larger, more diversified, and have greater financial resources. Speculative-grade issuers typically are smaller, have limited product diversity, and are more leveraged.

Medical Products & Device Company Ratings			
Company	Rating	Outlook	Total Debt \$M
Medtronic, Inc.	A1	Stable	4,026
Becton, Dickinson and Company	A2	Stable	1,365
Hillenbrand Industries Inc.	A3	Stable	356
Stryker Corporation	A3	Stable	232
Baxter International Inc.	Baa1	Stable	3,338
C.R. Bard, Inc.	Baa1	Stable	301
Dentsply International, Inc.	Baa2	Stable	682
Bausch & Lomb Incorporated	Baa3	RURD	644
Beckman Coulter, Inc.	Baa3	Stable	744
Boston Scientific Corporation	Baa3	Stable	9,000
Hospira, Inc.	Baa3	Stable	698
Dade Behring, Inc.	Ba1	Stable	392
Millipore Corporation	Ba1	Stable	1,367
Bio-Rad Laboratories, Inc.	Ba2	Stable	429
Orthofix International N.V.	Ba2	Stable	15
Angiotech Pharmaceuticals, Inc.	Ba3	Stable	506
ConMed Corporation	Ba3	Negative	307
DJO, LLC	Ba3	Stable	334
Kinetic Concepts, Inc.	Ba3	Positive	294
Advanced Medical Optics, Inc.	B1	Stable	560
Accellent Inc.	B2	Stable	701
AGA Medical Corporation	B2	Stable	-
Arizant Inc.	B2	Stable	-
Encore Medical IHC, Inc.	B2	RURD	315
Sterigenics International, Inc.	B2	Stable	-
Inverness Medical Innovations, Inc.	B3	Negative	263
Applera Corporation	P-2	Stable	0
St. Jude Medical, Inc.	P-2	Stable	1,053

Notes: Total reported debt for fiscal year ended December 31, 2005 or the nearest available twelve month period. Total debt for Boston Scientific, Millipore, Angiotech and DJO are based on Moody's estimates and are presented on a pro-forma basis for recently closed or pending transactions. AGA Medical, Arizant and Sterigenics do not file public financial statements. Encore Medical IHC's parent entered into a merger agreement in a going private transaction with Blackstone Capital Partners on June 30, 2006.

Industry Overview

Despite the diversity of their global product offerings, medical products and device companies face similar risk characteristics and challenges. Although all of the rated companies are based in the US, most of them are global manufacturers, often with manufacturing sites and sales that are increasingly focused outside of the US.

Steady end-user demand is fundamental to the credit strength of medical products and device companies and provides significant stability to ratings. Socio-demographic changes such as an aging population and increasing affluence of emerging markets have fostered continual growth in sales of medical products and devices on a worldwide basis and help to offset slower growth rates in more mature markets. Many medical device manufacturers are seeing revenue growth in some emerging markets such as the Asia-Pacific region (excluding Japan) that outstrips their revenue growth in the domestic market.

Medical device manufacturers must contend with a complex regulatory environment. Regulators determine, to a significant degree, what products may be brought to market, how such products are manufactured and under what terms they are sold. Thus, the regulatory environment exerts considerable influence on the sector as a whole.

In the US, group purchasing organizations (GPOs) have enabled purchasers (largely hospital organizations) to consolidate demand and therefore increase their bargaining power with manufacturers. At the same time, manufacturers continually try to increase the breadth of their product offerings and their leverage with GPOs.

Issues Going Into the Next Decade...

Increasing regulatory and litigation risk

We believe that medical products and device companies -- especially those that manufacture highly invasive products -- will continue to face greater regulatory and litigation risks. These risks include litigation related to product liability, patent infringement and anti-trust issues as well as higher regulatory scrutiny of manufacturing or marketing and sales practices.

The regulatory environment appears to have become less favorable as evidenced by a significant number of voluntary recalls and warning letters. Boston Scientific, Guidant and Medtronic have had to temporarily pull key products off the market due to product defects, while Baxter had a recent voluntary recall of its Colleague infusion pump. The removal of products not only means reduced revenue and negative publicity, but also potential litigation if there is injury to patients. Boston Scientific and Baxter face ongoing regulatory challenges related to resolving warning letters and a consent decree, respectively.

Blockbuster products provide concentration risk and are a tough act to follow

Large and small medical device manufacturers can be highly reliant on a specific product category or segment -- often because of the success of one blockbuster product -- and this is typically viewed as a credit negative. For example, Boston Scientific (pre-Guidant) generated more than 40% of revenues from its drug-eluting stent. Medtronic, though more diverse in its product offerings, has about 50% of its revenues concentrated in cardiac rhythm management devices.

The ability to sustain growth after achieving major success with one blockbuster product is a key issue for these and other medical device companies. In evaluating a company that has a high reliance on a specific product, we consider the potential for a slowdown in sales growth as that product matures. We also examine the nature of the company's product pipeline to assess new products that may be introduced in the foreseeable future to offset reliance on any particular product. Additionally, we evaluate the financial policies of those organizations that are at risk of experiencing a slow-down in sales growth. As a result of moderating growth, these companies may undertake financial policies that are less creditor friendly as they seek to satisfy shareholder expectations. These actions could have a negative affect on ratings to the extent that companies choose to de-capitalize through material share buybacks.

Innovation becomes more challenging

The risk in bringing new products to the market will continue to increase due to higher costs to conduct clinical trials, greater regulatory scrutiny, and greater complexity of products such as pharmaceutical and device combinations. A good example of this is the drug-eluting stent and the difficulties that various companies have had in the development stages. The delay or inability to launch new products not only negatively affects revenue growth, but can place greater pressure on companies to make acquisitions to supplement their product pipeline or to invest more in research and development (R&D). Product liability risk may increase as devices are expanded to broader patient populations with chronic or less severe medical conditions; an example is the use of implantable cardiac defibrillators for patients with less serious cardiovascular disease.

Acquisitions expected to increase

We expect an acceleration of acquisition activity in the medical device sector for several reasons.

- First, in addition to challenges faced in bringing new products to market, companies are seeing profitability and cash flow constraints on existing products because of increased competition and higher penetration rates in mature markets.
- Second, the benefits of scale, product diversity, and expansion into new geographies will prompt more companies to supplement internal growth with acquisitions.

Despite these benefits, the increased leverage associated with such acquisitions can result in deterioration of credit metrics and lower ratings. Moody's downgraded Boston Scientific's ratings to Baa3 from A3 in large part because of the increase in debt levels and other integration risks, which outweighed lower concentration risk and entry into a fast-growing cardiac rhythm management market. A reliance on debt-financed acquisitions to supplement internal growth is a key credit risk that can put pressure on ratings.

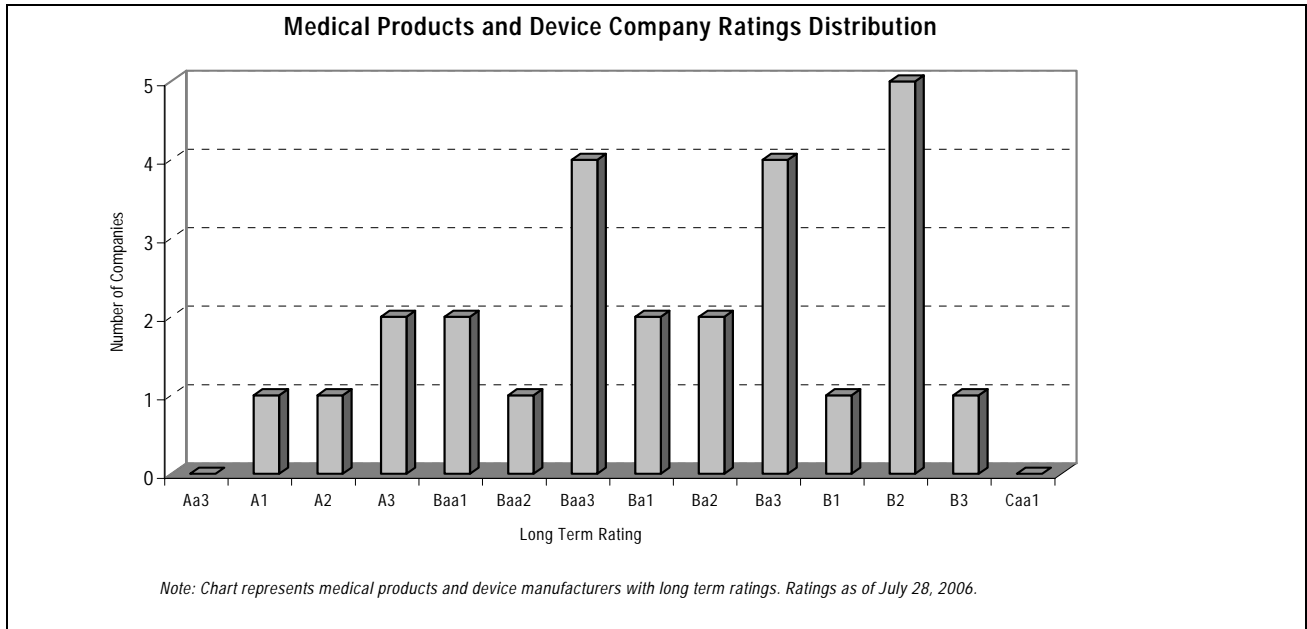
Future reimbursement pressure may dampen pricing and demand

In the US, the Centers for Medicare and Medicaid Services (CMS) had proposed rate changes to diagnosis-related group (DRG) codes for hospital inpatient stays, with the intent to better align hospital payments with the true cost of care. Initially, there was concern that certain medical device manufacturers -- particularly those making cardiac devices -- would potentially see a drop in demand or greater price competition if hospitals were forced to contend with lower reimbursement for certain inpatient stays.

Based on CMS' final rules (released on August 1, 2006), rate reductions for cardiac DRGs are significantly lower than initially anticipated, a favorable near-term development for cardiac device manufacturers.

However, Moody's believes that over time, because of spiraling healthcare costs and challenges in funding Medicare, the government and other payors may consider rate constraints. As a result, we believe that manufacturers will be under greater pressure to demonstrate system-wide cost savings with new devices.

Outside the US, where the private healthcare market is growing but is considerably smaller, pricing and demand has long been tied to governmental budget constraints. We believe that companies with commodity-type products will benefit from the ability to introduce products into less developed markets. However, we believe that the ongoing need to balance budgets globally will result in ongoing pricing pressure and demand constraints (particularly for higher-value products) in regions outside of the US.



About This Rating Methodology

This rating methodology for medical products and device companies takes readers through five steps:

1. IDENTIFICATION OF THE KEY RATING FACTORS

As noted, Moody's ratings focus primarily on the following factors:

1. **Size, scale and diversification**
2. **Product portfolio and profitability**
3. **Financial strength**
4. **Financial policies**

The discussion begins with a review of each factor and an explanation of its importance to the ratings.

2. MEASUREMENT OF THE KEY RATING FACTORS

Next, the measurement of each key factor is explained. Each of the four factors above is comprised of several sub-factors.

These measurements are quantitative where we can define an appropriate metric. However, for some factors, qualitative judgment or empirical observation is necessary to determine the appropriate category. In total, the rating methodology incorporates twelve sub-factors or measures, of which eight are quantitative and four are qualitative.

For each of the twelve sub-factors we assign a weight based on relative importance:

- The eight quantitative factors taken together are assigned a weight of approximately 71%, with size weighted almost three times that of any other individual factor.
- The remaining 29% is allocated equally over the four qualitative factors.

All quantitative measures incorporate Moody's standard adjustments to income statement, cash flow statement, and balance sheet amounts for (among other things) off-balance sheet accounts receivable securitization programs, underfunded pension obligations, and recurring operating leases.¹

Moody's ratings are forward looking. The rating process does, however, make extensive use of historical financial statements. Historical results help with understanding the pattern of a company's performance and how the company compares to others. They also provide perspective, helping to ensure that estimated future results are grounded in reality. While the rating process incorporates both historical and anticipated financial results, this document makes use of only historical data, and does so solely for illustrative purposes.

3. MAPPING FACTORS TO RATING CATEGORIES

After identifying the measurements for each factor, the potential outcomes for each of the 12 sub-factors are mapped to a Moody's rating category. (i.e. Aaa, Aa, A, Baa, Ba, B, and Caa)

4. APPLYING THE RATING METHODOLOGY/OUTLIER DISCUSSION

For each sub-factor, each company is mapped to a rating range. It is observed that a company may perform higher or lower on a specific broad factor or sub-factor than its actual rating level would otherwise indicate. These companies are identified as outliers for that sub-factor. A company whose performance on a specific sub-factor is two or more rating categories higher than its rating is deemed a positive outlier for that sub-factor. A company whose performance is two or more categories below is deemed a negative outlier. This document provides a general discussion of the outliers for each broad factor or sub-factor.

1. Refer to the following Rating Methodologies: *Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I (issuers in the U.S. and Canada)*, dated July 2005 and *Part II (issuers reporting under International Financial Reporting Standards)*, dated September 2005. Also, refer to the following Special Comment: *Guideline Rent Expense Multiples for Use with Moody's Global Standard Adjustment to Capitalize Operating Leases*, dated February 2006.

5. DETERMINING THE FINAL RATING

To determine an overall rating, each of the 12 assigned sub-factor ratings is converted into a numeric value based on the following scale:

Aaa	Aa	A	Baa	Ba	B	Caa
1	3	6	9	12	15	18

At the sub-factor level, the lowest value is assigned to an implied Aaa rating, while the highest value is assigned to a Caa2 rating. Each sub-factor's numeric value is multiplied by an assigned weight (refer to the table below and/or the Appendix for weights), and then summed. For information purposes, the following table shows sub-totals for the summation that show how much weight is given to each broad rating category.

Factors	Sub-Factors	Weighting	Cumulative Sub-Factor Weighting
Factor 1: Size, Scale and Diversification	Revenue	20.00%	34.55%
	Diversity by Customer Sales Segment	7.27%	
	Concentration by Top Customer Segment	7.27%	
Factor 2: Product Portfolio & Profitability	R&D % of Sales	7.27%	21.82%
	EBIT Margin	7.27%	
	ROA (NPATBUI / Avg. Assets)	7.27%	
Factor 3: Financial Strength	CFO / Debt	7.27%	21.82%
	FCF / Debt	7.27%	
	EBIT / Interest Expense	7.27%	
Factor 4: Financial Policies	Reliance on Acquisitions, Share Buybacks and Dividends	7.27%	21.82%
	Debt / Book Capitalization	7.27%	
	Debt / EBITDA	7.27%	
	Total	100.00%	100.00%

The total is then mapped to the table below, and an overall rating is assigned based on where the score falls in the range. Since the composite rating indication is presented at the alpha numeric rating level while sub-factor rating indications are presented at only the alpha level, the table shows outcome ranges for both presentation formats.

Indicated Rating	Aggregated Weighted Factor Score	Indicated Rated	Factor or Sub-Factor Score
Aaa	<1.50	Aaa	<1.50
Aa1	≥1.50 - 2.49	Aa	≥1.50 - 4.49
Aa2	≥2.50 - 3.49		
Aa3	≥3.50 - 4.49		
A1	≥4.50 - 5.49	A	≥4.50 - 7.49
A2	≥5.50 - 6.49		
A3	≥6.50 - 7.49		
Baa1	≥7.50 - 8.49	Baa	≥7.50 - 10.49
Baa2	≥8.50 - 9.49		
Baa3	≥9.50 - 10.49		
Ba1	≥10.50 - 11.49	Ba	≥10.50 - 13.49
Ba2	≥11.50 - 12.49		
Ba3	≥12.50 - 13.49		
B1	≥13.50 - 14.49	B	≥13.50 - 16.49
B2	≥14.50 - 15.49		
B3	≥15.50 - 16.49		
Caa1	≥16.50 - 17.49	Caa	≥16.50 - 18.00
Caa2	≥17.50 - 18.00		

The entire array of scores and mappings for each of the companies is shown in the Appendix.

Moody's recognizes there are instances in which consolidated financial information may not capture a complete picture of credit risk. This can occur for many reasons, the most common of which relates to recently completed or pending mergers that are not yet reflected in reported historical data, reorganization activity, and the prospective nature of a given rating.

The Key Rating Factors

FACTOR 1: SIZE, SCALE AND DIVERSIFICATION

Why it Matters

Size, scale and diversification are important rating considerations. Larger companies have more resources and tend to be more broadly diversified, which can reduce volatility and lower credit risk.

Scale -- which is usually associated with large size -- allows companies to leverage costs and gives them more clout with group purchasing organizations, customers, and suppliers. This is an important measure that provides insight into other factors, such as cost efficiency, strength of position with customers, and franchise strength.

Diversification has several different dimensions: products, product lines, customer segments and geographic reach, all of which can enable a company to mitigate the effects of variation in demand or pricing in a given product or market.

“Product line” is defined as a general medical or clinical market served. Examples of product lines are orthopedic, dental, eye care, cardiac rhythm management, urological, endoscopy, hospital beds, or clinical labs. Product offerings may vary within each product line. For example, one orthopedic company may offer only spinal products while another may offer reconstructive, trauma and spinal products. Some companies have significant concentration within a specific product line while others have broader product offerings.

Generally speaking, a specific targeted customer segment can be associated with each product line. For example, orthopedic products are typically sold to orthopedic surgeons and cardiovascular products are usually sold to interventional cardiologists. Targeted customer bases can sometimes differ depending on the product line. For example, a “clinical laboratory product” division may sell to both hospital laboratories as well as reference laboratories. Dental manufacturers may serve both dentists and dental laboratories.

Although geographic diversification can be beneficial, it does not tend to cause differentiation among ratings because the majority of rated companies operate globally.

Positive Rating Indicators

- Large revenue base
- Wide array of product lines serving different clinical needs
- Limited dependence on a single product line

Measurement Criteria

- Total sales
- Number of reported sales segments with distinct customer bases
- Top sales segment with distinct customer base as a % of revenues

Notes on Measurement Criteria

When measuring diversification, Moody's relies on the number of each company's reported sales segments. In order to focus on only meaningful sales segments, we include reported sales segments that represent 5% or more of total sales. Also, while some companies break out sales segments by geography, Moody's combines these segments for consistency. Finally, in order to better capture diversity and measure segments consistently, we count segments that serve a distinct customer base, combining reported sales segments that have the same customer base.

For example, while Medtronic reports one segment for cardiac rhythm management devices, Guidant (now part of Boston Scientific) historically reported defibrillators and pacemakers separately. For uniformity, Moody's combines these two segments since they are both marketed to electro-physiologists.

To measure concentration risk, we focus on the top reported sales segment or segments that have a distinct customer base, identified in measuring diversification. Although concentration risk may also be measured by specific products versus by product lines, issuers do not uniformly make this information publicly available.

Factor Mapping

Factor 1: Size, Scale and Diversification							
	Aaa	Aa	A	Baa	Ba	B	Caa
Revenue \$B	>20	10 - 20	4 - 10	1 - 4	0.75 - 1	0.5 - 0.75	<0.5
Diversity by Customer Sales Segment	>8	6 - 8	4 - 5	3	2	1	N/A
Concentration by Top Customer Segment	0% - 15%	15% - 25%	25% - 35%	35% - 50%	50% - 75%	75% - 100%	N/A

Results

Factor 1: Size, Scale and Diversification								
Company	Rating	Outlook	Revenue (\$000)	Indicated Rating	Diversity by Customer Sales Segment	Indicated Rating	Concentration by Top Customer Segment	Indicated Rating
Medtronic, Inc.	A1	Stable	11,003,300	Aa	6	Aa	46%	Baa
Becton, Dickinson and Company	A2	Stable	5,540,373	A	5	A	31%	A
Hillienbrand Industries Inc.	A3	Stable	1,940,600	Baa	3	Baa	42%	Baa
Stryker Corporation	A3	Stable	4,871,500	A	3	Baa	59%	Ba
Baxter International Inc.	Baa1	Stable	9,849,000	A	6	Aa	32%	A
C.R. Bard, Inc.	Baa1	Stable	1,771,300	Baa	4	A	30%	A
Dentsply International, Inc.	Baa2	Stable	1,715,135	Baa	2	Ba	45%	Baa
Bausch & Lomb Incorporated	Baa3	RURD	2,318,100	Baa	4	A	30%	A
Beckman Coulter, Inc.	Baa3	Stable	2,443,800	Baa	2	Ba	78%	B
Boston Scientific Corporation	Baa3	Stable	8,524,000	A	3	Baa	57%	Ba
Hospira, Inc.	Baa3	Stable	2,626,696	Baa	2	Ba	64%	Ba
Dade Behring, Inc.	Ba1	Stable	1,658,100	Baa	1	B	100%	B
Millipore Corporation	Ba1	Stable	1,267,000	Baa	2	Ba	52%	Ba
Bio-Rad Laboratories, Inc.	Ba2	Stable	1,180,985	Baa	2	Ba	52%	Ba
Orthofix International N.V.	Ba2	Stable	313,304	Caa	2	Ba	93%	B
Angiotech Pharmaceuticals, Inc.	Ba3	Stable	408,000	Caa	4	A	49%	Baa
ConMed Corporation	Ba3	Negative	617,305	B	4	A	56%	Ba
DJO, LLC	Ba3	Stable	425,000	Caa	2	Ba	60%	Ba
Kinetic Concepts, Inc.	Ba3	Positive	1,208,556	Baa	2	Ba	75%	B
Advanced Medical Optics, Inc.	B1	Stable	920,673	Ba	2	Ba	67%	Ba
Accellent Inc.	B2	Stable	461,146	Caa	3	Baa	44%	Baa
Inverness Medical Innovations, Inc	B3	Negative	421,850	Caa	3	Baa	42%	Baa
Positive outlier								
Negative outlier								

Note: Based on December 31, 2005 fiscal year end financials or the nearest twelve month period. Figures for Boston Scientific, Millipore, Angiotech and DJO are based on Moody's estimates and are presented on a pro-forma basis for recently closed or pending transactions.

Observations

Indicated ratings for “size, scale and diversification” are largely within one-notch of overall ratings, confirming the importance of this factor in the rating process. It is observed that about 27% of investment grade issuers were outliers while almost 55% of speculative grade issuers were outliers on one or two measures. This supports the fact that the majority of investment grade rated companies have larger scale and offer more diversified products.

Revenue

There are only three negative outliers and all are Ba-rated companies with moderate revenues. While their revenue amounts are more typical of Caa-companies, all three companies possess one or more positive characteristics that offset this negative factor. For example, Orthofix has extremely strong cash flow to debt metrics.

Diversity by Customer Sales Segment

There are five positive outliers, the majority being speculative-grade rated companies. While the four speculative grade companies with positive outliers are atypically diverse for their rating category, other characteristics that are typical of speculative-grade borrowers, including small size, weak profitability and cash flow or high leverage offset this factor. For example, Accellent and Inverness are positive outliers when measuring diversity by customer sales segment, but are very small, have weak Debt/EBITDA and are highly reliant on shareholder initiatives.

Concentration by Top Customer Segment

Similar to revenue and diversity measures, correlation of customer concentration with ratings is strong. However, two of the three investment grade outliers under this broad factor are found in measuring customer concentration. Stryker is a negative outlier when measuring concentration by top customer segment, but strong operating and free cash flow to debt measures are offsets to this factor.

FACTOR 2: PRODUCT PORTFOLIO AND PROFITABILITY

Why it Matters

In addition to size and product line diversification, the lifecycle of a company's products can provide insight into the level of risk associated with the introduction of new technology, competition, and potential cash flow volatility. Of the 12 measured sub-factors, this is arguably the one most unique to the medical products and device sector.

Manufacturers of certain products, such as those in the cardiovascular area, face the risk of rapid adoption of new technology by customers, thereby engendering significant shifts in market share and cash flow. The rapid pace of change forces many medical device companies to invest more of their revenues into R&D.

Manufacturers of long-lived products (such as hospital beds or syringes) require less R&D investment and generally maintain more stable market positions due in part to less competition.

The ability to be highly efficient and cost competitive is important to maintaining profitability. Product lifecycle can be associated with operating margins and profitability. Highly technical, short-lived products may provide significant medical value and contribute greatly to improving our health status. Healthcare payors -- both governmental and private -- will often allow for reimbursement of these products, particularly if they can be shown to reduce hospital admissions or lengths of stay. As a result, these products can be richly priced and can have very high operating margins. Often, manufacturers of long-lived products, which are more commodity-like, may enjoy less favorable pricing and consequently, lower margins and profitability. Given the lower value-added nature of these products, efficient operations may even be more critical to ensure price competitiveness.

The extent to which a company generates returns on its investments (including acquired product lines) will help us understand how efficiently a company is utilizing its assets. If a company overpays for acquired assets, its returns will be lower unless offset by unexpected acquisition synergies.

Positive Rating Indicators

- Long product lifecycle requiring slow product innovation
- Low competition and highly stable market share
- High profitability and efficiency levels
- Profitable return on investments

Measurement Criteria

- R&D as a percentage of sales
- EBIT Margin
- Net income from continuing operations / Average total assets

Notes on Measurement Criteria

We find that R&D as a percentage of sales serves as a good proxy when measuring product lifecycle, level of innovation and the potential for market share volatility. Typically, the higher the level of R&D investment, the shorter the product lifecycle and the more exposed the portfolio can be to competitive pressures.

One limitation to this measurement is the fact that R&D as a percentage of sales does not capture acquired R&D. Therefore, this measure may underestimate the degree of innovation and technological change associated with companies that acquire emerging technologies.

Moreover, the use of R&D as a percentage of sales would not be an appropriate measure in instances where an issuer is in financial distress and when low R&D funding levels are indicative of cash conservation. Further, this measure is not applicable when R&D is under-funded relative to what is necessary to remain competitive. Moody's considers these limitations when using this measure to assess product lifecycles.

Product lifecycle can be a distinguishing rating factor within the A to B range but, by itself, does not indicate ratings at the highest (Aaa or Aa) or lowest (Caa) ranges.

Factor Mapping

Factor 2: Product Portfolio & Profitability							
	Aaa	Aa	A	Baa	Ba	B	Caa
R&D % of Sales	N/A	N/A	0% - 5%	5% - 10%	10% - 15%	15% - 20%	N/A
EBIT Margin	>30%	25% - 30%	20% - 25%	15% - 20%	10% - 15%	5% - 10%	<5%
ROA (NPATBUI / Avg. Assets)	>25%	20% - 25%	15% - 20%	10% - 15%	5% - 10%	1% - 5%	<1%

Results

Factor 2: Product Portfolio & Profitability								
Company	Rating	Outlook	R&D % of Sales	Indicated Rating	EBIT Margin	Indicated Rating	ROA (NPATBUI / Avg. Assets)	Indicated Rating
Medtronic, Inc.	A1	Stable	10%	Baa	31%	Aaa	14%	Baa
Becton, Dickinson and Company	A2	Stable	5%	Baa	21%	A	11%	Baa
Hillbrand Industries Inc.	A3	Stable	3%	A	16%	Baa	10%	Baa
Stryker Corporation	A3	Stable	6%	Baa	21%	A	13%	Baa
Baxter International Inc.	Baa1	Stable	5%	Baa	18%	Baa	7%	Ba
C.R. Bard, Inc.	Baa1	Stable	7%	Baa	24%	A	14%	Baa
Dentsply International, Inc.	Baa2	Stable	3%	A	18%	Baa	7%	Ba
Bausch & Lomb Incorporated	Baa3	RURD	7%	Baa	14%	Ba	5%	Ba
Beckman Coulter, Inc.	Baa3	Stable	9%	Baa	11%	Ba	5%	Ba
Boston Scientific Corporation	Baa3	Stable	11%	Ba	19%	Baa	4%	B
Hospira, Inc.	Baa3	Stable	5%	Baa	14%	Ba	8%	Ba
Dade Behring, Inc.	Ba1	Stable	9%	Baa	13%	Ba	5%	Ba
Millipore Corporation	Ba1	Stable	7%	Baa	14%	Ba	5%	Ba
Bio-Rad Laboratories, Inc.	Ba2	Stable	10%	Baa	11%	Ba	5%	B
Orthofix International N.V.	Ba2	Stable	4%	A	19%	Baa	8%	Ba
Angiotech Pharmaceuticals, Inc.	Ba3	Stable	16%	B	31%	Aaa	7%	Ba
ConMed Corporation	Ba3	Negative	4%	A	10%	B	3%	B
DJO, LLC	Ba3	Stable	3%	A	19%	Baa	6%	Ba
Kinetic Concepts, Inc.	Ba3	Positive	3%	A	24%	A	18%	A
Advanced Medical Optics, Inc.	B1	Stable	7%	Baa	13%	Ba	3%	B
Accellent Inc.	B2	Stable	1%	A	7%	B	-5%	Caa
Inverness Medical Innovations, Inc	B3	Negative	7%	Baa	1%	Caa	-4%	Caa
Positive outlier								
Negative outlier								

Note: Based on December 31, 2005 fiscal year end financials or the nearest twelve month period. Figures for Boston Scientific, Millipore, Angiotech and DJO are based on Moody's estimates and are presented on a pro-forma basis for recently closed or pending transactions.

Observations

Ten of 22 issuers are outliers, but there is only one case -- Kinetic Concepts -- where the difference persists at the broad factor level. Kinetic's EBIT Margin and ROA have been extremely volatile over the past several years, raising concerns regarding sustainability. In addition, the company faces reimbursement risk and ongoing challenges to the validity of key patents on its wound closure products, which have been critical growth drivers.

Similar to size, scale and diversification, it is observed that about 73% of speculative grade issuers and only 18% of investment grade issuers are outliers, indicating the need for a high level of efficiency and profitability to be rated in the higher rating categories.

R&D as a Percentage of Sales (Product Lifecycle)

Seven of the ten speculative grade issuers are positive outliers while none of the investment grade companies are outliers on this measure of product lifecycle. In general, we expect smaller speculative grade borrowers to have longer product lifecycles and lower R&D investment. This stability provides a credit positive. However, other factors, such as small size, weak cash flow or high leverage metrics are typically overriding factors.

EBIT Margin

Due to the very strong correlation of ratings with EBIT Margin, this metric has only three positive outliers. Angiotech has exceptionally high operating margins but an extremely small revenue base, highly technology-intensive products and a high reliance on acquisitions provide offsets to this positive factor.

ROA (NPATBUI/Average Assets)

This measure has only two outliers, indicating strong correlation with overall ratings. The negative result for Boston Scientific is consistent with the company's high reliance on acquisitions, which have been purchased at relatively rich valuations.

FACTOR 3: FINANCIAL STRENGTH

Why it Matters

A key focus of Moody's quantitative analysis is a review of a company's ability to generate cash to service its debt. Companies with good coverage of interest payments have better financial strength. Financial strength also considers balance sheet flexibility. Companies with modest levels of debt relative to cash flow possess greater financial flexibility than companies with high levels of debt relative to cash flow.

When applying this methodology, Moody's examines both historical and, more importantly, future financial trends. This can be particularly meaningful in situations where companies are acquisitive, actively engaged in large stock buybacks or involved in significant lawsuits.

Positive Rating Indicators

- Strong cash flow relative to the amount of debt outstanding
- Strong coverage of interest payments

Measurement Criteria

- Cash flow from operations / Debt
- Free cash flow / Debt
- EBIT / Interest expense

Notes on Measurement Criteria

Unlike earnings measures, cash flow from operations takes into account working capital usage while free cash flow also considers capital investment as well as shareholder dividends. Free cash flow to debt is generally considered the more important measure, as it indicates a company's true discretionary cash flow relative to its debt obligations.

The free cash flow ratio shown in the following tables does not take into account share buybacks, which are considered separately in our assessment of financial policies.

Factor Mapping

Factor 3: Financial Strength							
	Aaa	Aa	A	Baa	Ba	B	Caa
CFO / Debt	>75%	50% - 75%	40% - 50%	25% - 40%	15% - 25%	5% - 15%	<5%
FCF / Debt	>50%	35% - 50%	25% - 35%	15% - 25%	10% - 15%	0% - 10%	<0%
EBIT / Interest Expense	>15.0x	12.0x - 15.0x	9.0x - 12.0x	5.0x - 9.0x	2.5x - 5.0x	1.0x - 2.5x	<1.0x

Results

Factor 3: Financial Strength								
Company	Rating	Outlook	CFO / Debt	Indicated Rating	FCF / Debt	Indicated Rating	EBIT / Interest Expense	Indicated Rating
Medtronic, Inc.	A1	Stable	77%	Aaa	56%	Aaa	26.7x	Aaa
Becton, Dickinson and Company	A2	Stable	58%	Aa	34%	A	9.6x	A
Hillienbrand Industries Inc.	A3	Stable	52%	Aa	18%	Baa	10.0x	A
Stryker Corporation	A3	Stable	129%	Aaa	84%	Aaa	25.6x	Aaa
Baxter International Inc.	Baa1	Stable	36%	Baa	23%	Baa	5.6x	Baa
C.R. Bard, Inc.	Baa1	Stable	84%	Aaa	51%	Aaa	13.2x	Aa
Dentsply International, Inc.	Baa2	Stable	26%	Baa	17%	Baa	10.4x	A
Bausch & Lomb Incorporated	Baa3	RURD	31%	Baa	12%	Ba	4.8x	Ba
Beckman Coulter, Inc.	Baa3	Stable	35%	Baa	10%	Ba	3.4x	Ba
Boston Scientific Corporation	Baa3	Stable	20%	Ba	14%	Ba	3.4x	Ba
Hospira, Inc.	Baa3	Stable	62%	Aa	34%	A	7.0x	Baa
Dade Behring, Inc.	Ba1	Stable	43%	A	19%	Baa	3.2x	Ba
Millipore Corporation	Ba1	Stable	15%	Ba	6%	B	7.3x	Baa
Bio-Rad Laboratories, Inc.	Ba2	Stable	22%	Ba	13%	Ba	3.2x	Ba
Orthofix International N.V.	Ba2	Stable	197%	Aaa	158%	Aaa	7.8x	Baa
Angiotech Pharmaceuticals, Inc.	Ba3	Stable	14%	B	13%	Ba	3.2x	Ba
ConMed Corporation	Ba3	Negative	12%	B	6%	B	3.4x	Ba
DJO, LLC	Ba3	Stable	12%	B	8%	B	3.0x	Ba
Kinetic Concepts, Inc.	Ba3	Positive	58%	Aa	34%	A	8.1x	Baa
Advanced Medical Optics, Inc.	B1	Stable	5%	Caa	-3%	Caa	3.2x	Ba
Accellent Inc.	B2	Stable	4%	Caa	0%	B	0.6x	Caa
Inverness Medical Innovations, Inc	B3	Negative	10%	B	2%	B	0.1x	Caa

Positive outlier

Negative outlier

Note: Based on December 31, 2005 fiscal year end financials or the nearest twelve month period. Figures for Boston Scientific, Millipore, Angiotech and DJO are based on Moody's estimates and are presented on a pro-forma basis for recently closed or pending transactions.

Observations

Seven of 22 issuers (32%) are outliers for one or more measure. It is interesting to note that all of the issuers with outlying measures are positive outliers, a signal that financial strength metrics may be a lagging indicator for credit ratings or may not be sufficient to determine credit quality. In certain cases, cash flow and coverage measures may not reflect recently completed or pending mergers or the potential for additional debt-financed acquisitions or shareholder initiatives. Of the seven companies that are outliers, five (or over 70%) are outliers on two or more measures. This indicates a strong relationship between operating and free cash flow and interest coverage.

CFO/Debt, FCF/Debt and EBIT/Interest Expense

Three companies are positive outliers on all three measures of financial strength. Medtronic's metrics do not yet reflect additional debt associated with a recent acceleration of share buybacks. Bard and Stryker have exceptional financial strength because of very low leverage. Moody's assessment includes the possibility that these companies may raise debt levels even moderately, which would likely have a significant effect on metrics that are currently based on very low lev-

els of debt or no debt. As was the case with profitability measures, Kinetic Concepts scores very high on CFO/Debt and FCF/Debt relative to its overall rating, but historical volatility of these measures brings sustainability into question.

FACTOR 4: FINANCIAL POLICIES

Why it Matters

As mentioned above, because so many medical device companies are seeking growth and diversification by pursuing acquisitions, a company's acquisition strategy and financial policy are of particular interest in our analysis. Our assessment of management's financial policy encompasses a review of their commitment to managing the company's balance sheet prudently from the perspective of bondholders and lenders.

Medical products and device companies that turn to aggressive acquisition strategies are considered riskier because of the potential for higher debt leverage as well as the challenges associated with integrating the acquisitions. Those that choose to repurchase shares aggressively as a means of returning capital to shareholders run the risk of raising debt levels while also reducing equity.

The repurchase of shares that is financed with debt will result in a lower ratio of cash flow from operations to debt, which reduces financial flexibility. Debt-financed acquisitions typically result in lower cash flow relative to debt because the acquired cash flow does not initially offset the additional debt.

Positive Rating Indicators

- Ability to satisfy shareholders with high level of organic growth
- Willingness to fund growth using equity or a combination of equity and debt compared to just debt

Measurement Criteria

- $(\text{Debt financed acquisitions} + \text{share buybacks} + \text{dividends} - \text{equity issuance} - \text{proceeds from stock option exercising}) / \text{Net income}$
- Debt / Capitalization
- Debt / EBITDA

Notes on Measurement Criteria

Moody's views favorably a company's use of equity to finance acquisitions. When measuring debt-financed acquisitions, share buybacks and dividends as a percentage of net income, we add back to the numerator any issuance of equity and cash received from stock option exercising. We take an average of this percentage over three fiscal years in order to get a better indication of a company's financial policies over a longer period of time. This helps minimize the effect of an atypical year.

From a credit perspective, companies that spend a higher percentage of their net income on these initiatives are viewed as more aggressive than those that do not, and receive a lower indicated rating for this measure.

However, if a company has inadequate net income to engage in these activities, it would receive a Caa rating in this sub-factor. In addition, although not reflected in this factor, Moody's does consider the quality, fit, and benefits associated with acquisitions.

Both Debt/Capitalization and Debt/EBITDA attempt to capture a company's willingness to leverage its capital structure. Similar to financial ratios used to measure "financial strength," Debt/Capitalization and Debt/EBITDA are calculated using Moody's standard analytic adjustments to financial statements.

Factor Mapping

Factor 4: Financial Policies							
	Aaa	Aa	A	Baa	Ba	B	Caa
Reliance on Acquisitions, Share Buybacks and Dividends	(100)% - 10%	10% - 20%	20% - 35%	35% - 50%	50% - 75%	75% - 100%	>100%
Debt / Book Capitalization	0% - 15%	15% - 25%	25% - 35%	35% - 45%	45% - 55%	55% - 75%	>75%
Debt / EBITDA	0.00x - 1.00x	1.00x - 1.25x	1.25x - 1.75x	1.75x - 2.50x	2.50x - 3.75x	3.75x - 6.00x	>6.0x

Results

Factor 4: Financial Policies								
Company	Rating	Outlook	Reliance on Acquisitions, Share Buybacks and Dividends	Indicated Rating	Debt / Book Capitalization	Indicated Rating	Debt / EBITDA	Indicated Rating
Medtronic, Inc.	A1	Stable	40%	Baa	28%	A	1.1x	Aa
Becton, Dickinson and Company	A2	Stable	81%	B	41%	Baa	1.4x	A
Hillenbrand Industries Inc.	A3	Stable	115%	Caa	38%	Baa	1.3x	A
Stryker Corporation	A3	Stable	6%	Aaa	20%	Aa	0.6x	Aaa
Baxter International Inc.	Baa1	Stable	29%	A	72%	B	2.6x	Ba
C.R. Bard, Inc.	Baa1	Stable	44%	Baa	24%	Aa	0.9x	Aaa
Dentsply International, Inc.	Baa2	Stable	18%	Aa	41%	Baa	2.4x	Baa
Bausch & Lomb Incorporated	Baa3	RURD	56%	Ba	39%	Baa	2.0x	Baa
Beckman Coulter, Inc.	Baa3	Stable	75%	B	54%	Ba	2.9x	Ba
Boston Scientific Corporation	Baa3	Stable	420%	Caa	34%	A	3.5x	Ba
Hospira, Inc.	Baa3	Stable	-27%	Aaa	41%	Baa	1.7x	A
Dade Behring, Inc.	Ba1	Stable	-10%	Aaa	45%	Baa	1.9x	Baa
Millipore Corporation	Ba1	Stable	412%	Caa	62%	B	4.7x	B
Bio-Rad Laboratories, Inc.	Ba2	Stable	19%	Aa	46%	Ba	2.8x	Ba
Orthofix International N.V.	Ba2	Stable	161%	Caa	9%	Aaa	0.5x	Aaa
Angiotech Pharmaceuticals, Inc.	Ba3	Stable	660%	Caa	50%	Ba	3.5x	Ba
ConMed Corporation	Ba3	Negative	191%	Caa	40%	Baa	3.7x	Ba
DJO, LLC	Ba3	Stable	202%	Caa	61%	B	3.5x	Ba
Kinetic Concepts, Inc.	Ba3	Positive	16%	Aa	68%	B	1.3x	A
Advanced Medical Optics, Inc.	B1	Stable	-498%	Caa	36%	Baa	3.8x	B
Accellent Inc.	B2	Stable	-1671%	Caa	54%	Ba	13.0x	Caa
Inverness Medical Innovations, Inc	B3	Negative	833%	Caa	44%	Baa	8.6x	Caa
Positive outlier								
Negative outlier								

Note: Based on December 31, 2005 fiscal year end financials or the nearest twelve month period. Figures for Boston Scientific, Millipore, Angiotech and DJO are based on Moody's estimates and are presented on a pro-forma basis for recently closed or pending transactions.

Observations

A significant 19 out of 22 issuers (about 86%) are outliers on at least one measure. However, there are only four cases where the issuer is an outlier on multiple measures of financial policies.

Reliance on Acquisitions, Share Buybacks and Dividends

This sub-factor has the most outliers. Thirteen of the 22 issuers (almost 60%) are spending more than 50% of their net income on acquisitions, buybacks or dividends, or have negative net income. All but one of the A-rated issuers have indicated ratings below their actual ratings. This is not surprising as many larger investment grade medical products and device companies have been focused on shareholder initiatives. Recently, stock prices of medical technology

companies have been depressed, causing certain companies, such as Medtronic, to accelerate buyback programs. Others, including Boston Scientific, which recently acquired Guidant, seek to sustain growth following the success of one blockbuster product.

Debt/Capitalization and Debt/EBITDA

Seven of 22 companies are outliers for one or more of these measures, and the vast majority of the outliers are positive. Similar to financial strength measures, this could be a signal that leverage metrics can be a lagging indicator for credit ratings. In certain cases, Debt/Capitalization and Debt/EBITDA may not reflect recently completed or pending mergers or the potential for additional debt-financed shareholder initiatives. In other instances, these measures may not reflect anticipated repayment of debt following a major debt-financed transaction.

Other Rating Considerations

COMPETITION AND MARKET POSITION

Most rated companies in this sector have relatively good market positions with product segments that rank the manufacturer as a top 1, 2, or 3 player in a specific market. To the extent possible, Moody's analysis differentiates companies on the basis of market share, particularly where market positioning is exceptionally strong or weak. For example, the strength of a company that is clearly dominant in its markets with limited competitive pressures is positively factored into the ratings. However, in many instances, the ability to objectively measure market share is limited. There are no independent tracking sources for this information and companies themselves do not always publicly report market share by product or sales segments.

OTHER FACTORS

Moody's considers many other non-quantifiable and quantitative factors. These include management and governance, legal and regulatory matters, liquidity, the quality of financial reporting and overall disclosure. While several of these matters are addressed in dedicated Moody's research and are not addressed further here, the influence of such factors remains integral to the rating process.

Final Considerations

The first order of business in a rating committee is a review of the subject company's fundamental attributes. A thorough appreciation of the business model, how the company conducts its business and how it plans to provide returns to its investors is critical.

In the medical products and device sector, long-term success is predicated on sustainable fundamental advantages. Important considerations in understanding what differentiates a company, or, alternatively, what makes it the same, include an assessment of:

- The size and stability of the target customer base(s)
- The company's competitive position relative to the target market(s)
- The types of products offered and level of investment needed to remain competitive
- Management's financial policies and shareholder investment strategy
- Management's acquisition track record
- Overall risk profile relating to litigation and regulatory matters

In part, the assessment of such matters affects how historical results are interpreted, and how expectations of future results are formulated. In general, many relevant conclusions from this aspect of the rating assessment are manifest in one or more of the 12 rating sub-factors.

With that as background, to determine the overall rating, each of the 12 assigned sub-factor ratings is converted into a numeric "point" value based on the following scale:

Aaa	Aa	A	Baa	Ba	B	Caa
1	3	6	9	12	15	18

At the sub-factor level, the lowest value is assigned to an implied Aaa rating, while the highest value is assigned to a Caa2 rating. Each sub-factor's numeric point value is then multiplied by an assigned weight (refer to the table below or the Appendix for weights).

Factors	Sub-Factors	Weighting	Cumulative Sub-Factor Weighting
Factor 1: Size, Scale and Diversification	Revenue	20.00%	34.55%
	Diversity by Customer Sales Segment	7.27%	
	Concentration by Top Customer Segment	7.27%	
Factor 2: Product Portfolio & Profitability	R&D % of Sales	7.27%	21.82%
	EBIT Margin	7.27%	
	ROA (NPATBUI / Avg. Assets)	7.27%	
Factor 3: Financial Strength	CFO / Debt	7.27%	21.82%
	FCF / Debt	7.27%	
	EBIT / Interest Expense	7.27%	
Factor 4: Financial Policies	Reliance on Acquisitions, Share Buybacks and Dividends	7.27%	21.82%
	Debt / Book Capitalization	7.27%	
	Debt / EBITDA	7.27%	
	Total	100.00%	100.00%

The point total is then mapped to the table below, and an overall rating is assigned based on where the score falls in the range. The methodology provides good correlation, with only one company having an outlying score.

Indicated Rating	Aggregated Weighted Factor Score	Indicated Rated	Factor or Sub-Factor Score
Aaa	<1.50	Aaa	<1.50
Aa1	≥1.50 - 2.49	Aa	≥1.50 - 4.49
Aa2	≥2.50 - 3.49		
Aa3	≥3.50 - 4.49		
A1	≥4.50 - 5.49	A	≥4.50 - 7.49
A2	≥5.50 - 6.49		
A3	≥6.50 - 7.49		
Baa1	≥7.50 - 8.49	Baa	≥7.50 - 10.49
Baa2	≥8.50 - 9.49		
Baa3	≥9.50 - 10.49		
Ba1	≥10.50 - 11.49	Ba	≥10.50 - 13.49
Ba2	≥11.50 - 12.49		
Ba3	≥12.50 - 13.49		
B1	≥13.50 - 14.49	B	≥13.50 - 16.49
B2	≥14.50 - 15.49		
B3	≥15.50 - 16.49		
Caa1	≥16.50 - 17.49	Caa	≥16.50 - 18.00
Caa2	≥17.50 - 18.00		

A chart showing the metrics and mappings for each of the broad quantitative rating factors is also shown along with the mapped composite and actual Moody's rating for each of the 22 companies. Note that the sub-factor and factor weighting are also provided. Mapped results for each of the sub-factors that vary from the actual rating by more than two notches are highlighted.

There are 22 medical products and device companies in this methodology. The indicated ratings of:

- 6 companies (27% of the sample) map to their assigned ratings,
- 10 companies; (45%; 73% cumulative) fall within one notch of their existing ratings,
- 5 companies (23%; 95%) have indicated ratings that are two notches higher or lower; and
- 1 company, whose rating reflects extremely volatile metrics as well as reimbursement risk and patent challenges, has an indicated rating that is five notches higher than the existing rating.

Appendix: Factor Mapping Results

Moody's Applied Weights			Factor 1			Factor 2			Factor 3			Factor 4		
			20.00%	7.27%	7.27%	7.27%	7.27%	7.27%	7.27%	7.27%	7.27%	7.27%	7.27%	7.27%
Company	Current Ratings	Model Indicated Ratings	Revenue	Diversity by Customer Sales Segment	Concentration by Top Customer Segment	R&D % of Sales	EBIT Margin	ROA (NPATBUI / Avg. Assets)	CFO / Debt	FCF / Debt	EBIT / Interest Expense	Reliance on Acquisitions, Share Buybacks and Dividends	Debt / Book Capitalization	Debt / EBITDA
Medtronic, Inc.	A1	Aa3	Aa	Aa	Baa	Baa	Aaa	Baa	Aaa	Aaa	Aaa	Baa	A	Aa
Becton, Dickinson and Company	A2	A3	A	A	A	Baa	A	Baa	Aa	A	A	B	Baa	A
Hillenbrand Industries Inc.	A3	Baa2	Baa	Baa	Baa	A	Baa	Baa	Aa	Baa	A	Caa	Baa	A
Stryker Corporation	A3	A1	A	Baa	Ba	Baa	A	Baa	Aaa	Aaa	Aaa	Aaa	Aa	Aaa
Baxter International Inc.	Baa1	Baa1	A	Aa	A	Baa	Baa	Ba	Baa	Baa	Baa	A	B	Ba
C.R. Bard, Inc.	Baa1	A2	Baa	A	A	Baa	A	Baa	Aaa	Aaa	Aa	Baa	Aa	Aaa
Dentsply International, Inc.	Baa2	Baa2	Baa	Ba	Baa	A	Baa	Ba	Baa	Baa	A	Aa	Baa	Baa
Bausch & Lomb Incorporated	Baa3	Baa3	Baa	A	A	Baa	Ba	Ba	Baa	Ba	Ba	Ba	Baa	Baa
Beckman Coulter, Inc.	Baa3	Ba1	Baa	Ba	B	Baa	Ba	Ba	Baa	Ba	Ba	B	Ba	Ba
Boston Scientific Corporation	Baa3	Ba1	A	Baa	Ba	Ba	Baa	B	Ba	Ba	Ba	Caa	A	Ba
Hospira, Inc.	Baa3	Baa1	Baa	Ba	Ba	Baa	Ba	Ba	Aa	A	Baa	Aaa	Baa	A
Dade Behring, Inc.	Ba1	Baa3	Baa	B	B	Baa	Ba	Ba	A	Baa	Ba	Aaa	Baa	Baa
Millipore Corporation	Ba1	Ba2	Baa	Ba	Ba	Baa	Ba	Ba	Ba	B	Baa	Caa	B	B
Bio-Rad Laboratories, Inc.	Ba2	Ba1	Baa	Ba	Ba	Baa	Ba	B	Ba	Ba	Ba	Aa	Ba	Ba
Orthofix International N.V.	Ba2	Baa3	Caa	Ba	B	A	Baa	Ba	Aaa	Aaa	Baa	Caa	Aaa	Aaa
Angiotech Pharmaceuticals, Inc.	Ba3	Ba3	Caa	A	Baa	B	Aaa	Ba	B	Ba	Ba	Caa	Ba	Ba
ConMed Corporation	Ba3	Ba3	B	A	Ba	A	B	B	B	B	Ba	Caa	Baa	Ba
DJO, LLC	Ba3	B1	Caa	Ba	Ba	A	Baa	Ba	B	B	Ba	Caa	B	Ba
Kinetic Concepts, Inc.	Ba3	Baa1	Baa	Ba	B	A	A	A	Aa	A	Baa	Aa	B	A
Advanced Medical Optics, Inc.	B1	Ba3	Ba	Ba	Ba	Baa	Ba	B	Caa	Caa	Ba	Caa	Baa	B
Accellent Inc.	B2	B2	Caa	Baa	Baa	A	B	Caa	Caa	B	Caa	Caa	Ba	Caa
Inverness Medical Innovations, Inc	B3	B2	Caa	Baa	Baa	Baa	Caa	Caa	B	B	Caa	Caa	Baa	Caa

Positive outlier

Negative outlier

Note: This table includes factor results for the 22 medical product and device issuers with long term debt ratings that file public financial statements. This excludes Encore Medical IHC, whose parent entered into a merger agreement in a going private transaction with Blackstone Capital Partners on June 30, 2006.

Based on December 31, 2005 fiscal year end financials or the nearest twelve month period. Figures for Boston Scientific, Millipore, Angiotech and DJO are based on Moody's estimates and are presented on a pro-forma basis for recently closed or pending transactions.

Related Research

Industry Outlook:

[Healthcare Industry Outlook: Medical Device Companies, December 2005 \(95448\)](#)

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