

# Survey of Hospital Administrators

## Thoughts on Hospital and Capital Equipment Spending in 2009

We surveyed 27 administrators and interviewed 10 senior executives at hospital systems (one at a group purchasing organization) around the United States to get their sense of the capital spending and credit environments in the fourth quarter and into 2009. The results were most relevant for the names in our coverage universe most dependent on capital spending—Intuitive Surgical, Stryker, and TomoTherapy—as well as elective procedures, such as VNUS Medical.

The executives observed that hospital profitability follows the economic trends in their served communities. Generally, they still expect flat to slightly higher patient volumes next year, but with revenues dropping, nearly all are rationalizing operating and capital expenditures. As the unemployment rate rises, more patients are stretching out payments, seeking care under Medicaid (which is a significant money-loser for most hospitals), and deferring elective procedures.

Capital spending is expected to decline along with the overall deterioration in the U.S. economy, with our survey respondents defining capital expenditures as starting in a range of as little as \$500-\$5,000. Most projects nearing completion are being finished, but we expect many hospital systems to delay even small new equipment purchases as well as larger purchases and planned facility expansions. Hospital funding is being constrained by the higher cost of borrowing, losses in investment portfolios, and a significant slowing in charitable donations. The time frame of recovery is unknown.

We expect hospitals to continue spending for revenue-generating equipment such as linear accelerators for radiation therapy where they are capacity constrained, as well as technologies such as EMR (electronic medical record) and robotic surgery, as these are necessary to stay competitive. However, many of the executives we interviewed indicated that many of these revenue-producing items can be delayed given the funding environment.

Based on the results of our field research and recent commentary from publicly traded hospital providers and services companies, we recently lowered our earnings estimates for Intuitive Surgical and Stryker, with a ratings reduction (from Outperform to Market Perform) on Intuitive Surgical. We are maintaining our estimates on TomoTherapy and VNUS Medical, as we believe they fully reflect the current economic and financing environment.

Ben Andrew  
312.364.8828  
bandrew@williamblair.com

Liping Cai  
312.364.8565  
lcai@williamblair.com

Matthew O'Brien  
312.364.8582  
mobrien2@williamblair.com

William Blair & Company, L.L.C. intends to seek or expects to receive compensation for investment banking services from Intuitive Surgical, Inc., TomoTherapy Incorporated, and VNUS Medical Technologies, Inc. in the next 3 months. Please consult pages 28 and 29 of this report for all disclosures.

### Healthcare | Medical Devices

December 3, 2008

#### Industry Report

(08-108)

#### Intuitive Surgical, Inc.

Symbol: ISRG (Nasdaq)  
Stock Price: \$117.95 (52-Wk: \$110-\$368)  
Rating: Market Perform  
Company Profile: Aggressive Growth

#### Stryker Corporation

Symbol: SYK (NYSE)  
Stock Price: \$38.13 (52-Wk: \$35-\$75)  
Rating: Outperform  
Company Profile: Established Growth

#### TomoTherapy Incorporated

Symbol: TOMO (Nasdaq)  
Stock Price: \$2.24 (52-Wk: \$2-\$20)  
Rating: Outperform  
Company Profile: Aggressive Growth

#### VNUS Medical Technologies, Inc.

Symbol: VNUS (Nasdaq)  
Stock Price: \$14.69 (52-Wk: \$11-\$24)  
Rating: Outperform  
Company Profile: Aggressive Growth



WILLIAM BLAIR & COMPANY, L.L.C.  
222 WEST ADAMS STREET  
CHICAGO, ILLINOIS 60606  
312.236.1600  
WWW.WILLIAMBLAIR.COM

## Conclusions

With the global economy struggling and tight worldwide credit markets, we surveyed 27 hospital administrators and conducted in-depth interviews with an additional 10 senior executives (one at a Group Purchasing Organization or GPO) to gain increased visibility into the challenges their hospital systems are facing and the likely impact on names in our coverage universe. The administrators noted that they anticipate relatively flat patient volume next year (although comments from several publicly traded companies that operate numerous hospitals indicate they expect an outright decline), with outpatient surgical procedures down and in-patient cases steady. On the credit side, most of the administrators noted that access to capital has tightened significantly, with many banks refusing to lend (or charging significantly higher rates on loans), charitable donations down, and investment portfolios under significant pressure.

Most significantly, the hospitals' profitability generally tracks the economic backdrop in their communities. As the unemployment rate rises, more patients and insurance companies take longer to pay their bills, and many more patients obtain care under Medicaid coverage, which dramatically hurts profitability. One executive indicated that his system gets only \$0.78 for every dollar of cost on Medicaid patients, and it's after an extended billing period to boot.

Consequently, many facilities are reducing spending in various areas (capital equipment, facility expansions, staff reductions, and benefits). While we expect most of the companies in our coverage universe to feel at least a modest impact in the current environment, we believe that four (Intuitive Surgical, Stryker, TomoTherapy, and VNUS Medical) are the most susceptible to these trends.

## Summary of Implications for Four Companies in Our Coverage

While we continue to view da Vinci from **Intuitive Surgical** as transformational technology that will eventually become the platform on which most surgery is performed, we believe that the macro environment will present a major headwind for the company next year. Consequently, we recently lowered our system placement, total revenue, and EPS estimates for 2009 (now 350 or flat year-over-year, \$1.043 billion, and \$6.25, respectively). With our belief that the economy will remain sluggish next year and that Street estimates will need to come down, on November 17 we lowered our rating on Intuitive Surgical to Market Perform from Outperform.

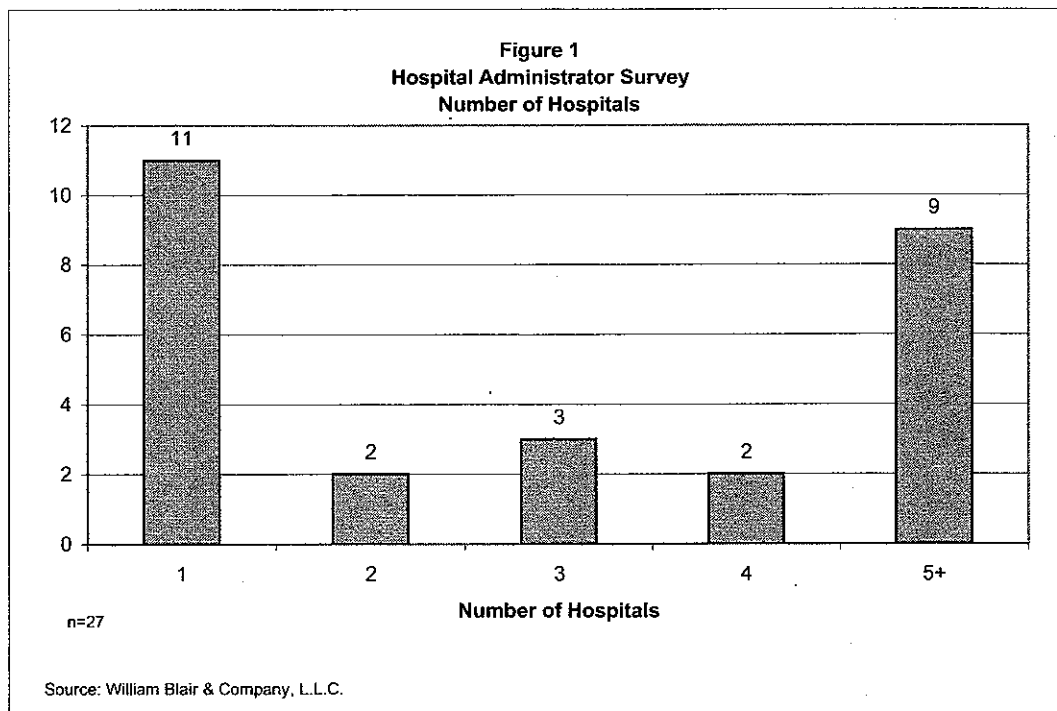
Despite **Stryker's** diversified platform, we believe that the company will face headwinds as orthopedic procedures begin to decelerate because patients fear being away from work for extended periods or cannot afford the required procedure or diagnostic co-pays. Moreover, we believe that capital spending on the company's MedSurg business will moderate. As a result, we recently reduced our fourth quarter 2008 revenue estimate by approximately \$100 million (to \$1.76 billion), although our EPS target is unchanged. We previously lowered our 2009 EPS estimate by \$0.08 (now \$3.30, up 15%). Despite the reductions, we maintain our Outperform rating. The stock trades at a discount (11.2 times our revised 2009 EPS estimate) to its expected growth rate and offers a strong balance sheet and diversified portfolio.

Our channel checks also indicated that demand for linear accelerators remains strong but may be delayed next year due to the difficult lending environment. However, following weak third quarter 2008 results from **TomoTherapy** (reported on October 28), we significantly reduced our estimates for the company to take into account the current financing environment and challenging competitive forces at play. Consequently, we do not believe that we need to further adjust our 2009 estimates. We model the company's trough cash position at \$2.60 per share, which represents a 15% premium to where shares of TomoTherapy trade today, leading us to believe that significant upside exists. We reiterate our Outperform rating.

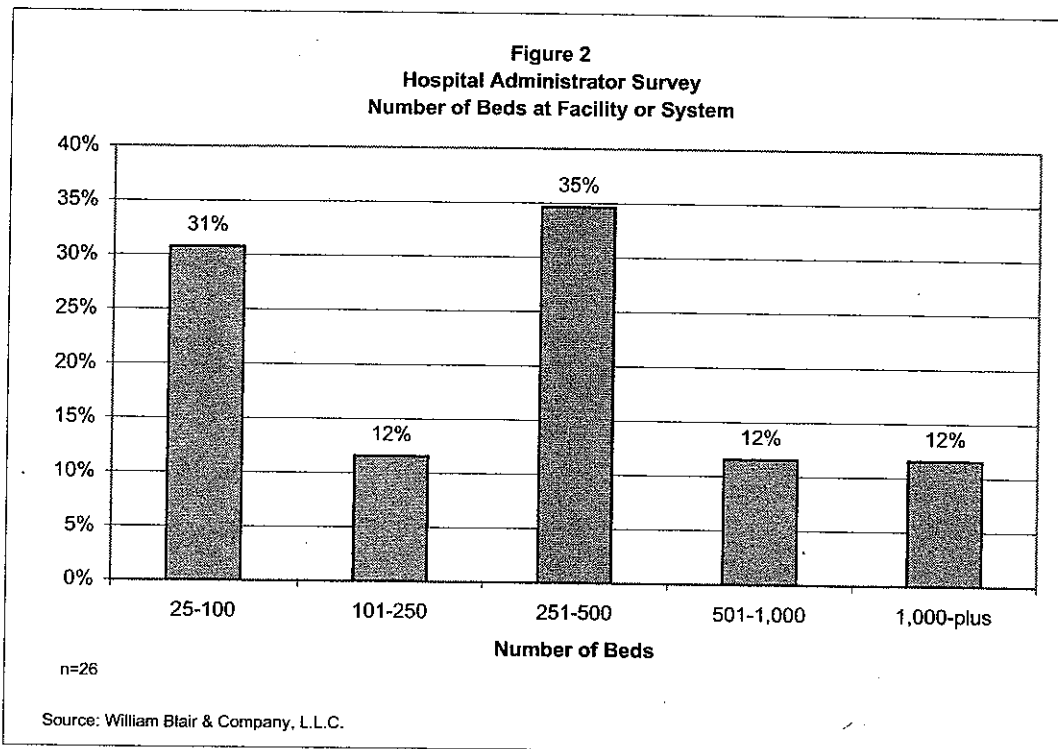
With our field research indicating that elective procedures will likely encounter a slowdown next year (both in the hospital and physician's office), we believe that **VNUS Medical** will face some headwind in the United States. However, our estimates include only modest share-taking next year even if the market declines (rather than grow at the high-teens levels of recent years), and we believe that the international market opportunity (the company is the only approved supplier in France, and the country is set to begin reimbursing these procedures on January 1, 2009) may more than offset any domestic slowdown. Further, the company has about \$5 per share in cash and an excellent competitive position; it collects a considerable royalty per catheter sold by AngioDynamics and Vascular Solutions (we estimate \$45 per catheter). We reiterate our Outperform rating and encourage investors to continue accumulating the stock at current levels and become increasingly aggressive on pullbacks.

## Survey and Channel Check Overview

We surveyed 27 hospital administrators to gain increased visibility into their expectations on hospital spending and access to capital during 2009. In addition, we interviewed 10 senior executives (one at a major GPO) to increase our understanding of the dynamics at play within hospitals. Although our sample set is relatively small, the in-depth interviews (30 to 60 minutes each) provided us with sufficiently consistent commentary to support our conclusions regarding the impact of this macro environment on the device manufacturers. As seen in figure 1, our survey respondents were split between stand-alone hospitals and large systems with five or more hospitals within the network.



While the number of respondents to our survey is relatively small, as seen in figure 2, on the following page, we were able to achieve a good cross-section of small hospitals (between 25 and 100 beds), midsize facilities (between 251 and 500 beds), and larger systems (more than 1,000 beds).



Similarly, our follow-up calls included small rural facilities and larger systems in major metropolitan areas. In aggregate, the number of beds in our survey and from our channel checks amount to about 15,000 beds and, as seen in table 1, include a geographic mix of hospitals (although roughly one-quarter are in Illinois).

**Table 1**  
**Hospital Administrator Survey and Interviews**  
**Location of Hospital Respondents by State**

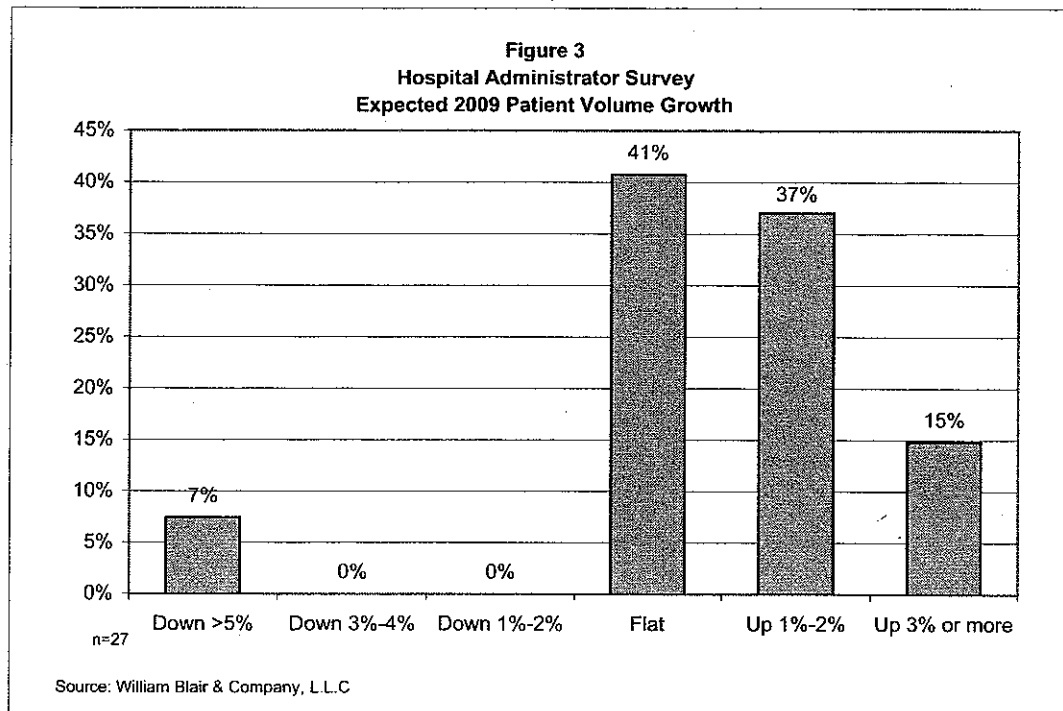
Alabama	2
Arizona	1
California	1
Florida	1
Connecticut	1
Illinois	10
Indiana	1
Iowa	1
Massachusetts	2
Michigan	1
Minnesota	2
Montana	1
New Jersey	1
New York	3
North Dakota	1
Ohio	2
Pennsylvania	1
Utah	1
Vermont	1
Virginia	1
Wisconsin	2

n = 37

Source: William Blair & Company, L.L.C.

## General Observations

From the results of our survey and our phone conversations, a number of general themes emerged. Although the U.S. economy continues to sputter, most of our administrator sources indicated that they expect patient volumes next year, as seen in figure 3, to be up modestly on average.



We have heard similar comments from our phone interviews, including:

- *We have seen no impact on patient volumes thus far (through October), and while we expect unemployment to increase next year, we are not forecasting a slowdown in patient volume next year.*
- *Our patient volumes have been solid in recent weeks.*

While our survey results and phone interviews indicate that most administrators expect unemployment to move higher next year (we believe expectations are for 7% unemployment, 50 basis points higher than the current level) and have incorporated this assumption into their patient volume growth estimates, we do not believe that this group has factored in the possibility of significantly higher unemployment. With some economists projecting unemployment could reach 10%-12% in the coming quarters, we believe that patient volumes could fall meaningfully next year. Although some people will pick up COBRA insurance if they lose their jobs and still be able to afford doctor and hospital visits, a meaningful portion will simply elect to forgo coverage, which should reduce patient volumes for hospitals in total. Further, several publicly traded hospital providers have noted that patient volumes are down roughly 2% already and expect the decline to persist next year. Consequently, we disagree with the consensus from our respondents and interviewees (the only time in our research on this topic that we do so) and anticipate that patient volumes will be down next year.

Outside of patient volumes, we believe that the hospitals will suffer in other areas. Many hospitals have seen an increase in their bad-debt expense, as patients (both insured and uninsured) have become increasingly delinquent with their paying habits. Some of the comments that we have heard during our channel checks include:

- *We have not seen a change in volumes yet, but we have seen a 10%-15% decline in collections.*
- *Bad debt has increased; people are just taking longer or not paying at all.*

On top of the increase in bad debts, hospitals are encountering an increase in the number of denials from commercial payors, as these organizations—in an effort to improve their cash flow position—extend the time before paying.

- *Payors are slowing down their payments too. We are increasingly being denied on claims that have traditionally been very straightforward. We have seen our days' sales outstanding increase by 7-12 days in recent months.*

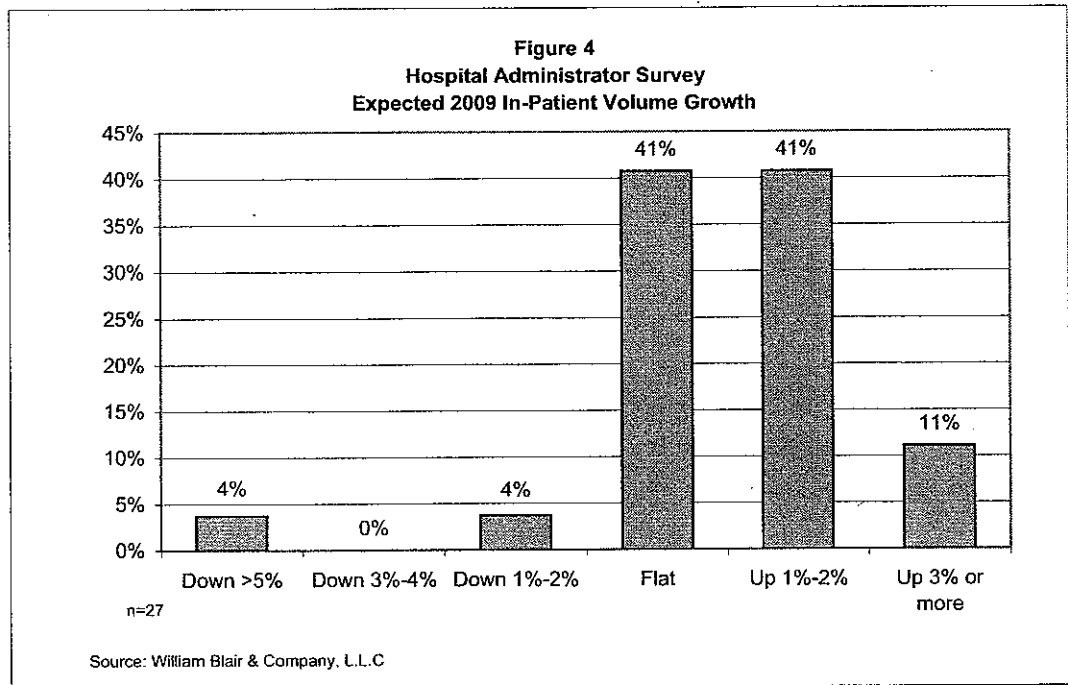
These activities force hospitals to foot a larger percentage of the economics and magnify the importance of a facility's ability to manage its revenue cycle. While we anticipate that hospitals will absorb a sizable portion of these economic costs, we believe that the manufacturers will also encounter an increase in days' sales outstanding in the coming quarters as a result of a slowdown in insurance payments. In addition, to improve their cash flow, we believe that hospitals may work down their inventory levels (creating increased volatility in quarterly ordering patterns) to reduce the amount of capital tied up in these assets. This should, to some extent, affect cash flow generation from many medical technology companies and their suppliers in the coming quarters. We anticipate that the larger organizations (Baxter, Medtronic, ResMed, St. Jude, and Stryker) have the means to absorb this activity better than the smaller companies in our universe (Cardica, DexCom, Insulet, and NxStage). Although this will likely amount to a modest distraction for some of our companies, we do not believe that a slowdown in the pace of payments from hospitals represents a serious threat to the financial health of any companies in our coverage universe.

Most of the hospitals noted that they continue to work on cost containment through the use of group purchasing organizations (GPOs) and negotiating directly with device manufacturers to lower acquisition costs. However, doctors still maintain a significant level of influence in terms of which devices, including orthopedic and spinal implants, are purchased. Consequently, we do not believe that the device manufacturers, such as Stryker, Zimmer, and NuVasive, are at significant risk from a pricing perspective during 2009, although longer term this is an area the hospitals will look into for margin opportunities. Healthcare reform or other initiatives taken by the government to manage the Medicare deficit, possibly through decreasing payments to hospitals for providing care to this population, will exacerbate the pricing pressure on the manufacturers, in our opinion. Some of the direct quotes from our administrators include:

- *Physicians still really control much of the device decision process; their mobility in where they perform procedures is the key.*
- *Orthopedic surgeons still control the situation and probably will for several years.*
- *GPOs only really help on high-volume commodity or near-commodity products.*

## In-Patient Procedures Not as Exposed to a Slowdown as Outpatient Cases

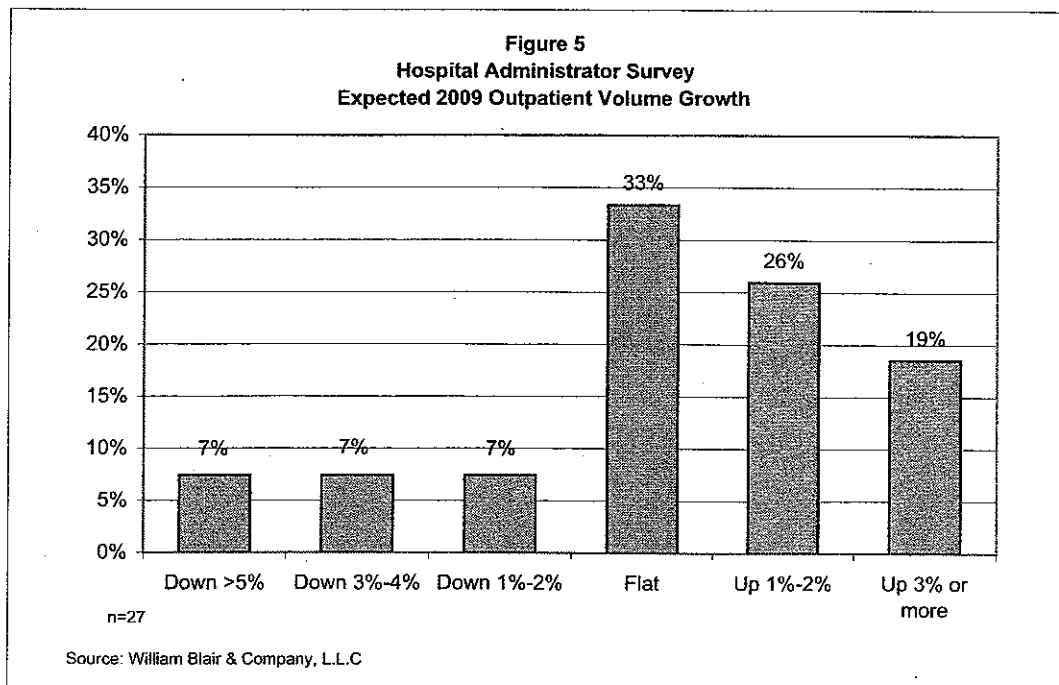
In terms of surgical procedures for 2009, our survey respondents, as seen figure 4, indicated that they expect flat to modestly higher numbers of in-patient procedures at their hospital or in their system next year.



In-patient procedures include coronary artery bypass and hysterectomy cases, among others. From the names on our coverage list, companies such as Baxter (with all three of the inhaled anesthetics for general surgery, IV solutions, and infusion pain pumps, among other products), Cardica (coronary bypass surgery), Intuitive Surgical (various oncology-related procedures), Medtronic (spine surgery products, heart valves, perfusion systems), and NuVasive (spinal fusion) are the most likely beneficiaries of this data. The results of this question largely mirror the comments we heard during our field research.

- *From the same period last year [3 months ended in September], our inpatient surgeries are up 40%.*
- *We have seen no volume impact to our in-patient cases due to the economy so far.*
- *Interestingly, we have seen a slowdown in the number of cardiovascular procedures performed.*

While in-patient procedures are expected to remain steady or increase, expectations regarding outpatient procedures are a bit more negative. As seen in figure 5, on the following page, a few of our respondents are looking for a retraction in the number of outpatient procedures next year (although this is equally offset by expectations of higher volumes).



We believe that outpatient procedures include a larger portion of elective cases (including plastic surgery and cataract surgery). We heard the same sentiment regarding outpatient procedures, with a particular focus on elective cases, during our channel checks. Some of the direct comments include:

- *We have seen a flattening in the number of outpatient procedures performed, with MRI, CT scans, and colonoscopy cases declining.*
- *Our outpatient surgery volume is down 5% [during the three-month period ended in September].*

### **Elective Procedures Most Likely to Feel Impact of Economic Downturn**

To get a sense for which outpatient procedures are most susceptible to the current economic environment, we polled our survey respondents to find out which cases they have seen slow down as a result of the weakening U.S. economy. The most commonly cited cases were elective procedures. We heard the same sentiment during our channel checks, with specific comments including:

- *We have seen a slowdown in the number of elective procedures being performed and I expect that people with high deductibles will likely continue to postpone elective surgery next year too.*
- *Procedures outside of cancer, cardiology, imaging, pulmonary and critical care, and neurosciences are being deferred.*

While we can speculate on which procedures will be under the most pressure, we surveyed our administrator respondents and additional field contacts to gain more visibility into which specific cases were most likely at risk in the coming quarters. Not surprisingly, the elective procedures most often mentioned as either experiencing or expected to observe a slowdown in the number of cases were cosmetic and plastic surgery. With the economic downturn,



companies that supply products for these cases are exposed to a meaningful slowdown, and the publicly traded pure-play aesthetics companies have significantly underperformed the market as a result. The following comment is evidence.

- *We have seen a 20%-30% slowdown in the number of plastic surgery cases at our facility and do not expect to see that reverse in 2009.*

**Outside of this common response, the second most commonly cited group of procedures experiencing a slowdown were orthopedic procedures.** Given the debilitating pain associated with the deterioration of a hip or knee, we were quite surprised to hear this answer as frequently as we did. While there have been some anecdotal comments over the past couple of months on slowdown of orthopedic procedures, all the major manufacturers in the industry reported solid numbers for the September quarter, with an estimated reconstructive market growth rate of 7%-9%. From the earnings calls by the manufacturers and comments made by the hospital administrators, we believe the patient co-pay, up to \$2,000 for a hip or knee replacement surgery when applicable, may have led to decisions to delay these procedures, but procedure volume likely has been made up by people who are worried of losing employment and insurance in this environment.

While reconstructive procedures can be delayed for several months, the conditions that require surgery do not reverse and most surgeries will get done. We do not rule out the possibility of a procedure slowdown for these types of surgeries, especially if the broad economy continues to deteriorate, but believe these procedures will come back eventually.

Outside of the orthopedic manufacturers we cover, the name that is likely most at risk from an elective standpoint is VNUS Medical, with its treatment of venous reflux disease. The procedure is fully reimbursed and generally requires a modest co-pay (from \$10 at the minimum up to \$400 at the high end). However, people seeking treatment for this condition are experiencing a significant level of pain (the disease is related to incompetent valves in the legs, causing blood to pool in the legs and resulting in ineffective blood flow back to the heart), which we believe will insulate VNUS to some extent from a further deterioration of the U.S. economy. See the section on VNUS at the end of this report for additional commentary.

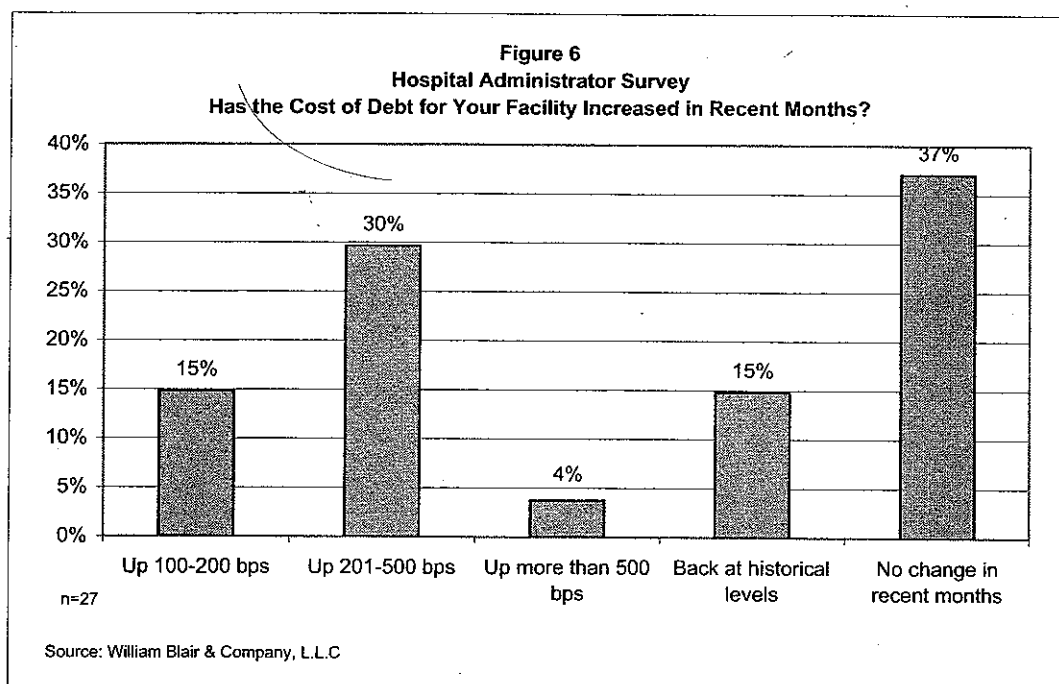
Outside of VNUS, none of the other names on our list are used to a large extent in elective procedures. However, a few of the more consumer-driven names (DexCom, Insulet, and ResMed) may feel an impact from an economic slowdown. All these companies, in our view, sell products to treat various diseases (diabetes and sleep-disordered breathing). However, patients with these diseases manage their illnesses with other therapeutic products (such as finger sticks for glucose monitor or daily insulin injections in diabetes) or may have less incentive to go out and purchase a CPAP machine and mask. Although the markets where these three companies compete are large and underpenetrated, we believe that, on the margin, they will likely lose some customers to the weakening economy as people decide just to make do with their current approach to managing the underlying disorder.

## Credit Market Tight for Hospitals, Cost of Debt Has Increased Meaningfully

With strong demographic trends and a relatively high predictive value regarding cash flow generation, hospitals would appear to be insulated from the recent credit crunch. However, one consistent statement from the numerous channel checks we have conducted in recent weeks is that access to capital is a significant constraint for hospitals. Not surprisingly, bigger hospitals in more affluent areas or those that are part of a larger system have an easier time obtaining credit from financing institutions than smaller hospitals, but all have encountered issues in recent months. Some of the comments that we have heard include:

- *The appetite for capital is clearly greater than the ability to access capital.*
- *There has been a contraction in lending recently and as a result we may have to delay the construction of a new bed tower.*
- *We have not seen a huge reduction in capital spending so far from our hospital clients.*

To go along with the tightening of the credit market, as seen in figure 6, the cost of debt for some hospitals has increased significantly in recent months.



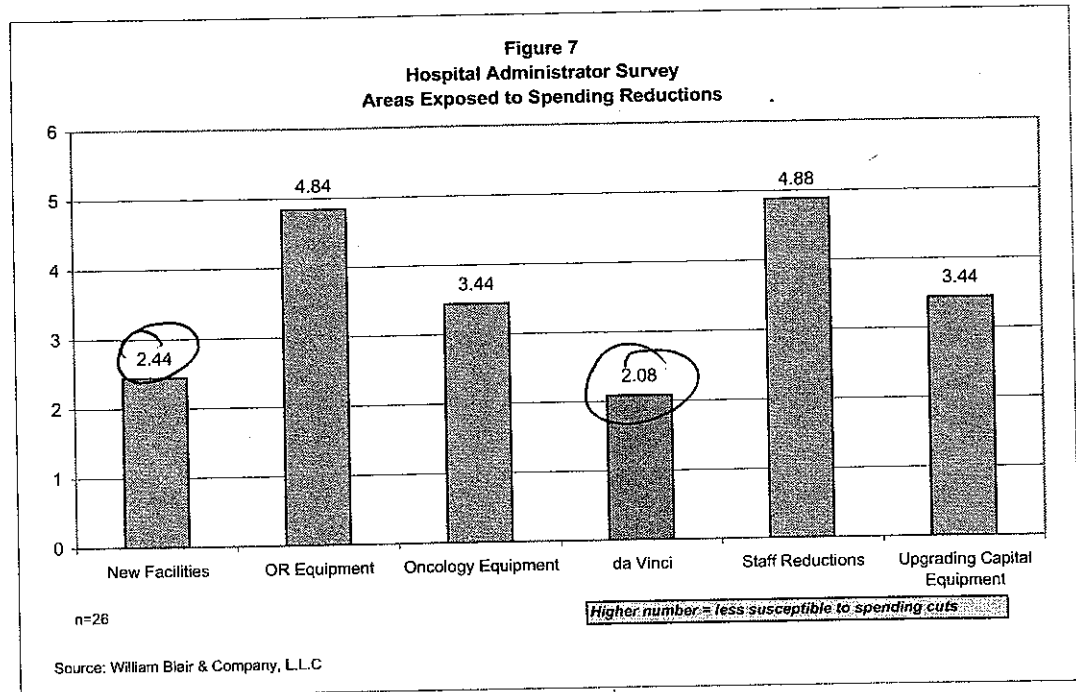
Though speculative on our part, we believe that of the roughly one-third of respondents who indicated that they have not seen a change in their cost of debt in recent months, a portion have not needed to access the debt market and thus may not yet feel the impact of the credit squeeze. However, our interviews yielded consistent commentary on the increase in interest rates for hospitals:

- *Four weeks ago, our cost of debt increased to between 8% and 9%, but in recent days has come back down to its traditional 2%-3% level.*
- *Our cost of debt is now 6%-8%, compared to 3.5%-4% historically.*
- *The interest rate on our variable debt increased from 2% up to 9% and now stands at 7%; this obviously impacts our ability to purchase new equipment.*

These rate increases dramatically affect the return-on-investment calculations, and thus have led to delays in or cancellations of a number of important projects. As a result of the credit situation in the United States, along with increased borrowing costs, hospitals need to cut spending in various areas in the coming months to mitigate margin erosion or to purchase the necessary equipment needed to remain competitive in their area.

### Conflicting Views on What Gets Cut First When Moving to Reduce Hospital Expenses

With the number of outpatient procedures already down and expected to continue falling in the coming months, a spike in the number of lower-profit Medicaid patients, and high debt costs, hospitals have begun to assess how to reduce operating expenses to offset the anticipated revenue decline next year and maintain profitability. To get a sense for where hospitals expect to cut expenses in the coming months, we polled the administrators to determine which areas will likely experience pressure. As seen in figure 7, the first area to face spending restrictions, according to the administrators, was on Intuitive Surgical's da Vinci robot.



With questions about the profitability of the system and a \$1.35 million average price tag, da Vinci is a target in this environment (we will have more to say on Intuitive Surgical specifically later in this report) and will likely face deferrals during 2009. We point out that the specificity of the da Vinci response (compared with broad alternative response categories) may have driven some of our respondents during our administrator interviews leads us to believe that system deferrals will likely occur next year. Our channel checks with the administrators offered a mixed response regarding their expectations on da Vinci systems during 2009 and include comments such as:

- This equipment has not generated the expected profitability or procedure volume.
- You have to have surgeons who are trained on it and fully committed to using it; otherwise, the economics do not work.
- More and more surgical specialties are trying to use it. We will certainly buy another one, but the timing of that purchase is undetermined at this point.

From our survey, the second most exposed expenditure among hospitals is the buildout of new facilities. This is not surprising considering the absolute dollar amount associated with these projects and the rapid increase in the cost of debt to fund these programs. We believe that the projects already under way will be completed, but new facility buildouts will be deferred. Our field research mirrored this sentiment, with the administrators noting that several of their large facility buildouts would likely be deferred. Some of their direct comments include:

- *We are delaying the construction of a new oncology building.*
- *We just delayed the buildout of a \$200 million bed tower.*

Many of the hospitals we spoke with noted that they will need to expand to meet the demand for services longer term, but in the interim they are simply delaying projects.

While it would seem that operating-room (OR) equipment sales would be susceptible to the slowdown in facilities expansions, our survey respondents indicated otherwise. We believe that the slowdown in facilities expansions are likely related to new wings and more hospital beds, rather than OR equipment. However, our channel checks indicated that OR equipment is not immune to the economic downturn. One direct comment included:

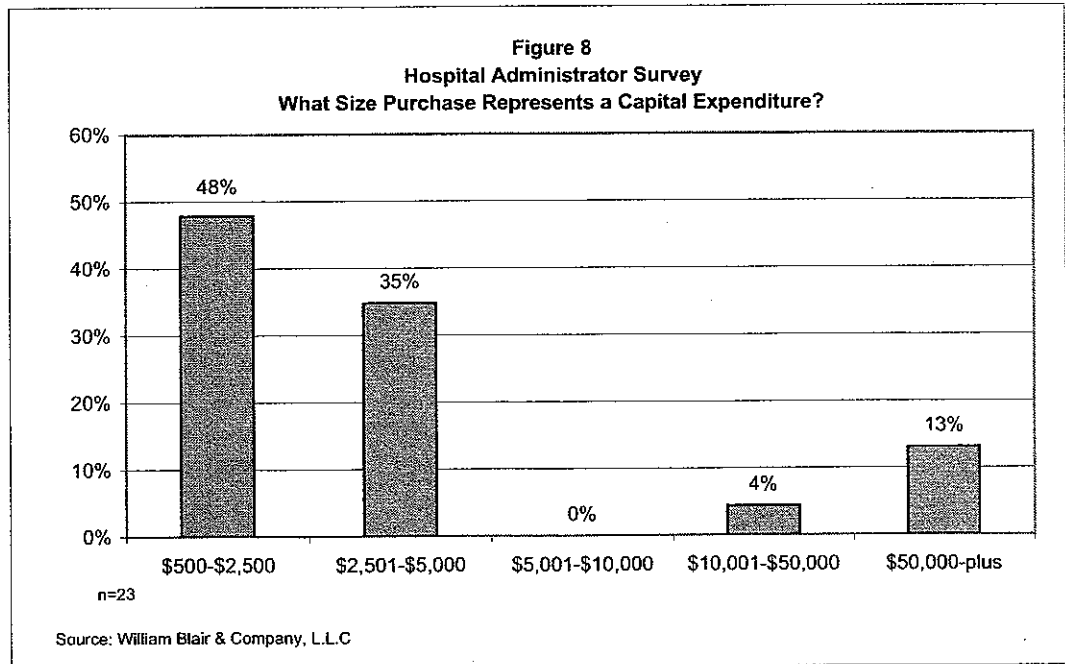
- *Demand is certainly strong enough to add another catheterization lab or two, but given the credit backdrop, we are going to defer for a while.*

We were surprised that staff reductions were among the last thing expected to be cut among the hospitals that we surveyed, as our field research indicates that several institutions have already trimmed their headcount to offset revenue reductions in other areas of the hospital.

- *One of the larger hospitals in the area just cut 200 people and we also just had a small layoff.*
- *There have been discussions about not funding 401(k) matching or not offering a salary increase next year for all employees in order to cut costs.*

We continued further down the path of the cost-reduction topic by querying our respondents on what size expenditure falls under a capital expense as opposed to an operating expense. As seen in figure 8, roughly 83% of the respondents indicated that a capital expense falls between \$500 and \$5,000, which we view as relatively small considering the millions of dollars that these facilities spend on equipment and supplies each year.

300



With capital spending items likely to receive a higher level of scrutiny in today's hospital spending environment, we believe that items costing above \$5,000 may come under increasing pressure in the coming months and that some hospitals may choose to push out the replacement of these products for a year or more to offset revenue slowdowns in other areas or a reduction in available capital. We heard such comments during some of our channel checks, including:

- *We have completely frozen the \$150 million capital spending that was planned for next year.*
- *Our investment portfolio is down over a half a billion dollars through October, so we will need to cut back on our capital spending to offset that move.*

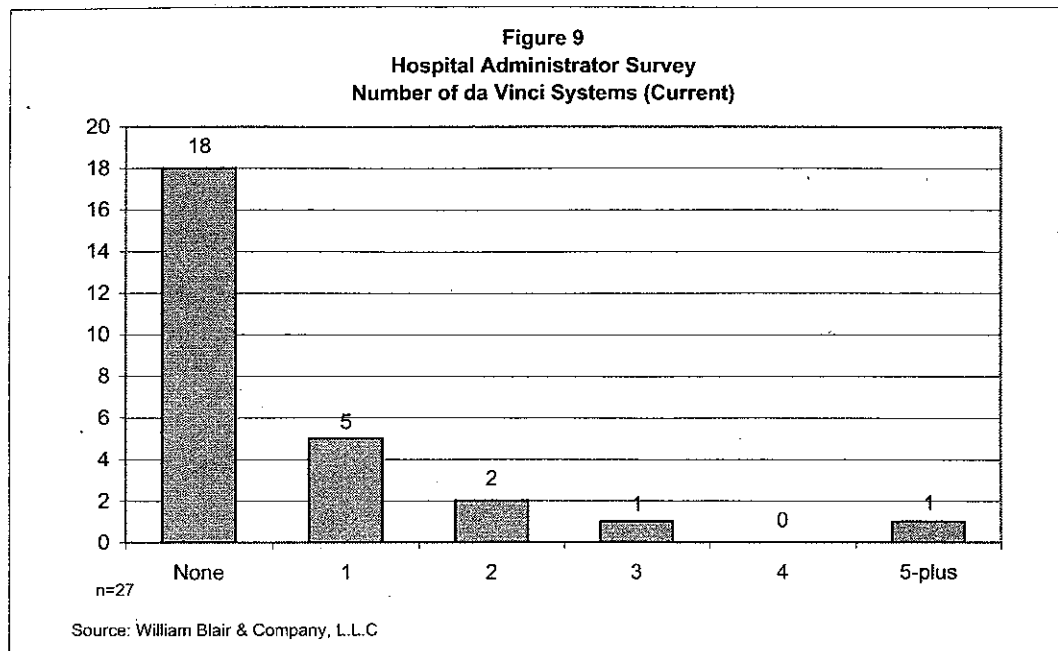
Although our interviewees mentioned drastic capital-expenditure reductions, several publicly traded hospital providers have noted that they expect only modest reductions in capital spending. In aggregate, we anticipate that hospital spending on capital expenditures will fall from 6%-7% of revenue to 5%-6%. Among the companies that we cover, TomoTherapy is the most exposed on the basis of percentage of revenue derived from capital equipment, with Stryker's MedSurg division (40% of the company's revenue) the second most at risk regarding this measure.

We tried to drill down farther with our respondents by asking which specific equipment was most likely to be deferred due to the weakening economy. The most commonly cited answer was capital equipment, with additional comments including food, IT upgrades, imaging equipment, and radiology equipment. Aside from the comments we have previously made regarding our covered companies and their exposure to a slowdown in capital equipment spending, the comments from our respondents to this question had very little impact on our coverage universe.

## Impact of Economy and Credit Markets on Intuitive Surgical, Stryker, TomoTherapy, and VNUS

### Intuitive Surgical

The million-dollar question on the minds of investors regarding Intuitive Surgical is the impact of an economic slowdown and tighter credit on the company's business in 2009 and beyond. To get a better sense of what may occur to Intuitive Surgical during 2009, we queried our survey respondents and field sources on their plans for systems purchases and procedure volume next year. Unfortunately, as seen in figure 9, very few of the respondents (33%) have at least one da Vinci at their hospital or their system.

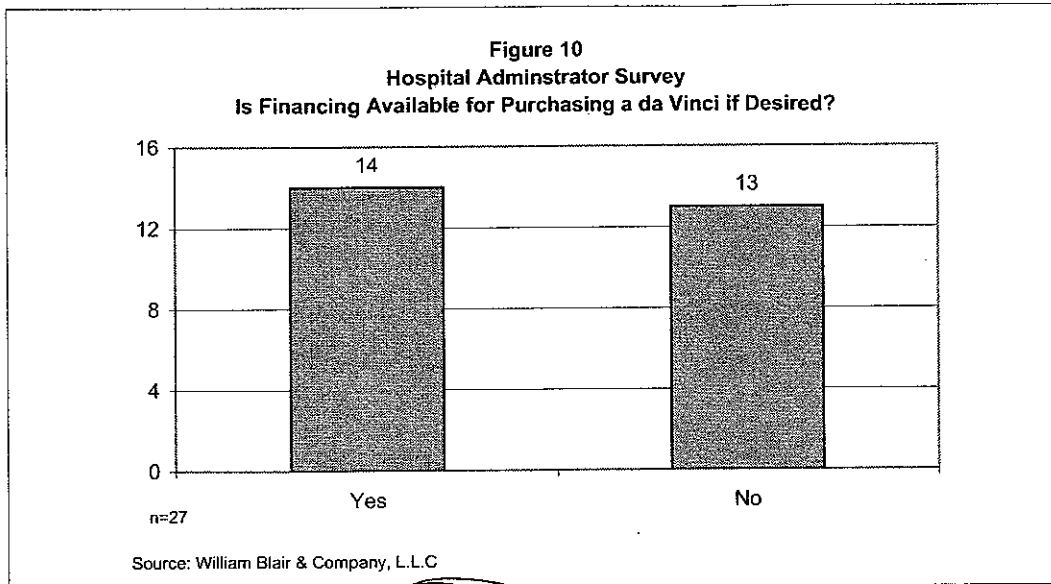


In addition, none of the respondents to our survey indicated that their hospital or network plans to purchase another da Vinci system by the end of 2009.

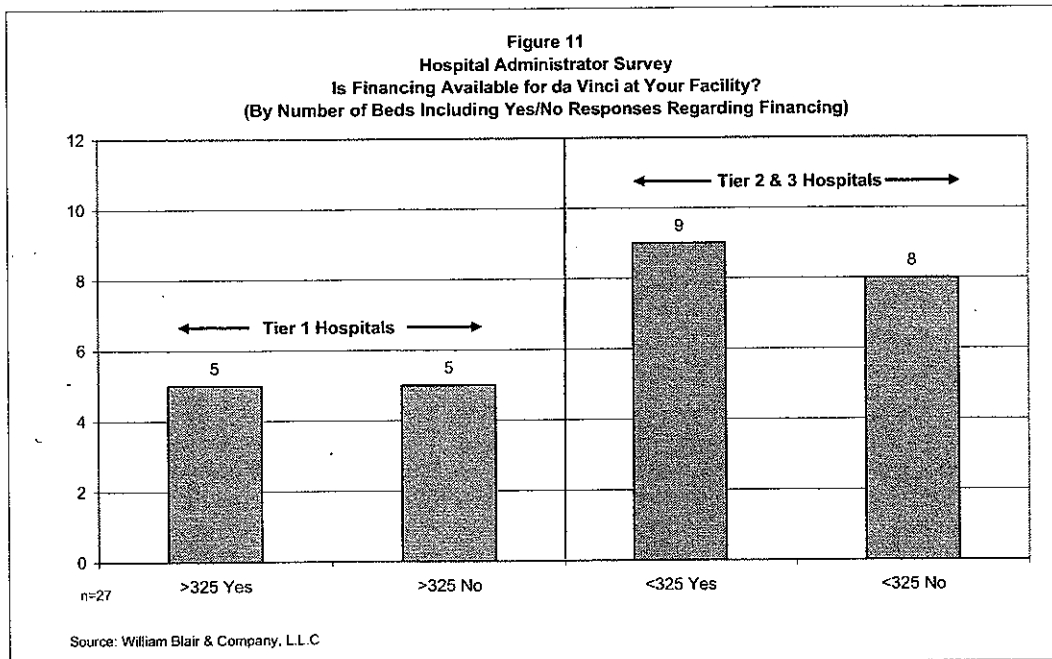
During our administrator interviews, only two executives indicated that their facility was investigating the purchase of another system next year. Overall, the comments from the administrators we surveyed and spoke with in person reveal an underlying concern regarding the true profitability of da Vinci but an understanding that to remain competitive in their area they will eventually need at least one system. Some of the comments include:

- *We are not seeing a lot of demand right now for da Vinci from our hospital clients.*
- *We are going to defer the purchase of another right now but it is on the list for 2010.... We know that we have to have capacity with the robot in order to stay competitive.*
- *I've been in hospital administration for 20 years now and I anticipate that da Vinci will be like CT scanners were when I started. Everyone thought that they [CT scanners] were too expensive and only select centers would have one.... I now have six CT scanners in my hospital.*

With our survey respondents largely indicating that they did not expect to purchase a new da Vinci system during 2009, we polled them to see if financing was available to buy a new robot if their facility or system wanted to. As seen in figure 10, it appears that financing is often an issue in terms of purchasing a new system.



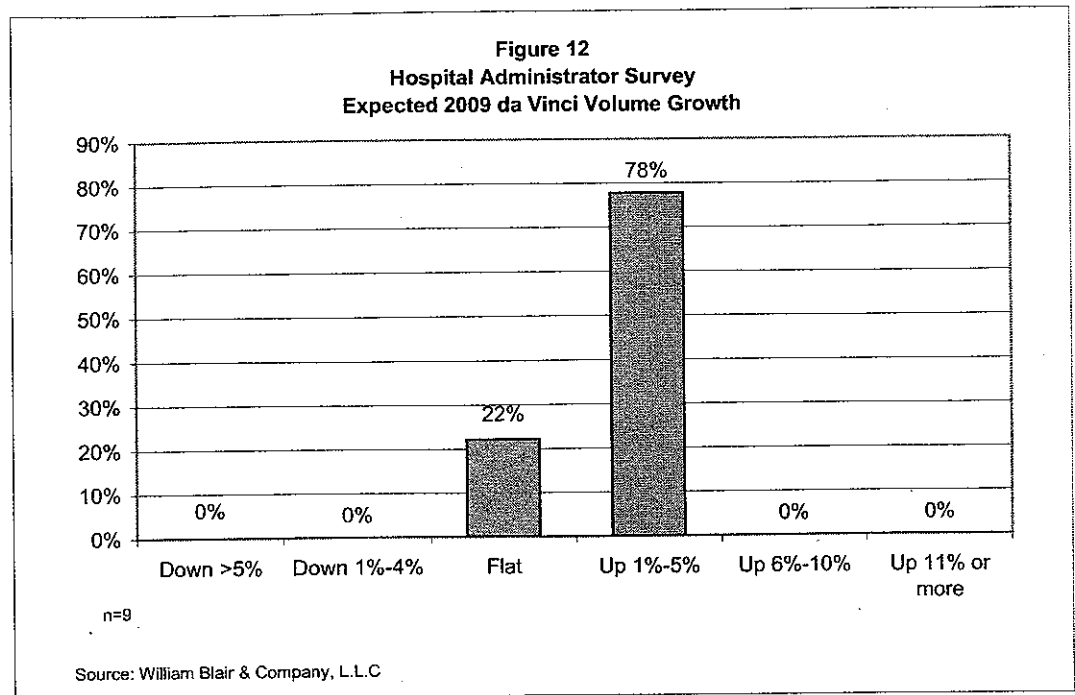
Currently, about 20% of Intuitive Surgical's 1,032 systems are financed. When we drilled down further into the responses of our administrator respondents, as seen in figure 11, the results were again split down the middle regarding financing ability for various sized hospitals.



We believe smaller facilities are meaningfully more nimble than the larger hospitals or systems, which face extended bureaucracies when it comes to purchasing capital equipment. These smaller facilities understand that they face serious competition from other hospitals in their area and understand that to stay competitive they must purchase the latest technology. But we anticipate that the credit environment will force both large and small facilities to defer a system purchase. We believe that hospitals that already own two or more da Vinci systems may defer the purchase of an additional system and simply increase capacity on existing machines to offset the economic slowdown. We estimate that 16% of the 776 hospitals in the United States with da Vinci have more than one system.

From the results of our survey and field research, we believe that Intuitive Surgical will not grow its system sales next year compared with our 2008 estimate. As a result, **we have lowered our 2009 system placement estimate from 425 to 350, flat compared with 2008.** We

also polled our respondents with a system to get a sense for their expectations on procedure volume on their existing da Vinci systems next year. We were surprised to hear, as seen in figure 12, that these administrators expect only modest increases in procedure volumes on their existing systems next year.



Of course, the number of respondents to this question is small, but it is still interesting. Further, during our interviews of hospital administrators, we repeatedly heard that their existing systems are generating strong procedural volumes. Some of the comments that we heard include:

- *We are not sure if we are going to buy another system or not next year, but our current robot is operating at full capacity.*
- *More and more surgical specialties are trying to use the system, which is driving our da Vinci volumes higher.*

Given our reduction in the estimated number of systems placed next year and the corresponding lower capacity to perform more procedures (although some cases will likely migrate to facilities with enough robots to service strong demand), we are reducing our projection for the number of instruments the company sells next year. Consequently, we now model 2009 unit sales of 183,000 (down 22,000 from our previous estimate); this translates into instrument revenue of \$396 million (down \$50 million compared with our previous target, but still up 35% year-over-year). For 2010, we now look for instrument unit sales of 242,000 (roughly 56,000 lower than our previous estimate, up 32%), which reduced our instrument revenue estimate by \$120 million (now \$507 million).

The aggregate effect of our reduced expectations regarding system sales and corresponding service and instrument revenue serves to reduce our total revenue estimate by \$250 million in 2009 (now \$1.043 billion, up 17%) and \$280 million in 2010 (now \$1.25 billion, up 20%).

***We also reduced our 2009 EPS target from \$7.44 to \$6.25 (up 19% versus 41% previously), with \$0.89 of this cut due to the lower revenue target and \$0.30 of this coming from higher stock-based compensation expense*** (we had not fully reflected the rolling-five-year amortization of the company's option plan in our model). We now expect stock-based compensation expense in 2009 of \$90 million, versus \$64 million previously. For 2010, our adjusted earnings per share estimate now stands at \$7.75 (down two dollars from our previous target, up 24%), with cash EPS at \$9.28.



Table 2  
Intuitive Surgical, Inc.  
Earnings Model

(\$ in thousands, except per share items)

	FY 2006	Q1 Mar-07	Q2 Jun-07	Q3 Sep-07	Q4 Dec-07	FY 2007	Q1 Mar-08	Q2 Jun-08	Q3 Sep-08	Q4 Dec-08	FY 2008E	Q1(E) Mar-09	Q2(E) Jun-09	Q3(E) Sep-09	Q4(E) Dec-09	FY 2009E	FY 2010E
Revenues:	\$317,599	\$96,449	\$119,885	\$136,063	\$164,702	\$618,089	\$160,951	\$189,780	\$202,267	\$216,865	\$769,893	\$200,010	\$215,229	\$218,682	\$232,800	\$866,721	\$1,028,868
Products	59,083	17,780	20,364	21,851	24,744	84,739	22,243	25,409	32,725	34,830	125,207	39,620	42,595	45,640	48,585	176,545	219,645
Services	\$372,682	\$114,229	\$140,249	\$166,904	\$189,446	\$600,928	\$181,194	\$219,189	\$235,992	\$251,693	\$895,070	\$239,630	\$257,824	\$264,322	\$281,485	\$1,043,261	\$1,248,813
Total Revenues																	
Y-O-Y Growth	63.9%	47.9%	61.2%	63.7%	68.3%	61.2%	64.8%	56.3%	50.4%	32.9%	49.0%	27.3%	17.6%	12.0%	16.6%	19.7%	
Sequential Growth		1.5%	22.8%	11.9%	20.7%		-0.7%	16.5%	7.7%	6.7%		-4.8%	7.6%	2.5%	6.5%		
Cost of sales	97,615	29,106	35,656	36,305	42,587	145,654	44,852	50,036	53,617	57,469	205,374	54,803	58,542	57,285	58,830	230,466	287,253
Products	27,231	8,615	10,485	10,129	11,659	40,896	13,535	13,997	12,800	14,629	54,161	17,116	17,123	17,891	20,059	72,189	89,417
Services	124,846	37,721	46,141	48,434	54,246	186,542	50,387	63,133	66,417	72,068	260,035	71,919	75,666	75,186	79,888	302,657	355,669
Total cost of sales																	
Operating Expenses:	110,703	33,945	38,883	40,163	45,694	158,985	48,634	57,504	62,892	69,000	236,830	65,898	69,613	71,367	71,497	278,375	332,484
Selling, general, and administrative	29,778	8,224	10,192	14,319	16,124	48,859	16,301	20,357	21,851	23,250	81,293	21,082	22,949	24,208	24,208	81,502	103,635
Research & development	140,481	42,169	49,075	54,482	61,818	207,544	64,935	71,861	84,543	91,250	317,589	86,986	92,559	94,627	95,705	369,877	436,119
Operating Expenses																	
Operating Income	107,355	34,339	45,033	53,986	73,382	206,742	64,872	78,195	85,032	88,347	316,446	80,726	89,600	94,509	105,892	370,727	466,826
Interest and other income	12,763	4,608	5,232	12,220	8,432	30,492	6,541	5,707	4,594	6,274	25,116	7,974	8,802	9,783	11,026	37,585	52,115
Pretax income	120,138	38,947	50,265	66,208	81,814	237,234	73,413	83,902	89,626	94,621	341,562	88,699	98,402	104,292	116,918	408,312	508,940
Taxes	48,094	15,145	19,602	25,289	32,660	92,695	28,632	32,720	32,032	36,502	130,286	33,706	36,901	38,588	42,675	151,870	183,063
Net income - GAAP	\$72,044	\$23,802	\$30,663	\$40,919	\$49,154	\$144,539	\$44,781	\$51,182	\$57,594	\$57,719	\$211,276	\$54,994	\$61,501	\$65,704	\$74,243	\$256,442	\$325,877
EPS - GAAP	\$1.89	\$0.62	\$0.79	\$1.04	\$1.24	\$3.70	\$1.12	\$1.28	\$1.44	\$1.43	\$5.27	\$1.35	\$1.50	\$1.60	\$1.79	\$6.25	\$7.75
Growth	-24.7%	62.2%	61.3%	130.5%	100.0%	95.9%	81.3%	61.4%	37.8%	15.5%	42.3%	20.4%	17.4%	11.2%	25.5%	78.6%	24.1%
Weighted Shares	38,083	38,398	38,657	39,271	39,766	39,021	39,847	39,980	40,108	40,408	40,086	40,658	40,908	41,158	41,408	41,033	42,033
Extraordinary items	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net income (adjusted)	\$72,044	\$23,802	\$30,663	\$40,919	\$49,154	\$144,539	\$44,781	\$51,182	\$57,594	\$57,719	\$211,276	\$54,994	\$61,501	\$65,704	\$74,243	\$256,442	\$325,877
EPS (adjusted)	\$1.89	\$0.62	\$0.79	\$1.04	\$1.24	\$3.70	\$1.12	\$1.28	\$1.44	\$1.43	\$5.27	\$1.35	\$1.50	\$1.60	\$1.79	\$6.25	\$7.75
Growth	4.8%	62.2%	61.3%	130.5%	100.0%	95.9%	81.3%	61.4%	37.8%	15.5%	42.3%	20.4%	17.4%	11.2%	25.5%	78.6%	24.1%
Stock-based compensation expense	25,260	8,105	9,950	8,726	10,111	36,292	14,564	19,719	20,955	21,000	76,248	21,238	22,503	22,952	23,483	90,176	100,000
Net income (excl. SBC & extraord.)	\$87,197	\$28,755	\$36,367	\$46,312	\$55,229	\$166,663	\$53,665	\$63,211	\$71,066	\$70,529	\$258,471	\$68,161	\$75,565	\$80,184	\$89,155	\$313,045	\$399,877
EPS (excl. SBC & extraord.)	\$2.29	\$0.75	\$0.94	\$1.18	\$1.39	\$4.27	\$1.35	\$1.58	\$1.77	\$1.75	\$6.45	\$1.68	\$1.85	\$1.95	\$2.15	\$7.63	\$9.28
Growth		61.7%	74.4%	110.2%	91.8%	96.5%	79.8%	68.1%	50.2%	25.6%	51.0%	24.5%	16.8%	9.9%	23.4%	78.3%	21.5%
As a percent to revenues:																	
Product gross margin	66.3	69.8	70.3	71.6	74.1	71.8	72.1	73.6	73.5	73.5	73.3	72.6	72.8	73.8	74.3	73.4	74.0
Service gross margin	50.6	51.5	48.5	53.6	52.9	51.7	50.3	55.5	61.7	58.0	56.7	56.8	59.8	60.8	58.3	59.1	59.7
Corporate gross margin	66.5	67.0	67.1	69.1	71.4	69.0	69.0	71.2	71.9	71.4	70.9	70.0	70.7	71.6	71.0	71.0	71.5
Selling, general, and administrative	29.7	29.7	27.7	25.6	24.1	26.4	25.8	26.2	26.6	27.0	26.5	27.5	27.0	27.0	25.4	26.7	26.5
Research & development	80	7.2	7.3	9.1	8.5	8.1	8.7	9.3	9.3	9.2	9.1	8.8	8.9	8.8	8.6	8.8	8.3
Operating Income	28.5	30.1	32.1	34.4	38.7	34.4	34.5	35.7	36.0	35.1	35.4	33.7	34.8	35.8	37.6	35.5	36.6
Operating Income (ex. SBC)	35.6	37.2	38.8	40.0	44.1	40.4	42.2	44.7	44.9	43.4	43.9	42.6	43.5	44.4	46.0	44.2	44.6
Net Income	19.3	20.6	21.9	26.1	25.9	24.1	23.8	23.4	24.4	22.9	23.6	22.9	23.9	24.9	26.4	24.6	26.1
Tax rate	40.0	38.9	39.0	38.2	39.9	39.1	39.0	39.0	35.7	39.0	38.1	38.0	37.5	37.0	36.5	37.2	36.0
Year-over-year growth:																	
Cost of sales	69.2	47.5	64.5	44.2	44.2	49.4	54.8	36.8	37.1	32.9	38.4	23.2	19.9	13.2	10.8	16.4	17.5
Selling, general, and administrative	64.1	42.6	42.6	40.5	47.2	43.3	43.3	47.9	56.1	48.8	49.2	35.5	21.1	13.8	5.1	17.5	19.4
Research & development	71.6	41.5	33.8	79.5	90.8	64.1	98.2	99.7	52.6	44.2	67.3	29.4	12.7	6.4	4.1	11.9	13.3
Operating Income	56.1	58.1	83.8	110.3	107.0	92.6	88.1	73.6	57.5	20.4	53.1	24.4	14.6	11.1	19.9	17.2	23.2
Net Income	6.5	64.6	83.8	137.0	107.9	100.6	88.1	66.9	40.8	17.4	46.2	22.8	20.2	14.1	28.6	21.4	27.1

Sources: Company reports and William Blair & Company, L.L.C. estimates

### Stryker

Our long-term view on Stryker's value being a diversified, high-quality medical technology company is not changed, but our near-term concerns on capital spending budgets for hospitals, a potential slowdown in orthopedic procedures, and a 4%-5% headwind to reported revenue from currency exchange rates led us to lower our estimates for both 2008 and 2009.

MedSurg accounts for 41% of Stryker's business. Among the MedSurg products, about 60% are considered capital purchases, although most of these are relatively low-ticket items. We had thought that exposure of MedSurg to the budget constraints at hospitals should be minimal, but given comments from our interviews and survey, we now expect a higher impact given the across-the-board spending cut approach that seems to be taken by many hospitals.

Similar to other orthopedic manufacturers in the third quarter, Stryker did not report any slowing in orthopedic implant procedure growth rates. Yet we have since heard numerous comments from hospital administrators and executives that lead us to believe that some patients may delay these semi-elective procedures due either to the co-pay or a desire to avoid taking time off work in the coming quarters. Other unexpected anecdotal reports include that some patients are cutting back on prescriptions and delaying physician visits and expensive diagnostic tests, as well as taking longer to pay their medical bills and seeking coverage under Medicaid.

In terms of currency, the exchange-rate situation has worsened since Stryker reported third-quarter results. We now expect an unfavorable 5% impact on the top line for the fourth quarter (versus 3% when it reported in mid-October) and 3% for 2009 (with at least 4% for the first three quarters of that year).

In our revised model, we continue to expect 11% top-line growth in constant currency for both fourth quarter 2008 and full year 2009. We maintained our EPS target of \$0.79 (up 20%) for fourth quarter 2008 and decreased our 2009 target to \$3.30 (up 15%) from \$3.38 (up 18%).

For fourth quarter 2008, we decreased our revenue target to \$1,760 million (up 6% reported, 11% organically) from \$1,865 million. The \$105 million decrease includes \$33 million from worsened currency exchange rates and \$72 million from the potential slowdown in both MedSurg and orthopedic procedures.

For 2009, we decreased our revenue target to \$7,265 million (up 7.5% reported, 11% organically) from \$7,668 million. The \$400 million decrease includes about \$100 million from unfavorable currency exchange rates and \$300 million from the potential economic impact on product sales.

**Table 3**  
Stryker Corporation  
Revenue and EPS Estimates, Old Versus New

	Q4 2008		2008		2009	
	Old	New	Old	New	Old	New
<b>Revenues</b>	\$1,865	\$1,760	\$6,865	\$6,760	\$7,668	\$7,265
<i>Growth, reported</i>	12.5%	6.1%	14.4%	12.7%	11.7%	7.5%
<i>Growth, organic</i>		11.1%		11.2%		11.0%
<b>EPS</b>	\$0.79	\$0.79	\$2.88	\$2.88	\$3.38	\$3.30
<i>Growth</i>	20.0%	20.2%	19.8%	19.9%	17.5%	14.6%

Source: William Blair & Company, L.L.C

We believe double-digit top-line growth in constant currency and mid- to high-teens bottom-line growth are achievable and sustainable for Stryker in the long run, driven by the diversified product portfolios, share taking from competitors (especially in MedSurg), and new product introductions. However, in the near term, we expect the company's results will likely be toward the lower end of that range.

Most product categories in Stryker's diversified portfolio have been growing at or above market rates, driven by well-planned product cycles (e.g., MedSurg instruments and endoscopy equipment), somewhat differentiated reconstructive products (e.g., Triathlon knees), and an experienced salesforce.

Product Category	Key Products	Third Quarter 2008		Sustainable Growth in CC
		% of Total Product Sales	Growth Rate (Reported, Constant Currency)	
<b>Reconstructive Implants</b>		34%	11%, 9%	8%
Hips	Trident, primary Trident Tritanium, revision Cornet Hip Resurfacing	16%	6%, 4%	6%
Knees	Triathlon, primary Triathlon, revision Triathlon PKR, partial knee Scorpio X3 poly	18%	16%, 14%	8%
<b>Other Implants</b>		25%	15%, 13%	12%
Trauma	Gamma 3 nails T2 nails	10%	20%, 16%	10%
Spine	Xia system (rods, screws, etc.) Interbody PEEK Spacer Low-profile cervical plates MANTIS MIS system Flexicore lumbar TDR Cervicore cervical TDR	8%	21%, 19%	12%
CMF	Various	3%	10%, 9%	15%
Extremities/Other	Fixation, nailing, plating systems	4%	-1%, -5%	10%
<b>MedSurg</b>		41%	16%, 15%	13%
Instrument	System 6 powertool system Neptune 2, waste management	18%	13%, 12%	15%
Endoscopy	1188 HD Camera iSuite	15%	11%, 10%	15%
Medical	InTouch Bed Bariatric Beds M-Series Stretchers Glide Lateral Air Transfer	7%	31%, 30%	10%

Sources: Company reports and William Blair & Company, L.L.C. analysis

Among the different MedSurg categories, endoscopy is more capital-intensive than instruments or medicals (beds and stretchers) and therefore more prone to economic impact, in our opinion. An endoscopy system with HD camera, monitor, and light source costs more than \$100,000, and the set-up of an entire OR can total \$1 million. In the long run, we expect midteens growth for the segment, driven by hospital upgrade cycle, share taking from competitors, and international expansion.

**Table 5**  
**Overview of MedSurg Markets**

	<b>Market Size, 2007 (Billions)</b>	<b>Market Growth, 2007</b>	<b>Stryker Growth, 2007</b>	<b>Stryker Share, 2007</b>	<b>Stryker Growth, Long Term, CC</b>
<b>Operating Room Equipment</b>	\$3.0	11%	19%	33%	Midteens
<b>Endoscopy</b>	\$16.5	12%	21%	5%	High Teens
<b>N.A. Patient Handling</b>	\$1.8	8%	16%	27%	Low Teens

Sources: Company reports and William Blair & Company, L.L.C. analysis

At 11.2 times our revised 2009 EPS estimate of \$3.30, and a relative P/E multiple (to the S&P 500) of 1.18 times, we believe the valuation remains reasonable relative to the historical range of 1.3-2.0 times, even as EPS growth is coming down to below 20%. Given the company's sustainable double-digit top-line growth, mid- to high-teens bottom-line growth, and financial flexibility (with more than \$2 billion cash on hand), we reiterate our Outperform rating.

Table 6  
Stryker Corporation  
Earnings Model  
(\$ in millions, except per share items)

	Year 2005			Year 2006			Year 2007			Year 2008			Year 2009			Year 2010		
	2005	2006	2007	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Orthopedic implants	\$2,855	\$3,110	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	\$3,575	
MedSurg Equipment	1,754	2,037	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	2,426	
Net Sales	4,609	5,147	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	6,001	
Yr. Over Yr. Product Growth	14.3%	14.7%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	
Constant Currency	14.0%	13.7%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	
Operating Expenses	1,718	1,617	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	1,665	
Cost of sales	1,861	2,047	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	2,352	
S,G & A	285	325	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	
R&D/Engineering	3,854	3,988	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	4,632	
Total Operating Expenses	(49)	(43)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	
Inangible amortization	868	1,116	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	1,327	
Operating Income	3	30	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	
Interest Income (expense)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other Income	974	1,147	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	
Earnings before taxes	268	322	389	389	389	389	389	389	389	389	389	389	389	389	389	389	389	
Income taxes	\$566	\$824	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	\$1,001	
Net Income (Adjusted with SBC)	\$1.87	\$2.00	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	\$2.40	
EPS (Adjusted with SBC)	33	41	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
Stock-based compensation adjustment	\$719	\$865	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	\$1,041	
Net Income (Adjusted without SBC)	\$1.15	\$2.10	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	\$2.60	
EPS (Adjusted without SBC)	0	6	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
Growth Rate		20.1%	20.7%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	20.6%	
Discontinued Operations																		
Extraordinary Items																		
Net Income (GAAP)	\$543	\$778	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	\$953	
EPS (GAAP)	\$1.56	\$1.89	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	\$2.44	
Diluted shares outstanding	411	412	417	417	417	417	417	417	417	417	417	417	417	417	417	417	417	
Dividend per Share	\$0.09	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	
Payout Ratio	5.6%	5.7%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	
As a percent to revenues:																		
Gross Margin	64.7%	66.6%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	68.4%	
S,G&A	38.0%	39.8%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	39.7%	
R&D	5.8%	6.3%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	
Operating Income	19.9%	21.7%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	22.6%	
EBT	19.0%	21.4%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	22.8%	
Net Income	14.1%	16.0%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	
Effective Tax Rate	29.5%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	28.1%	
Year-over-year Growth																		
Net Sales	14.3%	14.6%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	17.7%	
Gross margin	12.0%	10.6%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	15.9%	
S,G&A	24.8%	14.1%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	
R&D	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	15.2%	
Operating Income	15.2%	20.1%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	22.3%	
Net Income	15.2%	20.1%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	21.8%	

Sources: Company reports and William Blair & Company, L.L.C. estimates

### **TomoTherapy**

Our recent survey of and conversations with hospital administrators around the country indicate that TomoTherapy will continue to feel the impact from the economic downturn. Management started to see signs of order flow slowdown and lengthened system delivery times in the second and third quarters; this could get worse if the current situation continues. Almost all hospitals have or are planning to cut costs in different ways, and capital spending is high up on their list.

The average selling price (ASP) of Hi-Art is about \$2.7 million. In this environment, financing may be more difficult to come by for TomoTherapy's for-profit customers, and the large hospitals are likely to delay purchases to preserve cash, in our opinion.

However, we believe our estimates for 2008 and 2009 largely reflect the headwinds for TomoTherapy and thus we will not make further changes at this point. Following TomoTherapy's third-quarter results, we decreased our revenue and earnings targets quite significantly to account for the financing environment, the funding constraints for hospitals, and the competitive dynamics among the manufacturers. We project revenue of \$191 million (down 18%) for 2008 and \$234 million (up 23%) for 2009, the same level as the company reported in 2007.

We expect TomoDirect to drive revenue growth in future periods, although the ramp-up of the adoption of this new tool is likely to be slower.

Single linac centers, accounting for more than 50% of the cancer centers in the United States, are likely to find Hi-Art much more appealing with TomoDirect, in our opinion, as the system can now treat all type of cancers efficiently at optimal dose distribution.

We believe radiation oncology will remain an important revenue-generating component for hospitals. About half of our survey respondents indicated this is one of the last areas they are willing to cut spending on because of the high return on investment; it typically takes only 12 to 18 months for a hospital to break even on a nearly \$3 million radiation therapy system. In addition, hospitals repeatedly commented on the importance of having advanced radiation therapy systems to stay competitive in the neighborhood. Given the importance for hospitals to continue investing in this area, we expect the potential orders are not gone, but delayed in most cases.

Although the market for radiation therapy systems will likely be pressured in the short term, the long-term market demand remains strong, in our opinion. We continue to expect low-double-digit growth worldwide, with the image-guided segment growing much faster, driven by further penetration of this advanced technology, replacement of the aged systems, and installations in the underequipped international markets.

**Table 7**  
**Radiation Therapy Systems: Global Opportunity, 2006 to 2010**

	<u>2006</u>		<u>2010E</u>	
	<u>U.S.</u>	<u>OUS</u>	<u>U.S.</u>	<u>OUS</u>
Population (millions)	302	6,300	309	6,800
# Linacs per mil. population	11.9	0.9	13.0	1.0
<b>Installed Base</b>	<b>3,600</b>	<b>5,400</b>	<b>4,004</b>	<b>6,566</b>
<b>New placements, 2007-2010</b>			<b>404</b>	<b>1,166</b>
<b>Replacement systems</b>				
% Replaced by 2010 (vs. 2006)			40%	15%
Replacements, 2007- 2010			1,443	810
<b>Market demand, cumulative</b>			<b>1,847</b>	<b>1,976</b>

Sources: Company reports and William Blair & Company, L.L.C. analysis

TomoTherapy's cash position should trough at roughly \$142 million, or \$2.60 per share in cash (and no debt), in late 2009, suggesting nominal enterprise value for the company. We see sustainable profitability coming later in 2009, and encourage value-oriented investors to take a close look at this company given the potential in this new product cycle. With the stock trading at roughly trough cash value, we encourage patient investors to accumulate the shares, but acknowledge this is a show-me story that will have to rebuild credibility with investors. We rate the shares Outperform.

Table 8  
TomoTherapy, Inc.  
Earnings Model

(\$ in thousands, except per share items)

	FY 2005	FY 2006	Q1 Mar-07	Q2 Jun-07	Q3 Sep-07	Q4 Dec-07	FY 2007	Q1 Mar-08	Q2 Jun-08	Q3 Sep-08	Q4 (E) Dec-08	FY 2008 (E)	Q1 (E) Mar-09	Q2 (E) Jun-09	Q3 (E) Sep-09	Q4 (E) Dec-09	FY 2009 (E)
<b>Revenues</b>																	
Sales	\$73,594	\$146,121	\$48,486	\$38,767	\$52,588	\$72,021	\$211,842	\$32,487	\$45,247	\$20,416	\$64,400	\$162,550	\$41,250	\$55,000	\$38,500	\$68,750	\$203,500
Service Contracts	2,180	7,681	2,692	5,945	6,633	6,690	8,113	8,113	8,113	8,113	8,113	8,113	8,113	8,113	8,113	8,113	8,113
Total	\$75,754	\$156,102	\$51,163	\$44,712	\$59,221	\$78,711	\$232,810	\$40,599	\$53,359	\$28,529	\$72,513	\$170,663	\$49,363	\$63,113	\$46,613	\$76,863	\$211,613
% growth (yr-yr)	66.0%	106.1%	86.3%	37.2%	59.3%	32.1%	49.1%	-24.0%	19.0%	-53.0%	-7.9%	-18.0%	21.9%	21.6%	61.7%	9.1%	22.7%
Sequential Growth																	
% of annual total			22%	19%	25%	34%		20%	27%	14%	36%		20%	27%	19%	34%	
Cost of goods sold	50,047	102,653	29,352	28,191	37,151	50,443	146,137	30,682	39,496	28,281	46,575	147,034	33,206	43,643	30,550	52,181	159,560
<b>Operating Expenses:</b>																	
Research and development	11,372	21,337	7,155	7,692	9,624	9,833	34,304	9,525	10,044	10,947	10,000	40,516	10,200	10,200	10,200	10,200	40,800
S.G&A	14,197	23,119	8,623	9,083	11,126	13,453	42,307	10,088	13,635	11,547	11,500	47,350	12,000	13,500	12,000	14,500	50,000
Total operating expenses	25,569	44,516	15,778	16,775	20,750	23,286	76,611	20,193	23,679	22,494	21,500	87,866	22,200	23,700	22,200	24,700	92,800
Operating income	138	8,933	6,031	(2,261)	1,320	4,972	10,062	(11,975)	(11,154)	(23,401)	2,425	(44,105)	(7,969)	(4,093)	(8,475)	2,181	(18,955)
Interest / other income	254	1,508	165	1,280	2,400	2,289	6,104	1,774	1,090	1,032	903	4,799	979	977	968	915	3,938
Interest expense	(75)	(234)	(225)	(44)	0	0	(269)	(11)	(6)	(17)	(165)	(199)	(165)	(165)	(165)	(165)	(656)
Foreign currency gain (loss)	0	(1,432)	0	0	375	0	700	0	0	0	0	0	0	0	0	0	0
Other income (expense)	0	(84)	0	0	0	(147)	(147)	(74)	(82)	478	0	323	0	0	0	0	0
Warrant valuation	0	(638)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-operating income (expense), net	179	(1,202)	101	1,071	2,775	2,441	6,388	1,889	1,002	1,494	739	4,924	814	813	802	751	3,180
Earnings before taxes	317	7,731	6,132	(1,190)	4,065	7,413	16,450	(10,286)	(10,152)	(21,907)	3,164	(39,181)	(7,155)	(3,280)	(7,673)	2,932	(15,775)
Provision for taxes	78	(7,184)	2,246	(537)	1,512	2,567	5,788	(4,114)	(1,906)	(6,300)	866	(11,334)	(2,003)	(918)	(2,148)	821	(4,249)
Noncontrolling interest in subsidiary																	
Net income (adjusted including SBC)	\$233	\$14,916	\$3,888	\$653	\$2,583	\$4,846	\$10,662	\$6,172	\$6,861	\$12,953	\$4,778	\$21,208	\$2,851	\$2,300	\$2,300	\$2,300	\$2,300
EPS (adjusted including SBC)	\$0.03	\$0.32	\$0.09	\$0.01	\$0.05	\$0.09	\$0.21	\$0.12	\$0.14	\$0.26	\$0.09	\$0.41	\$0.06	\$0.06	\$0.06	\$0.06	\$0.03
% growth (yr-yr)	-92.5%	965.0%	24.6%	NM	-66.7%	-59.0%	-32.9%	NM	NM	NM	-3.1%	NM	NM	NM	NM	NM	NM
<b>Stock-based compensation</b>																	
Net income (adjusted excluding SBC)	\$239	\$15,148	\$4,585	\$14	\$3,390	\$5,846	\$13,895	\$5,470	\$6,266	\$11,766	\$5,528	\$17,974	\$2,051	\$739	\$2,424	\$4,411	\$1,726
EPS (adjusted excluding SBC)	\$0.03	\$0.38	\$0.11	\$0.00	\$0.06	\$0.11	\$0.28	\$0.11	\$0.12	\$0.23	\$0.10	\$0.35	\$0.04	\$0.01	\$0.06	\$0.08	\$0.03
<b>Extraordinary items</b>																	
Net income (GAAP)	\$239	\$9,988	\$3,886	\$653	\$2,583	\$4,846	\$10,602	\$5,172	\$6,861	\$12,953	\$4,778	\$21,208	\$2,851	\$2,324	\$2,324	\$2,324	\$2,324
EPS (GAAP)	\$0.03	\$0.25	\$0.09	\$0.01	\$0.05	\$0.09	\$0.21	\$0.12	\$0.14	\$0.26	\$0.09	\$0.41	\$0.06	\$0.06	\$0.06	\$0.06	\$0.03
Weighted average shares out.	7,996	40,130	42,168	43,889	54,405	54,066	49,919	50,024	50,173	50,244	55,000	51,380	51,000	51,250	51,500	55,500	52,313
EBITDA																	
As a percent to revenues (%):																	
Gross margin	33.3	34.2	42.6	33.2	37.3	35.9	37.2	21.1	24.1	(3.3)	33.0	22.9	30.0	31.0	31.0	34.0	31.9
R&D	15.0	13.7	14.0	17.6	16.3	12.5	14.7	24.5	19.3	40.0	13.8	21.2	21.5	16.1	23.0	12.9	17.4
S.G&A	18.7	14.8	16.9	20.8	18.8	17.1	18.2	27.4	26.2	42.2	15.9	24.8	25.3	21.3	27.1	16.3	22.2
Operating income	6.2	5.7	11.8	NM	2.2	6.3	4.3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
EBT	0.1	9.0	12.0	NM	6.9	9.4	7.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Net income	0.3	5.6	7.6	NM	4.4	6.2	4.6	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tax rate	24.5	(92.9)	36.5	NM	36.8	34.6	35.2	40.0	17.8	28.8	28.0	28.9	28.0	28.0	28.0	28.0	28.0
Year-over-year growth (%):																	
Gross margin	47.9	107.9	167.9	61.6	63.2	24.0	62.2	(62.3)	(13.8)	(104.1)	(15.4)	(49.5)	73.2	56.5	(1,613.3)	12.4	70.1
S.G&A	75.2	86.2	107.0	74.5	56.1	33.4	60.3	30.6	13.7	1.7	18.1	(8.5)	7.1	1.6	(6.8)	2.0	0.7
Operating income	76.6	74.1	112.1	76.6	71.9	48.2	72.1	28.0	8.4	(7.7)	(7.7)	(4.7)	9.9	0.1	(1.3)	14.9	5.6
EBT	NM	537.2	760.3	455.5	(9.2)	(30.8)	(28.6)	393.3	(1,872.8)	(51.2)	(338.2)	(338.2)	(30.4)	(67.7)	(65.0)	(10.1)	(58.4)
Net income	NM	2,338.8	911.4	11.3	266.0	3.9	112.8	(287.7)	753.1	(635.0)	(57.3)	(388.2)	(30.4)	(67.7)	(65.0)	(10.1)	(61.3)
	NM	6,140.8	540.9	(128.4)	(17.8)	(45.4)	(28.5)	950.7	(601.5)	(1.4)	(1.4)	(290.9)	(53.8)	(89.1)	(75.1)	(7.7)	(81.9)

Sources: Company reports and William Blair & Company, L.L.C. estimates



**VNUS Medical**

From our coverage universe, the name that is likely most at risk from an elective procedure standpoint is VNUS Medical, with its outpatient treatment of venous reflux disease. The procedure requires a modest co-pay (from \$10 at the minimum to \$400 at the high end), which may drive some patients to postpone surgical intervention to treat the disease. However, people seeking treatment for this condition are experiencing a significant level of pain (the disease is related to incompetent valves in the legs, causing blood to pool in the legs and resulting in ineffective blood flow back to the heart), which we believe will insulate VNUS to some extent from a further deterioration of the U.S. economy. Further, because venous reflux is a medical condition and not cosmetic, the procedure is fully reimbursed by Medicare and private payors.

Although we believe that the U.S. market for the treatment of endovenous ablation will continue to grow in the coming years, for illustrative purposes, in table 9, we have taken a look at what type of market share VNUS would need to have to meet our unit catheter estimates for 2009, with the market decelerating 5% from 2008.

**Table 9**  
**VNUS Medical Technologies, Inc.**  
**U.S. Market Share Analysis**  
**(William Blair Estimates)**

	<b>2008</b>	<b>2009</b>
Total U.S. Procedures	235,000	223,250
<b>Market Growth</b>		<b>-5%</b>
VNUS Catheter Sales	116,250	140,750
Perforator Catheters	10,463	14,075
Int'l Catheters	9,300	14,075
Standard Catheters (U.S. only)	96,488	112,600
<b>Market Share</b>	<b>41%</b>	<b>50%</b>

Source: William Blair & Company, L.L.C. estimates

When we exclude catheters sold to treat perforator veins and into international markets, it appears that VNUS will need to capture about 9 full points of share to meet our estimates for next year. However, VNUS exited third quarter 2008 with unit share of roughly 46% and is capturing about 80% of all generator sales to new accounts each quarter, which should move the company's market share higher in the coming quarters. Consequently, even assuming a significant pullback in the market next year, we believe that VNUS should be able to approximate our U.S. catheter expectations in 2009.

Outside of straight organic market growth and share taking, our catheter estimates include very little sales into France, where VNUS will be the only approved provider in 2009 as the country begins reimbursing endovenous ablation of venous reflux (70,000 annual case opportunity). In addition, market share could be gained if the company scores a victory in its patent infringement case against the small laser ablation providers that supply roughly 25% of the market. Overall, we acknowledge that endovenous ablation of venous reflux procedures could feel the impact of the economic slowdown, but we believe that VNUS is well positioned to deliver solid catheter unit sales regardless. Further, more than 70% of the company's cases are performed in the physician's office (outside of a hospital), which we believe will continue to grow quickly as these surgeons are highly motivated to aggressively market this highly profitable procedure.

On the capital equipment side, VNUS sells a generator that is used to supply the energy to the catheters during cases; these sales could come under pressure in the current market. However, most generators are sold into physician offices and VNUS's generator costs about \$20,000, roughly one-third lower than the company's laser ablation competitors. Further, with the profitability associated with performing these procedures in the physician's office, the payback on a VNUS generator is about 40 cases, which is about the number that a new customer performs in the first year when opening a vein practice.

While VNUS may face headwinds during 2009, we believe that the company has a number of levers to pull to generate strong results next year. Further, management recently reiterated that the deteriorating economy is not having a discernible impact on the business. The stock has come in along with the general market in recent months and now trades at 1.4 times our 2009 revenue estimate of \$108 million (up 19%), which we view as an attractive entry point for this dominant player in the rapidly growing worldwide market for the treatment of endovenous ablation of venous reflux. We reiterate our Outperform rating.

Additional information is available upon request.

This report is available in electronic form to registered users via R\*Docs™ at [www.rdocs.com](http://www.rdocs.com) or [www.williamblair.com](http://www.williamblair.com).

Please contact us at (800) 621-0687 or consult [http://www.williamblair.com/pages/eqresearch\\_coverage.asp](http://www.williamblair.com/pages/eqresearch_coverage.asp) for all disclosures.

DJIA:	8,419.33
S&P 500:	848.81
NASDAQ:	441.82

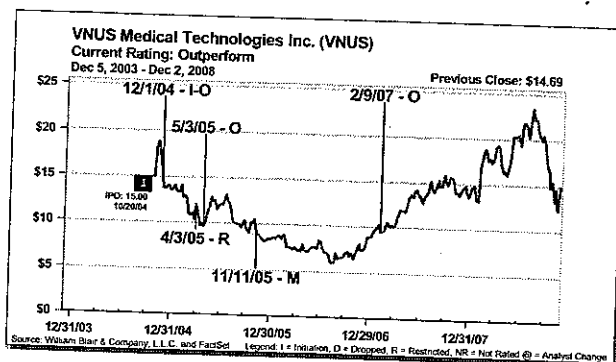
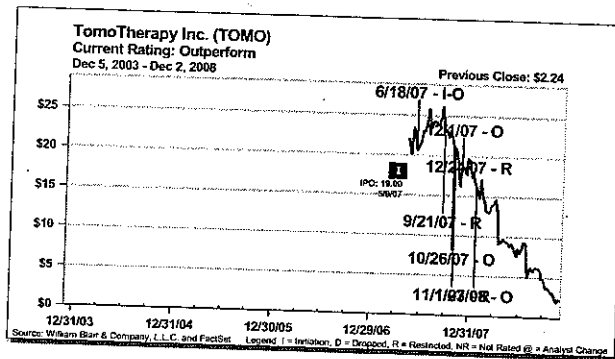
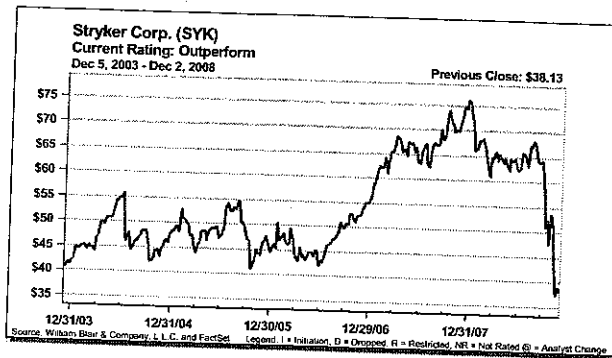
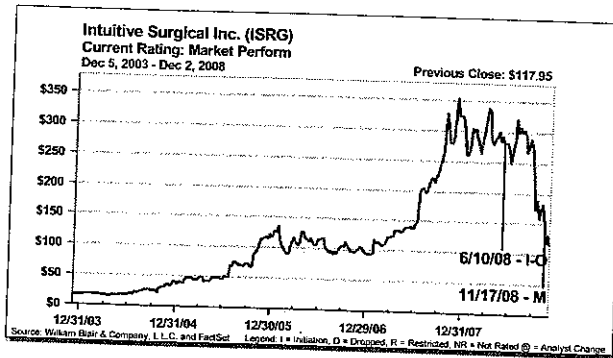
The prices of the common stock of other public companies mentioned in this report follow:

AngioDynamics, Inc.	\$11.03
Baxter International Inc.	\$53.12
Cardica, Inc.	\$3.98
DexCom, Inc.	\$2.00
Insulet Corporation	\$4.30
Medtronic, Inc.	\$29.30
NuVasive, Inc.	\$32.63
NxStage Medical, Inc.	\$2.16
ResMed Inc.	\$34.80
St. Jude Medical, Inc.	\$29.19
Vascular Solutions, Inc.	\$7.72
Zimmer Holdings, Inc.	\$36.42



William Blair & Company, L.L.C. and its affiliates beneficially own or control (either directly or through its managed accounts) 1% or more of the equity securities of VNUS Medical Technologies, Inc. as of the end of the month ending not more than 40 days from the date herein.

William Blair & Company, L.L.C. is a market maker in the security of Intuitive Surgical, Inc., Stryker Corporation, TomoTherapy Incorporated, and VNUS Medical Technologies, Inc. and may have a long or short position.



**Current Ratings Distribution (as of 11/30/08)**

<b>Coverage Universe</b>	<b>Percent Inv. Banking Relationships*</b>	<b>Percent</b>	<b>Percent</b>
Outperform (Buy)	55%	Outperform (Buy)	4%
Market Perform (Hold)	44%	Market Perform (Hold)	2%
Underperform (Sell)	1%	Underperform (Sell)	1%

\* Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

Ben Andrew attests that 1) all of the views expressed in this research report accurately reflect his personal views about any and all of the securities and companies covered by this report, and 2) no part of his compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed by him in this report.

**Stock Rating:** William Blair & Company, L.L.C. uses a three-point system to rate stocks. Individual ratings reflect the expected performance of the stock relative to the broader market over the next 12 months. The assessment of expected performance is a function of near-term company fundamentals, industry outlook, confidence in earnings estimates, valuation, and other factors. Outperform (O) – stock expected to outperform the broader market over the next 12 months; Market Perform (M) – stock expected to perform approximately in line with the broader market over the next 12 months; Underperform (U) – stock expected to underperform the broader market over the next 12 months; Not Rated (NR) – the stock is currently not rated.

**Company Profile:** The William Blair research philosophy is focused on quality growth companies. Growth companies by their nature tend to be more volatile than the overall stock market. Company profile is a fundamental assessment, over a longer-term horizon, of the business risk of the company relative to the broader William Blair universe. Factors assessed include: 1) durability and strength of franchise (management strength and track record, market leadership, distinctive capabilities); 2) financial profile (earnings growth rate/consistency, cash flow generation, return on investment, balance sheet, accounting); 3) other factors such as sector or industry conditions, economic environment, confidence in long-term growth prospects, etc. Established Growth (E) – Fundamental risk is lower relative to the broader William Blair universe; Core Growth (C) – Fundamental risk is approximately in line with the broader William Blair universe; Aggressive Growth (A) – Fundamental risk is higher relative to the broader William Blair universe.

The ratings and company profile assessments reflect the opinion of the individual analyst and are subject to change at any time.

The compensation of the research analyst is based on a variety of factors, including performance of his or her stock recommendations; contributions to all of the firm's departments, including asset management, corporate finance, institutional sales, and retail brokerage; firm profitability; and competitive factors.

THIS IS NOT IN ANY SENSE A SOLICITATION OR OFFER OF THE PURCHASE OR SALE OF SECURITIES. THE FACTUAL STATEMENTS HEREIN HAVE BEEN TAKEN FROM SOURCES WE BELIEVE TO BE RELIABLE, BUT SUCH STATEMENTS ARE MADE WITHOUT ANY REPRESENTATION AS TO ACCURACY OR COMPLETENESS OR OTHERWISE. OPINIONS EXPRESSED ARE OUR OWN UNLESS OTHERWISE STATED. FROM TIME TO TIME, WILLIAM BLAIR & COMPANY, L.L.C. OR ITS AFFILIATES MAY BUY AND SELL THE SECURITIES REFERRED TO HEREIN, MAY MAKE A MARKET THEREIN, AND MAY HAVE A LONG OR SHORT POSITION THEREIN. PRICES SHOWN ARE APPROXIMATE. THIS MATERIAL HAS BEEN APPROVED FOR DISTRIBUTION IN THE UNITED KINGDOM BY WILLIAM BLAIR INTERNATIONAL, LIMITED, REGULATED BY THE FINANCIAL SERVICES AUTHORITY (FSA), AND IS DIRECTED ONLY AT, AND IS ONLY MADE AVAILABLE TO, PERSONS FALLING WITHIN COB 3.5 AND 3.6 OF THE FSA HANDBOOK (BEING "ELIGIBLE COUNTERPARTIES" AND "PROFESSIONAL CLIENTS"). THIS DOCUMENT IS NOT TO BE DISTRIBUTED OR PASSED ON TO ANY "RETAIL CLIENTS." NO PERSONS OTHER THAN PERSONS TO WHOM THIS DOCUMENT IS DIRECTED SHOULD RELY ON IT OR ITS CONTENTS OR USE IT AS THE BASIS TO MAKE AN INVESTMENT DECISION. "WILLIAM BLAIR & COMPANY" AND "WILLIAM BLAIR & COMPANY (SCRIPT)" ARE REGISTERED TRADEMARKS OF WILLIAM BLAIR & COMPANY, L.L.C. Copyright 2008, William Blair & Company, L.L.C.