

Originally Published [MD&DI](#) December 2007

M&A ANALYSIS

Growing Companies Fuel Device Industry M&A Activity

A strong seller's market prevails, and medical device companies with promising products and technology have the opportunity to sell their companies at very attractive valuations.

Clyde Burkhardt and Stephen Tardio

In 2007, mergers and acquisitions (M&As) continued to shape the landscape and change the dynamics of all segments of the medical device industry. For the third straight year, strategic buyers and private equity financial buyers have had an insatiable appetite for acquisitions to enhance their growth prospects. They've filled out their product and technology offerings and their base of customers. HT Capital Advisors tracked more than 350 M&A transactions in the first nine months of 2007, including more than 100 transactions with European and nearly 25 with Asian participation. In total, these included 290 closed transactions as well as 67 announced and pending transactions. Seventeen deals exceeded \$1 billion in transaction value, 30 had transaction values between \$100 million and \$1 billion, and 119 were less than \$100 million in value. The remaining 191 transactions were of undisclosed value.



Illustration by
GLENN
GUSTAFSON/G2
Illustrations Inc.

Valuations peaked in the first half of 2007, as private equity buyers led the market to new highs with their ability to finance their offers with unprecedented leverage. Corporate acquirers tried to keep up in many cases, thereby initiating bidding wars, or perhaps more importantly, the impression of bidding wars. Many transactions required bids of several times revenue and more than 20 times earnings before interest, tax, depreciation, and amortization (EBITDA) just to compete. The result was that revenue and earnings multiples in general were at all-time highs. Of those transactions for which financial terms were disclosed, the purchase-price-to-revenue multiples ranged from 0.26 times to 29.9 times, and the average was nearly 4.2 times. The price-to-EBITDA multiples ranged from 4.0 to 58.5 times, with an average of nearly 24 times. For publicly traded targets, the average one-day price premium was 20%, and the average one-month price premium was 28%.

Merger Mania

July was the medical device industry's merger mania month. Several major acquisitions were proposed or concluded: Siemens's acquisition of Dade Behring, Medtronic's acquisition of Kyphon, ev3's acquisition of FoxHollow, Teleflex's acquisition of Arrow, and ReAble Therapeutics's acquisition of DJO Inc. Among other major transactions in 2007 were Molnlycke Health Care Group's acquisition by two private equity firms, Investor AB and Morgan Stanley Private Equity; Hologic's acquisition of Cytoc Corp.; and Flextronics's acquisition of Solectron.

In terms of the number of transactions, the most active buyers were Inverness Medical Innovations, which announced or completed seven transactions during the period, and Medtronic, which announced or completed four. In terms of total transaction size in dollars, Siemens held the top spot with more than \$7.2 billion in transaction value, followed by Hologic (\$6.0 billion), Warburg Pincus (\$4.5 billion), Flextronics (\$4.3 billion),

and Medtronic (\$4.0 billion).

Venture capital financing levels were also at all-time highs in the medical device and equipment sector during the first half of 2007. In the first six months of the year, a record \$2.1 billion went into 204 medical device and equipment deals, an increase of more than 60% over the \$1.3 billion invested during the same period in 2006. The majority of the transactions were mid-to-late stage transactions, but early-stage transaction volume also increased over prior periods. Of the \$2.1 billion invested, \$420 million went into first-stage investments, double the amount of the prior year. Investment in the medical device sector by venture capital firms has been driven by the successes they have experienced in the industry over the past couple of years as many of their portfolio companies have been acquired.

Based on a few very successful medical device initial public offerings (IPOs) over the past year, we believe that the public markets will be a viable alternative exit strategy for companies with promising products or technology. The October 2007 IPO of TranS1, which makes products to treat degenerative disk diseases of the lower spine, is a good example of an IPO that may spur other companies to consider an IPO rather than being acquired. TranS1's common stock surged 60% on the day of the offering. The company raised \$85.5 million, and at that time had a total stock market value of \$470 million, approximately 78 times revenues.

Mindray Medical International, one of China's largest device firms, completed its \$13.50 IPO in September 2006, and since then its common stock has more than tripled. The company has operations in the United States, and with its war chest from the IPO, it could become an active acquirer. There were also several Chinese pharmaceutical companies in the IPO pipeline in the third quarter of 2007. We expect other Chinese medical device companies to go public to take advantage of the strong appetite that is developing worldwide for Chinese companies.

Given China's demographics, we would not be surprised to see the acquisition of Chinese medical device companies by major U.S. or foreign medical device companies to enhance their penetration of the Chinese market.

New Buyers

The dramatic change in M&A activity that began about four years ago with respect to the most active potential acquirers became even more evident in 2007. Previously, several large companies—including Boston Scientific, Medtronic, Baxter, GE, and Johnson & Johnson—were the dominant players in the acquisition marketplace. Over the past several years, the number of acquisitions completed by these large companies has declined somewhat. In their place, another group of companies—Arthrocare, Angiotech Pharmaceuticals, Integra LifeSciences, American Medical Systems, Hologic, ev3, St. Jude Medical, Inverness, and ReAble, to name a few—have completed IPOs. They have grown very successfully and profitably and now have the financial clout, reputation, desire, and need to grow through acquisitions. Some of these firms cannot continue to grow significantly with their existing product and technology platforms, so they have become aggressive acquirers of smaller companies that have developed or are developing products with promising market potential.

We also expect many foreign acquirers, which we know have been looking at potential acquisitions over the past few years, to step up their acquisition efforts over the next year given the favorable exchange rate. Smith & Nephew plc, which has acquired many companies over the years, acquired the privately held wound-treatment company BlueSky Medical Group in May for potentially as much as \$110 million (see [Table I](#)). More than 85% of the purchase price was contingent and based on future milestones. In 2006, BlueSky had revenues of \$11 million. The transaction gives Smith & Nephew entrance into the fastest-growing segment of the advanced wound-care market—negative-pressure wound therapy. This transaction is a good example of how many medical device transactions are structured to minimize risks to the buyers by aligning their interests with those of the sellers.

As in past years, the vast majority of large acquisitions on the domestic front in 2007 were in the cardiovascular and orthopedic space. On July 26, Medtronic announced that it would acquire spinal products developer Kyphon for \$4 billion, a 32% premium over the stock market value one day prior to the announcement and more than seven times trailing revenues. Medtronic was obviously impressed by Kyphon's technology and market potential when it chose to add Kyphon's catalog to its broad portfolio of products. Analysts expect the acquisition to boost Medtronic's top-line and bottom-line growth by 2010.

Integra LifeSciences proposed an acquisition of publicly held IsoTis for \$51 million in cash, approximately two times revenues. This will help Integra further its goal to become a leader in regenerative medicine—a logical adjunct to its basic orthopedic business. The transaction gives Integra one of the largest sales forces addressing the orthobiologics market, and it will benefit from cross-selling to its spine, neurosurgery, trauma, extremity, and reconstructive surgery businesses. It was interesting to note that by mid October, IsoTis had not yet accumulated the required 50% shareholder approval for the transaction, primarily because a large part of its shareholder base are individuals residing outside of the United States.

In an attempt to create a company with a bigger mass in the global endovascular market, ev3 announced in July it would buy, but in effect merge with, FoxHollow Technologies. The \$780 million transaction was at a premium of more than 20% to FoxHollow's stock market value on the day before announcement of the transaction. FoxHollow's promising SilverHawk and NightHawk lines are to be sold into a fast-growing global market with the help of ev3's strong international sales force. Ev3 is partially owned by private equity firms Warburg Pincus and Vertical Group.

ReAble Therapeutics (formerly Encore Medical, a public company taken private in 2006 by The Blackstone Group, a large private equity firm) acquired DJO in July for \$1.6 billion, a 20% premium over the stock market value the day before the transaction was announced. The purchase price represented a price-to-revenue multiple of 3.2 times and a price-to-EBITDA multiple of 15.9 times. DJO produces rehabilitation and regeneration devices. Interestingly, illustrating that many things often come full circle in the world of M&A, ReAble is getting back into the orthopedic soft goods business that Encore previously sold to DJO. Also in May, ReAble enhanced its pain-management offerings with the acquisition of Iomed for \$22 million. With the financial backing of Blackstone, ReAble can be expected to continue making acquisitions to further enhance its strong orthopedics position.

Diagnostics: Heating Up

The acquisition climate in the diagnostics segment currently is very hot. The segment has received a great deal of attention since the announcement of Siemens's \$7 billion offer for Dade Behring (four times revenue) in July. With this proposed acquisition, Siemens has pulled off a major coup to further its goal of creating a one-stop medical testing company. In effect, Siemens has upped the M&A ante for competitive in vitro diagnostic companies. Its main rival GE will have to make a significant acquisition if it wishes to maintain its leading medical testing position.

Inverness Medical Innovations has been on a buying spree in the diagnostics area in 2007 with no less than seven acquisitions announced through September, plus two more foreign acquisitions in the first week of October. Inverness's largest transaction was the June acquisition of Biosite Inc. for \$1.9 billion, or \$92.50 per share. Prior to being acquired by Inverness, Biosite terminated a merger agreement it had with Beckman Coulter. In September, Inverness bought HemoSense Inc. for 5.8 times trailing 12-month revenue of \$28 million. HemoSense, a point-of-care diagnostics company that makes blood coagulation systems, was not profitable. In October, Inverness beefed up its distribution system with the acquisition of Bio-Stat Healthcare Group, a distributor of diagnostic products in the UK. The purchase price was \$33.4 million plus an earn-out of up to \$14.6 million based on future results. Bio-Stat was profitable with 2006 revenues of \$29.5 million.

Women's Healthcare

In women's healthcare, Hologic's \$6.2 billion acquisition of Cytoc Corp. completed in October combined two major players in the area. The resulting company has the largest sales force in the United States devoted to selling screening tools and medical devices to OB/GYNs. Cytoc's dominant business to date has been Pap-smear tests for cervical cancer, while Hologic's main source of revenue is digital mammography. The merger of Hologic and Cytoc is notable because it creates a \$10 billion sales global leader in women's healthcare with a comprehensive portfolio of best-in-class products. The transaction was structured as an acquisition of Cytoc by Hologic, for total cash and stock consideration of \$6.2 billion, a 33% premium over Cytoc's stock market value on the day before the transaction was announced. Of all the transactions we have reviewed over the past year, this one ranks high from the standpoint of overall fit and the ability to significantly increase revenues by leveraging the combined company's extensive channel coverage, cross-selling opportunities, and broad international presence.

Interestingly, both companies have grown significantly through several acquisitions over the past two years and continued to pursue deals while they were courting each other. In September 2007, Hologic paid about \$70 million for Biolucent, the leading producer of mammogram breast cushions. In March 2007, Cytoc acquired Adiana Inc., which had a proprietary nonincisional permanent contraceptive procedure, and in February 2007 it acquired publicly held Adeza Biomedical, a producer of preterm birth testing kits. The price paid was about \$420 million, a 65% premium over the stock market value of Adeza the day before the transaction was announced.

A New Era for Contract Manufacturing

A blockbuster transaction in the contract manufacturing area was Flextronics's October cash and stock acquisition of Solectron for approximately \$4.3 billion. The combined company has revenues of about \$30 billion, operates in 35 countries, and will be, by far, the largest and most diversified global provider of advanced design and vertically integrated manufacturing services. To further expand its medical manufacturing services into the design and manufacturing of disposable medical devices, Flextronics announced in August that it would acquire private equity-backed Avail Medical Products (\$250 million in sales) from UBS Capital Americas and Norwest Mezzanine Partners.

We would not be surprised if the Flextronics-Solectron transaction were a precursor to other less-flashy supply sectors of the industry, such as contract manufacturing, design and marketing, logistics, and component and subassembly suppliers.

Diversified manufacturer Teleflex made a definitive shift toward the medical products business in July by announcing it would purchase Arrow International for \$2 billion in cash, a 20% premium and a price-to-EBITDA multiple of sixteen times. Teleflex believes the deal is a major milestone in its efforts to redefine its portfolio. Arrow's disposable catheter products were attractive in part because they represented recurring revenue streams. The Arrow deal came on the heels of Teleflex's acquisition of the assets of contract manufacturer HDJ Co. and its wholly owned subsidiary Specialized Medical Devices.

Other Major Deals

On July 2, Tyco International successfully completed the spin-off of its Tyco Healthcare business, which is now Covidien, a publicly traded company. With nearly \$10 billion in sales, 59% of which is from medical devices, Covidien contains such leading brand businesses as Autosuture, Kendall, Mallinckrodt, Nellcor, Puritan Bennett, Syneture, U.S. Surgical, and Valleylab. With its strong market position and financial strength, we expect Covidien to pursue acquisitions of other trophy brand-name medical product companies in the years to come.

In May, Cardinal Health announced it would purchase Viasys Healthcare, a medical technology company focused on respiratory, neurology, medical disposable, and orthopedic products, for \$1.5 billion. The acquisition expands Cardinal's clinical and medical product offerings for global acute-care customers.

Private equity firm Warburg Pincus agreed to buy optical products maker Bausch & Lomb in May for \$3.7 billion, at which time it also agreed to a 50-day window to invite other bidders. This so-called go-shop clause gained fashion this year as a method to ensure private equity buyers were indeed paying full price. The invitation was accepted by Bausch rival Advanced Medical Optics (AMO) in July, which submitted a \$5 billion bid. AMO's bid was withdrawn a month later when Bausch refused to grant the company extra time to shore up its bid.

In January, Apax Partners sold Molnlycke Health Care Group, the Swedish device company, to private equity firms Investor AB and Morgan Stanley Private Equity for \$3.7 billion, a price-to-revenue multiple of 3.8 times. Molnlycke makes wound-care and surgical products. During its holding period, Apax acquired and combined the wound-care business of SSL International and surgical glove business of Regent Medical with Molnlycke. Other bidders in the sale of Molnlycke included The Blackstone Group and Clayton, Dubilier & Rice. The transaction is an example of private equity funds trading among themselves, something that was prevalent in 2007 in other industries as well.

The Long View for Components

The long-term consolidation trend of the medical device component sector continued over the past year. In addition to producing components for medical device OEMs, many targets also serve the needs of the aerospace, instrument, and security industries. There is a very large universe of attractive component companies with revenues in the range of \$5 million–

\$100 million. Many of them have just one proprietary product, technology, or technique, which would enhance the product offerings of many potential acquirers.

In the components area, the acquisitions made over the past year by SurModics, a leading provider of surface modification and drug-delivery technologies, were a good example. In August, SurModics solidified its position and broadened its product offerings in the diagnostics market by acquiring BioFX Laboratories, a producer of substrates used in test kits with revenues of \$3.5 million. The price paid is a good illustration of the valuation that well-positioned small component companies can command: \$11.3 million in cash, and up to an additional \$11.4 million in cash when certain revenue targets are achieved. Also in August, SurModics acquired Brookwood Pharmaceuticals, which further strengthens its leading position in polymer-based drug-delivery systems.

Greatbatch Inc., a leading provider of critical components used in implantable medical devices, enhanced its product offerings and base of OEM customers through two acquisitions. In June, it acquired publicly held Enpath Medical, a supplier of venous vessels, for approximately \$93 million, a 30% premium over the stock market value of the company the day before the transaction was announced. In April, Greatbatch acquired Biomec Inc. for approximately \$11.4 million in cash. The acquisition is expected to broaden Greatbatch's device design and engineering service capabilities.

In March, Moog Inc., a manufacturer of precision control components and systems, continued its long-term strategy of growth through acquisitions with the purchase of Zevex International for \$83.8 million. Zevex produces a line of pumps, sensors, and surgical tools for the medical OEM marketplace. The purchase price represented a premium of 39% over Zevex's stock market value on the day before the transaction was announced.

Conclusion

In summary, 2007 was an exciting time for M&As in the medical device industry. Private equity led the way on big deals, about which the prevailing attitude was “no one is immune to a buyout” because of size. That transaction environment changed significantly with the problems in the credit markets during July and August.

The Federal Reserve did much to calm the M&A market’s nerves by initiating its first interest rate cut in many years. Since the much-analyzed subprime meltdown during the mid part of the year, common wisdom on Wall Street says that larger private equity buyouts financed by syndicated loans will diminish substantially. Thus, very large deals are likely to return to the domain of the large, corporate buyers. This does not mean, however, that we are unlikely to see smaller, strategic deals in the future.

On the contrary, tuck-ins and add-ons that plug gaps in a corporate buyer’s strategy are likely to become more prevalent. What the M&A market might resemble is a sort of barbell market, where the bulk of the transaction dollar volume comes from a handful of large deals, and the bulk of the transaction volume comes from deals in the middle to lower-middle market (<\$500 million).

One of the main drivers of M&A activity in general over the next two years will be the fact that many company owners will be eager to sell before any increase in the currently favorable maximum 15% federal capital gains rate. We believe this will be particularly true in the medical device component sector because there are a large number of companies with owners at or near retirement age, and a large group of large financially strong industrial component manufacturers aggressively seeking acquisitions.

Overall, we expect mergers and acquisitions in all segments of the medical device industry to continue to be strong in 2008 and beyond. Simply stated, there is a substantial number of small and medium-sized medical device and component companies that have products or technologies that make them attractive acquisition targets for a large group of very motivated potential buyers, both strategic and financial.

Clyde Burkhardt is senior managing director for HT Capital and Stephen Tardio is the managing director of HT Capital's Chicago office. They can be reached at cburkhardt@htcapital.com and stardio@htcapital.com, respectively.

DEAL SIZE (\$ MILLIONS)	BUYER	UNIT PURCHASED	DATE CLOSED
7036.08	Siemens Medical	Dade Behring	10/31/07
5657.65	Hologic Inc.	Cytec Corp.	9/30/07
3812.84	Medtronic Inc.	Kyphon Inc.	Pending
1982.51	Teleflex Medical Inc.	Arrow International Inc.	10/2/07
1534.64	ReAble Therapeutics	DJO Inc.	12/31/07
1517.20	Cardinal Health Inc.	Viasys Healthcare Inc.	6/29/07
1509.13	Inverness Medical Innovations	Biosite Inc.	7/2/07
886.57	Smith & Nephew plc	Plus Orthopedics Holdings AG	6/1/07
700.17	Advanced Medical Optics	IntraLase Corp.	4/3/07
636.14	ev3 Inc.	FoxHollow Technologies	12/31/07
385.78	Danaher Corp.	Vision Systems Ltd.	2/26/07
217.65	Angiodynamics Inc.	RITA Medical Systems	1/30/07
178.29	Inverness Medical Innovations	Hemosense Inc.	12/31/07
110.00	Smith & Nephew plc	BlueSky Medical Group	Pending
97.00	Allergan Inc.	EndoArt SA	2/22/07
94.64	Greatbatch Inc.	Enpath Medical Inc.	6/18/07
78.22	Moog Inc.	Zevex International Inc.	3/19/07
56.54	Mentor Corp.	Perouse Plastic SAS	7/3/07
31.40	Immunodiagnostic Systems Holdings	Biocode Hycel SA	8/31/07
30.00	Varian Medical Systems Inc.	Accel Instruments GmbH	1/29/07
30.00	Integra LifeSciences	LXU Healthcare Inc.	5/8/07
25.00	Inverness Medical Innovations	First Check Diagnostics LLC	2/5/07
25.00	Inverness Medical Innovations	Quality Assured Services Inc.	6/18/07
25.00	DaVita Inc.	NxStage Medical Inc.	2/7/07
23.00	MediCult A/S	Humagen Fertility Diagnostics	6/1/07
18.92	Cellular Technical Services Co., Inc.	SafeStitch LLC	9/4/07
17.00	Wright Medical Group Inc.	Darco International Inc.	4/5/07
16.75	AFP Imaging Corp.	Quantitative Radiology srl	4/23/07
16.30	Enzo Biochem Inc.	Axxora Life Sciences Inc.	6/5/07
15.10	Symmetry Medical Inc.	Specialty Surgical Instruments	9/4/07
12.57	ITX Corp.	AiMedics Corp.	6/29/07
11.40	Greatbatch Inc.	Biomec Inc.	4/9/07
11.30	SurModics	BioFX Laboratories Inc.	8/13/07
5.69	Inverness Medical Innovations	Orange Medical BV	5/8/07

Table I. A sampling of key mergers and acquisitions in the medical device industry in 2007. Mergers are ranked by deal size. Source: Bloomberg and HT Capital Advisors LLC.