annualreport 08

DEAR SHAREHOLDERS

For Aspect Medical Systems, 2008 will be remembered as a year of challenges. Despite the economic turbulence, Aspect continued to grow and maintain a commitment to advancing the quality and safety of patient care. Our confidence in the value of brain monitoring has not diminished and I am proud to say that BIS technology has been used to help clinicians optimize patient care for more than 31 million patients across the globe. Our market leadership position remains strong, with more than 56,000 BIS systems installed worldwide. Furthermore, BIS technology was used to help guide anesthetic management in approximately 19% of the general anesthetics administered in the United States last year.

Nonetheless, revenue growth slowed in 2008 more than we anticipated. Compared to 2007 results:

Product Revenue Grew 8% U.S. Sensor Revenue Grew 8% International Sensor Revenue Grew 26%

There are a number of factors that contributed to the deceleration in growth rates compared to the prior year. In 2008 we determined that growing our business with the late adopters would require more contact with our customers and a greater emphasis on clinical education. In recognition of this, we made the decision to expand our U.S. sales force. Although this effort caused some disruption during the second half of the year as territories were realigned and attention was placed on hiring and training, this decision allowed us to better address market challenges encountered throughout the year. One of these challenges was the publication of a controversial study questioning the efficacy of our technology as a means of reducing the incidence of intraoperative awareness. Although the study findings confirmed previous research demonstrating the role of BIS monitoring in helping clinicians achieve a low incidence of awareness in high-risk patient populations, the interpretation of some study results and resulting publicity was disruptive and required a considerable effort for our field organization to educate our customers. This was followed later in the year by the worldwide recession, which presented an entirely new set of challenges for medical technology companies due to the impact on hospital spending.

Given these challenges, we believe that our expanded sales organization has provided a strategic advantage in better positioning the business. In difficult times, it is more important than ever to stay close to customers, and we believe we have successfully done this. Our sales force expansion has also given us the opportunity to refocus our customers on the proven value of BIS technology in helping clinicians improve care, and to expand the depth and breadth of our clinical education programs. Our results demonstrate the value of this approach. Although growth slowed during the course of the year, product use continued to expand and we successfully grew the worldwide installed base of BIS sockets by 19%.

On another positive note, the financial crisis provided an opportunity for us to significantly strengthen our balance sheet. At the start of last year, Aspect had a cash balance of $109 million and $125 million in long-term debt. As a result of a debt buyback program, we began 2009 with a cash balance of $83 million and $65 million in debt, a net improvement of $34 million.

We believe that Aspect's commitment to ground-breaking clinical research and ethical, evidence-based marketing and product development serves as the foundation for both our past success and our future opportunities. Thousands of anesthesia providers have incorporated BIS monitoring into clinical practice in an effort to provide the best possible care for their patients. We look ahead to 2009 with a renewed focus and remain confident that we are pursuing the right programs to guide efforts to capture a larger share of the untapped business opportunity in the operating room. Nonetheless, the challenging economic conditions demand that we scrutinize every element of our cost structure. Accordingly, regardless of the rate at which revenue grows in response to our investments in the sales force, outcomes research, new product development or business development, we remain fully committed to deliver strong earnings performance, and we plan to realign our spending programs as necessary as we strive to meet this commitment. Our results in the first quarter of 2009 demonstrate the impact of this approach on our bottom line.

PRODUCTS

Our product development strategy in 2009 is to introduce new products to the market that complement changes in the practice of anesthesia, and are designed to give both existing and new customers additional reasons to use Aspect's technology. We introduced our bilateral monitoring system that allows clinicians to track differences in brain function between the right and left sides of the head. We are also continuing efforts to develop CVI, a novel indicator of analgesic adequacy that examines intra-operative variability in BIS values and facial EMG. Our goal is to develop a product that will help anesthesia professionals track intra-operative analgesic requirements and reduce post operative pain. At the end of 2008, we completed a multi-center trial designed to demonstrate an association between CVI and somatic events in response to painful stimuli during surgery. The results of this study, which met the primary endpoint, will be presented at scientific conferences in the spring and will be submitted for publication soon. We also plan to conduct further CVI studies throughout 2009 and expect to launch the product outside the U.S. later in the year.

We are also actively considering the addition of new, high value-added products from outside the company that complement our core technology, and that have the potential for generating incremental revenue for each procedure when BIS may be used. Although there can be no assurance that any such addition will be successfully completed, as we evaluate these opportunities, we will seek to ensure that any potential new products integrate well with BIS technology and our sales force, can be brought to market quickly and enable clinicians to improve patient management and deliver better outcomes.

CLINICAL RESEARCH

A major theme within the anesthesia community is a growing appreciation of emerging research showing links between various anesthetic management approaches and important long term patient outcomes. The critical role that anesthesia professionals play in enabling complex surgeries to be performed safely is well recognized. Less well described are the associations between specific anesthetic conditions and potential adverse complications and outcomes following surgery. For example, two recent publications have confirmed findings from previous studies that demonstrate an association between deep anesthesia or sedation, as measured with BIS, and mortality.

> "Ride every crest of waves that come your way. Riding higher you see further. Thereby visible to you are not only the challenges but their resolution. This of course serves as a catalyst to foster hope in bleak times, and to exercise constraint in prosperous times."
>
> — *Bernard Lown, MD*
> Cardiologist, Nobel Peace Prize Laureate (IPPNW, 1985)
> Company mentor

Collectively, these studies indicate that some populations, such as patients with pre-existing cancer or patients requiring mechanical ventilation in the intensive care unit, may particularly benefit from more careful neuromonitoring with BIS. More importantly, these findings help highlight the importance of individualized care based on patient response, rather than use of the same standard technique for all patients.

If further research continues to validate the link between deep anesthesia and higher morbidity or mortality, we believe that the clinical benefits and role of BIS in facilitating precision in anesthesia care will become even more compelling. In an effort to better define this linkage, we are initiating collaborative research programs with several leading hospital networks and one of the largest academic medical centers in the country. This program includes an ongoing analysis of comprehensive long term patient records for over 160,000 patients to assess the impact of anesthetic management techniques, including BIS, on important patient outcomes. We have also developed a risk stratification model using Medicare claims that encompass 28 million surgical patient records. This information allows us to evaluate the impact of clinical interventions, including BIS use, and to rapidly complete comparative effectiveness studies while controlling for differences in patient profiles. This type of research is valuable to healthcare policy makers who seek to assess the impact of clinical interventions in routine health care, compare the effectiveness of alternative clinical choices, and ensure that the best choices are reflected in the way hospitals and physicians are reimbursed.

Ultimately, we believe that the best way to encourage clinicians to adopt our technology, and for policy makers to support its use, is to continue to deliver clear scientific evidence that demonstrates that BIS monitoring enables them to provide better patient care and to improve outcomes – and we believe that our collaborative research initiative has the potential for accelerating this process.

In the Neuroscience area, although we remain encouraged by the response of psychiatric thought leaders about the potential for biomarkers in the treatment of depression and dementia, the economic environment has led us to significantly scale back our research in depression and Alzheimer's disease in an effort to remain consistent with our commitment to generate earnings growth.

In summary, the continuing significant downturn in the economy has led us to make difficult business decisions, but at the same time, created unique opportunities for the company to better define a path forward. We have shifted our focus to our bottom line and are committed to aligning our spending with revenue growth with a goal of re-establishing, sustaining, and accelerating profitability. At the same time, we plan to continue our efforts to make the right strategic investments to position us for faster growth when the economy begins to recover as we work toward our goal of enhancing shareholder value. We have a number of exciting research and product development initiatives underway and we remain confident about our business while being realistic given the impact of the worldwide economy on healthcare spending. I believe that our philosophy of focus, resilience and discipline will serve us well in guiding our vision to make a difference for millions of patients receiving anesthesia or sedation. I continue to be energized by the opportunities ahead and thank you for your continued support.

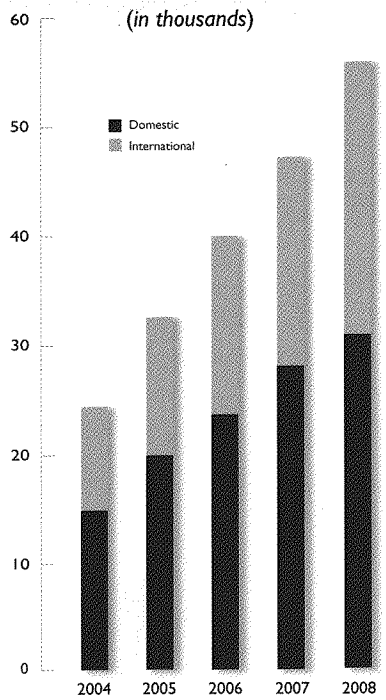
Sincerely,

Nassib G. Chamoun
President, CEO and Founder

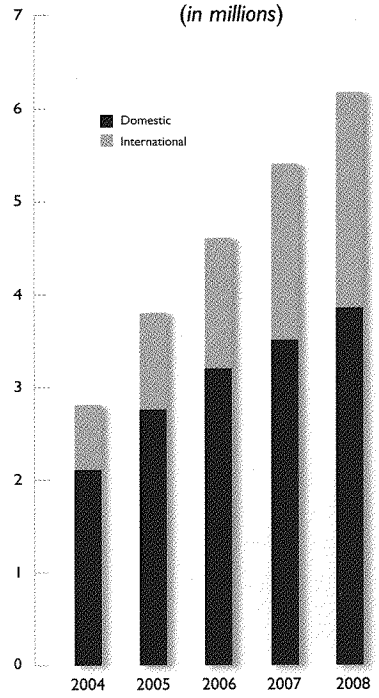
Postscript:

In April, Aspect Medical Systems and First Manhattan Co. entered into an agreement in which three new independent directors proposed by First Manhattan are expected to join Aspect's Board of Directors: Jon Biro, Executive Vice President and Chief Financial and Accounting Officer of Consolidated Graphics, Inc., Melvin Keating, former President and Chief Executive Officer of Alliance Semiconductor Corporation, and Vincent Scialli, Managing Director of First Manhattan. Messrs. Biro and Keating have been nominated for election at our upcoming annual meeting of stockholders and Mr. Scialli will be elected to fill a vacancy on our Board immediately prior to the Annual Meeting. I welcome the prospect of Jon, Mel and Vince joining our Board and look forward to benefiting from their insight and experience.

Total Installed Base of Monitors and Modules

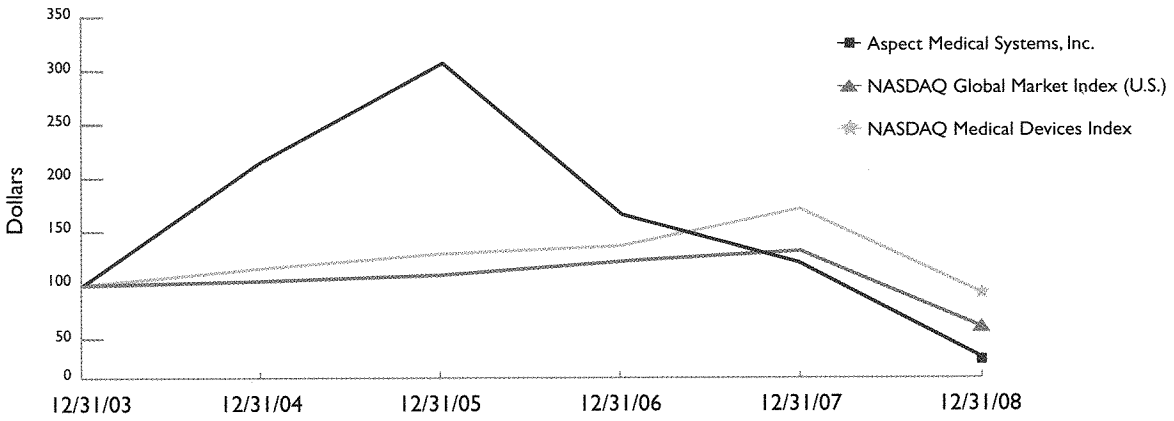


Sensor Shipment Total – Domestic & International



Comparative Stock Performance Graph

The comparative stock performance graph below compares the cumulative total stockholder return (assuming reinvestment of dividends, if any) from investing $100 on December 31, 2003 and plotted at the end of the last trading day of the fiscal years ended December 31, 2004, 2005, 2006, 2007 and 2008, in each of (i) our common stock, (ii) the NASDAQ Global Market Index of U.S. Companies and (iii) an index of surgical, medical and dental instruments and supplies companies listed on the NASDAQ Global Market.



Measurement Period (Fiscal Year Covered)	Aspect Medical Systems, Inc.	NASDAQ Global Market Index (U.S.)	NASDAQ Medical Devices Index
12/31/03	$ 100.00	$ 100.00	$ 100.00
12/31/04	$ 213.96	$ 108.84	$ 117.17
12/31/05	$ 300.49	$ 111.16	$ 128.66
12/31/06	$ 164.57	$ 122.11	$ 135.60
12/31/07	$ 122.48	$ 132.42	$ 172.42
12/31/08	$ 29.83	$ 63.80	$ 92.87

FINANCIAL INFORMATION

SELECTED CONSOLIDATED FINANCIAL DATA

CONSOLIDATED STATEMENTS OF INCOME DATA *(in thousands, except per share data):*

YEAR ENDED DECEMBER 31,	2008	2007	2006	2005	2004
Product revenue	$ 99,267	$ 92,078	$ 85,018	$ 73,471	$ 54,902
Strategic alliance revenue	—	5,246	6,316	3,524	662
Total revenue	99,267	97,324	91,334	76,995	55,564
Costs of product revenue	25,263	23,319	22,171	19,303	12,992
Gross profit	74,004	74,005	69,163	57,692	42,572
Gross margin percentage	74.6%	76.0%	75.7%	74.9%	76.6%
Operating expenses:					
Research and development	16,688	16,052	15,280	10,464	7,470
Sales and marketing	46,629	39,823	35,571	30,298	26,695
General and administrative	16,899	15,486	12,446	10,291	8,946
Total operating expenses	80,216	71,361	63,297	51,053	43,111
(Loss) income from operations	(6,212)	2,644	5,866	6,639	(539)
Interest income, net	405	3,009	3,332	1,926	923
Realized losses on sales of investments, net	(1,513)	—	—	—	—
Gain on repurchases of debt	27,793	—	—	—	—
Income before income taxes	20,473	5,653	9,198	8,565	384
Income tax provision (benefit)	9,372	3,397	(27,891)	90	81
Net income	$ 11,101	$ 2,256	$ 37,089	$ 8,475	$ 303
Net income per share:					
Basic	$ 0.64	$ 0.12	$ 1.66	$ 0.39	$ 0.02
Diluted	$ 0.56	$ 0.11	$ 1.59	$ 0.35	$ 0.01
Weighted average shares used in computing net income per share:					
Basic	17,255	19,614	22,378	21,508	20,142
Diluted	23,230	20,247	23,380	23,921	22,286

CONSOLIDATED BALANCE SHEET DATA *(in thousands):*

AS OF DECEMBER 31,	2008	2007	2006	2005	2004
Cash, cash equivalents, restricted cash and marketable securities	$ 83,451	$109,484	$ 63,470	$ 61,341	$ 43,734
Working capital	91,981	118,824	70,645	64,853	41,814
Total assets	136,974	173,477	125,254	87,132	61,690
Long-term debt	65,000	125,000	—	—	186
Total stockholders' equity	56,030	36,675	109,248	67,423	45,586

These selected condensed financial statements should be read in conjunction with the full audited financial statements presented in Aspect's Form 10-K, as filed with the Securities and Exchange Commission.

CORPORATE INFORMATION

Annual Meeting of Shareholders

All shareholders are welcome to attend our annual meeting, which will be held at 9:00 am on Friday, June 5, 2009, at Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts. We look forward to meeting our shareholders and answering any questions you may have at the meeting.

Forward-Looking Statements

Certain statements made in this Annual Report to Shareholders are forward-looking statements that are subject to risks and uncertainties, including statements regarding the Company's near-term and long-term operating plans, strategies, goals, prospects and financial and operating performance and results. There are a number of important factors that could cause the Company's future performance and results of operations to differ materially from such statements, including without limitation those set forth under the heading, "Risk Factors" in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008, which is filed with the Securities and Exchange Commission. These statements should not be relied upon as representing the Company's expectations of beliefs as of any date subsequent to the date of this Annual Report.

Board of Directors

Nassib G. Chamoun
President, Chief Executive Officer, and Founder

J. Breckenridge Eagle
Chairman of the Board of Directors

Boudewijn Bollen
Member of the Board of Directors

Michael Esposito
Partner
Norbridge, Inc

David W Feigal, M.D., M.P.H.
Vice President, Global Regulatory
Amgen, Inc.

Edwin M. Kania, Jr.
Managing Partner and Chairman
Flagship Ventures

John O'Connor
Retired, PricewaterhouseCoopers LLP

James J. Mahoney, Jr.
President, The Mahoney Group

Donald Stanski, M.D.
Vice President, Global Head of Modeling and Simulation
Novartis Pharma AG
Professor of Anesthesia (emeritus)
Stanford University

Executive Officers

Nassib G. Chamoun
President, Chief Executive Officer, and Founder

J. Breckenridge Eagle
Chairman of the Board of Directors

J. Neal Armstrong
Vice President, Chief Financial Officer and Secretary

Margery Ahearn
Vice President of Human Resources

John Coolidge
Vice President of Manufacturing Operations

Marc Davidson
Vice President of Engineering

Philip H. Devlin
Vice President of Emerging Technologies and General Manager of Neuroscience

William Floyd
Executive Vice President of Worldwide Sales and Marketing

Scott D. Kelley, M.D.
Vice President of Medical Affairs

Paul J. Manberg, Ph.D.
Vice President of Clinical, Regulatory and Quality Assurance

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443.213.0500

Corporate Counsel

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617.526.6000

Auditors

Ernst & Young LLP
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Boston, Massachusetts 02116
617.266.2000

Transfer Agent

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781.575.2879
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f: 617.559.7400
e: bis_info@aspectms.com

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The Netherlands
t: 31.30.662.9140
f: 31.30.662.9150
e: amsint@aspectms.com

Form 10-K

The Company's Annual Report on Form 10-K, as filed with the Securities and Exchange Commission for the fiscal year ended December 31, 2008, is available free of charge upon written request to Aspect Medical Systems, Inc., Investor Relations Department, One Upland Road, Norwood, Massachusetts 02062

ASPECT™
MEDICAL SYSTEMS

One Upland Road
Norwood, MA 02062
tel: (617) 559-7000
fax: (617) 559-7400

www.aspectmedical.com

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2008

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 0-24663

Aspect Medical Systems, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**04-2985553**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*
One Upland Road **Norwood, Massachusetts** *(Address of Principal Executive Offices)*	**02062-1546** *(Zip Code)*

(617) 559-7000
Registrant's telephone number, including area code

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered Pursuant to Section 12(g) of the Act:
Common Stock, $0.01 Par Value
(Title Of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K ☐.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check One):

Large accelerated filer ☐ Accelerated filer ☑ Non-accelerated filer ☐ Smaller Reporting company ☐
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 27, 2008 was $29,430,631. Such aggregate market value was computed by reference to the closing price as quoted on the Nasdaq Global Market on June 27, 2008 (the last business day of the Registrant's most recently completed second fiscal quarter). The registrant had 17,354,538 shares of Common Stock, $0.01 par value per share, outstanding as of February 27, 2009.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended December 31, 2008. Portions of such proxy statement are incorporated by reference into Part III of this Form 10-K.

TABLE OF CONTENTS

PART I		1
Item 1.	Business	1
Item 1A.	Risk Factors	17
Item 1B.	Unresolved Staff Comments	37
Item 2.	Properties	37
Item 3.	Legal Proceedings	37
Item 4.	Submission of Matters to a Vote of Security Holders	37
PART II		38
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	38
Item 6.	Selected Consolidated Financial Data	39
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	40
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	54
Item 8.	Financial Statements and Supplementary Data	55
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	55
Item 9A.	Controls and Procedures	55
	Report of Independent Registered Public Accounting Firm	57
Item 9B.	Other Information	58
PART III		58
Item 10.	Directors, Executive Officers and Corporate Governance	58
Item 11.	Executive Compensation	58
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	58
Item 13.	Certain Relationships and Related Transactions, and Director Independence	58
Item 14.	Principal Accounting Fees and Services	58
PART IV		59
Item 15.	Exhibits and Financial Statement Schedules	59
SIGNATURES		60
Consolidated Financial Statements		61

Forward-Looking Information

This Annual Report on Form 10-K contains, in addition to historical information, forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, including information relating to our ability to maintain profitability, information with respect to market acceptance of our BIS system, continued growth in sales of our BIS Sensors, BIS monitors and original equipment manufacturer products, our dependence on the BIS system, regulatory approvals for our products, our ability to remain competitive and achieve future growth, information with respect to other plans and strategies for our business and factors that may influence our revenue for the fiscal quarter ending April 4, 2009 and thereafter. Words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "estimate" and variations of these words and similar expressions are intended to identify our forward-looking statements. These forward-looking statements are not guarantees of future performance and involve risks and uncertainties including those described in "Item 1A — Risk Factors" and elsewhere in this annual report and that are otherwise described from time to time in our Securities and Exchange Commission reports filed after this report. The forward-looking statements included in this annual report represent our estimates as of the date of this annual report. We specifically disclaim any obligation to update these forward-looking statements in the future, except as specifically required by law or the rules of the Securities and Exchange Commission. These forward-looking statements should not be relied upon as representing our estimates or views as of any date subsequent to the date of this annual report.

PART I

Item 1. Business.

OVERVIEW

Aspect Medical Systems, Inc. was incorporated as a Delaware corporation in 1987. We develop, manufacture and market an anesthesia monitoring system that we call the BIS® system. The BIS system is based on our patented core technology, the Bispectral Index®, which we refer to as the BIS index. The BIS system provides information that allows clinicians to assess and manage a patient's level of consciousness in the operating room, intensive care and procedural sedation settings and is intended to assist the clinician in better determining the amount of anesthesia or sedation needed by each patient. We developed the BIS system over 10 years, and it is the subject of 23 issued United States patents and ten pending United States patent applications. Our proprietary BIS system includes our BIS monitor, BIS Module Kit or BISx system, which allows original equipment manufacturers to incorporate the BIS index into their monitoring products, and our group of sensor products, which we collectively refer to as BIS Sensors.

As of December 31, 2008, the worldwide installed base of BIS monitors and original equipment manufacturer products was approximately 56,300 units. We estimate that BIS technology is installed in approximately 71% of all domestic operating rooms and that more than 31 million patients worldwide have been monitored using the BIS index during surgery.

Clinical trials and routine clinical use of the BIS system have shown that patient monitoring with the BIS system can result in:

- a reduction in the incidence of unintentional intraoperative awareness with recall,
- a reduction in the amount of anesthetics used,
- faster wake-up from anesthesia,
- less patient time in the operating room and the post-anesthesia care unit following surgery,
- higher rates of outpatients bypassing the post-anesthesia care unit and proceeding to a less costly step-down recovery area directly from the operating room, and
- improvements in the quality of recovery.

We are in the process of investigating other product areas that utilize our expertise in anesthesia delivery and monitoring of the brain. For additional information regarding these other product areas, see "Business — Research and Development" appearing elsewhere in this annual report.

We derive our revenue primarily from sales of our BIS Sensors, our original equipment manufacturer products (including BIS Module Kits and the BISx system) and related accessories, which we collectively refer to as Equipment, and sales of our BIS monitors. We have also historically derived a portion of our revenue from strategic alliances, primarily our alliance with Boston Scientific Corporation, which we terminated in June 2007. In fiscal years 2008, 2007 and 2006, revenue from the sale of BIS Sensors represented approximately 85%, 78% and 71%, respectively, of our revenue and revenue from the sale of Equipment represented approximately 15%, 17% and 22%, respectively, of our revenue. In fiscal years 2008, 2007 and 2006, strategic alliance revenue represented approximately 0%, 5% and 7%, respectively, of our revenue.

We maintain a website with the address *www.aspectmedical.com*. We are not including the information contained on our website, or information that can be accessed by links contained on our website, as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available free of charge through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and amendments to these reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission, or SEC. We have posted on our website a copy of our Code of Business Conduct and Ethics. In addition, we intend to disclose on our website any amendments to, or waivers from, our Code of Business Conduct and Ethics that are required to be publicly disclosed pursuant to the rules of the SEC.

2008 DEVELOPMENTS

Repurchases of 2.5% Convertible Senior Notes Due 2014

During 2008, we repurchased approximately $60.0 million of our 2.5% convertible notes for total consideration of $30.4 million, plus accrued interest of approximately $617,000. As a result of these transactions, we recorded a gain on debt repurchase of $27.8 million for the year ended December 31, 2008, which is net of the write-off of the ratable portion of unamortized deferred financing fees.

In February 2009, we repurchased an additional $7.0 million of our 2.5% convertible notes for total consideration of approximately $3.8 million, including accrued interest of approximately $28,000. As a result of this transaction, we recorded a gain on debt repurchase of approximately $3.0 million, which is net of the write-off of the ratable portion of unamortized deferred financing fees.

THE ASPECT SOLUTION: PATIENT MONITORING WITH THE BIS SYSTEM

We have developed the BIS monitoring system that is based on our proprietary BIS index. Our BIS system comprises our BIS monitor, BIS Module Kit or BISx system and our BIS Sensors. The BIS Sensors are applied to a patient's forehead to acquire the electroencephalogram, or EEG, a measure of the electrical activity of the brain. The EEG is then analyzed by the BIS monitor, BIS Module Kit or BISx system to produce the BIS index. The BIS index is a numerical index that correlates with levels of consciousness and is displayed as a number ranging between 100, indicating that the patient is awake, and zero, indicating an absence of brain activity. In October 1996, the United States Food and Drug Administration, or FDA, cleared the BIS index for marketing for use as a direct measure of the effects of anesthetics and sedatives on the brain. In October 2003, the FDA cleared a new indication for use specifying that use of BIS monitoring to help guide anesthetic administration may be associated with the reduction of the incidence of awareness with recall in adults during general anesthesia and sedation.

Products

Our principal product offerings consist of the following:

EQUIPMENT

BIS VISTA Bilateral

The BIS VISTA Bilateral monitoring system, when used in conjunction with the BIS Bilateral Sensor, provides the capability to detect hemispheric differences in the brain which may prove useful for advanced monitoring applications. Advanced Bilateral features include 4 channel EEG monitoring, Asymmetry Indicator (ASYM) and Density Spectral Array (DSA). The initial commercial shipment of the BIS VISTA Bilateral took place in 2008.

BIS VIEW

The BIS VIEW is our basic featured standalone monitor, which has fewer optional configurations compared with the BIS VISTA monitor. The BIS VIEW monitor runs on the BISx platform. The initial commercial shipment of the BIS VIEW took place in 2007.

BIS VISTA

The BIS VISTA is our stand alone monitor which offers enhanced display and user interface as well as greater processing capability as compared with the BIS View and the A-2000 BIS Monitor, including the ability to support advanced monitoring features. The BIS VISTA monitor runs on the BISx platform. The initial commercial shipment of the BIS VISTA took place in 2006.

BISx system

The BISx system is our original equipment manufacturer BIS monitoring solution that provides the processing technology required to obtain BIS information from a single device the approximate size of a hockey puck. The BISx system is designed to integrate with a wide range of patient monitoring platforms sold by original equipment manufacturers. BISx simplifies the incorporation of BIS technology into our partners' monitoring systems and makes available a class of monitoring systems that has historically been out of reach due to the cost of integration. We have also maintained backwards compatibility with our existing BIS engine technology to simplify the adoption of BISx by our existing partners. The initial commercial shipment of the BISx system took place in 2004.

BIS XP system

The BIS XP system offers enhanced performance capabilities and expanded benefits as compared with the previous version of our BIS system, enabling more precise measurement of brain activity to assess the level of consciousness. The BIS XP system is designed to detect and filter interference from muscle artifact and to resist interference from electrocautery devices. Additionally, it is able to provide enhanced detection of near suppression, a brain wave pattern occasionally observed during deep anesthesia and cardiac cases. The BIS XP system runs on the A-2000 BIS Monitor, BIS Vista, BIS View, BIS Module Kit platform and BISx system. The initial commercial shipment of the BIS XP system took place in 2001.

A-2000 BIS Monitor

The A-2000 BIS Monitor is a compact, lightweight, portable monitor designed to accommodate the space limitations and positioning requirements of surgical settings. The A-2000 BIS Monitor displays the BIS index and supporting information and includes our proprietary digital signal converter. This converter is a palm-sized module that serves as the interface between the BIS monitor and the BIS Sensors. The digital signal converter acquires the EEG signal, which is the electrical signal generated in the brain, from the BIS Sensors and converts the EEG signal to digital format. The EEG signal is then processed and the BIS index is displayed on the A-2000 BIS Monitor. The initial commercial shipment of the A-2000 BIS Monitor took place in 1998.

BIS Module Kit

Our BIS Module Kit is designed to facilitate the integration of the BIS index into equipment marketed by original equipment manufacturers. The BIS Module Kit consists of two pieces, our proprietary digital signal converter and a small circuit board that resides in the original equipment manufacturer's system. The digital signal converter acquires the EEG signal from the BIS Sensors and converts the EEG signal to digital format. The circuit board then processes the EEG signal and outputs the BIS index to the original equipment manufacturer's system.

The common architecture of the BIS Module Kit facilitates integration of the BIS index into the original equipment manufacturer's system. Each original equipment manufacturer is required to obtain FDA and other appropriate regulatory clearance of its BIS module product.

In 2001, we introduced commercially the BIS Module Kit with 4 channel EEG monitoring capability to support a product introduction of one of our original equipment manufacturers.

BIS Sensors

BIS Bilateral Sensor

The BIS Bilateral Sensor was designed for symmetrical placement to capture bi-hemispheric data. The Bilateral Sensor is designed for use with the BIS VISTA Monitoring System. The initial commercial shipment of the BIS Bilateral Sensor took place in 2008.

Semi-Reusable Sensor (SRS)

The SRS is a semi-reusable version of a BIS Sensor that uses the same algorithm and hardware as our disposable sensors. Currently, the SRS is primarily only available in markets outside of the United States where we sell our products, excluding Japan. The initial commercial shipment of the SRS took place in 2005.

BIS Extend Sensor

We created the BIS Extend Sensor for patients who are typically monitored for an extended period of time, such as in intensive care unit settings. We designed the BIS Extend Sensor with a surface that allows clinicians to record in writing the date and time of application, making it easier to track when a new sensor should be applied. The BIS Extend Sensor is designed to resist electrical artifact and to detect and filter interference from muscle artifact caused by sources such as eye movement. The BIS Extend Sensor contains an electronic memory device that allows information about the sensor, such as lot code, expiration date and type of sensor, to be stored on the sensor and to be retrieved by the BIS monitor, BIS Module Kit or BISx system. We introduced commercially the BIS Extend Sensor in 2002.

BIS Pediatric Sensor

The BIS Pediatric Sensor is smaller and easier to apply than our other BIS Sensors, and is designed to be visually appealing to children. The BIS Pediatric Sensor features an improved design for easy connection and enables the BIS system to automatically configure its settings for specific patient populations and applications. The BIS Pediatric Sensor contains an electronic memory device that allows information about the sensor, such as lot code, expiration date and type of sensor, to be stored on the sensor and to be retrieved by the BIS monitor, BIS Module Kit or BISx system. The initial commercial shipment of the BIS Pediatric Sensor took place in 2001.

BIS Quatro Sensor

The BIS Quatro Sensor offers enhanced performance in deep anesthetic states and improved resistance to interference from noise sources, such as high frequency/electromyography conditions, in the operating room and intensive care unit. The BIS Quatro Sensor features an improved design compared with the BIS Standard Sensor for easy connection and enables the BIS system to automatically configure its settings for specific patient populations and applications. The BIS Quatro Sensor contains an electronic memory device that allows information about the

sensor, such as lot code, expiration date and type of sensor, to be stored on the sensor and to be retrieved by the BIS monitor, BIS Module Kit, or BISx system. We introduced commercially the BIS Quartro Sensor in 2001.

BIS Sensor Plus

The BIS Sensor Plus is a second-generation disposable product for use with the A-2000 BIS Monitor and BIS Module Kit. The BIS Sensor Plus features an improved design compared with the BIS Standard Sensor for easy connection and enables the BIS system to automatically configure its settings for specific patient populations and applications. The BIS Sensor Plus contains an electronic memory device that allows information about the sensor, such as lot code, expiration date and type of sensor, to be stored on the sensor and to be retrieved by the BIS monitor or BIS Module Kit. The initial commercial shipment of the BIS Sensor Plus took place in 2001.

BIS Standard Sensor

The BIS Standard Sensor is a single-use, disposable product for use with the A-2000 BIS Monitor and the BIS Module Kit. The BIS Standard Sensor is not compatible with the BIS XP system because it does not contain the easy connection feature and electronic memory device of our other BIS Sensors. The BIS Standard Sensor is designed to provide a reliable and simple means of acquiring the EEG signal needed to generate the BIS index. The one-piece design allows quick and accurate placement on the patient's forehead. The BIS Standard Sensor connects to the monitor by a single-point proprietary connector. The BIS Standard Sensor was introduced commercially in 1997.

Our Zipprep® self-prepping technology is a key feature of each of our BIS Sensors. The technology is designed to minimize patient set-up time and establish effective electrical contact with the patient which enables consistent, accurate readings of the EEG signal. Prior to our development of the Zipprep technology, to obtain an EEG signal the user prepared a patient's skin by rubbing an abrasive cream over the forehead 10 to 20 times in order to remove the top layer of skin prior to applying the electrode.

Technology

We developed the BIS system, including our proprietary BIS index, over 10 years. The BIS index is a numerical index that quantifies the hypnotic component of anesthetic drug effect, which correlates with the level of consciousness and is derived from an analysis of the EEG signal. In general, an EEG signal changes from a small-amplitude, high-frequency signal while a person is awake to a large-amplitude, low-frequency signal while a person is deeply anesthetized. Historically, researchers used observations about these changes in the EEG signal to create mathematical algorithms to track the effects of anesthetics on the brain. However, these algorithms were not widely adopted because studies indicated that they generally did not provide sufficient clinically useful information to assess levels of consciousness with commonly used anesthetics and doses.

In developing the BIS index, we sought to improve these early EEG analyses in two ways. First, by using bispectral analysis, a mathematical tool that examines signals such as the EEG, we can extract new information from the EEG signal. Second, we developed proprietary processing algorithms that extract information from bispectral analysis, power spectral analysis and time domain analysis. Geophysicists originally used bispectral analysis in the early 1960s to study ocean wave motion, atmospheric pressure changes and seismic activity. The advent of high-speed, low-cost digital signal processors has enabled the use of bispectral analysis for other applications. By using bispectral analysis, we are able to extract a distinctive fingerprint of the underlying signal structure of the EEG and represent it as a three-dimensional mathematical model.

We created the BIS index to quantify changes in the EEG signal that relate to the effects of anesthetics on the brain in order to assess levels of consciousness. Over a number of years, Aspect and others collected a large database of high fidelity EEG recordings and clinical assessments from volunteers and patients receiving a wide variety of anesthetics. Researchers used clinical assessments such as a sedation rating scale, picture or word recall memory tests and response to stimuli to define levels of consciousness. Using statistical methods, we identified features within the EEG that correlated with sedation and loss of consciousness. We then used proprietary statistical methods to combine these features to generate an interpretive numerical index, which we refer to as the BIS index. The BIS index ranges from 100, indicating that the patient is awake, to zero, indicating an absence of electrical brain activity.

Research and Development

Our research and development team is comprised of our clinical, regulatory and quality assurance group and our engineering group. During the fiscal years ended December 31, 2008, 2007 and 2006, we incurred expenses of approximately $16.7 million, $16.1 million and $15.3 million, respectively, in connection with our research and development efforts.

Clinical, Regulatory and Quality Assurance

Our clinical, regulatory and quality assurance group is responsible for:

- establishing collaborative relationships with leading clinical researchers,
- encouraging publications related to the BIS index in scientific literature,
- monitoring compliance with the FDA and other regulatory agencies' requirements,
- conducting clinical research with the goal of extending the application of patient monitoring with the BIS system to other settings and clinical uses, and
- collecting data for new product development.

We have a clinical database of over 5,000 cases for use in algorithm development and product validation based on trials that we conducted or sponsored or that third parties conducted.

In 1996, the FDA cleared the BIS index for marketing for use as a direct measure of the effects of anesthetics and sedatives on the brain. The regulatory approval process involved studies we conducted on over 900 volunteers and patients. These studies characterized the relationships between the BIS index value and various clinical endpoints, including movement, response to incision, response to verbal command as a measure of consciousness in volunteers and patients, memory function, drug utilization and speed of patient recovery following surgery.

In October 2003, the FDA cleared a new indication for use specifying that use of BIS monitoring to help guide anesthetic administration may be associated with the reduction of the incidence of awareness with recall in adults during general anesthesia and sedation. This clearance was based on data that was collected in several multi-center, multinational studies to assess the incidence of awareness with recall and the impact of BIS monitoring. More than 30,000 patients were enrolled in these studies, which we conducted over a period of 18 months. Results from these studies demonstrated that awareness with recall occurs in approximately one to two cases per 1,000 patients during general anesthesia. Although our clinical research and practice experience suggests that awareness with recall is more likely to occur when BIS values are high, we do not believe that our experience demonstrates conclusively that patient monitoring with the BIS system will identify or prevent all cases of awareness with recall.

Since the introduction of our products, clinicians have reported to us cases of possible awareness with recall during surgical procedures monitored with the BIS system. These reports may not include all cases of awareness with recall that might have occurred during procedures where patients were monitored with the BIS system. In most of the cases that were reported to us, when BIS index values were recorded at the time of awareness with recall, high BIS index values were noted, indicating that the BIS index correctly identified the increased risk of awareness with recall in these patients. It is possible that, in a number of these reported cases, awareness with recall may not have been detected by monitoring with the BIS system.

We are also collaborating with researchers that are investigating the relationship between deep anesthetic levels as measured using the BIS system and one-year morbidity and mortality rates. One initial report (Monk TG, Saini V, Weldon BC, Sigl JC Anesthetic Management and One-Year Mortality after Noncardiac surgery. *Anesthesia Analg*. 2005 Jan;100(1):4-10.) suggested that deep anesthesia is associated with increased post-operative mortality in elderly patients undergoing general anesthesia. A second study involving over 4,000 patients has reportedly confirmed this association (Lennmarken C, Lindholm, ML, Greenwald S, Sandin R. Confirmation that Low Intraoperative BIS Levels Predict Increased Risk of Post-Operative Mortality. *Anesthesiology 2003*, Annual Meeting A-303). Finally, a retrospective analysis of Medicare national hospital data has suggested that hospitals that routinely use intraoperative BIS monitoring may have decreased postoperative one-year mortality rates (Monk T, Sigl J, Weldon C. Intraoperative BIS Utilization is Associated with Reduced One-Year Post-Operative Mortality.

Anesthesiology 2003, Annual Meeting A-1361). We believe that these preliminary findings need to be further confirmed in additional trials. We were not the direct sponsors in any of these studies.

Recent Clinical Studies

In March 2007, we announced the initiation of two studies being conducted with the Cleveland Clinic to investigate the impact of anesthetic management techniques on patient outcomes. The first is a vascular study which seeks to determine if avoidance of deep anesthesia, administration of steroids and control of blood sugar levels improves outcomes in patients undergoing major vascular surgery. The study is expected to evaluate up to 900 patients scheduled for elective major surgeries at Cleveland Clinic hospitals. Patients will be randomized to a surgical care protocol that includes administration of a steroid or placebo, intensive or conventional glucose management and lighter or deeper anesthetic management. Researchers will assess multiple outcome measures during and after surgery, including the incidence of major perioperative morbidity such as heart attack, as well as incidence of surgical complications, delirium and quality of life.

The second study is designed to test the hypothesis that avoiding deep general anesthesia reduces cancer recurrence rates in women under going surgery for breast cancer. The study is expected to evaluate up to 1,100 breast cancer patients scheduled to undergo mastectomies. Patients will be randomly assigned to regional anesthesia/analgesia with sedation or light anesthesia, or to a full general anesthetic and morphine analgesia. The study contemplates that participants will be followed for up to 10 years to determine the rate of cancer recurrence or metastasis. BIS monitoring will be used to assess whether the depth of general anesthesia is related to patient outcomes.

In 2008 we continued development of Aspect's composite measure of BIS and EMG variability called Composite Variability Measure, or CVI, designed to assist anesthesia professionals with the management of intraoperative analgesia. Inadequate analgesia is associated with an increase in somatic events in response to painful stimuli during surgery. In 2007, we began enrollment in the multicenter ADVANCE trial, which is investigating this relationship. Enrollment in this trial was completed in 2008. We plan to conduct further CVI studies and evaluations in the first few quarters of 2009 and expect to launch CVI commercially, initially outside of the United States, by late 2009 pending receipt of appropriate regulatory approvals.

In 2008, we also completed a multi-center collaborative study called the Childhood Awareness and Recall Evaluation, or CARE study, which documented the incidence and risk factors for intraoperative awareness in children between the ages of five and fifteen. We have completed analysis on this study and have submitted publications for review.

In 2005, we agreed to collaborate with The Brain Resource Company in a multi-year clinical study to evaluate brain electrical activity in patients identified with mild cognitive impairment, or MCI, a memory impairment that often precedes Alzheimer's disease. Interim results of this study indicate that our EEG-based biomarker correlates with standard measures of cognitive performance and suggest that EEG information may be helpful in determining which patients in the normal to MCI range are likely to experience congnitive decline. Subjects in this study are prospectively evaluated using our brain assessment technology to obtain an EEG cognitive functional score. The EEG assessments from the MCI patients are then compared with assessments in a recently acquired database of normal elderly subjects and Alzheimer's disease patients. The interim results of this study indicate that patients suffering from MCI showed brain assessment scores between those of healthy and Alzheimer's disease subjects. In December 2008, we concluded data collection in this study. We plan to do a final analysis of this study in the future.

Since 2003, 434 normal elderly subjects have enrolled in a longitudinal memory study, which we refer to as the Cape Cod Memory Study, conducted by us in which EEG and clinical information such as measures of cognitive performance and change in clinical status are collected on a quarterly basis over years. This data collected in the course of the Cape Cod Memory Study is intended to enable us to develop EEG biomarkers to: (i) assess cognitive performance and (ii) identify patients at risk of worsening cognition, which may be due to developing dementia caused by Alzheimer's disease. To date, we have published results showing that BIS-AD correlates with metrics of cognitive performance and is an independent predictor of future (1 year) worsening of cognition in normal elderly subjects. In December 2008, we concluded data collection in the Cape Cod Memory Study. We plan to do a final analysis of this study in the future.

Engineering

Our engineering efforts focus primarily on continuing to improve the function and features of the BIS system and enhancing our technical leadership in signal-processing technology for use in patient care. We intend to leverage the BIS technology for the development of new monitoring products and proprietary disposable sensors for new applications and to take advantage of new opportunities such as the intensive care unit and procedural sedation markets.

Our engineering department has four primary areas of responsibility:

- algorithm research,
- product development,
- pre-production quality assurance, and
- clinical engineering.

In 2003, we developed the BISx system, which offers our original equipment manufacturers a BIS monitoring solution that provides the processing technology required to obtain BIS information from a single device the approximate size of a hockey puck. The BISx system has been designed to integrate with a wide range of patient monitoring platforms sold by original equipment manufacturers. The BISx system simplifies the incorporation of BIS technology into our original equipment manufacturer's monitoring systems and makes integration feasible with a class of monitoring systems that has historically been out of reach due to the cost of integration. We also maintained backwards compatibility with our existing BIS engine technology to simplify the adoption of BISx by our existing partners. In 2008, we expanded the BISx system from two-channel EEG capability to four-channel capability (BISx4), providing a more powerful platform for new applications. As with prior new product introductions, the BISx4 was developed with full backwards compatibility simplifying the adoption by our existing partners.

We are in the process of investigating other product areas that utilize our expertise in anesthesia delivery and monitoring of the brain. We have a team that is investigating the use of the BIS monitoring platform to diagnose and track neurological disorders. We believe that because the BIS index quantifies changes in patients' EEG, and we have shown the BIS index correlates with memory function and changes in brain metabolism, our technologies may be useful in detecting neurological disorders in patients. We are evaluating the application of the EEG-based parameters including those derived from the BIS index to measure brain function, which may assist in the detection of Alzheimer's disease, depression and other neurological disorders, including sleep cycles and seizure detection. Although additional research and development and clinical trials will be required, our research shows a correlation between the EEG-based parameters and the severity of dementia in patients with Alzheimer's disease and vascular dementia. This research complements our prior research demonstrating the correlation between the EEG-based parameters and the effects of pharmacological agents on the brain, changes in cerebral metabolic activity and clinical measures of cognitive and memory function.

Sales, Marketing and Customers

Our customers include anesthesia providers, hospitals, outpatient surgical centers and individual practitioners in office-based practice. We market and sell our products to our customers through:

- our direct sales force,
- distributors, and
- original equipment manufacturers.

For the years ended December 31, 2008, 2007 and 2006, no one customer accounted for 10% or more of our total revenue.

Domestic

We market our BIS system in the United States primarily through a combination of a direct sales force, specialty distributors and original equipment manufacturers. As of December 31, 2008, our domestic direct sales force was composed of 91 sales professionals, which included product specialists, clinical specialists and inside sales representatives.

We augment our direct sales force with medical products distributors in selected markets within the United States. We also market our products through the sales organizations of our original equipment manufacturers and contracts with hospital group purchasing organizations.

For those healthcare organizations desiring to acquire our BIS monitors directly from us, we offer two primary options. Our customers have the option either to purchase BIS monitors outright or to acquire BIS monitors pursuant to a sales-type lease agreement whereby the customer contractually commits to purchase a minimum number of BIS Sensors per BIS monitor per year. Under our sales-type leases, customers purchase BIS Sensors and the BIS monitor for the purchase price of the BIS Sensors plus an additional charge per BIS Sensor to pay for the purchase price of the BIS monitor and related financing costs over the term of the agreement. We also grant these customers an option to purchase the BIS monitors at the end of the term of the agreement, which is typically three to five years. We recognize Equipment revenue under sales-type lease agreements either at shipment or delivery in accordance with the agreed upon contract terms with interest income recognized over the life of the sales-type lease. The cost of the BIS monitor acquired by the customer is recorded as costs of revenue in the same period. We believe that the sales-type lease arrangement in some cases reduces the time required for customers to adopt the BIS system because it provides them with an option to utilize their operating budget to fund the purchase.

In addition to the two options noted above, we also offer customers the opportunity to use the BIS monitors under our Equipment Placement program, which we refer to as the EP program. Under the EP program, the customer is granted the right to use the BIS monitors for a mutually agreed upon period of time. During this period, the customer purchases BIS Sensors at a price that may include a premium above the list price of the BIS Sensors to cover the rental of the equipment, but without any minimum purchase commitments. At the end of the agreed upon period, the customer has the option of purchasing the BIS monitors, continuing to use them under the EP program or returning them to us.

We focus our marketing initiatives on the various constituencies that may be involved in the decision-making process concerning the purchase of our products. For clinical audiences, we exhibit at tradeshows, sponsor speakers at professional meetings and develop articles for publication in conjunction with industry experts. In addition, we work with hospitals to publicize their adoption of patient monitoring with the BIS system in an effort to assist them in communicating to their patients and communities their commitment to improving the quality and efficiency of patient care.

Group Purchasing Agreements

We have entered into several agreements with group purchasing organizations whereby the member healthcare organizations have the right to purchase BIS monitors and BIS Sensors under the pricing terms contained in the respective agreements with the group purchasing organization. Under these agreements, the group purchasing organizations' field forces have agreed to work with our sales force to encourage the adoption of our BIS technology by their member healthcare organizations. We have agreements with the following group purchasing organizations:

Group Purchasing Organization	Effective Date	Termination Date
Healthtrust Purchasing Group, L.P.	July 28, 2000	February 28, 2009*(1)
Novation	January 27, 2005	July 31, 2011* (may be renewed for two one-year terms)
Consorta, Inc.	March 1, 2006	March 1, 2009*(1)

(1) We are currently seeking to extend the current agreements while we renegotiate new contracts.

* Agreement can be terminated by either party on either 60 or 90 day written notice.

International

We conduct our international operations through our international headquarters in the Netherlands and through subsidiaries in the United Kingdom, Germany and France. We continue to develop our international sales and distribution program through a combination of distributors and marketing partners, including companies with which we have entered into original equipment manufacturer relationships. As of December 31, 2008, we employed 49 persons in our international organization located in Europe, Asia, Australia and South America. See Note 16, "Segment Information and Enterprise Reporting," of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for domestic and international financial information.

We are subject to a number of challenges which specifically relate to our international business activities. These challenges include:

- failure of local laws to provide adequate protection against infringement of our intellectual property,
- protectionist laws and business practices that favor local competitors, which could slow our growth in international markets,
- difficulties in terminating or modifying distributor arrangements because of restrictions in markets outside the United States,
- less acceptance by foreign anesthesia providers of the use of disposable products similar to the BIS Sensors,
- delays in regulatory approval of our products,
- currency conversion issues arising from sales denominated in currencies other than the United States dollar,
- foreign currency exchange rate fluctuations,
- longer sales cycles to sell products like the BIS system to hospitals and outpatient surgical centers, which could slow our revenue growth from international sales, and
- longer accounts receivable payment cycles and difficulties in collecting accounts receivable.

Distribution Agreements

We have entered into a distribution agreement, dated January 21, 1998, with Nihon Kohden Corporation, under which Nihon Kohden has agreed to act as an exclusive distributor of our BIS monitors and related products in Japan. The initial term of this agreement ended in January 2003, and is subject to automatic renewal annually unless either party provides written notice of termination to the other party at least three months prior to expiration of any renewal period. This agreement automatically renewed for an additional one-year period on February 21, 2009.

Original Equipment Manufacturer Relationships

We have entered into agreements with the following nine patient monitoring or anesthesia equipment companies that provide for the integration of our BIS technology into their patient monitoring equipment:

- Datascope Corp.,
- Dixtal Biomedica Ind E Com Ltda.,
- Dräger Medical Systems,
- General Electric (Healthcare Division),
- Mennen Medical LTD
- Nihon Kohden Corporation,
- Philips Medizinsysteme Boeblingen GmbH,
- Spacelabs Healthcare, Inc., and
- Shenzhen Mindray Bio-Medical Electronics Co., Ltd.

These companies have agreed to integrate our BIS technology with their patient monitoring systems. The agreements expire at various times through 2013, unless extended by agreement of the parties.

Manufacturing

We use approximately 40,000 square feet of our 136,503 square foot facility located in Norwood, Massachusetts for manufacturing purposes with the remainder used for research and development, sales and marketing, general and administrative purposes and warehouse space. In this facility, we assemble all of our BIS hardware, and we produce all of our BIS Sensors.

Our production process for our BIS hardware consists of final assembly, integration and testing of standard and custom components. Our production process for our BIS Sensors involves assembly of custom components on automated machinery. Qualified sub-contractors, who have met our supplier certification process and are placed on an approved vendors list, produce certain custom components for our products. Some of the components that are necessary for the assembly of our BIS system, including some of the components used in our BIS Sensors, are currently provided to us by sole-source suppliers or a limited group of suppliers. We purchase components through purchase orders and in select cases, long-term supply agreements. We generally do not maintain large volumes of inventory. We have experienced shortages and delays in obtaining some of the components of our BIS system in the past, and we may experience similar shortages and delays in the future.

We maintain a quality-assurance program covering our manufacturing operations and those of our suppliers. Our quality assurance program is subject to auditing by both the FDA and International Organization for Standardization, or ISO, agencies.

Competition

The medical device industry is subject to intense competition. We are facing increased competition in the level of consciousness market in the United States as a result of a number of competitors' monitoring systems, which have been cleared by the FDA. The competitive devices are based on signal-processing of the EEG and are marketed by well-established medical products companies with significant resources. We believe that new competition will come from companies, including patient monitoring companies, currently marketing conventional EEG monitors utilizing standard signal-processing techniques such as spectral edge frequency analyses and median frequency analyses. We also believe that new competition will come from companies that market EEG monitors utilizing novel signal-processing technologies. Several potential competitive products are currently being marketed outside the United States, although, we do not believe that these products provide any significant advantages relative to our BIS technology. These other products and techniques include the use of auditory evoked potentials, heart rate variability, pupillary reflexes and skin blood flow measurement techniques. Additionally, a number of academic researchers worldwide are studying the potential use of other techniques to measure the effects of anesthetics.

We believe that the principal competitive factors that we and other companies competing in the market for anesthesia-monitoring products must address include:

- improved patient outcomes,
- cost effectiveness,
- FDA approval or clearance,
- acceptance by leading anesthesia providers,
- availability of the technology in modular patient monitoring systems,
- ease of use for anesthesia providers,
- the publication of peer reviewed clinical studies,
- sales and marketing capability,
- timing and acceptance of product innovation,

- patent protection, and
- product quality.

Patents and Proprietary Rights

Medical technology companies place considerable importance on obtaining patent and trade secret protection for new technologies, products and processes. We consider the protection of our proprietary technologies and products to be important to the success of our business and rely on a combination of patents, licenses, copyrights and trademarks to protect our technologies and products. Our policy is to prosecute and enforce our patents and proprietary technology. We intend to continue to file United States and foreign patent applications to protect technology, inventions and improvements that are considered important to the development of our business. We also rely upon trade secrets, know-how, continuing technological innovation and licensing opportunities to develop and maintain our competitive position.

Trade secret protection for our unpatented confidential and proprietary information is important to us. To protect our trade secrets, we generally require our employees, consultants, scientific advisors, and parties to collaboration and licensing agreements to execute confidentiality agreements upon the commencement of employment, the consulting relationship, or the collaboration or licensing arrangement with us. However, others could either develop independently the same or similar information or obtain access to our proprietary information.

We have established a substantial proprietary position with respect to our products and our core signal processing technology, bispectral analysis, and its application to biological signals. The patent position of medical device companies is highly uncertain and involves complex legal and factual questions. There can be no assurance that any claims that are included in pending or future patent applications will be issued, that any issued patents will provide us with competitive advantage or will not be challenged by third parties, or that the existing or future patents of third parties will not have an adverse effect on our ability to commercialize our products. Furthermore, there can be no assurance that other companies will not independently develop similar products, duplicate any of our products or design around patents that may be issued to us. We may be required to engage in litigation or administrative proceedings to enforce any patents issued to us or to determine the scope and validity of others' proprietary rights.

As of December 31, 2008, we held 23 United States patents and had filed ten additional United States patent applications. Our issued United States patents generally relate to our BIS technologies and uses thereof and expire at various dates between 2011 and 2024. We also have numerous corresponding patents and pending patent applications in certain major industrial countries, including Canada, the major European market countries, Australia, Japan, Mexico, Brazil, China and India.

We have also been granted a perpetual, royalty-free, non-exclusive license by Siemens Medical Systems, Inc. to a United States patent covering signal acquisition technology for digital signal converters.

Additionally, in July 2004, we exercised our right to acquire an exclusive license from the Regents of the University of California to certain brain monitoring technology in the field of diagnosis and management of neurological diseases and conditions which was developed at the Neuropsychiatric Institute and David Geffen School of Medicine at UCLA. On July 27, 2007 we acquired an additional exclusive license from the Regents of the University of California to other certain brain monitoring technology in the field of diagnosis and management of neurological diseases.

Government Regulation

The manufacture and sale of medical devices intended for commercial distribution and use are subject to extensive government regulation in the United States and in other countries. Our existing products are regulated in the United States as medical devices by the FDA under the Federal Food, Drug, and Cosmetic Act, or FDC Act. Pursuant to the FDC Act, the FDA regulates the research, testing, manufacturing, safety, labeling, storage, record keeping, advertising, distribution and production of medical devices. Noncompliance with applicable regulations can result in refusal of the government to grant clearance for devices, withdrawal of prior clearances or approvals, total or partial suspension of production, fines, injunctions, civil penalties, recall or seizure of products, total or

partial suspension of production, failure of the government to grant pre-market clearance or pre-market approval for devices, withdrawal of marketing clearances or approvals and criminal prosecution.

FDA Clearance Procedures

510(k) Clearance Pathway. Generally, before we can introduce a new product in the United States, we must obtain FDA clearance of a premarket notification under Section 510(k) of the FDC Act, referred to as a 510(k) notification, or approval of a premarket approval application under Section 515 of the FDC Act. To date, we have received clearance of a 510(k) notification from the FDA with respect to 19 products, including most recently the Zipprep Electrode in January 2007, the BIS VIEW in June 2007 and the VISTA/BISx in November 2007. The FDA attempts to respond to a 510(k) pre-market notification within 90 days of submission of the notification, but the response may be a request for additional information or data, sometimes including clinical data. As a practical matter, pre-market clearance can take significantly longer, including up to one year or more.

If the FDA disagrees with a manufacturer's determination that a new clearance or approval is not required for a particular modification, the FDA can require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or pre-market approval is obtained. The manufacturer may also be subject to significant regulatory fines and penalties.

Once we have received clearance of a 510(k) notification, any products we manufacture or distribute are subject to extensive and continuing regulation by the FDA, including compliance with current Good Manufacturing Practices regulations, record keeping requirements, reporting of adverse experience with the use of the device, post-market surveillance, and other actions deemed necessary by the FDA. A new 510(k) notification is also required when a medical device manufacturer makes a change or modification to a legally marketed device that could significantly affect the safety or effectiveness of the device, or where there is a major change or modification in the intended use of the device. When any change or modification is made to a device or its intended use, the manufacturer must make the initial determination whether the change or modification is of a kind that would necessitate the filing of a new 510(k) notification. The FDA's regulations provide only limited guidance for making this determination.

If the FDA concludes that any of our products do not meet the requirements to obtain clearance of a premarket notification under Section 510(k) of the Food, Drug and Cosmetic Act, then we would be required to file a premarket approval application. For example, there can be no guarantee that the FDA will accept the results from our depression clinical trial as supportive of a 510(k) notification without requiring additional studies and/or a premarket approval application.

Pre-market Approval Pathway. A pre-market approval application must be submitted if the device cannot be cleared through the 510(k) process. The pre-market approval process is much more demanding than the 510(k) pre-market notification process. A pre-market approval application must be supported by extensive data and information including, but not limited to, technical, preclinical and clinical trials, manufacturing and labeling to demonstrate to the FDA's satisfaction the safety and effectiveness of the device.

After the FDA determines that a pre-market approval application is complete, the FDA begins an in-depth review of the submitted information. The FDA, by statute and regulation, has 180 days to review an accepted pre-market approval application, although the review generally occurs over a significantly longer period of time, and can take up to several years. During this review period, the FDA may request additional information or clarification of information already provided. Also during the review period, an advisory panel of experts from outside the FDA may be convened to review and evaluate the application and provide recommendations to the FDA as to the approvability of the device. In addition, the FDA will conduct a pre-approval inspection of the manufacturing facility to ensure compliance with the Quality System Regulations, which requires manufacturers to follow design, testing, control, documentation and other quality assurance procedures. New pre-market approval applications or supplemental pre-market approval applications are required for significant modifications to the manufacturing process, labeling, use and design of a device that is approved through the pre-market approval process. Pre-market approval supplements often require submission of the same type of information as a pre-market approval application, except that the supplement is limited to information needed to support any changes from the device

covered by the original pre-market approval application, and may not require as extensive clinical data or the convening of an advisory panel.

Clinical Trials. A clinical trial is almost always required to support a pre-market approval application and is sometimes required for a 510(k) pre-market notification. Clinical trials for devices that involve significant risk, referred to as significant risk devices, require submission of an application for an investigational device exemption, or IDE, to the FDA. The IDE application must be supported by appropriate data, such as animal and laboratory testing results, showing that it is safe to test the device in humans and that the testing protocol is scientifically sound. Clinical trials for a significant risk device may begin once the IDE application is approved by the FDA and the institutional review board, or IRB, overseeing the clinical trial. If the FDA fails to respond to an IDE application within 30 days of receipt, the application is deemed approved, but IRB approval would still be required before a study could begin. Products that are not significant risk devices are deemed to be "non-significant risk devices" under FDA regulations, and are subject to abbreviated IDE requirements, including informed consent, IRB approval of the proposed clinical trial, and submitting certain reports to the IRB. Clinical trials are subject to extensive recordkeeping and reporting requirements. Our clinical trials must be conducted under the oversight of an IRB at each clinical study site and in accordance with applicable regulations and policies including, but not limited to, the FDA's good clinical practice, or GCP, requirements.

Continuing FDA Regulation

After a device is placed on the market, numerous regulatory requirements apply. These include, among others:

- Quality System Regulations, which require manufacturers to have a quality system for the design, manufacture, packaging, labeling, storage, installation, and servicing of finished medical devices;
- labeling regulations, which govern product labels and labeling, prohibit the promotion of products for unapproved, or off-label, uses and impose other restrictions on labeling and promotional activities;
- medical device reporting, or MDR, regulations, which require that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur; and
- recalls and notices of correction or removal.

The FDC Act regulates our quality control and manufacturing procedures by requiring us to demonstrate and maintain compliance with current Good Manufacturing Practices regulations, including quality systems regulations, as specified by the FDA. This regulation requires, among other things, that:

- we use written procedures to control our product development and manufacturing process,
- we validate, by extensive and detailed testing of every aspect of the process, our ability to produce devices which meet our manufacturing specifications,
- we investigate deficiencies in the manufacturing process or in the products produced, and
- we maintain detailed record keeping.

The current Good Manufacturing Practices regulations are applicable to manufacturers that produce components specifically for use in a medical device, and require design controls and maintenance of service records.

FDA Inspections. The FDA monitors compliance with current Good Manufacturing Practices regulations by conducting periodic inspections of manufacturing facilities. If violations of applicable regulations are noted during FDA inspections of our manufacturing facilities, the continued marketing of our products may be adversely affected. During the last routine inspection of our manufacturing facility by the FDA in 2005, the FDA noted no adverse observations. We believe that we have continued to maintain manufacturing facilities and procedures that are compliant with all applicable government quality systems regulations and guidelines. Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, which may include any of the following:

- warning letters or untitled letters;

- fines, injunctions, and civil penalties;
- administrative detention;
- voluntary or mandatory recall or seizure of our products;
- customer notification, or orders for repair, replacement or refund;
- operating restrictions, partial suspension or total shutdown of production;
- refusal to review pre-market notification or pre-market approval submissions;
- rescission of a substantial equivalence order or suspension or withdrawal of a pre-market approval; and
- criminal prosecution.

Product Labeling. Labeling and promotional activities are subject to scrutiny by the FDA and, in certain circumstances, by the Federal Trade Commission. Medical devices approved or cleared by the FDA may not be promoted for unapproved or uncleared uses, otherwise known as "off-label" promotion. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including substantial monetary penalties and criminal prosecution.

MDR Regulations. The MDR regulations require that we report to the FDA any incident in which our product may have caused or contributed to a death or serious injury, or in which our product malfunctioned and, if the malfunction were to recur, would likely cause or contribute to a death or serious injury.

In June 1998, we obtained ISO 9001: 1994 /EN 46001 international quality management system certification and European Medical Device Directive EC certification. These certifications show that our development, production and distribution of products comply with these standards and directives. Our continued compliance with these standards and directives has been confirmed since June 1998 in annual surveillance audits. In April 2003, we obtained ISO 13485/CMDR certification from a CMDCAS (Canadian) recognized registrar. In September 2005, we obtained ISO 13485: 2003/CMDR re-certification from a CMDCAS (Canadian) recognized registrar. The ISO 9001, ISO 13485 and Medical Device Directive, or MDD, certifications signify compliance with the requirements enabling us to affix the CE Mark to our current products. The CE Mark denotes conformity with European standards for safety and allows certified devices to be placed on the market in all European Union countries. Since June 1998, medical devices cannot be sold in European Union countries unless they display the CE Mark.

We have established a dedicated regulatory and quality assurance group to maintain regulatory compliance and manage all of our quality-assurance activities. This group is responsible for the following activities:

- all regulatory submissions and communications,
- scheduling and performing company-wide internal audits,
- coordinating product update procedures and corrective actions,
- maintaining adherence to appropriate procedures and applicable requirements related to the FDA's quality systems regulations and appropriate international regulations, and
- coordinating appropriate documentation for FDA, ISO 9001, ISO 13485, CMDR and MDD review and audits.

Foreign Regulation of Medical Devices

Clearance or approval of our products by regulatory authorities comparable to the FDA may be necessary in foreign countries prior to the commencement of marketing of the product in those countries, whether or not FDA clearance has been obtained. The regulatory requirements for medical devices vary significantly from country to country. They can involve requirements for additional testing and may be time consuming and expensive.

Third-Party Reimbursement

Third-party payors, including Medicare, Medicaid, private health insurance carriers, managed care organizations, health care administration authorities in foreign countries and other organizations, may affect the pricing or demand for our products by regulating the maximum amount of reimbursement provided by these payors to the anesthesia providers, hospitals, outpatient surgical centers or physicians' offices where surgical procedures are performed.

We believe that anesthesia providers will not be separately reimbursed for patient-monitoring activities utilizing the BIS system. When facilities, such as hospitals or outpatient surgical centers, are reimbursed a fixed fee calculated on a per case, per stay, or per capita basis, the cost of monitoring with the BIS system will not be recovered by these providers unless the incremental costs of this monitoring are offset by savings in other costs, such as the costs of anesthetics or costs of the operating room or post-anesthesia care unit. This type of reimbursement policy has been adopted by Medicare, for example, for both inpatient and outpatient surgery. In such cases, patient monitoring with the BIS system may not result in sufficient savings to offset these costs. When reimbursement is based on charges or costs, patient monitoring with the BIS system may have the effect of reducing reimbursement because the charges or costs for surgical procedures, including operating room and post-anesthesia care unit charges and costs, may decline as a result of monitoring with the BIS system.

The Japanese Ministry of Health, Labor and Welfare has granted reimbursement approval for use of our BIS monitors. Healthcare providers in Japan are eligible to receive partial reimbursement of 1,000 yen each time BIS monitoring is used. We believe that the BIS system is the only commercially available consciousness monitoring technology in Japan.

Employees

As of December 31, 2008, we had 322 employees worldwide in the following functional areas:

Number of Employees	Functional Area
168	Sales, Marketing and Clinical Support
51	Manufacturing
45	General and Administrative
41	Research and Development
17	Clinical and Regulatory Affairs
322	Total

None of our employees is covered by a collective bargaining agreement. We consider relations with our employees to be good.

Scientific Advisors

We seek advice from a number of leading scientists and physicians on scientific and medical matters, including experts in EEG monitoring, pharmacology and anesthesia management. These individuals advise us concerning a number of matters, including:

- our research and development programs,
- the design and implementation of our clinical research program,
- our publication strategies,
- the identification of market opportunities from the clinical perspective, and
- specific scientific and technical issues.

Item 1A. Risk Factors.

You should carefully consider the following risk factors, in addition to other information included in this annual report, in evaluating our business. If any of the following risks occur, our business, financial condition and operating results could be materially adversely affected.

Risks Relating to the Company

We will not continue to be profitable if hospitals and anesthesia providers do not buy and use our BIS system and purchase our BIS Sensors in sufficient quantities.

Although we were profitable for the years ended December 31, 2008 and 2007, we will not continue to be profitable or increase our level of profitability if hospitals and anesthesia providers do not buy and use our BIS system in sufficient quantities. Our customers may determine that the cost of the BIS system exceeds cost savings in drugs, personnel and post-anesthesia care recovery that may result from use of the BIS system. Also, if third party reimbursement is based on charges or costs, patient monitoring with the BIS system may have the effect of reducing reimbursement because the charges or costs for surgical procedures may decline as a result of monitoring with the BIS system. In addition, hospitals and anesthesia providers may not accept the BIS system as an accurate or superior means of assessing a patient's level of consciousness during surgery or in the intensive care unit. If extensive or frequent malfunctions occur, healthcare providers may also conclude that the BIS system is unreliable. If hospitals and anesthesia providers do not accept the BIS system as cost-effective, accurate and reliable, they will not buy and use the BIS system in sufficient quantities to enable us to continue to be profitable.

Moreover, additional clinical research we or third parties undertake may fail to support the benefit of our products, including failing to support evidence of a link between the use of BIS monitoring and a reduction in the incidence of awareness. For example, a third-party study recently published in the *New England Journal of Medicine* compared BIS monitoring with a protocol based on end-tidal gas anesthetic in a patient population considered to be at high risk of awareness and concluded that, based upon a similar occurrence of awareness in both groups, no benefit of BIS monitoring was demonstrated. We believe that the rate of growth of our sensor revenue was, in part, adversely affected in the second half of 2008, and may be adversely affected in future periods as a result of this publication. If the patient safety benefits of BIS monitoring are not persuasive enough to lead to a wider adoption of our BIS technology, our business, financial condition and results of operations could be adversely affected.

The success of our business depends in a large part on continued use of the BIS system by our customers and, accordingly, sales by us of BIS Sensors. Sales of BIS Sensors have increased over time as a percentage of our revenue as compared to sales of Equipment as we built our installed base of monitors and modules, and we expect they will continue to increase. If use of our BIS system, and accordingly, sales of our BIS Sensors, do not increase, our ability to grow our revenue and maintain profitability could be adversely affected.

We depend on our BIS system for substantially all of our revenue, and if the BIS system does not gain widespread market acceptance, then our revenue will not grow.

To date, we have not achieved widespread market acceptance of the BIS system for use in the operating room or in the intensive care unit from healthcare providers or professional anesthesia organizations. Because we depend on our BIS system for substantially all of our revenue, and we have no other significant products, if we fail to achieve widespread market acceptance for the BIS system, we will not be able to sustain or grow our product revenue.

Various factors may adversely affect our quarterly operating results at least through the first fiscal quarter of 2009.

Various factors may adversely affect our quarterly operating results at least through the first fiscal quarter of 2009. Among these factors are the following:

- a third party study published in March 2008 in the *New England Journal of Medicine* compared BIS monitoring with a protocol based on end-tidal gas anesthetic in a patient population considered to be at high

risk of awareness and concluded that, based upon a similar occurrence of awareness in both groups, no benefit of BIS monitoring was demonstrated. We believe that the publication of this study has had, and may continue to have an adverse effect on the rate at which existing or potential new customers purchase and use our products, which could adversely affect our operating results;

- we have expanded our sales force and expect that such expansion will continue to increase our operating expenses in future periods and that such an increase would not be offset at least initially by an increase in revenue; as a result our operating results in such periods could be adversely affected;
- we have shifted the focus of our sales and marketing efforts from expanding our customer base to deepening our relationships with our existing customers and increasing their sensor utilization and procedure penetration. As a result of this shift in focus, we expect our revenue from the sale of equipment to continue to decrease. As such, if we do not increase revenue from sales of our BIS Sensors quickly, or at all, our operating results could be adversely affected;
- we may not realize expected benefits of favorable industry pronouncements on anesthesia awareness, including the position statements issued by the Joint Commission on Accreditation of Healthcare Organizations, the American Society of Anesthesiologists House of Delegates, and the American Association of Nurse Anesthetists;
- we have repurchased a portion of our 2.5% convertible senior notes due 2014, referred to as our notes, and we may make additional repurchases in the future. If any such repurchases are made at a discount to the face value of the note, we expect to record a gain on such transaction, which could affect our operating results in the quarter in which any such repurchase is made; and
- we face risks beyond our control with respect to the continued challenges of the U.S. and worldwide economies including without limitation the effects of domestic inflation, declines in the value of our investments and the global rise in energy costs.

If these or any other adverse factors cause a decline in our operating results, or if the market perceives that any such adverse factors could cause a decline in our operating results, in the first quarter of 2009 or beyond, then the trading price of our common stock may decline and your investment may lose value.

Fluctuations in our quarterly operating results could cause our stock price to decrease.

Our operating results have fluctuated significantly from quarter to quarter in the past and are likely to vary in the future. These fluctuations are due to several factors relating to the sale of our products, including:

- the timing and volume of customer orders for our BIS system;
- market acceptance of our BIS VISTA monitor;
- use of and demand for our BIS Sensors;
- transition of sales focus from expanding our customer base to developing our existing customers and increasing their sensor utilization and procedure penetration;
- customer cancellations;
- introduction of competitive products;
- regulatory approvals;
- changes in management;
- turnover in our direct sales force;
- expansion of our direct sales force which has increased our operating expenses, and this increase will not be offset, at least initially, by an increase in revenue;
- effectiveness of new marketing and sales programs;

- communications published by industry organizations or other professional entities in the anesthesia community that are unfavorable to our business, including publication of the results of clinical studies;
- trading in our convertible debt instruments;
- repurchases of shares of our common stock or our notes;
- the amount of our outstanding indebtedness and interest payments under debt obligations;
- reductions in orders by our distributors and original equipment manufacturers; and
- the timing and amount of our expenses.

Because of these factors, it is likely that in some future quarter or quarters our operating results could fall below the expectations of securities analysts or investors. If our quarterly operating results are below expectations in the future, the market price of our common stock would likely decrease. In addition, because we do not have a substantial backlog of customer orders for our BIS system or our BIS Sensors, revenue in any quarter depends on orders received in that quarter. Our quarterly results may also be adversely affected because some customers may have inadequate financial resources to purchase our products or may fail to pay for our products after receiving them. In particular, hospitals continue to experience financial constraints, consolidations and reorganizations as a result of cost containment measures and declining third-party reimbursement for services, which may result in decreased product orders or an increase in bad debt allowances in any quarter.

The current crisis in global credit and financial markets could materially and adversely affect our business and results of operations and our investment portfolio may become impaired further by a continuation of the global economic crisis.

As widely reported, global credit and financial markets have been experiencing extreme disruptions in recent months, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. There can be no assurance that there will not be further deterioration in credit and financial markets and confidence in economic conditions. The current tightening of credit in financial markets may lead hospitals to postpone spending, which may cause our customers to cancel, decrease or delay their existing and future orders with us. The volatility in the credit markets has severely diminished liquidity and capital availability. We are unable to predict the likely duration and severity of the current disruptions in the credit and financial markets and adverse global economic conditions, and if the current uncertain economic conditions continue or further deteriorate, our business and results of operations could be materially and adversely affected.

Our investment portfolio consists primarily of money market accounts, certificates of deposit, high-grade commercial paper, high grade corporate bonds and debt obligations of various governmental agencies. Although the primary objectives of our investment policy are to preserve principal, maintain a high degree of liquidity to meet operating needs, and obtain competitive returns subject to prevailing market conditions, these investments are subject to risk of default, changes in credit rating and changes in market value. The current adverse financial market conditions have negatively affected investments in many industries, including those in which we invest. We recognized a loss of approximately $1.5 million in our statement of income for the year ended December 31, 2008 due to our disposition of certain investments with significant unrealized losses. The current global economic crisis may continue to have a negative impact on the market values of the investments in our investment portfolio.

If the estimates we make, and the assumptions on which we rely, in preparing our financial statements prove inaccurate, our actual results may vary from those reflected in our financial statements.

Our financial statements have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of our assets, liabilities, revenues and expenses, the amounts of charges accrued by us and related disclosure of contingent assets and liabilities. This includes estimates and judgments regarding revenue recognition, warranty reserves, inventory valuations, valuation allowances for deferred tax assets, allowances for doubtful accounts and share-based compensation expense. We base our estimates and judgments on historical

experience and on various other assumptions that we believe to be reasonable under the circumstances at the time such estimates and judgments were made. There can be no assurance, however, that our estimates and judgments, or the assumptions underlying them, will be correct.

Compliance with changing regulation of corporate governance and public disclosure as well as potential new accounting pronouncements are likely to impact our future financial position or results of operations.

Changing laws, regulations and standards relating to corporate governance and public disclosure, new regulations of the Securities and Exchange Commission, or SEC, and Nasdaq Global Market rules are creating uncertainty for companies such as ours. These new or changed laws, regulations and standards are subject to varying interpretations in many cases due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies, which could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. In addition, future changes in financial accounting standards may cause adverse, unexpected revenue fluctuations and affect our financial position or results of operations. New accounting pronouncements and varying interpretations of pronouncements have occurred with frequency in the past and may occur again in the future and as a result we may be required to make changes in our accounting policies.

Our efforts to comply with evolving laws, regulations and standards have resulted in, and are likely to continue to result in, increased general and administrative expenses and management time related to compliance activities. We expect these efforts to require the continued commitment of significant resources. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, our reputation may be harmed and we might be subject to sanctions or investigation by regulatory authorities, such as the SEC. Any such action could adversely affect our financial results and the market price of our common stock.

Failure to maintain effective internal controls in accordance with section 404 of the Sarbanes-Oxley act could have a material adverse effect on our business and stock price.

Section 404 of the Sarbanes-Oxley Act of 2002 requires management's annual review and evaluation of our internal controls, and attestations of the effectiveness of our internal controls by our independent auditors. Our failure to maintain the effectiveness of our internal controls in accordance with the requirements of Section 404 of the Sarbanes-Oxley Act, as such standards are modified, supplemented or amended from time to time, could have an adverse effect on our business, operating results and stock price.

We may need additional financing for our future capital needs and may not be able to raise additional funds on terms acceptable to us, or at all.

We believe that the financial resources available to us, including our current working capital and available revolving line of credit, will be sufficient to finance our planned operations and capital expenditures through at least the next 12 months. If we are unable to increase our revenue and continue to maintain positive cash flow, we will need to raise additional funds. We may also need additional financing if:

- the research and development costs of our products or technology currently under development, including costs to fund our neuroscience program following termination in June 2007 of our alliance with Boston Scientific Corporation, increase beyond current estimates;
- we decide to expand faster than currently planned;
- we develop new or enhanced services or products ahead of schedule;
- we decide to undertake new sales and/or marketing initiatives;
- we are required to defend or enforce our intellectual property rights, or respond to other legal challenges with respect to our products, including product liability claims;
- sales of our products do not meet our expectations domestically or internationally, including sales of our BIS Sensors;

- we are required or elect to pay the principal under our notes in cash at or prior to maturity or we determine to repurchase any portion of our notes;
- we experience unexpected losses in our cash investments or are otherwise unable to liquidate these investments due to unfavorable conditions in the capital markets;
- we need to respond to competitive pressures; or
- we decide to acquire complementary products, businesses or technologies.

The current economic crisis has severely diminished the availability of capital. While we have no immediate need to access the equity or credit markets, the current economic crisis may limit our ability to access these markets to obtain financing in the future. The cost and terms of such future financing is unclear and we can provide no assurance that we will be able to raise additional funds on terms acceptable to us, if at all. If future financing is not available or is not available on acceptable terms, we may not be able to fund our future operations which would significantly limit our ability to implement our business plan and could result in a default under our 2.5% convertible senior notes due 2014. In addition, we may have to issue equity securities that may have rights, preferences and privileges senior to our common stock or issue debt securities that may contain limitations or restrictions on our ability to engage in certain transactions in the future.

Cases of awareness with recall during monitoring with the BIS system could limit market acceptance of the BIS system and could expose us to product liability claims.

Clinicians have reported to us cases of possible awareness with recall during surgical procedures monitored with the BIS system. In most of the cases that were reported to us, when BIS index values were recorded at the time of awareness, high BIS index values were noted, indicating that the BIS index correctly identified the increased risk of awareness with recall in these patients. However, in a small number of these reported cases, awareness with recall may not have been detected by monitoring with the BIS system. We have not systematically solicited reports of awareness with recall. It is possible that additional cases of awareness with recall during surgical procedures monitored with the BIS system have not been reported to us. Anesthesia providers and hospitals may elect not to purchase and use the BIS system if there is adverse publicity resulting from the report of cases of awareness with recall that were not detected during procedures monitored with the BIS system. If anesthesia providers and hospitals do not purchase and use the BIS system, then we may not sustain or grow our product revenue. Although our multi-center, multinational clinical studies have demonstrated that the use of BIS monitoring to help guide anesthetic administration may be associated with the reduction of the incidence of awareness with recall in adults using general anesthesia and sedation, we may be subject to product liability claims for cases of awareness with recall during surgical procedures monitored with the BIS system. Any of these claims could require us to spend significant time and money in litigation or to pay significant damages.

We may not be able to compete with new products or alternative techniques developed by others, which could impair our ability to remain competitive and achieve future growth.

The medical device industry in which we market our products is characterized by rapid product development and technological advances. Our competitors have received clearance by the FDA, for, and have introduced commercially, anesthesia monitoring products. If we do not compete effectively with these monitoring products, our revenue could be adversely affected. Our current and planned products are at risk of obsolescence from:

- other new monitoring products, based on new or improved technologies;
- new products or technologies used on patients or in the operating room during surgery in lieu of monitoring devices;
- electrical or mechanical interference from new or existing products or technologies;
- alternative techniques for evaluating the effects of anesthesia;
- significant changes in the methods of delivering anesthesia; and
- the development of new anesthetic agents.

We may not be able to improve our products or develop new products or technologies quickly enough to maintain a competitive position in our markets and to grow our business.

If we do not maintain our relationships with the anesthesia community and if anesthesiologists and other healthcare providers do not recommend and endorse our products, our sales may decline or we may be unable to increase our sales and profits.

Physicians typically influence the medical device purchasing decisions of the hospitals and other healthcare institutions in which they practice. Consequently, our relationships with anesthesiologists are critical to our growth. We believe that these relationships are based on the quality of our products, our long-standing commitment to the consciousness monitoring market, our marketing efforts and our presence at medical society and trade association meetings. Any actual or perceived diminution in our reputation or the quality of our products, or our failure or inability to maintain our commitment to the consciousness monitoring market and our other marketing and product promotion efforts could damage our current relationships, or prevent us from forming new relationships, with anesthesiologists and other anesthesia professionals and cause our growth to be limited or decline and our business to be harmed.

In order for us to sell our products, anesthesia professionals must recommend and endorse them. We may not obtain the necessary recommendations or endorsements from this community. Acceptance of our products depends on educating the medical community as to the distinctive characteristics, perceived benefits, safety, clinical efficacy and cost-effectiveness of our products compared to traditional methods of consciousness monitoring and the products of our competitors, and on training healthcare professionals in the proper application of our products. For example, we believe that the publication in March 2008 of a study in the *New England Journal of Medicine* that concluded that no benefit of BIS monitoring was demonstrated when compared to an alternative protocol for consciousness monitoring has adversely affected, and could continue to adversely affect, market perceptions of the benefits of our BIS monitoring products and, accordingly, the degree to which anesthesia professionals and other healthcare providers endorse those products. If we are not successful in obtaining and maintaining the recommendations or endorsements of anesthesiologists and other healthcare professionals for our products, our sales may decline or we may be unable to increase our sales and profits.

Negative publicity or unfavorable media coverage could damage our reputation and harm our operations.

Certain companies that manufacture medical devices have received significant negative publicity in the past when their products did not perform as the medical community or patients expected. This publicity, and the perception such products may not have functioned properly, may result in increased litigation, including large jury awards, legislative activity, increased regulation and governmental review of company and industry practices. If we were to receive such negative publicity or unfavorable media attention, whether warranted or unwarranted, our reputation would suffer, our ability to market our products would be adversely affected, we may be required to change our products and become subject to increased regulatory burdens and we may be required to pay large judgments or fines. Any combination of these factors could further increase our cost of doing business and adversely affect our financial position, results of operations and cash flows.

A third party study published in March 2008 in the *New England Journal of Medicine* compared BIS monitoring with a protocol based on end-tidal gas anesthetic in a patient population considered to be at high risk of awareness and concluded that, based upon a similar occurrence of awareness in both groups, no benefit of BIS monitoring was demonstrated. We believe that the publication of this study has had, and may continue to have an adverse effect on the rate at which existing or potential new customers purchase and use our products.

If we do not successfully develop or acquire and introduce enhanced or new products we could lose revenue opportunities and customers.

Our success in developing or acquiring and commercializing new products and enhancements of current products is affected by our ability to:

- identify and respond, in a timely manner, to new market trends or opportunities;

- assess customer needs;
- successfully develop or acquire competitive products;
- complete regulatory clearance in a timely manner;
- successfully develop cost effective manufacturing processes;
- introduce such products to our customers in a timely manner; and
- achieve market acceptance of the BIS system.

If we are unable to continue to develop or acquire and market new products and technologies, we may experience a decrease in demand for our products, and a loss of market share and our business would suffer. We depend on our BIS system for substantially all our revenue, and we have no other significant products. As the market for our BIS system matures, we need to develop or acquire and introduce new products for anesthesia monitoring or other applications. Additionally, we have been researching the use of BIS monitoring to diagnose, track and manage neurological diseases, including Alzheimer's disease and depression. We face at least the following two risks with respect to our planned development of new products and our entrance into potential new markets:

- we may not successfully adapt the BIS system to function properly for procedural sedation, when used with anesthetics we have not tested or with patient populations we have not studied, such as infants; and
- our technology is complex, and we may not be able to develop it further for applications outside anesthesia monitoring, such as the diagnosis and tracking of neurological diseases.

We are focused on the market for brain monitoring products. The projected demand for our products could materially differ from actual demand if our assumptions regarding this market and its trends and acceptance of our products by the medical community prove to be incorrect or do not materialize or if other products or technologies gain more widespread acceptance, which in each case would adversely affect our business prospects and profitability.

If we do not successfully adapt the BIS system for new products and applications both within and outside the field of anesthesia monitoring, or if such products and applications are developed but not successfully commercialized, then we could lose revenue opportunities and customers.

If our clinical trials are delayed or unsuccessful, our business could be adversely affected.

Clinical trials require sufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol and the eligibility criteria for the clinical trial. Delays in patient enrollment can result in increased costs and longer development times.

We cannot predict whether we will encounter problems with respect to any of our completed, ongoing or planned clinical trials that will cause us or regulatory authorities to delay or suspend our clinical trials or delay the analysis of data from our completed or ongoing clinical trials. Moreover, the final results of our clinical trials may not support or confirm any preliminary or interim results and we may not successfully reach the endpoints in these trials. Even if we successfully complete our clinical trials, the FDA or other regulatory agencies may not accept the results.

Any of the following could delay the completion of our ongoing and planned clinical trials, or result in a failure of these trials to support our business:

- delays or the inability to obtain required approvals from institutional review boards or other governing entities at clinical sites selected for participation in our clinical trials;
- delays in enrolling patients and volunteers into clinical trials;
- lower than anticipated retention rates of patients and volunteers in clinical trials;
- negative results from clinical trials for any of our potential products, including those involving the management of depression and the early diagnosis and tracking of Alzheimer's disease; and
- failure of our clinical trials to demonstrate the efficacy or clinical utility of our potential products.

If we determine that the costs associated with attaining regulatory approval of a product exceed the potential financial benefits or if the projected development timeline is inconsistent with our determination of when we need to get the product to market, we may choose to stop a clinical trial and/or development of a product.

If we do not develop and implement a successful sales and marketing strategy, we will not expand our business.

In the past, we have experienced high turnover in our direct sales force. It is possible that high turnover may occur in the future. If new sales representatives do not acquire the technological skills to sell our products in a timely and successful manner or we experience high turnover in our direct sales force, we may not be able to sustain and grow our product revenue. In addition, in order to increase our sales, we need to continue to strengthen our relationships with our international distributors and continue to add international distributors. Also, we need to continue to strengthen our relationships with our original equipment manufacturers and other sales channels and increase sales through these channels. On an ongoing basis, we need to develop and introduce new sales and marketing programs and clinical education programs to promote the use of the BIS system by our customers. We have shifted the focus of our sales and marketing emphasis from expanding our customer base to deepening our relationships with our existing customers and increasing their sensor utilization and procedure penetration. If we do not implement these new sales and marketing and education programs in a timely and successful manner, we may not be able to achieve the level of market awareness and sales required to expand our business. We have only limited sales and marketing experience both in the United States and internationally and may not be successful in developing and implementing our strategy. Among other things, we need to:

- provide or assure that distributors and original equipment manufacturers provide the technical and educational support customers need to use the BIS system successfully;
- promote frequent use of the BIS system so that sales of our disposable BIS Sensors increase;
- establish and implement successful sales and marketing and education programs that encourage our customers to purchase our products or the products that are made by original equipment manufacturers incorporating our technology;
- manage geographically dispersed operations; and
- modify our products and marketing and sales programs for foreign markets.

We encourage our direct sales force, distributors and original equipment manufacturers to maximize the amount of our products they sell and they may engage in aggressive sales practices that may harm our reputation.

We sell our products through a combination of a direct sales force, third party distributors and original equipment manufacturers. As a means to incentivize the sales force, distributors and original equipment manufacturers, the compensation we pay increases with the amount of our products they sell. For example, the compensation paid to the members of our direct sales force consists, in part, of commissions and, the greater the amount of sales, the higher the commission we pay. The participants in our sales channels may engage in sales practices that are aggressive or considered to be inappropriate by existing or potential customers. In addition, we do not exercise control over, and may not be able to provide sufficient oversight of, the sales practices and techniques used by third party distributors and original equipment manufacturers. Negative public opinion resulting from these sales practices can adversely affect our ability to keep and attract customers and could expose us to litigation.

Our third-party distribution and original equipment manufacturer relationships could negatively affect our profitability, cause sales of our products to decline and be difficult to terminate if we are dissatisfied.

Sales through distributors could be less profitable than direct sales. Sales of our products through multiple channels could also confuse customers and cause the sale of our products to decline. We do not control our original equipment manufacturers and distribution partners. Our partners could sell competing products, may not

incorporate our technology into their products in a timely manner and may devote insufficient sales efforts to our products. In addition, our partners are generally not required to purchase minimum quantities. As a result, even if we are dissatisfied with the performance of our partners, we may be unable to terminate our agreements with these partners or enter into alternative arrangements.

We may not be able to generate enough additional revenue from our international expansion to offset the costs associated with establishing and maintaining foreign operations.

A component of our growth strategy is to expand our presence in international markets. We conduct international business primarily in Europe and Japan, and we are attempting to increase the number of countries in which we do business. It is costly to establish international facilities and operations and to promote the BIS system in international markets. We have encountered barriers to the sale of our BIS system outside the United States, including less acceptance by anesthesia providers for use of disposable products, such as BIS Sensors, delays in regulatory approvals outside of the United States, particularly in Japan, and difficulties selling through indirect sales channels. In addition, we have little experience in marketing and distributing products in international markets. Revenue from international activities may not offset the expense of establishing and maintaining these international operations.

We may not be able to meet the unique operational, legal and financial challenges that we encounter in our international operations, which may limit the growth of our business.

We are increasingly subject to a number of challenges which specifically relate to our international business activities. These challenges include:

- failure of local laws to provide adequate protection against infringement of our intellectual property;
- protectionist laws and business practices that favor local competitors, which could slow or prohibit our growth in international markets;
- difficulties in terminating or modifying distributor arrangements because of restrictions in markets outside the United States;
- less acceptance by foreign anesthesia providers of the use of disposable products, such as BIS Sensors;
- delays in regulatory approval of our products;
- currency conversion issues arising from sales denominated in currencies other than the United States dollar;
- foreign currency exchange rate fluctuations;
- longer sales cycles to sell products like the BIS system to hospitals and outpatient surgical centers, which could slow our revenue growth from international sales; and
- longer accounts receivable payment cycles and difficulties in collecting accounts receivable.

If we are unable to meet and overcome these challenges, our international operations may not be successful, which would limit the growth of our business and could adversely impact our results of operations.

We may experience customer dissatisfaction and our reputation could suffer if we fail to manufacture enough products to meet our customers' demands.

We rely on third-party manufacturers to assemble and manufacture the components of our BIS monitors, original equipment manufacturer products and a portion of our BIS Sensors. We manufacture substantially all BIS Sensors in our own manufacturing facility. We have only one manufacturing facility. If we fail to produce enough products at our own manufacturing facility or at a third-party manufacturing facility for any reason, including damage or destruction of the facility, or experience a termination or modification of any manufacturing arrangement with a third party, we may be unable to deliver products to our customers on a timely basis. Even if we are able to identify alternative facilities to manufacture our products, if necessary, we may experience disruption in the supply of our products until such facilities are available. Although we believe we possess adequate insurance for damage to

our property and the disruption of our business from casualties, such insurance may not be sufficient to cover all of our potential losses and may not be available to us on acceptable terms or at all. Additionally, failure to deliver products on a timely basis could lead to customer dissatisfaction and damage our reputation.

Our reliance on sole-source suppliers could adversely affect our ability to meet our customers' demands for our products in a timely manner or within budget.

Some of the components that are necessary for the assembly of our BIS system, including some of the components used in our BIS Sensors, are currently provided to us by sole-source suppliers or a limited group of suppliers. We purchase components through purchase orders, and in select cases, long-term supply agreements, and generally do not maintain large volumes of inventory. We have experienced shortages and delays in obtaining some of the components of our BIS systems in the past, and we may experience similar shortages or delays in the future. The disruption or termination of the supply of components could cause a significant increase in the costs of these components, which could affect our profitability. A disruption or termination in the supply of components could also result in our inability to meet demand for our products, which could lead to customer dissatisfaction and damage our reputation. If a supplier is no longer willing or able to manufacture components that we purchase and integrate into the BIS system, we may attempt to design replacement components ourselves that would be compatible with our existing technology. In doing so, we would incur additional research and development expenses, and there can be no assurance that we would be successful in designing or manufacturing any replacement components. Furthermore, if we are required to change the manufacturer of a key component of the BIS system, we may be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could delay our ability to manufacture BIS system products in a timely manner or within budget.

We may be required to bring litigation to enforce our intellectual property rights, which may result in substantial expense and may divert our attention from the implementation of our business strategy.

We believe that the success of our business depends, in part, on obtaining patent protection for our products, defending our patents once obtained and preserving our trade secrets. We rely on a combination of contractual provisions, confidentiality procedures and patent, trademark and trade secret laws to protect the proprietary aspects of our technology. These legal measures afford only limited protection, and competitors may gain access to our intellectual property and proprietary information. Any patents we have obtained or will obtain in the future might also be invalidated or circumvented by third parties. Our pending patent applications may not issue as patents or, if issued, may not provide commercially meaningful protection, as competitors may be able to design around our patents or produce alternative, non-infringing designs. Litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets and to determine the validity and scope of our proprietary rights. Any litigation could result in substantial expense and diversion of our attention from the business and may not be adequate to protect our intellectual property rights.

We may be sued by third parties which claim that our products infringe on their intellectual property rights, particularly because there is substantial uncertainty about the validity and breadth of medical device patents.

We may be subject to litigation by third parties based on claims that our products infringe the intellectual property rights of others. This risk is exacerbated by the fact that the validity and breadth of claims covered in medical technology patents involve complex legal and factual questions for which important legal principles are unresolved. Any litigation or claims against us, whether or not valid, could result in substantial costs, could place a significant strain on our financial resources and could harm our reputation. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease selling, incorporating or using any of our products that incorporate the challenged intellectual property, which would adversely affect our revenue;
- obtain a license from the holder of the infringed intellectual property right, which license may not be available on reasonable terms, if at all; and
- redesign our products, which may be costly, time-consuming and may not be successful.

We could be exposed to significant product liability claims which could divert management attention and adversely affect our cash balances, our ability to obtain and maintain insurance coverage at satisfactory rates or in adequate amounts and our reputation.

The manufacture and sale of our products expose us to product liability claims and product recalls, including those which may arise from misuse or malfunction of, or design flaws in, our products or use of our products with components or systems not manufactured or sold by us. There may be increased risk of misuse of our products if persons not skilled in consciousness monitoring attempt to use our BIS monitoring products. Product liability claims or product recalls, regardless of their ultimate outcome, could require us to spend significant time and money in litigation or to pay significant damages. We currently maintain product liability insurance; however, it may not cover the costs of any product liability claims made against us. Furthermore, we may not be able to obtain insurance in the future at satisfactory rates or in adequate amounts. In addition, publicity pertaining to the misuse or malfunction of, or design flaws in, our products could impair our ability to successfully market and sell our products and could lead to product recalls.

Several class action lawsuits have been filed against the underwriters of our initial public offering which may result in negative publicity and potential litigation against us that would be costly to defend and the outcome of which is uncertain and may harm our business.

The underwriters of our initial public offering are named as defendants in several class action complaints which have been filed allegedly on behalf of certain persons who purchased shares of our common stock between January 28, 2000 and December 6, 2000. These complaints allege violations of the Securities Act and the Securities Exchange Act of 1934, as amended, or the Securities Exchange Act. Primarily they allege that there was undisclosed compensation received by our underwriters in connection with our initial public offering. While we and our officers and directors have not been named as defendants in these suits, based on comparable lawsuits filed against other companies, there can be no assurance that we and our officers and directors will not be named in similar complaints in the future. In addition, the underwriters may assert that we are liable for some or all of any liability that they are found to have to the plaintiffs, pursuant to the indemnification provisions of the underwriting agreement we entered into as part of the initial public offering, or otherwise.

We can provide no assurance as to the outcome of these complaints or any potential suit against us or our officers and directors. Any conclusion of these matters in a manner adverse to us could have a material adverse affect on our financial position and results of operations. In addition, the costs to us of defending any litigation or other proceeding, even if resolved in our favor, could be substantial. Such litigation could also substantially divert the attention of our management and our resources in general. Even if we are not named as defendants in these lawsuits, we may also be required to incur significant costs and our management may be distracted by being required to provide information, documents or testimony in connection with the actions against our underwriters. Uncertainties resulting from the initiation and continuation of any litigation or other proceedings and the negative publicity associated with this litigation could harm our ability to compete in the marketplace.

We and Boston Scientific jointly terminated our strategic alliance and other agreements and, as a result, we may not have sufficient funding to finance our neuroscience programs.

On June 11, 2007, we and Boston Scientific Corporation entered into a termination and repurchase agreement under which we jointly agreed to terminate the following agreements between the parties:

- the original equipment manufacturer product development agreement dated as of August 7, 2002, pursuant to which we were seeking to develop certain products that Boston Scientific Corporation would then commercialize in the area of monitoring patients under sedation in a range of less invasive medical specialties, and pursuant to which we granted Boston Scientific Corporation an exclusive option to become the distributor for a period of time of certain of our products;
- the product development and distribution agreement dated as of May 23, 2005, pursuant to which we were seeking to develop new applications of its brain-monitoring technology in the area of the diagnosis and treatment of neurological, psychiatric and pain disorders and Boston Scientific Corporation was appointed the exclusive distributor of such products. Under this agreement, which we refer to as the neuroscience

alliance, Boston Scientific Corporation had agreed to provide $25.0 million of funding over a five year period. We received $10.0 million under this agreement; and

- the letter agreement dated August 7, 2002, and the security agreement dated August 7, 2002, pursuant to which Boston Scientific Corporation agreed to make revolving interest-bearing loans to us from time to time at our request, such revolving loans being evidenced by a promissory note in the original principal amount of $5,000,000 dated August 7, 2002 made by us in favor of Boston Scientific Corporation.

As a result of the termination of our alliance with Boston Scientific Corporation, we have regained the commercial rights to products subject to the alliance that we previously shared, but we have lost the support that Boston Scientific Corporation would have provided under the alliance to develop and market products for monitoring patients under sedation and for neuroscience applications. Specifically, we will not receive funding and distribution support from Boston Scientific Corporation for these products. Consequently, we may need to find alternative sources of funds, which may not be available, and we may need to develop our own distribution capabilities or use a third-party distributor. There can be no guarantee that we will be able to develop these new products successfully on our own or that we will be able to reach any agreement with a third-party distributor on terms acceptable to us, or at all.

We may not reserve amounts adequate to cover product obsolescence, claims and returns, which could result in unanticipated expenses and fluctuations in operating results.

Depending on factors such as the timing of our introduction of new products which utilize our BIS technology, as well as warranty claims and product returns, we may need to reserve amounts in excess of those currently reserved for product obsolescence, excess inventory, warranty claims and product returns. These reserves may not be adequate to cover all costs associated with these items. If these reserves are inadequate, we would be required to incur unanticipated expenses which could result in unexpected fluctuations in quarterly operating results.

We may not be able to compete effectively, which could result in price reductions and decreased demand for our products.

We are facing increased competition in the domestic level of consciousness monitoring market as a result of a number of competitors' monitoring systems which have been cleared for marketing by the FDA. These products are marketed by well-established medical products companies with significant resources. We may not be able to compete effectively with these and other potential competitors. We may also face substantial competition from companies which may develop sensor products that compete with our proprietary BIS Sensors for use with our BIS monitors or with third-party monitoring systems or anesthesia delivery systems that incorporate the BIS index. We also expect to face competition from companies currently marketing conventional electroencephalogram, or EEG, monitors using standard and novel signal-processing techniques. Other companies may develop anesthesia-monitoring systems that perform better than the BIS system and/or sell for less. In addition, one or more of our competitors may develop products that are substantially equivalent to our FDA-approved products, in which case they may be able to use our products as predicate devices to more quickly obtain FDA approval of their competing products. Medical device companies developing these and other competitive products may have greater financial, technical, marketing and other resources than we do. Competition in the sale of anesthesia-monitoring systems could result in price reductions, fewer orders, reduced gross margins and loss of market share. We are seeking to develop new products and technologies in the areas of depression and Alzheimer's disease. If we are not successful in developing new products or technologies, or if we experience delays in development or release of such products, we may not be able to compete successfully.

Our ability to market and sell our products and generate revenue depends upon receipt of domestic and foreign regulatory approval of our products and manufacturing operations.

Our products are classified as medical devices and are subject to extensive regulation in the United Sates by the FDA and other federal, state, and local authorities. These regulations relate to the manufacturing, labeling, sale,

promotion, distribution, importing, exporting and shipping of our products. Before we can market new products or a new use of, or claim for, an existing product in the United States, we must obtain clearance or approval from the FDA. If the FDA concludes that any of our products do not meet the requirements to obtain clearance of a premarket notification under Section 510(k) of the Food, Drug and Cosmetic Act, then we would be required to file a premarket approval application. For example, there can be no guarantee that the FDA will accept the results from our depression clinical trial as supportive of a 510(k) notification without requiring additional studies and/or a premarket approval application. Both of these processes can be lengthy, expensive, may require extensive data from preclinical studies and clinical trials and may require significant user fees. The premarket approval process typically is more burdensome, expensive, time-consuming and uncertain than the premarket notification process. We may not obtain clearance of a 510(k) notification or approval of a premarket approval application with respect to any of our products on a timely basis, if at all. If we fail to obtain timely clearance or approval for our products, we will not be able to market and sell our products, which will limit our ability to generate revenue. We may also be required to obtain clearance of a 510(k) notification from the FDA before we can market certain previously marketed products which we modify after they have been cleared. We have made certain enhancements to our currently marketed products which we have determined do not necessitate the filing of a new 510(k) notification. However, if the FDA does not agree with our determinations, it will require us to file a new 510(k) notification for the modification, and we may be prohibited from marketing the modified devices until we obtain FDA clearance, or be required to recall devices that may be on the market, or be subject to other sanctions.

Medical devices may be marketed only for the indications for which they are approved or cleared. The FDA may fail to approve or clear indications that are necessary or desirable for successful commercialization of our products. The FDA also may refuse our request for 510(k) clearance or premarket approval of new products, new intended uses, or modification to products once they are approved or cleared. Our approvals or clearance can be revoked if safety or effectiveness problems develop.

Our promotional materials and training methods must comply with the FDA and other applicable laws and regulations. If the FDA determines that our promotional materials or training constitute promotion of an unapproved use, it could request that we modify our training or promotional materials or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil monetary penalties, or criminal prosecution. It also is possible that other federal, state, or foreign enforcement authorities might take action if they consider our promotional or training materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement. In that event, our reputation could be damaged, adoption of the products could be impaired, and we might not be able to promote the products for certain uses for which we had expected to promote them.

The FDA also requires us to adhere to current Good Manufacturing Practices regulations, also known as the Quality System Regulation, or QSR, in the case of medical devices, which include production controls, design controls, testing, quality control, documentation procedures, verification and validation of the design and of the production process, purchasing controls for materials and components, implementation of corrective and preventive actions, and servicing, among other requirements. The FDA may at any time inspect our facilities to determine whether adequate compliance with QSR requirements has been achieved. Compliance with the QSR regulations for medical devices is difficult and costly. In addition, we may not continue to be compliant as a result of future changes in, or interpretations of, regulations by the FDA or other regulatory agencies. If we do not achieve continued compliance, the FDA may issue a warning letter, withdraw marketing clearance, require product recall, seize products, seek an injunction or consent decree, or seek criminal prosecution, among other possible remedies. When any change or modification is made to a device or its intended use, the manufacturer may be required to reassess compliance with the QSR regulations, which may cause interruptions or delays in the marketing and sale of our products.

Sales of our products outside the United States are subject to foreign regulatory requirements that vary from country to country. The time required to obtain approvals from foreign countries may be longer than that required for FDA approval, and requirements for foreign licensing may differ from FDA requirements.

The federal, state and foreign laws and regulations regarding the manufacture and sale of our products are subject to future changes, as are administrative interpretations of regulatory agencies. If we fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions, including product seizures, recalls, withdrawal of clearances or approvals and civil and criminal penalties.

All of our manufacturing activities are performed at a single site and any disaster at this site could disrupt our ability to manufacture our products for a substantial length of time, which could cause our revenues to decrease.

We assemble all of our BIS hardware and produce all of our BIS Sensors in one facility in Norwood, Massachusetts. Despite precautions we take, events such as fire, flood, power loss or other disasters at this facility could significantly impair our ability to manufacture our products and operate our business. Our facility and certain manufacturing equipment located in that facility would be difficult to replace and could require substantial replacement lead-time. Catastrophic events may also destroy any inventory of product or components located in our facility. While we carry insurance for natural disasters and business interruption, the occurrence of such an event could result in losses that exceed the amount of this insurance coverage, which would impair our financial results.

Even if we obtain the necessary FDA clearances or approvals, if we or our suppliers fail to comply with ongoing regulatory requirements our products could be subject to restrictions or withdrawal from the market.

We are subject to the Medical Device Reporting, or MDR, regulations that require us to report to the FDA if our products may have caused or contributed to patient death or serious injury, or if our device malfunctions and a recurrence of the malfunction would likely result in a death or serious injury. We must also file reports of device corrections and removals and adhere to the FDA's rules on labeling and promotion. Our failure to comply with these or other applicable regulatory requirements could result in enforcement action by the FDA, which may include any of the following:

- untitled letters, warning letters, fines, injunctions and civil penalties;
- administrative detention, which is the detention by the FDA of medical devices believed to be adulterated or misbranded;
- customer notification, or orders for repair, replacement or refund;
- voluntary or mandatory recall or seizure of our products;
- operating restrictions, partial suspension or total shutdown of production;
- refusal to review pre-market notification or pre-market approval submissions;
- rescission of a substantial equivalence order or suspension or withdrawal of a pre-market approval; and
- criminal prosecution.

Any of the foregoing actions by the FDA could have a material adverse effect on our business and results of operations.

We may be subject, directly or indirectly, to federal and state healthcare fraud and abuse laws and regulations and, if we are unable to fully comply with such laws, could face substantial penalties.

Our operations may be directly or indirectly affected by various state and federal healthcare fraud and abuse laws, including the federal Anti-Kickback Statute, which prohibits any person from knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, to induce or reward either the referral of an individual, or the furnishing or arranging for an item or service, for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs. If our past or present operations are found to be in violation of these laws, we or our officers may be subject to civil or criminal penalties, including large monetary penalties, damages, fines, imprisonment and exclusion from Medicare and Medicaid program participation. If enforcement action were to occur, our business and financial condition would be harmed.

If we do not retain our senior management and other key employees, we may not be able to successfully implement our business strategy.

Our president and chief executive officer, Nassib Chamoun, joined us at our inception in 1987. Our chairman, J. Breckenridge Eagle, began serving as a director in 1988. Many other members of our management and key employees have extensive experience with us and other companies in the medical device industry. Our success is substantially dependent on the ability, experience and performance of these members of our senior management and other key employees. Because of their ability and experience, if we lose one or more of the members of our senior management or other key employees, our ability to successfully implement our business strategy could be seriously harmed. We compensate our executive officers in part with equity incentives, including stock options. A significant portion of the stock options held by our senior management and employees have exercise prices below the fair market value of our common stock.

If we do not attract and retain skilled personnel, or if we do not maintain good relationships with our employees, we will not be able to expand our business.

Our products are based on complex signal-processing technology. Accordingly, we require skilled personnel to develop, manufacture, sell and support our products. Our future success will depend largely on our ability to continue to hire, train, retain and motivate additional skilled personnel, particularly sales representatives who are responsible for customer education and training and post-installation customer support. In order to hire and train skilled personnel, we believe that we will need to provide compensation arrangements, including incentive-based programs, that are competitive with programs offered by comparable medical device companies. Various factors may prevent us from implementing or maintaining such programs, including business and general market conditions and fluctuations in our stock price. If we are not able to attract and retain skilled personnel, we will not be able to manage and expand our business.

In addition, we may be subject to claims that we engage in discriminatory or other unlawful practices with respect to our hiring, termination, promotion and compensation processes for our employees. Such claims, with or without merit, could be time consuming, distracting and expensive to defend, could divert attention of our management from other tasks important to the success of our business and could adversely affect our reputation as an employer.

If we make any acquisitions, we will incur a variety of costs and may never successfully integrate the acquired business into ours.

We may attempt to acquire businesses, technologies, services or products that we believe are a strategic complement to our business. We may encounter operating difficulties and expenditures relating to integrating an acquired business, technology, service or product. These acquisitions may also absorb significant management attention that would otherwise be available for ongoing development of our business. Moreover, we may never realize the anticipated benefits of any acquisition. We may also make dilutive issuances of equity securities, incur debt or experience a decrease in the cash available for our operations, or incur contingent liabilities in connection with any future acquisitions, all of which could have a material adverse affect on our business, financial condition and results of operations.

Our employees may engage in misconduct or other improper activities, including insider trading.

We are exposed to the risk that employee fraud or other misconduct could occur. Misconduct by employees could include failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with manufacturing standards we have established, to comply with federal and state healthcare fraud and abuse laws and regulations, to accurately report financial information or data or to disclose unauthorized activities to us. Employee misconduct could also involve improper sales tactics or use of customer information or information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a written code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses.

In addition, during the course of our operations, our directors, executives and employees may have access to material, non-public information regarding our business, our results of operations or potential transactions we are considering. Despite our adoption of an Insider Trading Policy, we may not be able to prevent a director or employee from trading in our common stock on the basis of, or while in possession of, material, non-public information. If a director or employee was to be investigated, or an action was to be brought against a director or employee, for insider trading, it could have a negative impact on our reputation and our stock price. Such a claim, with or without merit, could also result in substantial expenditures of time and money, and divert attention of our management team from other tasks important to the success of our business.

Failure of users of the BIS system, or users of future products we may develop, to obtain adequate reimbursement from third-party payors could limit market acceptance of the BIS system and other products, which could prevent us from sustaining profitability.

Anesthesia providers are generally not reimbursed separately for patient monitoring activities utilizing the BIS system. For hospitals and outpatient surgical centers, when reimbursement is based on charges or costs, patient monitoring with the BIS system may reduce reimbursements for surgical procedures, because charges or costs may decline as a result of monitoring with the BIS system. Failure by hospitals and other users of the BIS system to obtain adequate reimbursement from third-party payors, or any reduction in the reimbursement by third-party payors to hospitals and other users as a result of using the BIS system, could limit market acceptance of the BIS system, which could prevent us from sustaining profitability.

In addition, market acceptance of future products serving the depression and Alzheimer's disease markets could depend upon adequate reimbursement from third-party payors. The ability and willingness of third-party payors to authorize coverage and sufficient reimbursement to compensate and encourage physicians to use such products is uncertain.

The market price of our stock is highly volatile. This volatility could cause your investment in our stock to suffer a decline in value.

The market price of our stock is highly volatile. For example, from January 1, 2008 through December 31, 2008, the price of our common stock has ranged from a high of $14.25 to a low of $2.50. As a result of this volatility, your investment in our stock could rapidly lose its value. Our stock price could fluctuate for many reasons, including without limitation:

- variations in our quarterly operating results or those of companies that are perceived to be similar to us;
- third-party sales of large blocks of our common stock;
- rumors relating to us or our competitors;
- changes to our research and development plans and/or announcements regarding new technologies by us or our competitors;
- adverse results in clinical trials of our BIS monitoring system products and products under development;
- negative publicity or unfavorable media coverage;
- lawsuits involving us;
- sales by us of equity or debt to fund our operations;
- the loss of any of our key scientific or management personnel;
- FDA or international regulatory actions or lawsuits concerning the safety of our products; and
- market conditions, both in the medical device sector and generally.

In addition, the stock markets in general have been extremely volatile, and have experienced fluctuations that have often been unrelated or disproportionate to the operating performance of the companies whose stock is trading.

These broad market fluctuations could result in extreme fluctuations in the price of our common stock, which could cause a decline in the value of our shares.

Transactions engaged in by our largest stockholders, our directors or executives involving our common stock may have an adverse effect on the price of our stock.

Sales of our shares by our largest stockholders could have the effect of lowering our stock price. The perceived risk associated with the possible sale of a large number of shares by these stockholders, or the adoption of significant short positions by hedge funds or other significant investors, could cause some of our stockholders to sell their stock, thus causing the price of our stock to decline. In addition, actual or anticipated downward pressure on our stock price due to actual or anticipated sales of stock by directors or officers of Aspect could cause other institutions or individuals to engage in short sales of our common stock, which may further cause the price of our stock to decline.

From time to time our directors and executive officers sell shares of our common stock on the open market. These sales are publicly disclosed in filings made with the SEC. In the future, our directors and executive officers may sell a significant number of shares for a variety of reasons unrelated to the performance of our business. Our stockholders may perceive these sales as a reflection on management's view of the business and result in some stockholders selling their shares of our common stock. These sales could cause the price of our stock to drop.

We have various mechanisms in place to discourage takeover attempts, which may reduce or eliminate our stockholders' ability to sell their shares for a premium in a change of control transaction.

Various provisions of our certificate of incorporation and by-laws and of Delaware corporate law may discourage, delay or prevent a change in control or takeover attempt of our company by a third party that is opposed by our management and board of directors. Public stockholders who might desire to participate in such a transaction may not have the opportunity to do so. These anti-takeover provisions could substantially impede the ability of public stockholders to benefit from a change of control or change in our management and board of directors. These provisions include:

- preferred stock that could be issued by our board of directors to make it more difficult for a third party to acquire, or to discourage a third party from acquiring, a majority of our outstanding voting stock;
- classification of our directors into three classes with respect to the time for which they hold office;
- non-cumulative voting for directors;
- control by our board of directors of the size of our board of directors;
- limitations on the ability of stockholders to call special meetings of stockholders;
- inability of our stockholders to take any action by written consent; and
- advance notice requirements for nominations of candidates for election to our board of directors or for proposing matters that can be acted upon by our stockholders at stockholder meetings.

Risks Related to our Issuance of $125.0 Million Principal Amount of 2.5% Convertible Senior Notes due 2014

Our increased indebtedness as a result of the issuance of $125.0 million principal amount of 2.5% convertible senior notes, or the notes, may harm our financial condition and results of operations.

In June 2007, we issued $125.0 million principal amount of 2.5% convertible senior notes due 2014. At February 28, 2009, $58.0 million principal amount remained outstanding. Our level of indebtedness could have important consequences to investors, because:

- it could adversely affect our ability to satisfy our obligations under the notes;
- a substantial portion of our cash flows from operations will have to be dedicated to interest payments, principal payments and, if we irrevocably elect to net share settle the notes, conversion payments and may

not be available for operations, working capital, capital expenditures, expansion, acquisitions or general corporate or other purposes;

- it may impair our ability to obtain additional financing in the future;
- it may limit our flexibility in planning for, or reacting to, changes in our business and industry; and
- it may make us more vulnerable to downturns in our business, our industry or the economy in general.

Our operations may not generate sufficient cash to enable us to service our debt. If we fail to make a payment on the notes, we could be in default on the notes, and this default could cause us to be in default on our other indebtedness outstanding at that time. Conversely, a default on our other outstanding indebtedness may cause a default under the notes.

We may not have the cash necessary to pay interest on the notes, to settle conversions of the notes (if we have obtained stockholder approval to elect net share settlement of the notes, and we irrevocably elect such settlement method) or to repurchase the notes upon a fundamental change.

The notes bear interest semi-annually at a rate of 2.5% per annum. In addition, we may in certain circumstances be obligated to pay additional interest. If at any time on or prior to the 45th scheduled trading day preceding the maturity date of the notes we obtain stockholder approval of the net share settlement feature in connection with the potential conversion of the notes, and if we irrevocably elect to use such feature, then upon conversion of the notes we would:

- pay cash in an amount equal to the lesser of one-fortieth of the principal amount of the notes being converted and the daily conversion value (the product of the conversion rate and the current trading price) of the notes being converted; and
- issue shares of our common stock only to the extent that the daily conversion value of the notes exceeded one-fortieth of the principal amount of the notes being converted for each trading day of the relevant 40 trading day observation period.

Holders of notes also have the right to require us to repurchase all or a portion of their notes for cash upon the occurrence of a fundamental change. Any of our future debt agreements or securities may contain similar provisions. We may not have sufficient funds to pay interest, pay any such cash amounts to the note holders upon conversion or make the required repurchase of the notes at the applicable time and, in such circumstances, may not be able to arrange the necessary financing on favorable terms, if at all. In addition, our ability to pay interest, pay cash to the note holders upon conversion or make the required repurchase, as the case may be, may be limited by law or the terms of other debt agreements or securities. Our failure to pay such cash amounts to holders of notes or make the required repurchase, as the case may be, however, would constitute an event of default under the indenture governing the notes which, in turn, could constitute an event of default under other debt agreements or securities, thereby resulting in their acceleration and required prepayment and further restrict our ability to make such payments and repurchases.

The net share settlement feature of the notes, if available, may have adverse consequences.

Under the terms of the indenture for the notes, if we obtain stockholder approval, we could elect net share settlement of the notes. To date, we have not sought such approval. The net share settlement feature of the notes may:

- result in holders receiving no shares of our common stock upon conversion or fewer shares of our common stock relative to the conversion value of the notes;
- reduce our liquidity because we will be required to pay the principal portion in cash;
- delay holders' receipt of the proceeds upon conversion; and
- subject holders to market risk before receiving any shares upon conversion.

If we obtain stockholder approval of the net share settlement feature in connection with the potential conversion of the notes, and if we irrevocably elect to use such feature, then upon conversion of the notes we would (1) pay cash in an amount equal to the lesser of one-fortieth of the principal amount of the notes being converted and the daily conversion value (the product of the conversion rate and the current trading price) of the notes being converted and (2) issue shares of our common stock only to the extent that the daily conversion value of the notes exceeded one-fortieth of the principal amount of the notes being converted for each trading day of the relevant 40 trading day observation period.

Because the consideration due upon conversion of notes is based in part on the trading prices of our common stock, any decrease in the price of our common stock after notes are tendered for conversion may significantly decrease the value of the consideration received upon conversion. Furthermore, because under net share settlement we must settle at least a portion of our conversion obligation in cash, the conversion of notes may significantly reduce our liquidity.

If we repurchase any portion of our notes, such repurchases could adversely affect the holders of both our notes and our common stock and could also adversely affect our financial condition and operating results.

During 2008, we repurchased $60.0 million of the notes for total consideration of $30.4 million, plus accrued interest of $617,000 to the date of repurchase. As a result of these transactions, we have recorded a net gain on debt repurchases of $27.8 million for the year ended December 31, 2008. In February 2009, we repurchased an additional $7.0 million of the notes for total consideration of approximately $3.8 million, including accrued interest of approximately $28,000, which resulted in a net gain on repurchase of approximately $3.0 million. We may, from time to time, depending on market conditions, including without limitation whether our notes are then trading at discounts to their respective face amounts, repurchase additional outstanding notes for cash and/or in exchange for shares of our common stock, warrants, preferred stock, debt, or other consideration, in each case in open market purchases and/or privately negotiated transactions. The amounts involved in any such transactions, individually or in the aggregate, may be material. In addition, if we exchange shares of our capital stock, or securities convertible into or exercisable for our capital stock, such exchanges could result in material dilution to holders of our common stock. Moreover, any such repurchase could result in a tax liability if made at a discount to the face amount of the notes, and/or could otherwise adversely affect our financial condition or results of operations. Repurchases of the notes could also adversely affect the trading market for such notes if, for example, the public float on such notes is materially reduced. There can be no assurance that we will repurchase or exchange any additional outstanding notes and even if, in the future, we elect to repurchase a portion of the outstanding notes, any such repurchase may not be successfully completed or, if completed, may not be on terms that are favorable to us or that result in expected benefits for us.

Future sales of our common stock in the public market or the issuance of securities senior to our common stock could adversely affect the trading price of our common stock and the value of the notes and our ability to raise funds in new securities offerings.

Future sales of our common stock, the perception that such sales could occur or the availability for future sale of shares of our common stock or securities convertible into or exercisable for our common stock could adversely affect the market prices of our common stock and the value of the notes prevailing from time to time and could impair our ability to raise capital through future offerings of equity or equity-related securities. In addition, we may issue common stock or equity securities senior to our common stock in the future for a number of reasons, including to finance our operations and business strategy, to adjust our ratio of debt to equity, to satisfy our obligations upon the exercise of options or for other reasons.

As of December 31, 2008, we had outstanding options to purchase approximately 4,265,000 shares of our common stock at a weighted average exercise price of $17.02 per share (approximately 776,000 of which have not yet vested) issued to employees, directors and consultants pursuant to our 1991 Amended and Restated Stock Option Plan, 1998 Stock Incentive Plan, Amended and Restated 1998 Director Equity Incentive Plan and 2001 Stock Incentive Plan, as amended. In order to attract and retain key personnel, we may issue additional securities, including stock options, restricted stock grants and shares of common stock, in connection with our employee benefit plans, or may lower the price of existing stock options. No prediction can be made as to the effect, if any, that

the sale, or the availability for sale, of substantial amounts of common stock by our existing stockholders pursuant to an effective registration statement or under Rule 144, through the exercise of registration rights or the issuance of shares of common stock upon the exercise of stock options, or the perception that such sales or issuances could occur, could adversely affect the prevailing market prices for our common stock and the value of the notes.

Conversion of the notes will dilute the ownership interest of existing stockholders, including holders who had previously converted their notes.

To the extent we issue any shares of our common stock upon conversion of the notes, the conversion of some or all of the notes will dilute the ownership interests of existing stockholders, including holders who have received shares of our common stock upon prior conversion of the notes. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the notes may encourage short selling by market participants because the conversion of the notes could depress the price or our common stock.

Provisions in the indenture for the notes may deter or prevent a business combination that may be favorable to note holders.

If a fundamental change occurs prior to the maturity date of the notes, holders of the notes will, have the right, at their option, to require us to repurchase all or a portion of their notes. In addition, if a make-whole fundamental change occurs prior to the maturity date of the notes, we will in some cases increase the conversion rate for a holder that elects to convert its notes in connection with such make-whole fundamental change. In addition, the indenture governing the notes prohibits us from engaging in certain mergers or acquisitions unless, among other things, the surviving entity assumes our obligations under the notes. These and other provisions could prevent or deter a third party from acquiring us.

The notes may not be rated or may receive a lower rating than anticipated.

We do not intend to seek a rating on the notes. However, if one or more rating agencies rates the notes and assigns the notes a rating lower than the rating expected by investors, or reduces or indicates that they may reduce their rating in the future, the market price of the notes and our common stock could be harmed.

The effective subordination of the notes to our secured indebtedness to the extent of the collateral securing such indebtedness may limit our ability to satisfy our obligations under the notes.

The notes will be our senior unsecured obligations and rank equally with any senior debt and senior to any subordinated debt. However, the notes will be effectively subordinated to our secured indebtedness to the extent of the value of the collateral securing such indebtedness. As of December 31, 2008, we did not have any secured indebtedness outstanding. The provisions of the indenture governing the notes do not prohibit us from incurring secured indebtedness in the future. Consequently, in the event of a bankruptcy, liquidation, dissolution, reorganization or similar proceeding with respect to us, the holders of any secured indebtedness will be entitled to proceed directly against the collateral that secures such secured indebtedness. Therefore, such collateral will not be available for satisfaction of any amounts owed under our unsecured indebtedness, including the notes, until such secured indebtedness is satisfied in full.

The structural subordination of the notes to our secured liabilities and all liabilities and preferred equity of our subsidiaries may limit our ability to satisfy our obligations under the notes.

The notes will be effectively subordinated to all unsecured and secured liabilities and preferred equity of our subsidiaries. In the event of a bankruptcy, liquidation, dissolution, reorganization or similar proceeding with respect to any such subsidiary, we, as a common equity owner of such subsidiary, and, therefore, holders of our debt, including holders of the notes, will be subject to the prior claims of such subsidiary's creditors, including trade and other payables, but excluding intercompany indebtedness. As of December 31, 2008, our subsidiaries had an accounts payable and accrued liabilities balance of approximately $1.5 million. The provisions of the indenture governing the notes do not prohibit our subsidiaries from incurring additional liabilities or issuing preferred equity in the future.

Item 1B. Unresolved Staff Comments.

Not applicable.

Item 2. Properties.

We lease approximately 136,500 square feet of administrative and manufacturing space in Norwood, Massachusetts. The lease expires in 2016 and we have been granted the option to extend the term for three additional five-year periods.

We lease approximately 9,280 square feet of office space located in De Meern, The Netherlands for our international operations. This lease expires in December 2011.

We believe that our current facilities are adequate for our needs for the foreseeable future.

Item 3. Legal Proceedings.

On October 10, 2007, a purported holder of our common stock (the plaintiff), filed suit in the U.S. District Court for the Western District of Washington against Morgan Stanley and Deutsche Bank AG, the lead underwriters of our 2000 initial public offering, alleging violations of Section 16(b) of the Securities Exchange Act of 1934 (the "Exchange Act"). The complaint alleges that the combined number of shares of our common stock beneficially owned by the lead underwriters and certain of our unnamed officers, directors and principal stockholders exceeded ten percent of our outstanding common stock from the date of our initial public offering on January 28, 2000, through at least January 27, 2001. The complaint further alleges that those entities and individuals were subject to the reporting requirements of Section 16(a) of the Exchange Act and the short-swing trading prohibition of Section 16(b) of the Exchange Act, and failed to comply with those provisions. The complaint seeks to recover from the lead underwriters any "short-swing profits" obtained by them in violation of Section 16(b) of the Exchange Act. We were named as a nominal defendant in the action, but have no liability for the asserted claims. None of our directors or officers serving in such capacities at the time of our initial public offering (many of whom still serve as our officers or directors) are currently named as defendants in this action, but there can be no guarantee that the complaint will not be amended, or a new complaint or suit filed, naming such directors or officers as defendants in this action or another action alleging a violation of the same provisions of the Exchange Act. On February 27, 2008, the plaintiff filed an amended complaint asserting substantially similar claims as those set forth in the initial complaint. On July 25, 2008, we joined with 29 other issuers to file the Issuer Defendants' Joint Motion to Dismiss. The Plaintiff filed her opposition on September 8, 2008, and we and the other Issuer Defendants filed our Reply in Support of Their Joint Motion to Dismiss on October 23, 2008. Oral argument on the Joint Motion to Dismiss was held on January 16, 2009 at which time the Judge took the pending notice to dismiss under advisement. The Judge has stayed discovery until he rules on all motions to dismiss. We currently believe that the outcome of this litigation will not have a material adverse impact on our consolidated financial position and results of operations.

Item 4. Submission of Matters to a Vote of Security Holders.

No matter was submitted to a vote of security holders during the fourth quarter of the fiscal year ended December 31, 2008 through the solicitation of proxies or otherwise.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock has been traded on the Nasdaq Global Market under the symbol "ASPM" since July 1, 2006 and on the Nasdaq National Market since January 28, 2000. The following table sets forth, for the years ended December 31, 2007 and 2008, the range of high and low sales prices for our common stock on the Nasdaq Global Market. These prices do not include retail mark-up, mark-down or commissions and may not represent actual transactions.

	High	Low
2007:		
Quarter Ended March 31, 2007	$19.51	$14.47
Quarter Ended June 30, 2007	17.58	14.75
Quarter Ended September 29, 2007	15.70	11.84
Quarter Ended December 31, 2007	16.08	12.59
2008:		
Quarter Ended March 29, 2008	$14.25	$ 4.87
Quarter Ended June 28, 2008	7.05	5.02
Quarter Ended September 27, 2008	7.39	4.71
Quarter Ended December 31, 2008	5.32	2.50

On February 27, 2009, the last reported sales price of our common stock on the Nasdaq Global Market was $3.50 per share. As of February 27, 2009, there were approximately 394 holders of record of our common stock.

Dividends

We have never paid or declared any cash dividends on our common stock or other securities and do not anticipate paying cash dividends in the foreseeable future. We currently intend to retain all earnings for use in the operation and expansion of our business. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion. Additionally, our revolving line of credit agreement with Bank of America prohibits the declaration or payment of cash dividends without the consent of the bank.

Information relating to compensation plans under which our equity securities are authorized for issuance is set forth in Part III, Item 12 of this Annual Report on Form 10-K.

Item 6. Selected Consolidated Financial Data.

The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes and other financial information included elsewhere in this Annual Report on Form 10-K. The consolidated statements of operations data for the years ended December 31, 2008, 2007 and 2006, and the consolidated balance sheet data as of December 31, 2008 and 2007, are derived from our audited consolidated financial statements included in this Annual Report on Form 10-K. The consolidated statements of operations data for the years ended December 31, 2005 and 2004 and the consolidated balance sheet data as of December 31, 2006, 2005 and 2004 are derived from our audited consolidated financial statements not included in this Annual Report on Form 10-K. The historical results presented here are not necessarily indicative of future results.

	Year Ended December 31,				
	2008	2007	2006	2005	2004
	(in thousands, except per share data)				
Consolidated Statements of Income Data:					
Product revenue	$99,267	$92,078	$ 85,018	$73,471	$54,902
Strategic alliance revenue	—	5,246	6,316	3,524	662
Total revenue	99,267	97,324	91,334	76,995	55,564
Costs of product revenue	25,263	23,319	22,171	19,303	12,992
Gross profit	74,004	74,005	69,163	57,692	42,572
Operating expenses:					
Research and development	16,688	16,052	15,280	10,464	7,470
Sales and marketing	46,629	39,823	35,571	30,298	26,695
General and administrative	16,899	15,486	12,446	10,291	8,946
Total operating expenses	80,216	71,361	63,297	51,053	43,111
(Loss) income from operations	(6,212)	2,644	5,866	6,639	(539)
Interest income, net	405	3,009	3,332	1,926	923
Realized losses on sales of investments, net	(1,513)	—	—	—	—
Gain on repurchases of debt	27,793	—	—	—	—
Income before income taxes	20,473	5,653	9,198	8,565	384
Income tax provision (benefit)	9,372	3,397	(27,891)	90	81
Net income	$11,101	$ 2,256	$ 37,089	$ 8,475	$ 303
Net income per share:					
Basic	$ 0.64	$ 0.12	$ 1.66	$ 0.39	$ 0.02
Diluted	$ 0.56	$ 0.11	$ 1.59	$ 0.35	$ 0.01
Weighted average shares used in computing net income per share:					
Basic	17,255	19,614	22,378	21,508	20,142
Diluted	23,230	20,247	23,380	23,921	22,286

	December 31,				
	2008	2007	2006	2005	2004
			(in thousands)		
Consolidated Balance Sheet Data:					
Cash, cash equivalents and investments	$ 82,612	$108,480	$ 62,459	$61,259	$43,652
Restricted cash	839	1,004	1,011	82	82
Working capital	91,981	118,824	70,645	64,853	41,814
Total assets	136,974	173,477	125,254	87,132	61,690
Long-term debt	65,000	125,000	—	—	186
Total stockholders' equity	56,030	36,675	109,248	67,423	45,586

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Overview

We derive our revenue primarily from sales of BIS Sensors, our original equipment manufacturer products (including BIS Module Kits and the BISx system) and related accessories, which we collectively refer to as Equipment, and sales of BIS monitors. We have also historically derived a portion of our revenue from strategic alliances, primarily our alliance with Boston Scientific Corporation, which we terminated in June 2007. To assist management in assessing and managing our business, we segregate our revenue by sales by region, sales by products and revenue derived from our strategic alliance, as shown in the following table:

	2008	2007	2006
	(dollar amounts in thousands)		
Domestic revenue	$69,101	$73,107	$70,729
Percent of total revenue	70%	75%	77%
International revenue	$30,166	$24,217	$20,605
Percent of total revenue	30%	25%	23%
Total revenue	**$99,267**	**$97,324**	**$91,334**
BIS Sensor revenue	$84,161	$75,372	$64,752
Percent of total revenue	85%	78%	71%
Equipment revenue	$15,106	$16,706	$20,266
Percent of total revenue	15%	17%	22%
Strategic alliance revenue	$ —	$ 5,246	$ 6,316
Percent of total revenue	—	5%	7%
Total revenue	**$99,267**	**$97,324**	**$91,334**

At December 31, 2008, we had cash, restricted cash and investments of approximately $83.5 million and working capital of approximately $92.0 million.

We follow a system of fiscal quarters as opposed to calendar quarters. Therefore, the first three quarters of each fiscal year end on the Saturday closest to the end of the calendar quarter and the last quarter of the fiscal year always ends on December 31.

We believe our ability to grow our revenue is directly related to whether our customers continue to purchase and use our BIS Sensors after they purchase our Equipment. We believe the primary reason for the growth in product revenue is a direct result of the shift of our sales and marketing emphasis from expanding our customer base to deepening our relationships with our existing customers and increasing their sensor utilization and procedure penetration. As we seek to continue to achieve this growth, we have expanded our sales forces and are implementing new sales and marketing programs. We expect that as we seek to grow our business, revenue from the sale of BIS Sensors will contribute an increasing percentage of product revenue. Additionally, we believe that, over time, revenue from the sale of BIS Module Kits and our BISx system will increase as a percentage of total Equipment revenue as healthcare organizations purchase our technology as part of an integrated solution offered by our original equipment manufacturers.

In order to sustain profitability, we believe that we need to continue to maintain our gross profit and control the growth of our operating expenses. To maintain our gross profit, we believe we must continue to focus on maintaining our average unit sales prices of our BIS Sensors, increasing revenue from the sale of BIS Sensors as a percentage of total revenue, as BIS Sensors have a higher gross profit than Equipment, and continuing to reduce the costs of manufacturing our products.

For those healthcare organizations desiring to acquire our BIS monitors directly from us, we offer two primary options. Our customers have the option either to purchase BIS monitors outright or to acquire BIS monitors pursuant to a sales-type lease agreement whereby the customer contractually commits to purchase a minimum number of BIS Sensors per BIS monitor per year. Under our sales-type leases, customers purchase BIS Sensors and the BIS monitor for the purchase price of the BIS Sensors plus an additional charge per BIS Sensor to pay for the

purchase price of the BIS monitor and related financing costs over the term of the agreement. We also grant these customers an option to purchase the BIS monitors at the end of the term of the agreement, which is typically three to five years. We recognize Equipment revenue under sales-type lease agreements either at shipment or delivery in accordance with the agreed upon contract terms with interest income recognized over the life of the sales-type lease. The cost of the BIS monitor acquired by the customer is recorded as costs of revenue in the same period.

We also offer customers the opportunity to use the BIS monitors under our Equipment Placement program, which we refer to as the EP program. Under the EP program, the customer is granted the right to use the BIS monitors for a mutually agreed upon period of time. During this period, the customer purchases BIS Sensors at a price that may include a premium above the list price of the BIS Sensors to cover the rental of the equipment, but without any binding minimum purchase commitments. At the end of the agreed upon period, the customer has the option of purchasing the BIS monitors, continuing to use them under the EP program or returning them to us.

We have subsidiaries in The Netherlands, United Kingdom, Germany and France to facilitate the sale of our products into the international market. We are continuing to develop our international sales and distribution program through a combination of distributors and marketing partners, including companies with which we have entered into original equipment manufacturer relationships. See Note 16 of the Notes to our Consolidated Financial Statements contained elsewhere in this annual report for additional information concerning sales of our products outside the United States.

We are party to a distribution agreement with Nihon Kohden Corporation to distribute BIS monitors in Japan. Nihon Kohden has received approval from the Japanese Ministry of Health, Labor and Welfare for marketing in Japan our A-1050 EEG Monitor with BIS, our A-2000 BIS Monitor, our BIS module (our product that integrates BIS monitoring technology into equipment sold by original equipment manufacturers), our BIS XP system and, most recently in December 2007, our BISx and the BIS VISTA monitor. In January 2002, the Japanese Ministry of Health, Labor and Welfare granted reimbursement approval for use of our BIS monitors. With this approval, healthcare providers in Japan are eligible to receive partial reimbursement of 1,000 Yen each time BIS monitoring is used. Sales to Nihon Kohden represented approximately 15%, 15% and 12%, respectively, of international revenue in 2008, 2007 and 2006, respectively.

We account for share-based payments to employees under Financial Accounting Standards Board's, or FASB's, Statement of Financial Accounting Standards, or SFAS, 123 (revised 2004), *Share-Based Payment*, or SFAS No. 123R. For the three years ended December 31, 2008, 2007 and 2006, we recognized approximately $7.6 million, $8.7 million and $6.7 million, respectively, of stock-based compensation expense in our consolidated statement of income. See Note 2 of the Notes to our Consolidated Financial Statements contained elsewhere in this annual report for further information regarding our adoption of SFAS No. 123R.

Various factors may adversely affect our quarterly operating results at least through the first quarter of 2009. For example, a third party study that was published in March 2008 in the *New England Journal of Medicine* compared BIS monitoring with a protocol based on end-tidal gas anesthetic in a patient population considered to be at high risk of awareness and concluded that, based upon a similar occurrence of awareness in both groups, no benefit of BIS monitoring was demonstrated. While the study results were consistent with earlier studies that showed a low incidence of awareness using BIS, we believe the conclusions drawn by the authors are not supported by their data and that there were several flaws in the design and execution of the trial. However, we believe that the publication of this study has had, and may continue to have an adverse effect on the rate at which existing or potential new customers purchase and use our products. We have also recently expanded our sales force and expect that such expansion will increase our operating expenses in future periods and that the resulting increase in operating expenses would not be offset at least initially by an increase in revenue. We also are continuing to shift the focus of our sales and marketing efforts from expanding our customer base to deepening our relationships with our existing customers and increasing their sensor utilization and procedure penetration. As a result of this shift in focus, we expect our revenue from the sale of equipment to decrease. Additionally, we have repurchased a portion of our notes, and may make additional repurchases in the future. If any such repurchases are made at a discount to the face value of the notes, we expect to record a gain on such transaction, which could affect our operating results in the quarter in which any such repurchase is made. Finally, we may not realize expected benefits of favorable industry pronouncements on anesthesia awareness, including the position statements issued by the Joint Commission on

Accreditation of Healthcare Organizations, the American Society of Anesthesiologists House of Delegates, and the American Association of Nurse Anesthetists. We also face risks beyond our control with respect to the continued challenges of the U.S. and worldwide economies.

Critical Accounting Policies

Management's discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. Note 2 of the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K includes a summary of our significant accounting policies and methods used in the preparation of our financial statements. In preparing these financial statements, we have made estimates and judgments in determining certain amounts included in the financial statements. The application of these accounting policies involves the exercise of judgment and use of assumptions as to future uncertainties and, as a result, actual results could differ from these estimates. We do not believe there is a significant likelihood that materially different amounts would be reported under different conditions or using different assumptions. We believe that our critical accounting policies and estimates are as follows:

Revenue Recognition

We sell our BIS monitors primarily through a combination of a direct sales force and distributors. We sell our BIS modules to original equipment manufacturers who then incorporate them into their equipment and sell to the end-user. BIS Sensors are sold through a combination of a direct sales force, distributors and original equipment manufacturers. Direct product sales are structured as sales, sales-type lease arrangements or sales under our EP program. We recognize revenue when earned in accordance with Staff Accounting Bulletin, or SAB, No. 104, *Revenue Recognition,* and Emerging Issues Task Force, or EITF, 00-21, *Revenue Arrangements with Multiple Deliverables,* or SAB No. 104. Revenue is recognized when persuasive evidence of an arrangement exists, product delivery has occurred or services have been rendered, the price is fixed or determinable and collectibility is reasonably assured. For product sales, revenue is not recognized until title and risk of loss have transferred to the customer.

We also recognize revenue from prepaid license and royalty fees. This revenue is deferred until product shipment or delivery in accordance with the terms of the agreement and license and royalty fees are earned in accordance with the terms of the respective agreements. In August 2002, we recorded approximately $6.3 million of deferred revenue related to an OEM product development and distribution agreement with Boston Scientific Corporation, which we refer to as the 2002 OEM product development and distribution agreement. In June 2007, we terminated the 2002 OEM product development and distribution agreement and as a result we recognized the remaining $3.8 million that had been previously deferred under this agreement.

We follow SFAS No. 13, *Accounting For Leases*, or SFAS No. 13, in connection with our sales-type lease agreements. Under our sales-type leases, customers purchase BIS Sensors and the BIS monitor for the purchase price of the BIS Sensors plus an additional charge per BIS Sensor to pay for the purchase price of the BIS monitor and related financing costs over the term of the agreement. The minimum lease payment, consisting of the additional charge per BIS Sensor, less the unearned interest income, which is computed at the interest rate implicit in the lease, is recorded as the net investment in sales-type leases. We recognize Equipment revenue under sales-type lease agreements either at shipment or delivery in accordance with the agreed upon contract terms with interest income recognized over the life of the sales-type lease. The cost of the BIS monitor acquired by the customer is recorded as costs of revenue in the same period it is acquired. We review and assess the net realizability of our investment in sales-type leases at each reporting period. This review includes determining, on a customer specific basis, if a customer is significantly underperforming relative to the customer's cumulative level of committed BIS Sensor purchases as required by the sales-type lease agreement. If a customer is underperforming, we record an allowance for lease payments as a charge to revenue to reflect the lower estimate of the net realizable investment in sales-type lease balance. Changes in the extent of underperformance in the agreements could increase or decrease the amount of revenue recorded in future periods.

We recognize revenue either at shipment or delivery in accordance with the agreed upon contract terms with distributors and original equipment manufacturers in accordance with SAB No. 104. Contracts executed for sales to distributors and original equipment manufacturers include a clause that indicates that customer acceptance is limited to confirmation that our products function in accordance with our applicable product specifications in effect at the time of delivery. Formal acceptance by the distributor or original equipment manufacturer is not necessary to recognize revenue provided that we objectively demonstrate that the criteria specified in the acceptance provisions are satisfied. Each product is tested prior to shipment to ensure that it meets the applicable product specifications in effect at the time of delivery. Additionally, we have historically had a minimal number of defective products shipped to distributors and original equipment manufacturers, and any defective products are subject to repair or replacement under warranty as distributors and original equipment manufacturers do not have a right of return.

We exercise judgment in determining the specific time periods in which we can recognize revenue in connection with sales of our products and with respect to our strategic alliances. To the extent that actual facts and circumstances differ from our initial judgments, our revenue recognition could change accordingly and any such change could affect our reported results.

Stock-Based Compensation

SFAS No. 123R requires that stock-based compensation expense associated with equity instruments be recognized in the consolidated statement of income. Determining the amount of stock-based compensation to be recorded requires us to develop estimates to be used in calculating the grant-date fair value of stock options. We calculate the grant-date fair values using the Black-Scholes valuation model. The use of valuation models requires us to make estimates of the following assumptions:

Risk-free interest rate: the implied yield currently available on U.S. Treasury zero-coupon issues with a remaining term equal to the expected term used as the assumption in the model.

Expected term: the expected term of an employee option is the period of time for which the option is expected to be outstanding. We use a Monte Carlo simulation model to estimate the expected term assumption for the grant date valuation as we believe that this information is currently the best estimate of the expected term of a new option.

Expected volatility: in estimating our expected volatility, we consider both trends in historical volatility and the implied volatility of our publicly traded options. We used a combination of our implied volatility and historical volatility to estimate expected volatility in the three and 12 months ended December 31, 2008. We believe that in addition to the relevance of historical volatility, consideration of implied volatility achieves the objectives of SFAS No. 123R since it represents the expected volatility that marketplace participants would likely use in determining an exchange price for an option, and is therefore an appropriate assumption to use in the calculation of grant date fair value.

Additionally, we are required to make assumptions regarding the forfeiture rate. SFAS No. 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. We used a forfeiture rate of approximately 5.30% of the relevant 2007 and 2008 option grants. We re-evaluate this forfeiture rate on a quarterly basis and adjust the rate as necessary.

These assumptions involve significant judgment and estimates. Future stock-based compensation expense could vary significantly from the amount recorded in the current period due to changes in assumptions and due to the extent of stock option activity and restricted stock issued in future periods.

As of December 31, 2008, the total unrecognized compensation cost related to unvested stock options and unvested restricted stock awards was $5.3 million and $4.8 million, respectively, which will be amortized over the weighted average remaining requisite service periods of 24 months and 30 months, respectively.

Allowance for Doubtful Accounts

We determine our allowance for doubtful accounts by making estimates and judgments based on our historical collections experience, current trends, historical write-offs of our receivables, credit policy and a percentage of our

accounts receivable by aging category. We also review the credit quality of our customer base as well as changes in our credit policies. We continuously monitor collections and payments from our customers. While credit losses have historically been within our expectations and the provisions established, our credit loss rates in the future may not be consistent with our historical experience. To the extent that we experience a deterioration in our historical collections experience or increased credit losses, bad debt expense would likely increase in future periods.

Inventories

We value inventory at the lower of cost or estimated market value, and determine cost on a first-in, first-out basis. We regularly review inventory quantities on hand and record a provision for excess or obsolete inventory primarily based on production history and on our estimated forecast of product demand. The medical device industry in which we market our products is characterized by rapid product development and technological advances that could result in obsolescence of inventory. Additionally, our estimates of future product demand may prove to be inaccurate, in which case we would need to change our estimate of the provision required for excess or obsolete inventory. If revisions are deemed necessary, we would recognize the adjustments in the form of a charge to costs of revenue at the time of the determination. Therefore, although we continually update our forecasts of future product demand, any significant unanticipated declines in demand or technological developments, such as the introduction of new products by our competitors, could have a significant negative impact on the value of our inventory, results of operations and cash flows in future periods.

Warranty

Equipment that we sell generally is covered by a warranty period of one year. We accrue a warranty reserve for estimated costs to provide warranty services. Our estimate of costs to service our warranty obligations is based on our historical experience and expectation of future conditions. While our warranty costs have historically been within our expectations and the provisions established, to the extent we experience an increased number of warranty claims or increased costs associated with servicing those claims, our warranty expenses will increase, and we may experience decreased gross profit and cash flow.

Income Taxes

Our provision for income taxes is composed of a current and a deferred portion. The current income tax provision is calculated as the estimated taxes payable or refundable on tax returns for the current year. The deferred income tax provision is calculated for the estimated future tax effects attributable to temporary differences and carryforwards using expected tax rates in effect in the years during which the differences are expected to reverse.

Effective January 1, 2007, we adopted the provisions of the Financial Accounting Standards Board Interpretation No. 48, *Accounting for Uncertainty in Income Taxes — an Interpretation of FASB Statement No. 109*, or FIN 48. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS No. 109, *Accounting for Income Taxes,* or SFAS No. 109, and prescribes a recognition threshold of more-likely-than-not to be sustained upon examination. Upon adoption of FIN 48, our policy to include interest and penalties related to gross unrecognized tax benefits within our provision for income taxes did not change. We did not accrue interest expense related to these unrecognized tax benefits due to our historical carryforward loss position, the uncertain benefits have not yet reduced taxes payable and, accordingly, no interest expense has been accrued. The net adjustment to retained earnings upon adoption to FIN 48 on January 1, 2007 was $371,000.

Results of Operations

The following tables present, for the periods indicated, financial information expressed as a percentage of revenue and a summary of our total revenue. This information has been derived from our consolidated statements of

income included elsewhere in this Annual Report on Form 10-K. You should not draw any conclusions about our future results from the results of operations for any period.

	Year Ended December 31,		
	2008	2007	2006
Revenue	100%	100%	100%
Costs of revenue	25	24	24
Gross margin	75	76	76
Operating expenses:			
Research and development	17	16	17
Sales and marketing	47	41	39
General and administrative	17	16	14
Total operating expenses	81	73	70
(Loss) income from operations	(6)	3	6
Interest income, net	—	3	4
Realized losses on sales of investments, net	(2)	—	—
Gain on repurchases of debt	28	—	—
Income before income taxes	20	6	10
Income tax provision (benefit)	9	4	(32)
Net income	11%	2%	42%

Year Ended December 31, 2008 Compared to Year Ended December 31, 2007

	2008	2007	Percentage Increase (Decrease)
	(in thousands, except unit amounts)		
Revenue — Worldwide			
BIS Sensors	$ 84,161	$ 75,372	12%
BIS monitors	7,650	9,869	(22)%
Original equipment manufacturer products	4,320	3,941	10%
Other equipment and accessories	3,136	2,896	8%
Total equipment	15,106	16,706	(10)%
Total product revenue	99,267	92,078	8%
Strategic alliance	—	5,246	(100)%
Total revenue	$ 99,267	$ 97,324	2%
Unit Analysis — Worldwide			
BIS Sensors	6,150,000	5,421,000	13%
BIS monitors	2,547	3,208	(21)%
Original equipment manufacturer products	5,724	4,907	17%
Installed base	56,305	47,474	19%

Revenue. Revenue from the sale of BIS Sensors increased approximately 12% from 2007 to 2008 and the number of BIS Sensors sold increased approximately 13% during this same period. We believe the increase in revenue from the sale of BIS Sensors and the number of BIS Sensors sold during this period was primarily attributable to two factors. First, we have shifted the focus of our sales and marketing strategy from expanding our customer base to deepening our relationships with our existing customers and increasing their sensor utilization and

procedure penetration and second, we experienced growth in the installed base of BIS monitors. The number of domestic sensors sold was approximately 3.6 million in 2007 and increased to approximately 3.9 million in 2008, an increase of approximately 8%, while the number of international sensors sold increased approximately 25% from approximately 1.8 million in 2007 to approximately 2.3 million in 2008. Our installed base of BIS monitors and original equipment manufacturer products increased approximately 19% to 56,305 units at December 31, 2008 compared with 47,474 units at December 31, 2007.

Equipment revenue decreased approximately 10% from 2007 to 2008. The decrease in Equipment revenue during the year was primarily a result of a decrease of 22% in BIS monitor revenue offset by an increase in original equipment manufacturer product revenue of approximately 10% and an increase in other equipment and accessory revenue of approximately 8%. The decrease in monitor revenue was a result of a decrease of approximately 21% in the number of monitors sold. In 2008, we sold 2,547 monitors compared with 3,208 in 2007. Domestically, we sold 667 monitors in 2008 compared with 1,646 monitors sold in 2007. The increase in original equipment manufacturer product revenue was a result of an increase of approximately 17% in the number of products sold to our original equipment manufacturers.

For the year ended December 31, 2008, we recorded no strategic alliance revenue compared with approximately $5.2 million for the year ended December 31, 2007. The strategic alliance revenue in the prior year is primarily attributable to revenue we recognized from our agreements with Boston Scientific Corporation. In June 2007, we entered into a termination and repurchase agreement with Boston Scientific Corporation pursuant to which all agreements with Boston Scientific Corporation, including the 2002 OEM product development and distribution agreement and the 2005 product development and distribution agreement were terminated.

Our gross margin was approximately 74.6% in 2008 compared with a gross margin of approximately 76.0% in 2007. The decrease in gross margin in 2008 was primarily the result of two factors; first, we recognized $5.2 million of strategic alliance revenue in 2007, compared with no strategic alliance revenue recognized in 2008, and second, there was a change in the hardware mix transitioning from the A-2000 to the VISTA platform.

Expense Overview

	2008	2007	Percentage Increase
	(dollar amounts in thousands)		
Expenses			
Research and development	$16,688	$16,052	4%
Sales and marketing	46,629	39,823	17%
General and administrative	16,899	15,486	9%

Research and Development. The increase in research and development expenses in 2008 compared with 2007 was primarily attributable to an increase in compensation and benefits paid to our research and development personnel of approximately $543,000, an increase in compensation expense for employees we hired on a temporary basis of approximately $194,000, offset by a decrease in consulting expense of approximately $134,000. The increase in compensation and benefits is primarily related to an increase in salary and benefits of approximately $444,000 as a result of annual salary increases of personnel in the beginning of the year, an increase of approximately $141,000 related to a reduction in force that took place in December and an increase of approximately $70,000 in our annual bonus accrual. These increases were offset by a decrease in the stock-based compensation expense recorded of approximately $90,000. We expect research and development expenses in 2009 to decrease compared to the level of research and development expenses in 2008 due to the reduction in force that took place in 2008.

Sales and Marketing. The increase in sales and marketing expenses in 2008 compared with 2007 was primarily attributable to an increase of approximately $2.9 million in compensation and benefits, an increase of approximately $937,000 in travel expenses and an increase of approximately $3.0 million in other operating expenses. The overall increase in compensation and benefits is principally the result of the sales force expansion which we initiated during the second quarter of 2008 and a sales retention program implemented in April 2008. The increase in other operating expenses was driven by an increase of approximately $582,000 in recruiting expense as a

result of the sales force expansion and an increase of approximately $198,000 in training expense associated with the sales force expansion. In addition, there was an increase of approximately $610,000 in market research expense related to strategic development, an increase of approximately $381,000 in realized and unrealized losses on currency exchange, an increase of approximately $308,000 in compensation expense paid to employees we hired on a temporary basis and an increase of approximately $252,000 in honorarium expense related to clinician education. We expect sales and marketing expenses in 2009 to increase compared with the level of sales and marketing expenses in 2008 due to the expenses associated with our sales force expansion.

General and Administrative. The increase in general and administrative expenses in 2008 compared with 2007 was attributable to an increase in compensation and benefits paid to our general and administrative personnel of approximately $926,000 and an increase of approximately $300,000 in accounting and tax expense. The increase in compensation and benefits is primarily due to an increase in head count and the expense we recorded in connection with the severance agreement we entered into with our former chief financial officer, who resigned effective December 31, 2008. We expect general and administrative expenses in 2009 to be comparable to the level of general and administrative expenses in 2008.

Interest Income. Interest income decreased to approximately $3.8 million in 2008 from approximately $5.0 million in 2007, a decrease of approximately 24%. The decrease in interest income in 2008 compared with 2007 was primarily attributable to a lower cash and investment balance resulting from the repurchase of a portion of our convertible debt combined with a decrease in investment return rates. We expect interest income to decrease in 2009 compared with 2008 due to a lower cash and investment balance combined with a decrease in investment return rates.

Interest Expense. Interest expense increased to approximately $3.4 million in 2008 from approximately $2.0 million in 2007. The increase in interest expense in 2008 was the result of a full year of interest expense from the issuance in June 2007 of $125.0 million aggregate principal amount of 2.5% convertible senior notes due 2014. At December 31, 2008, an aggregate of $65.0 million in aggregate principal amount was outstanding. We expect interest expense to decrease in 2009 compared with 2008 due to a lower balance on our long-term debt.

Other Income (expense). Other income (expense), excluding interest income and interest expense, was approximately $26.3 million in 2008 compared with no other income (expense) in 2007. The increase in other income is primarily due to aggregate gains of approximately $27.8 million resulting from repurchases of portions of our convertible debt throughout 2008. This increase is offset by gross realized losses of approximately $1.5 million on the sales of investments in 2008. We expect other income in 2009 to be below the level of other income in 2008.

Income taxes. Our provision for income taxes comprises a current and a deferred portion. The current income tax provision is calculated as the estimated taxes payable or refundable on tax returns for the current year. The deferred income tax provision is calculated for the estimated future tax effects attributable to temporary differences and carryforwards using expected tax rates in effect in the years during which the differences are expected to reverse. Our income tax provision was approximately $9.4 million for the year ended December 31, 2008 compared with an income tax provision of approximately $3.4 million for the year ended December 31, 2007.

As of December 31, 2008, we had United States federal net operating loss, or NOL, carryforwards of approximately $17.2 million and state NOL carryforwards of approximately $407,000, which expire at various dates through 2027, compared with federal NOL carryforwards of approximately $44.0 million and state NOL carryforwards of approximately $2.1 million at December 31, 2007. We have an additional $15.3 million of federal and state NOLs not reflected in the amounts referenced in the preceding sentence with respect to the amounts for December 31, 2008 that are attributable to stock option exercises which will be recorded as an increase in additional paid in capital on our consolidated balance sheet once they are "realized" in accordance with SFAS No. 123R. As of December 31, 2008, we had federal and state tax credit carryforwards of approximately $2.2 million and $1.7 million, respectively, which expire at various dates through 2028 compared with federal and state tax credit carryforwards of approximately $2.0 million and $2.2 million as of December 31, 2007. Additionally, the NOL and tax credit carryforwards are subject to review by the Internal Revenue Service. Ownership changes, as defined under Sections 382 and 383 in the Internal Revenue Code, may limit the amount of these tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined

based on our value immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years.

Effective January 1, 2007, we adopted the provisions of FIN 48. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS No. 109 and prescribes a recognition threshold of more-likely-than-not to be sustained upon examination. Upon adoption of FIN 48, our policy to include interest and penalties related to gross unrecognized tax benefits within our provision for income taxes did not change. We did not accrue interest expense related to these unrecognized tax benefits due to our historical carryforward loss position, the uncertain benefits have not yet reduced taxes payable and, accordingly, no interest expense has been accrued. The net adjustment to retained earnings upon adoption to FIN 48 on January 1, 2007 was $371,000.

Year Ended December 31, 2007 Compared to Year Ended December 31, 2006

	2007	2006	Percentage Increase (Decrease)
	(in thousands except unit amounts)		
Revenue — Worldwide			
BIS Sensors	$ 75,372	$ 64,752	16%
BIS monitors	9,869	12,873	(23)%
Original equipment manufacturer products	3,941	4,743	(17)%
Other equipment and accessories	2,896	2,650	9%
Total equipment	16,706	20,266	(18)%
Total product revenue	92,078	85,018	8%
Strategic alliance	5,246	6,316	(17)%
Total revenue	$ 97,324	$ 91,334	7%
Unit Analysis — Worldwide			
BIS Sensors	5,421,000	4,612,000	18%
BIS monitors	3,208	4,127	(22)%
Original equipment manufacturer products	4,907	5,248	(6)%
Installed base	47,474	39,922	19%

Revenue. Revenue from the sale of BIS Sensors increased approximately 16% from 2006 to 2007. The increase in revenue from the sale of BIS Sensors in 2007 was primarily attributable to the continued shift of the focus of our sales and marketing emphasis from expanding our customer base to seeking to develop our existing customers and increasing their sensor utilization and procedure penetration. During 2007, we experienced an increase of approximately 18% in the number of BIS Sensors sold which we believe was a result of the change in the focus of our sales and marketing strategy and growth in the installed base of BIS monitors. The number of domestic sensors sold was approximately 3.2 million in 2006 and increased to approximately 3.6 million in 2007, an increase of approximately 12%, while the number of international sensors sold increased approximately 31% from approximately 1.4 million in 2006 to approximately 1.8 million in 2007. The increase in the number of BIS Sensors sold was complemented by an increase in the average selling price of BIS Sensors of approximately 1%. Our installed base of BIS monitors and original equipment manufacturer products increased approximately 19% to 47,474 units at December 31, 2007 compared with 39,922 units at December 31, 2006.

Equipment revenue in 2007 decreased approximately 18% compared with 2006 primarily as a result of a decrease of 23% in BIS monitor revenue and a decrease in original equipment manufacturer product revenue of approximately 17%. This decrease was partially offset by an increase in other equipment and accessory revenue of 9%. The decrease in monitor revenue was a result of a decrease of approximately 22% in the number of monitors sold. In 2007, we sold 3,208 monitors compared with 4,127 in 2006. The majority of the decrease in monitor revenue was on the domestic side where we experienced a 32% decrease in monitor revenue. Domestically, we sold 1,646 monitors in 2007 compared with 2,469 monitors sold in 2006. We believe this overall decrease in unit sales of

monitors reflects the shift in our sales and marketing emphasis from expanding our customer base to developing our existing customers and increasing their sensor utilization and procedure penetration. The decrease of 17% in original equipment manufacturer product revenue was a result of a decrease of approximately 6% in the number of modules sold to our original equipment manufacturers combined with a decrease in the average selling price.

For the year ended December 31, 2007, we recorded strategic alliance revenue of approximately $5.2 million compared with approximately $6.3 million for the year ended December 31, 2006. The strategic alliance revenue is primarily attributable to revenue we recognized from our agreements with Boston Scientific Corporation. In June 2007, we entered into a termination and repurchase agreement with Boston Scientific Corporation pursuant to which all agreements with Boston Scientific Corporation, including the 2002 OEM product development and distribution agreement and the 2005 product development and distribution agreement were terminated. In connection with the termination of these agreements, we recognized approximately $3.6 million of strategic alliance revenue in our statement of operations in June 2007. This $3.6 million of revenue comprises $3.8 million which was recognized from the 2002 OEM product development and distribution agreement net of a $285,000 receivable from Boston Scientific Corporation under the 2005 product development and distribution agreement which had been recorded in March 2007 against the strategic alliance revenue where it had originally been recorded in the statement of income.

Our gross margin was approximately 76.0% in 2007 compared with a gross margin of approximately 75.7% in 2006. The increase in gross margin in 2007 was primarily the result of favorable changes in the mix of BIS Sensor and hardware revenues. BIS Sensors have a higher gross margin than hardware and accounted for approximately 82% of our total product revenue in 2007 compared with approximately 76% of our total product revenue in 2006.

Expense Overview

	2007	2006	Percentage Increase
	(dollar amounts in thousands)		
Expenses			
Research and development	$16,052	$15,280	5%
Sales and marketing	$39,823	$35,571	12%
General and administrative	$15,486	$12,446	24%

Research and Development. The increase in research and development expenses in 2007 compared with 2006 was primarily attributable to an increase in compensation and benefits paid to our research and development personnel of approximately $1.7 million, offset by a decrease in clinical study expenses of approximately $1.0 million. The decrease in clinical study expenses is primarily related to a decrease in expenses resulting from our completion of enrollment for the BRITE study in March 2007. Of the $1.7 million increase in compensation and benefits, approximately $545,000 relates to an increase in stock-based compensation expense that was recorded as a result of an increase in the number of stock options and awards issued during 2007. The remaining increase in compensation and benefits relates to an increase in salaries and wages of approximately $674,000.

Sales and Marketing. The increase in sales and marketing expenses in 2007 compared with 2006 was primarily attributable to an increase in compensation and benefits paid to our domestic sales and marketing personnel of approximately $2.3 million and an increase in our operating expenses associated with our international subsidiaries of approximately $2.0 million. Of the $2.3 million increase in compensation and benefits for domestic sales and marketing personnel, approximately $771,000 relates to an increase in salaries and wages primarily as a result of annual salary increases and additional headcount, approximately $521,000 relates to an increase in stock-based compensation expense as a result of an increase in the number of stock options and awards issued during 2007, approximately $510,000 relates to sales commissions expense, and approximately $372,000 relates to employee benefits. The $2.0 million increase in operating expenses for our international subsidiaries relates primarily to an increase in salaries and benefits of approximately $1.3 million primarily as a result of annual salary increases, travel and entertainment expenses of $180,000, and other operating expenses of $466,000. The increases in total sales and marketing expenses were partially offset by a reversal of an accrual for our group purchasing commission expenses of approximately $471,000. Based upon review of one of our group purchasing organization

contracts, we determined that the expenses we anticipated in connection with this contract, which we previously accrued for, would not be recognized and therefore the accrual was reversed in the fourth quarter of 2007.

General and Administrative. The increase in general and administrative expenses in 2007 compared with 2006 was attributable to an increase in compensation and benefits paid to our general and administrative personnel of approximately $1.7 million, an increase of approximately $584,000 in legal fees, an increase of approximately $383,000 in building rent, and an increase of $309,000 in depreciation expense. The $1.7 million increase in compensation expense and benefits was primarily the result of an increase of approximately $690,000 in stock-based compensation expense as a result of an increase in the number of stock options and awards issued during 2007, an increase in salaries and wages of approximately $510,000 primarily as a result of annual salary increases, and an increase in bonus expense of approximately $314,000.

Interest Income. Interest income increased to approximately $5.0 million in 2007 from approximately $3.3 million in 2006, an increase of approximately 50%. The increase in interest income from 2006 to 2007 was primarily attributable to a higher cash and investment balance resulting from the proceeds received in connection with the sale of $125.0 million aggregate principal amount of our 2.5% convertible senior notes due 2014 that we issued in June 2007.

Interest Expense. Interest expense increased to approximately $2.0 million in 2007 from approximately $3,000 in 2006. The increase in interest expense in 2007 was the result of the $125.0 million of aggregate principal amount of our 2.5% convertible senior notes due 2014 that we issued in June 2007.

Income taxes. Our provision for income taxes comprises a current and a deferred portion. The current income tax provision is calculated as the estimated taxes payable or refundable on tax returns for the current year. The deferred income tax provision is calculated for the estimated future tax effects attributable to temporary differences and carryforwards using expected tax rates in effect in the years during which the differences are expected to reverse. Our income tax provision was approximately $3.4 million for the year ended December 31, 2007 compared with an income tax benefit of approximately $27.9 million for the year ended December 31, 2006.

As of December 31, 2007, we had United States federal net NOL carryforwards of approximately $44.0 million and state NOL carryforwards of approximately $2.1 million, which expire at various dates through 2027, compared with federal NOL carryforwards of approximately $51.4 million and state NOL carryforwards of approximately $776,000 at December 31, 2006. We have an additional $16.1 million of federal and state NOLs not reflected in the amounts referenced in the preceding sentence with respect to the amounts for December 31, 2007 that are attributable to stock option exercises which will be recorded as an increase in additional paid in capital on our consolidated balance sheet once they are "realized" in accordance with SFAS No. 123R. As of December 31, 2007, we had federal and state tax credit carryforwards of approximately $2.0 million and $2.2 million, respectively, which expire at various dates through 2027 compared with federal and state tax credit carryforwards of approximately $2.6 million and $1.7 million as of December 31, 2006. Additionally, the NOL and tax credit carryforwards are subject to review by the Internal Revenue Service. Ownership changes, as defined under Sections 382 and 383 in the Internal Revenue Code, may limit the amount of these tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on our value immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years.

Effective January 1, 2007, we adopted the provisions of FIN 48. FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS No. 109 and prescribes a recognition threshold of more-likely-than-not to be sustained upon examination. Upon adoption of FIN 48, our policy to include interest and penalties related to gross unrecognized tax benefits within our provision for income taxes did not change. We did not accrue interest expense related to these unrecognized tax benefits due to our historical carryforward loss position, the uncertain benefits have not yet reduced taxes payable and, accordingly, no interest expense has been accrued. The net adjustment to retained earnings upon adoption to FIN 48 on January 1, 2007 was $371,000.

Quarterly Results of Operations

The following table sets forth unaudited selected operating results for each of the eight fiscal quarters in the two years ended December 31, 2008 and 2007. We believe that the following selected quarterly information includes all adjustments (consisting only of normal, recurring adjustments) that we consider necessary to present this information fairly. This financial information should be read in conjunction with the financial statements and related notes included elsewhere in this Annual Report on Form 10-K. Our results of operations have fluctuated in the past and are likely to continue to fluctuate significantly from quarter to quarter in the future. Therefore, results of operations for any previous periods are not necessarily indicative of results of operations in the future.

	Quarter Ended							
	March 31, 2007	June 30, 2007	September 29, 2007	December 31, 2007	March 29, 2008	June 28, 2008	September 27, 2008	December 31, 2008
	(in thousands)							
Revenue	$24,119	$26,641	$22,632	$23,932	$24,428	$25,185	$24,758	$24,896
Gross profit	18,040	20,874	17,099	17,992	17,942	18,832	18,654	18,576
Operating expenses	17,929	18,409	17,145	17,879	18,083	19,778	20,790	21,565
Net income (loss)	517	1,488	(156)	408	(235)	1,899	1,040	8,397

Liquidity and Capital Resources

Our liquidity requirements have historically consisted of research and development expenses, sales and marketing expenses, capital expenditures, working capital and general corporate and administrative expenses. From our inception through December 31, 2008, we raised approximately $212.2 million from equity and debt financings, including the following:

- net proceeds of approximately $54.6 million from our initial public offering in February 2000;
- approximately $3.4 million in equipment financing;
- approximately $5.1 million related to our investment in sales-type leases;
- proceeds of approximately $10.0 million related to our 2002 OEM product development and distribution agreement with Boston Scientific Corporation;
- proceeds of approximately $8.1 million from the sale of our common stock to Boston Scientific Corporation in 2004;
- $10.0 million in installment payments from Boston Scientific Corporation received in May 2005 and May 2006 pursuant to the 2005 product development and distribution agreement with Boston Scientific Corporation; and
- net proceeds of $121.0 million received in connection with our 2.5% convertible senior notes that we issued in June 2007.

In May 2001, we entered into an agreement with Bank of America for a $5.0 million revolving line of credit which was renewed in May 2008 and currently expires in May 2009. The line of credit may be extended on an annual basis at the discretion of the bank and contains restrictive covenants that require us to maintain liquidity and net worth ratios and is secured by certain investments, which are shown as restricted cash on our consolidated balance sheets. In connection with this revolving line of credit agreement, we are required to maintain restricted cash in an amount equal to 102% of the outstanding amounts under the revolving line of credit. At December 31, 2008, we were in compliance with all covenants contained in the revolving line of credit agreement. Interest on any borrowings under the revolving line of credit is, at our election, either the prime rate or the London Inter-Bank Offer Rate, or LIBOR, plus 2.25%. Up to $1.5 million of the $5.0 million revolving line of credit is available for standby letters of credit. At December 31, 2008, the interest rate on the line of credit was 3.25%, there was no amount outstanding under this line of credit and we had standby letters of credit outstanding relating to our leased facility and an international service provider in the amount of approximately $839,000 which is shown on our consolidated balance sheet as restricted cash.

In June 2007, we completed a private placement of $125.0 million aggregate principal amount of 2.5% convertible notes due 2014. Net proceeds received from the issuance of the notes were $121.0 million, which is net of the underwriters discount of $4.0 million. As of December 31, 2008, we have used approximately $85.0 million of these proceeds to repurchase 5.5 million shares of our common stock, of which 4.5 million shares were repurchased from Boston Scientific Corporation and 1.0 million shares were repurchased in connection with our 2.5% convertible senior note offering that we completed in June 2007.

On August 3, 2006, our Board of Directors authorized the repurchase of up to 2.0 million shares of our common stock from time to time on the open market or in privately negotiated transactions. As of December 31, 2008, we have repurchased 276,493 shares of our common stock for approximately $5.0 million under this plan. We did not repurchase any shares of our common stock under this plan in 2008.

We expect to meet our near-term liquidity needs through the use of cash and short-term investments on hand at December 31, 2008 and cash generated from operations. We believe that the financial resources available to us, including our current working capital, our long-term investments and available revolving line of credit will be sufficient to finance our planned operations and capital expenditures for at least the next 12 months. However, our future liquidity and capital requirements will depend upon numerous factors, including the resources required to further develop our marketing and sales organization domestically and internationally, to finance our research and development programs, to implement new marketing programs, to finance our sales-type lease program, to meet market demand for our products and to repay our convertible notes.

We expect to fund the growth of our business over the long term through cash flow from operations and through issuances of capital stock, promissory notes or other securities. Any sale of additional equity or debt securities may result in dilution to our stockholders, and we cannot be certain that additional public or private financing will be available in amounts or on terms acceptable to us, or at all. If we are unable to obtain this additional financing, we may be required to delay, reduce the scope of, or eliminate one or more aspects of our business development activities, which could harm the growth of our business.

Currently, our 2.5% convertible senior notes due 2014 are convertible, under certain circumstance, solely into shares of our common stock. However, under the terms of the Indenture and such notes, we have the option to settle potential conversions of these notes with cash and, if applicable, shares of our common stock, commonly referred to as "net share settlement", if we first obtain stockholder approval of this net share settlement feature and we irrevocably elect to use such settlement method. If we obtain stockholder approval of the net share settlement feature in connection with the potential conversion of such notes and we irrevocably elect to use such settlement method, then upon conversion of such notes we would (1) pay cash in an amount equal to the lesser of one-fortieth of the principal amount of the notes being converted and the daily conversion value (the product of the conversion rate and the current trading price) of the notes being converted and (2) issue shares of our common stock only to the extent that the daily conversion value of the notes exceeded one-fortieth of the principal amount of the notes being converted for each trading day of the relevant 40 trading day observation period. In order to fund the cash payments due upon conversion, we may be required to use a significant portion or all of our existing cash or raise the cash for such payments through the sale of shares of our common stock or additional debt securities or through one or more other financing transactions. We may not have sufficient cash on hand or be able to acquire the necessary funds via financing on terms favorable to us or our stockholders, or at all, which would result in an event of default under the notes. Moreover, the use of a substantial portion of our existing cash may adversely affect our liquidity and cash available to fund the growth of our business.

Working capital at December 31, 2008 was approximately $92.0 million compared to approximately $118.8 million at December 31, 2007. The decrease in working capital from December 31, 2007 to December 31, 2008 was attributable to a decrease in our cash and short term investments of approximately $23.9 million, primarily related to our repurchase of an aggregate of $60.0 million of our 2.5% convertible notes during 2008 for total consideration of approximately $30.4 million, plus accrued interest of approximately $617,000.

Cash from Operations. We generated approximately $7.5 million of cash from operations in 2008. The positive cash from operating activities generated during this period was primarily driven by our net income of approximately $11.1 million, $7.5 million of non-cash stock-based compensation expense, $3.6 million increase in accrued liabilities, $3.0 million of non-cash depreciation and amortization expense and $8.1 million of deferred

taxes. These were offset by non-cash gains of approximately $27.8 million resulting from the repurchase of an aggregate of $60.0 million of our 2.5% convertible notes during the period.

We generated approximately $28.9 million of cash from operations during the three years ended December 31, 2008, which was primarily driven by net income of approximately $50.4 million and non-cash stock-based compensation expense of $22.8 million, offset by non-cash gains of approximately $27.8 million as a result of the repurchase of an aggregate of $60.0 million of our notes and the reversal in 2006 of our valuation allowance against our deferred tax assets.

Cash from Investing Activities. We received approximately $14.7 million of cash from investing activities in 2008. The cash received from investing activities was primarily the result of net proceeds from investments of approximately $16.7 million in 2008 and the acquisition of property and equipment of approximately $2.2 million primarily due to spending related to our automated sensor manufacturing lines, a new customer relationship management system and information system infrastructure investment. We anticipate that the level of capital expenditures in 2009 will decrease compared with the level of capital expenditures in 2008.

We used approximately $42.4 million for investing activities during the three years ended December 31, 2008 primarily as a result of net purchases of investments of approximately $31.0 million and acquisition of property, plant and equipment of approximately $10.7 million.

Cash used for Financing Activities. We used approximately $29.6 million of cash for financing activities in 2008. The cash used for financing activities was primarily the result of our repurchase of an aggregate of $60.0 million of our 2.5% convertible notes during 2008 for approximately $30.4 million.

We generated approximately $5.4 million of cash from financing activities during the three years ended December 31, 2008. Cash generated by financing activities during this period was primarily the result of proceeds received in June 2007 upon the issuance of $125.0 million of 2.5% convertible senior notes due 2014. This is offset by our repurchase of approximately $85.0 million of our common stock in 2007, the repurchase of an aggregate of $60.0 million of our 2.5% convertible notes in 2008 for approximately $30.4 million and the purchase of approximately $5.0 million of treasury stock in 2006.

We have summarized below our contractual cash obligations as of December 31, 2008:

	Payments Due by Period				
Contractual Obligations	**Total**	**Less Than One Year**	**One to Three Years**	**Three to Five Years**	**After Five Years**
			(in thousands)		
Operating leases	$17,338	$2,369	$4,445	$4,235	$ 6,289
Capital lease	196	86	109	1	—
Long-term debt	65,000	—	—	—	65,000
Total contractual cash obligations	$82,534	$2,455	$4,554	$4,236	$71,289

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements or relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which are typically established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Effects of Inflation

We believe that inflation and changing prices over the past three fiscal years have not had a significant impact on our revenue or on our results of operations.

Recent Accounting Pronouncements

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities, an Amendment of FASB Statement No. 133,* or SFAS No. 161. The objective of this statement is to require enhanced disclosures about an entity's derivative and hedging activities to improve the transparency of financial reporting. This statement is effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008 with early application encouraged. We do not believe that the adoption of SFAS No. 161 will have a material impact on our results of operations, financial position or cash flow.

In May 2008, the FASB issued FASB Staff Position APB 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)* or FSP APB 14-1. FSP APB 14-1 requires the issuer of certain convertible debt instruments, such as our convertible senior notes, that may be settled in cash on conversion to separately account for the liability and equity components of the instruments in a manner that will reflect the issuer's nonconvertible debt borrowing rate. This FSP is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. We do not believe that the adoption of FSP APB 14-1 will have a material impact on our results of operations, financial position or cash flow.

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Accounting Principles*, or SFAS No. 162. The current hierarchy under Generally Accepted Accounting Principles in the United States, or GAAP, as set forth in the American Institute of Certified Public Accountants, or AICPA, Statement on Auditing Standards No. 69, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*, has been criticized because (1) it is directed to the auditor rather than the entity, (2) it is complex, and (3) it ranks FASB Statements of Financial Accounting Concepts. The FASB believes that the GAAP hierarchy should be directed to entities because it is the entity (not its auditor) that is responsible for selecting accounting principles for financial statements that are presented in conformity with GAAP. Accordingly, the FASB concluded that the GAAP hierarchy should reside in the accounting literature established by the FASB and is issuing this Statement to achieve that result. This statement is effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*. We do not believe that the adoption of SFAS No. 162 will have a material impact on our results of operations, financial position or cash flow.

In June 2008, the FASB issued EITF Issue No. 07-5, *Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock*, or EITF 07-5. EITF 07-5 clarified how to determine whether certain instruments or features were indexed to an entity's own stock under EITF Issue No. 01-6, *The Meaning of "Indexed to a Company's Own Stock"* (EITF 01-6). It also resolved issues related to proposed Statement 133 Implementation Issue No. C21, *Scope Exceptions: "Whether Options (Including Embedded Conversion Options) Are Indexed to both an Entity's Own Stock and Currency Exchange Rates"* (Implementation Issue C21). The consensus will replace EITF 01-6 as a critical component of the literature applied to evaluating financial instruments for debt or equity classification and embedded features for bifurcation as derivatives. EITF 07-5 will become effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The consensus must be applied to all instruments outstanding on the date of adoption and the cumulative effect of applying the consensus must be recognized as an adjustment to the opening balance of retained earnings at transition. Therefore, any company that previously evaluated equity-linked financial instruments under the pre-existing financial instruments literature will need to once again carefully analyze the appropriate classification of those financial instruments and analyze any equity-linked embedded features for bifurcation under the new guidance. We do not believe that the adoption of EITF 07-5 will have a material impact on our results of operations, financial position or cash flows.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Exposure

Our investment portfolio consists primarily of money market accounts, certificates of deposit, high-grade commercial paper, high grade corporate bonds and debt obligations of various governmental agencies. We manage our investment portfolio in accordance with our investment policy. The primary objectives of our investment policy

are to preserve principal, maintain a high degree of liquidity to meet operating needs, and obtain competitive returns subject to prevailing market conditions. Investments are made with an average maturity of 12 months or less and a maximum maturity of 24 months. These investments are subject to risk of default, changes in credit rating and changes in market value. These investments are also subject to interest rate risk and will decrease in value if market interest rates increase. Due to the conservative nature of our investments and relatively short effective maturities of the debt instruments, we believe interest rate risk is mitigated. Our investment policy specifies the credit quality standards for our investments and limits the amount of exposure from any single issue, issuer or type of investment.

During the fourth quarter of 2008, we disposed of one investment that was impaired as of September 27, 2008 for which we had recorded an impairment charge of approximately $840,000 and additional investments that had significant unrealized losses but which were not determined to be other-than-temporarily impaired. As a result of these dispositions, we recognized a loss of approximately $1.5 million in our statement of income for the year ended December 31, 2008.

Our annual interest income would change by approximately $1.1 million in fiscal 2008 and $891,000 in fiscal 2007 for each 100 basis point increase or decrease in interest rates. The fair values of our investment portfolio at December 31, 2008 and December 31, 2007 would change by approximately $2.0 million and $1.5 million, respectively, for each 100 basis point increase or decrease in rates.

Our investment in sales-type leases and our line of credit agreement are also subject to market risk. The interest rates implicit in our sales-type leases are fixed and not subject to interest rate risk. In addition, the interest rate on the 2.5% convertible senior notes due 2014 is fixed and not subject to interest rate risk. The interest rate on our line of credit agreement is variable and subject to interest rate risk. The interest rate risk experienced to date related to the line of credit has been mitigated primarily by the fact that the line of credit, when drawn on, is generally outstanding for short periods of time in order to fund short-term cash requirements.

Foreign Currency Exposure

Most of our revenue, expenses and capital spending are transacted in U.S. dollars. The expenses and capital spending of our international subsidiaries are transacted in the respective country's local currency and subject to foreign currency exchange rate risk. Our foreign currency transactions are translated into U.S. dollars at prevailing currency rates. Gains or losses resulting from foreign currency transactions are included in current period income or loss as incurred and translation adjustments have been included as part of accumulated other comprehensive income. Currently, transactions that are denominated in foreign currencies have not been material.

Item 8. Financial Statements and Supplementary Data.

The information required by this item may be found on pages 1 through 92 of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

1. Evaluation of Disclosure Controls and Procedures.

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2008. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act are recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding

required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2008, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

No change in our internal controls over financial reporting occurred during the fiscal quarter ended December 31, 2008 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

2. *Management's Report on the Effectiveness of Internal Control over Financial Reporting.*

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) promulgated under the Securities Exchange Act of 1934 as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect our transactions and dispositions of our assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2008. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO, in *Internal Control-Integrated Framework.*

Based on our assessment, management concluded that, as of December 31, 2008, our internal control over financial reporting is effective based on those criteria.

Our independent registered public accounting firm, Ernst & Young LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2008. This report appears below.

(c) Attestation Report of the Independent Registered Public Accounting Firm.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Aspect Medical Systems, Inc.

We have audited Aspect Medical Systems, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Aspect Medical Systems, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying *Management's Report on the Effectiveness of Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Aspect Medical Systems, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Aspect Medical Systems, Inc. as of December 31, 2008 and 2007, and the related consolidated statements of income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2008 of Aspect Medical Systems, Inc. and our report dated March 3, 2009 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Boston, Massachusetts
March 3, 2009

(c) Changes in Internal Control over Financial Reporting.

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) occurred during the fiscal quarter ended December 31, 2008 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information with respect to directors and executive officers required under this item is incorporated by reference to the information set forth under the section entitled *"Election of Directors"* in our proxy statement for our 2009 Annual Meeting of Stockholders to be held on May 20, 2009, which we refer to as our 2009 proxy statement. Information relating to certain filings of Forms 3, 4 and 5 is contained in our 2009 proxy statement under the section entitled *"Section 16(a) Beneficial Ownership Reporting Compliance"* and is incorporated herein by reference.

The information required under this item pursuant to Item 401(h) and 401(i) of Regulation S-K relating to an Audit Committee financial expert and identification of the Audit Committee of our Board of Directors is contained in our 2009 proxy statement under the caption *"Corporate Governance"* and is incorporated herein by reference.

We have adopted a written code of business conduct and ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Our Code of Business Conduct and Ethics is posted on our website. We intend to disclose any amendments to, or waivers from, our code of business conduct and ethics on our website which is located at www.aspectmedical.com.

Item 11. Executive Compensation.

The information required under this item is incorporated by reference to the sections entitled *"Information About Executive Compensation," "Compensation of Directors"* and *"Compensation Committee Interlocks and Insider Participation"* in our 2009 proxy statement.

The section entitled *"Report of the Compensation Committee"* in our 2009 proxy statement is not incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required under this item is incorporated by reference to the section entitled *"Stock Ownership Information"* and *"Securities Authorized for Issuance Under Equity Compensation Plans"* in our 2009 proxy statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required under this item is incorporated by reference to the section entitled *"Certain Relationships and Related Transactions"* in our 2009 proxy statement.

Item 14. Principal Accounting Fees and Services.

The information required under this item is incorporated by reference to the section entitled *"Independent Auditors Fees and Other Matters"* in our 2009 proxy statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) Consolidated Financial Statements.

For a list of the consolidated financial information included herein, see Index to the Consolidated Financial Statements on page 61 of this Annual Report on Form 10-K.

(b) List of Exhibits.

The exhibits listed in the Exhibit Index immediately preceding the exhibits are filed as part of this Annual Report on Form 10-K.

(c) Financial Statement Schedules.

All schedules have been omitted because the information required to be set forth therein is not applicable or is shown in the accompanying Consolidated Financial Statements or notes thereto.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ASPECT MEDICAL SYSTEMS, INC.

Date: March 6, 2009

By: /s/ J. NEAL ARMSTRONG
Vice President and Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ NASSIB G. CHAMOUN Nassib G. Chamoun	President, Chief Executive Officer and Director (Principal Executive Officer)	March 6, 2009
/s/ J. BRECKENRIDGE EAGLE J. Breckenridge Eagle	Chairman of the Board of Directors	March 6, 2009
/s/ J. NEAL ARMSTRONG J. Neal Armstrong	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 6, 2009
/s/ BOUDEWIJN L.P.M. BOLLEN Boudewijn L.P.M. Bollen	Director	March 6, 2009
/s/ MICHAEL ESPOSITO Michael Esposito	Director	March 6, 2009
/s/ DAVID W. FEIGAL, JR., M.D. David W. Feigal, Jr., M.D.	Director	March 6, 2009
/s/ EDWIN M. KANIA Edwin M. Kania	Director	March 6, 2009
/s/ JAMES J. MAHONEY, JR. James J. Mahoney, Jr.	Director	March 6, 2009
/s/ JOHN O'CONNOR John O'Connor	Director	March 6, 2009
/s/ DONALD R. STANSKI, M.D. Donald R. Stanski, M.D.	Director	March 6, 2009

ASPECT MEDICAL SYSTEMS, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
Report of Independent Registered Public Accounting Firm	62
Consolidated Balance Sheets as of December 31, 2008 and 2007	63
Consolidated Statements of Income for the Years Ended December 31, 2008, 2007 and 2006	64
Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2008, 2007 and 2006	65
Consolidated Statements of Cash Flows for the Years Ended December 31, 2008, 2007 and 2006	67
Notes to Consolidated Financial Statements	68

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Aspect Medical Systems, Inc.

We have audited the accompanying consolidated balance sheets of Aspect Medical Systems, Inc. as of December 31, 2008 and 2007, and the related consolidated statements of income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2008. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Aspect Medical Systems, Inc. at December 31, 2008 and 2007, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2008, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 2 to the consolidated financial statements, effective January 1, 2007, the Company adopted Financial Accounting Standards Board Interpretation No. 48, "*Accounting for Uncertainty in Income Taxes*, an interpretation of FASB Statement No. 109".

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Aspect Medical Systems, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 3, 2009 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Boston, Massachusetts
March 3, 2009

ASPECT MEDICAL SYSTEMS, INC.

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	December 31, 2008	December 31, 2007
ASSETS		
Current assets:		
Cash	$ 12,066	$ 19,713
Short-term investments	65,985	82,249
Accounts receivable, net of allowances of $121 and $322 at December 31, 2008 and 2007, respectively	13,193	12,544
Current portion of investment in sales-type leases	1,057	1,473
Inventory	7,796	7,113
Deferred tax assets	4,729	4,729
Other current assets	2,905	2,677
Total current assets	107,731	130,498
Property and equipment, net	8,319	8,455
Restricted cash	839	1,004
Long-term investments	4,561	6,518
Long-term investment in sales-type leases	1,454	2,618
Deferred financing fees	1,852	4,213
Long-term deferred tax assets	12,090	20,171
Other long-term assets	128	—
Total assets	$ 136,974	$ 173,477
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,155	$ 1,836
Accrued liabilities	13,288	9,723
Current portion of obligation under capital lease	71	28
Deferred revenue	236	87
Total current liabilities	15,750	11,674
Long-term portion of obligation under capital lease	100	89
Long-term portion of deferred revenue	94	39
Long-term debt	65,000	125,000
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $.01 par value; 5,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock, $.01 par value; 60,000,000 shares authorized, 17,352,438 and 17,118,037 shares issued and outstanding at December 31, 2008 and 2007, respectively	176	174
Treasury stock, at cost; 276,493 shares	(5,008)	(5,008)
Additional paid-in capital	187,374	178,837
Accumulated other comprehensive (loss) income	(105)	180
Accumulated deficit	(126,407)	(137,508)
Total stockholders' equity	56,030	36,675
Total liabilities and stockholders' equity	$ 136,974	$ 173,477

The accompanying notes are an integral part of these consolidated financial statements.

ASPECT MEDICAL SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)

	Year Ended December 31,		
	2008	2007	2006
Product revenue	$99,267	$92,078	$ 85,018
Strategic alliance revenue	—	5,246	6,316
Total revenue	99,267	97,324	91,334
Costs of product revenue(1)	25,263	23,319	22,171
Gross profit	74,004	74,005	69,163
Operating expenses:(1)			
Research and development	16,688	16,052	15,280
Sales and marketing	46,629	39,823	35,571
General and administrative	16,899	15,486	12,446
Total operating expenses	80,216	71,361	63,297
(Loss) income from operations	(6,212)	2,644	5,866
Other income (expense):			
Interest income	3,807	5,019	3,335
Interest expense	(3,402)	(2,010)	(3)
Realized losses on sales of investments, net	(1,513)	—	—
Gain on repurchases of debt	27,793	—	—
Income before income taxes	20,473	5,653	9,198
Income tax provision (benefit)	9,372	3,397	(27,891)
Net income	$11,101	$ 2,256	$ 37,089
Net income per share:			
Basic	$ 0.64	$ 0.12	$ 1.66
Diluted	$ 0.56	$ 0.11	$ 1.59
Weighted average shares used in computing net income per share:			
Basic	17,255	19,614	22,378
Diluted	23,230	20,247	23,380
(1) Stock-based compensation included in costs and expenses:			
Costs of product revenue	$ 497	$ 577	$ 430
Research and development	1,920	2,010	1,487
Sales and marketing	2,550	3,210	2,506
General and administrative	2,622	2,914	2,267

The accompanying notes are an integral part of these consolidated financial statements.

ASPECT MEDICAL SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)

	Comprehensive Income (Loss)	Common Stock		Additional Paid-in Capital	Treasury Stock	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
		Shares	Par Value						
Balance, December 31, 2005		22,281	$222	$159,281	$ —	$(498)	$ (84)	$ (91,498)	$ 67,423
Issuance of common stock upon exercise of common stock options	—	332	4	2,644	—	—	—	—	2,648
Issuance of common stock upon Employee Stock Purchase Plan (ESPP) purchase	—	18	—	326	—	—	—	—	326
Issuance of common stock awards	—	1	—	26	—	—	—	—	26
Issuance of stock options to non-employees	—	—	—	10	—	—	—	—	10
Issuance of shares of common stock upon vesting of restricted stock	—	8	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	6,651	—	—	—	—	6,651
Repurchases of common stock	—	(276)	—	—	(5,008)	—	—	—	(5,008)
Reclassification of deferred compensation upon the adoption of SFAS 123R	—	—	—	(498)	—	498	—	—	—
Comprehensive income:									
Net income	37,089	—	—	—	—	—	—	37,089	37,089
Other comprehensive loss — Unrealized loss on investments	83	—	—	—	—	—	83	—	83
Comprehensive income:	$37,172	—	—	—	—	—	—	—	—
Balance, December 31, 2006		22,364	$226	$168,440	$(5,008)	$ —	$ (1)	$ (54,409)	$109,248
Issuance of common stock upon exercise of common stock options	—	230	3	1,416	—	—	—	—	1,419
Issuance of common stock upon ESPP purchase	—	15	—	222	—	—	—	—	222
Issuance of stock options to non-employees	—	—	—	6	—	—	—	—	6
Issuance of common stock awards	—	1	—	17	—	—	—	—	17
Issuance of shares of common stock upon vesting of restricted stock	—	8	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	8,593	—	—	—	8,593	
Repurchases of common stock	—	(5,500)	(55)	—	—	—	—	(84,986)	(85,041)
Implementation of FIN 48	—	—	—	—	—	—	—	(369)	(369)
Tax benefit from stock option exercises	—	—	—	143	—	—	—	—	143
Comprehensive income:									
Net income	2,256	—	—	—	—	—	—	2,256	2,256
Other comprehensive income — Unrealized gain on investments	181	—	—	—	—	—	181	—	181
Comprehensive income:	$ 2,437	—	—	—	—	—	—	—	—
Balance, December 31, 2007		17,118	$174	$178,837	$(5,008)	$ —	$ 180	$(137,508)	$ 36,675

	Comprehensive Income (Loss)	Common Stock Shares	Common Stock Par Value	Additional Paid-in Capital	Treasury Stock	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
Issuance of common stock upon exercise of common stock options	—	176	$ 2	$ 755	$ —	$ —	$ —	$ —	$ 757
Issuance of common stock upon ESPP purchase	—	37	—	177	—	—	—	—	177
Issuance of shares of common stock upon vesting of restricted stock	—	21	—	—	—	—	—	—	—
Stock-based compensation expense	—	—	—	7,493	—	—	—	—	7,493
Tax benefit from stock option exercises	—	—	—	112	—	—	—	—	112
Comprehensive income:									
Net income	11,101	—	—	—	—	—	—	11,101	11,101
Other comprehensive income									
Foreign currency translation adjustment	(267)	—	—	—	—	—	(267)	—	(267)
Unrealized loss on investments	(18)	—	—	—	—	—	(18)	—	(18)
Comprehensive income:	$10,816	—	—	—	—	—	—	—	—
Balance, December 31, 2008		17,352	$176	$187,374	$(5,008)	$ —	$(105)	$(126,407)	$ 56,030

The accompanying notes are an integral part of these consolidated financial statements.

ASPECT MEDICAL SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2008	2007	2006
Cash flows from operating activities:			
Net income	$ 11,101	$ 2,256	$ 37,089
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	3,030	2,644	1,597
Gain on repurchases of debt	(27,793)	—	—
Realized losses on sales of investments, net	1,513	—	—
(Credit to) provision for doubtful accounts	(115)	129	141
Stock-based compensation expense	7,493	8,616	6,687
Tax benefit from stock option exercises	112	143	—
Adjustment for FIN 48 adoption	—	(371)	—
Deferred taxes	8,081	3,341	(28,242)
Changes in assets and liabilities —			
(Increase) decrease in accounts receivable	(534)	103	(1,200)
Increase in inventory	(683)	(612)	(1,384)
Increase in other current assets	(228)	(520)	(673)
Decrease (increase) in investment in sales-type leases	1,580	219	(564)
Increase in other long-term assets	(128)	—	—
Increase (decrease) in accounts payable	319	(379)	(177)
Increase (decrease) in accrued liabilities	3,565	1,295	(1,768)
Increase (decrease) in deferred revenue	204	(5,237)	(1,757)
Net cash provided by operating activities	7,517	11,627	9,749
Cash flows from investing activities:			
Purchases of property and equipment	(2,190)	(2,827)	(5,668)
Decrease (increase) in restricted cash	165	7	(929)
Purchases of investments	(120,449)	(149,920)	(73,000)
Proceeds from sales and maturities of investments	137,139	114,033	61,210
Net cash provided by (used) for investing activities	14,665	(38,707)	(18,387)
Cash flows from financing activities:			
Repurchases of common stock	—	(85,041)	—
Purchases of treasury stock	—	—	(5,008)
Deferred financing fees	—	(4,559)	—
Proceeds from issuance of common stock	934	1,640	2,973
Proceeds from issuance of long-term debt	—	125,000	—
Repayment of long-term debt	(30,430)	—	—
Repayment of capital lease	(66)	(11)	—
Net cash (used for) provided by financing activities	(29,562)	37,029	(2,035)
Effect of exchange rate changes on cash	(267)	—	—
Net (decrease) increase in cash	(7,647)	9,949	(10,673)
Cash, beginning of period	19,713	9,764	20,437
Cash, end of period	$ 12,066	$ 19,713	$ 9,764
Supplemental disclosure of cash flow information:			
Interest paid	$ 2,878	$ 1,528	$ 3
Income taxes paid	$ 181	$ 85	$ 304

The accompanying notes are an integral part of these consolidated financial statements.

(1) Description of Operations

Aspect Medical Systems, Inc. and its subsidiaries (the "Company") develop, manufacture and market an anesthesia monitoring system called the BIS® system. The BIS system provides information that allows clinicians to assess and manage a patient's level of consciousness in the operating room and intensive care and procedural sedation settings and is intended to assist the clinician in better determining the amount of anesthesia or sedation needed by each patient. The Company's BIS system incorporates the Company's proprietary disposable BIS Sensors with the Company's BIS monitor or an original equipment manufacturers' products, including the BIS Module Kit and BISx. The BIS system is based on the Company's patented core technology, the BIS index.

(2) Summary of Significant Accounting Policies

A summary of the significant accounting policies used by the Company in the preparation of its consolidated financial statements follows:

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

Foreign Currency

During the year ended December 31, 2008, the Company determined that the functional currency of its international subsidiaries had changed from the U.S. dollar to the local currency of the international subsidiaries. As a result of this change, gains and losses resulting from translation adjustments have been included as part of accumulated other comprehensive income and have not been material. Transaction gains and losses and remeasurement of foreign currency denominated assets and liabilities are included in income currently and are not material.

Cash and Investments

The Company invests its excess cash in money market accounts, certificates of deposit, high-grade commercial paper, high grade corporate bonds and debt obligations of various government agencies. The Company considers all highly liquid debt instruments purchased with an original maturity of three months or less to be cash equivalents.

The Company accounts for its investments in marketable securities in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, *Accounting for Certain Investments in Debt and Equity Securities* ("SFAS No. 115"). In accordance with SFAS No. 115, the Company has classified all of its investments in marketable securities as available-for-sale at December 31, 2008 and 2007. The investments are reported at fair value, with any unrealized gains or losses excluded from earnings and reported as a separate component of stockholders' equity as accumulated other comprehensive income or loss. Realized gains and losses on available-for-sale securities are included in other income (expense), as well as charges for the impairment of available-for-sale securities that were determined to be other-than-temporary due to a decline in value. Investments that have contractual maturities of more than twelve months are included in long-term investments in the accompanying consolidated balance sheets.

Revenue Recognition

The Company primarily sells its BIS monitors through a combination of a direct sales force and distributors. The Company sells its BIS Module Kits to original equipment manufacturers who in turn sell them to the end user. BIS Sensors are sold through a combination of a direct sales force, distributors and original equipment

manufacturers. Direct product sales are structured as sales, sales-type lease arrangements or sales under the Company's Equipment Placement ("EP") program. Sales, sales-type lease agreements and sales under the EP program are subject to the Company's standard terms and conditions of sale and do not include any customer acceptance criteria, installation or other post shipment obligations (other than warranty) or any rights of return. The Company's BIS monitor is a standard product and does not require installation as it can be operated with the instructions included in the operator's manual.

The Company recognizes revenue when earned in accordance with Staff Accounting Bulletin ("SAB") No. 104, *Revenue Recognition* ("SAB No. 104"). and Emerging Issues Task Force ("EITF") 00-21, *Revenue Arrangements with Multiple Deliverables* ("EITF 00-21"). Revenue is recognized when persuasive evidence of an arrangement exists, product delivery has occurred or services have been rendered, the price is fixed or determinable and collectibility is reasonably assured. For product sales, revenue is not recognized until title and risk of loss have transferred to the customer. The Company's revenue arrangements with multiple elements are divided into separate units of accounting if specified criteria are met, including whether the delivered element has stand-alone value to the customer and whether there is objective and reliable evidence of the fair value of the undelivered items. The consideration received is allocated among the separate units based on their respective fair values, and the applicable revenue recognition criteria are applied to each of the separate units.

The Company follows SFAS No. 13, *Accounting For Leases* ("SFAS No. 13"), for its sales-type lease agreements. Under the Company's sales-type leases, customers purchase BIS Sensors and the BIS monitor for the purchase price of the BIS Sensors plus an additional charge per BIS Sensor to pay for the purchase price of the BIS monitor and related financing costs over the term of the agreement. In accordance with SFAS No. 13, the minimum lease payment, consisting of the additional charge per BIS Sensor, less the unearned interest income, which is computed at the interest rate implicit in the lease agreement, is recorded as the net investment in sales-type leases. The Company recognizes equipment revenue under sales-type lease agreements either at shipment or delivery in accordance with the agreed upon contract terms with interest income recognized over the life of the sales-type lease. The cost of the BIS monitor acquired by the customer is recorded as costs of revenue in the same period.

In addition, the Company reviews and assesses the net realizability of its investment in sales-type leases at each reporting period. This review includes determining, on a customer specific basis, if a customer is significantly underperforming relative to the customer's cumulative level of committed BIS Sensor purchases as required by the sales-type lease agreement. If a customer is underperforming, the Company records an allowance for lease payments as a charge to revenue to reflect the lower estimate of the net realizable investment in sales-type lease balance.

As of December 31, 2008, the Company does not consider any sales-type lease agreement, against which an allowance for lease payments has been established, an impaired asset.

Under the Company's EP program, the customer is granted the right to use the BIS monitors for a mutually agreed upon period of time. During this period, the customer purchases BIS Sensors at a price that may include a premium above the list price of the BIS Sensors to cover the rental of the equipment, but without any minimum purchase commitments. At the end of the agreed upon period, the customer has the option of purchasing the BIS monitors, continuing to use them under the EP program or returning them to the Company. Under the EP program, no equipment revenue is recognized as the equipment remains the Company's property, title does not pass to the customer and the criteria for sales-type leases under SFAS No. 13 are not met. The BIS monitors under the EP program are depreciated over two years and the depreciation is charged to costs of revenue. BIS Sensor revenue under the EP program is recognized either at shipment or delivery of the BIS Sensors in accordance with the agreed upon contract terms.

(tabular amounts in thousands except per share amounts and percentages)

The Company's obligations under warranty are limited to repair or replacement of any product that the Company reasonably determines to be covered by the warranty. The Company records an estimate for its total warranty obligation in accordance with SFAS No. 5, *Accounting for Contingencies* ("SFAS No. 5").

Research and Development Costs

The Company charges research and development costs to operations as incurred. Research and development costs include costs associated with new product and business development, product improvements and extensions, clinical studies and project consulting expenses.

Allowance for Doubtful Accounts

The Company makes estimates and judgments in determining its allowance for doubtful accounts based on the Company's historical collections experience, historical write-offs of its receivables, current trends, credit policies and a percentage of the Company's accounts receivable by aging category. The Company also reviews the credit quality of its customer base as well as changes in its credit policies. The Company continually monitors collections and payments from its customers and adjusts the allowance for doubtful accounts as needed.

Inventory

The Company values inventory at the lower of cost or estimated market value, and determines cost on a first-in, first-out basis. The Company regularly reviews inventory quantities on hand and records a provision for excess or obsolete inventory primarily based on production history and on its estimated forecast of product demand. The medical device industry in which the Company markets its products is characterized by rapid product development and technological advances that could result in obsolescence of inventory. Additionally, the Company's estimates of future product demand may prove to be inaccurate, in which case it would need to change its estimate of the provision required for excess and obsolete inventory. If revisions are deemed necessary, the Company would recognize the adjustments in the form of a charge to costs of revenue at the time of such determination.

Warranty

Equipment that the Company sells is generally covered by a warranty period of one year. The Company accrues a warranty reserve for estimated costs to provide such warranty services. The Company's estimate of costs to service its warranty obligations is based on historical experience and an expectation of future conditions. Warranty expense for the years ended December 31, 2008, 2007 and 2006, and accrued warranty cost, included in accrued liabilities in the consolidated balance sheets at December 31, 2008 and 2007, was as follows:

Balance as of December 31, 2005	$ 159
Warranty expense	129
Deductions and other	(68)
Balance as of December 31, 2006	220
Warranty expense	79
Deductions and other	(49)
Balance as of December 31, 2007	250
Warranty expense	127
Deductions and other	(107)
Balance as of December 31, 2008	$ 270

Shipping and Handling Costs

Shipping and handling costs are included in costs of revenue. Shipping and handling costs for the years ended December 31, 2008, 2007 and 2006 were approximately $929,000, $1,009,000 and $962,000, respectively.

Advertising Costs

Advertising costs are expensed as incurred. These costs are included in sales and marketing expense in the consolidated statements of income. Advertising costs for the years ended December 31, 2008, 2007 and 2006 were approximately $774,000, $1,114,000 and $1,265,000, respectively.

Property and Equipment

Property and equipment is recorded at cost and depreciated using the straight-line method over the estimated useful lives of the related property and equipment. The costs of improvements to the Company's leased building are capitalized as leasehold improvements and amortized on the straight-line method over the shorter of the life of the lease or the useful life of the asset. Repair and maintenance expenditures are charged to expense as incurred. The Company does not develop software for internal use and the costs of software acquired for internal use are accounted for in accordance with the American Institute of Certified Public Accountant's Statement of Position 98-1, *Accounting for the Costs of Computer Software Developed or Obtained for Internal Use.*

Income Taxes

The Company accounts for income taxes in accordance with SFAS No. 109, *Accounting for Income Taxes* ("SFAS No. 109"). Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences, utilizing currently enacted tax rates of temporary differences between the carrying amounts and the tax basis of assets and liabilities. Deferred tax assets are recognized, net of any valuation allowance, for the estimated future tax effects of deductible temporary differences and tax operating loss and credit carryforwards. See Note 8 for additional disclosure relating to income taxes and the adoption and application of the Financial Accounting Standards Board ("FASB") Interpretation No. 48, *Accounting for Uncertainty in Income Taxes — an Interpretation of FASB Statement No. 109* ("FIN 48").

Concentration of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk primarily consist of cash, investments, accounts receivable and investments in sales-type lease receivables. The Company does not require collateral or other security to support financial instruments subject to credit risk. To minimize the financial statement risk with respect to accounts receivable and investments in sales-type lease receivables, the Company maintains reserves for potential credit losses and such losses, in the aggregate, have not exceeded the reserves established by management. The Company maintains cash and investments with various financial institutions. The Company performs periodic evaluations of the relative credit quality of investments and the Company's policy is designed to limit exposure to any one institution or type of investment. The primary objective of the Company's investment strategy is the safety of the principal invested. The Company does not maintain foreign exchange contracts or other off-balance sheet financial investments.

Single or Limited Source Suppliers

The Company currently obtains certain key components of its products from single or limited sources. The Company purchases components pursuant to purchase orders, and in select cases, long-term supply agreements and generally does not maintain large volumes of inventory. The Company has experienced shortages and delays in obtaining certain components of its products in the past. The Company may experience similar shortages and delays

(tabular amounts in thousands except per share amounts and percentages)

in the future. The disruption or termination of the supply of components or a significant increase in the costs of these components from these sources could have a material adverse effect on the Company's business, financial position, results of operations and cash flows.

Net Income Per Share

In accordance with SFAS No. 128, *Earnings Per Share* ("SFAS No. 128"), basic net income per share amounts for the three years ended December 31, 2008, 2007 and 2006 were computed by dividing net income by the weighted average number of common shares outstanding during those periods and diluted net income per share was computed using the weighted average number of common shares outstanding and other dilutive securities, including stock options, unvested restricted stock and convertible debt during those periods.

For the years ended December 31, 2008, 2007 and 2006, approximately 4,522,000, 2,833,000 and 1,125,000, respectively, of potentially dilutive instruments, consisting of common stock options and unvested restricted stock have been excluded from the computation of diluted weighted average shares outstanding as their effect would be antidilutive.

Basic and diluted net income per share for the years ended December 31, 2008, 2007 and 2006 were computed as follows:

	2008	2007	2006
Basic:			
Net income	$11,101	$ 2,256	$37,089
Weighted average shares outstanding	17,255	19,614	22,378
Basic net income per share	$ 0.64	$ 0.12	$ 1.66
Diluted:			
Net income	$11,101	$ 2,256	$37,089
Interest expense on convertible debt, net	1,838	—	—
Net income	$12,939	$ 2,256	$37,089
Weighted average shares outstanding	17,255	19,614	22,378
Effect of dilutive options and restricted stock	100	633	1,002
Shares issuable upon conversion of convertible debt	5,875	—	—
Weighted average shares assuming dilution	23,230	20,247	23,380
Diluted net income per share	$ 0.56	$ 0.11	$ 1.59

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Other than the Company's net income, the only other elements of comprehensive income impacting the Company are the unrealized gains (losses) on its investments for all periods presented and cumulative currency translation adjustments.

Stock-Based Compensation

The Company accounts for share-based payments to employees under the fair value recognition and measurement provisions of SFAS No. 123R (revised 2004), *Share Based Payment* ("SFAS No. 123R").

Compensation expense recognized during the years ended December 31, 2008, 2007 and 2006 included: (a) compensation expense for all share-based awards granted prior to, but not yet vested, as of December 31, 2005, based on the grant date fair value estimated in accordance with the original provisions of SFAS No. 123, *Accounting for Stock-Based Compensation* ("SFAS No. 123") and (b) compensation expense for all share-based awards granted subsequent to December 31, 2005, based on the grant date fair value estimated in accordance with the provisions of SFAS No. 123R. See Note 10 for a detailed discussion of SFAS No. 123R.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Fair Value of Financial Instruments

The estimated fair market values of the Company's financial instruments, which include investments, accounts receivable, investment in sales-type leases and accounts payable, approximate their carrying values.

The estimated fair value of the the Company's long-term debt at December 31, 2008 was approximately $29,250,000 and the carrying amount was $65,000,000. The fair value of the debt was estimated based on the rate used to repurchase a portion of the notes in December 2008 in an open market transaction.

Reclassifications

Certain amounts in the prior years' financial statements have been reclassified to conform with the current-year presentation.

Recent Accounting Pronouncements

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities, an Amendment of FASB Statement No. 133* ("SFAS No. 161"). The objective of this statement is to require enhanced disclosures about an entity's derivative and hedging activities to improve the transparency of financial reporting. This statement is effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008 with early application encouraged. The Company does not believe that the adoption of SFAS No. 161 will have a material impact on its results of operations, financial position or cash flow.

In May 2008, the FASB issued FASB Staff Position ("FSP") APB 14-1, *Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement*("FSP APB 14-1"). FSP APB 14-1 requires the issuer of certain convertible debt instruments, such as the Company's convertible senior notes, that may be settled in cash on conversion to separately account for the liability and equity components of the instruments in a manner that will reflect the issuer's nonconvertible debt borrowing rate. This FSP is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The Company does not believe that the adoption of FSP APB 14-1 will have a material impact on its results of operations, financial position or cash flow.

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Accounting Principles* ("SFAS No. 162"). The current hierarchy under Generally Accepted Accounting Principles in the United States ("GAAP"), as set forth in the American Institute of Certified Public Accountants ("AICPA") Statement on Auditing Standards No. 69, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles* ("SFAS No. 162"), has been criticized because (1) it is directed to the auditor rather than the entity, (2) it is complex, and (3) it ranks FASB Statements of Financial Accounting Concepts. The FASB believes that the GAAP hierarchy

(tabular amounts in thousands except per share amounts and percentages)

should be directed to entities because it is the entity (not its auditor) that is responsible for selecting accounting principles for financial statements that are presented in conformity with GAAP. Accordingly, the FASB concluded that the GAAP hierarchy should reside in the accounting literature established by the FASB and is issuing this Statement to achieve that result. This Statement is effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, *The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*. The Company does not believe that the adoption of SFAS No. 162 will have a material impact on its results of operations, financial position or cash flow.

In June 2008, the FASB issued EITF Issue No. 07-5, *Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock* ("EITF 07-5"). EITF 07-5 clarified how to determine whether certain instruments or features were indexed to an entity's own stock under EITF Issue No. 01-6, *The Meaning of "Indexed to a Company's Own Stock"* ("EITF 01-6"). It also resolved issues related to proposed Statement 133 Implementation Issue No. C21, *Scope Exceptions: "Whether Options (Including Embedded Conversion Options) Are Indexed to both an Entity's Own Stock and Currency Exchange Rates"* (Implementation Issue C21). The consensus will replace EITF 01-6 as a critical component of the literature applied to evaluating financial instruments for debt or equity classification and embedded features for bifurcation as derivatives. EITF 07-5 will become effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. The consensus must be applied to all instruments outstanding on the date of adoption and the cumulative effect of applying the consensus must be recognized as an adjustment to the opening balance of retained earnings at transition. Therefore, any company that previously evaluated equity-linked financial instruments under the pre-existing financial instruments literature will need to once again carefully analyze the appropriate classification of those financial instruments and analyze any equity-linked embedded features for bifurcation under the new guidance. The Company does not believe that the adoption of EITF 07-5 will have a material impact on its results of operations, financial position or cash flow.

(3) Comprehensive Income

The Company's comprehensive income is as follows:

	Year Ended December 31,		
	2008	2007	2006
Net income	$11,101	$2,256	$37,089
Other comprehensive income:			
Foreign currency translation adjustments	(267)	—	—
Unrealized (loss) gain on investments, net of reclassification adjustment for realized loss on sale of investments recognized during the period of $1,513,000	(18)	181	83
Comprehensive income	$10,816	$2,437	$37,172

(4) Cash, Restricted Cash and Investments

At December 31, 2008, the Company maintained approximately $839,000 of restricted cash as part of its revolving line of credit agreement with a commercial bank (see Note 18).

(tabular amounts in thousands except per share amounts and percentages)

Available-for-sale investments at December 31, 2008 and 2007 consist of the following:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
December 31, 2008 —				
U.S. Government debt securities	$50,952	$323	$ —	$51,275
Corporate obligations	13,200	—	(207)	12,993
Commercial paper	5,953	46	—	5,999
Certificates of deposit	279	—	—	279
	$70,384	$369	$(207)	$70,546
December 31, 2007 —				
Corporate obligations	$40,157	$ 46	$ (58)	$40,145
Commercial paper	45,714	192	—	45,906
Certificates of deposit	2,716	—	—	2,716
	$88,587	$238	$ (58)	$88,767

All available-for-sale investments have contractual maturities of one to two years.

The Company evaluates its investments with unrealized losses for other-than-temporary impairment. When assessing investments for other-than-temporary declines in value, the Company considers such factors as, among other things, how significant the decline in value is as a percentage of the original cost, how long the market value of the investment has been less than its original cost, the Company's ability and intent to retain the investment for a period of time sufficient to allow for any anticipated recovery in fair value and market conditions in general.

During 2008, the Company decided to dispose of certain investments that had significant unrealized losses. The cost of securities sold is determined based on the specific identification method for purposes of recording realized gains and losses. Gross realized losses on the sales of investments in 2008 were approximately $1,525,000 and gross realized gains were approximately $12,000.

The aggregate fair value of investments with unrealized losses was approximately $12,493,000 and $21,299,000 at December 31, 2008 and 2007, respectively. At December 31, 2008 and 2007, 15 and 22 investments were in an unrealized loss position, respectively. All such investments have been in an unrealized loss position for less than a year and these losses are considered temporary. The Company has the ability and intent to hold these investments until a recovery of fair value.

The Company adopted SFAS No. 157, *Fair Value Measurements* ("SFAS No. 157"), on January 1, 2008. SFAS No. 157 defines and establishes a framework for measuring fair value and expands disclosure about fair value measurements. The standard creates a fair value hierarchy which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows: Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities; Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and Level 3 inputs are unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

(tabular amounts in thousands except per share amounts and percentages)

Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. In accordance with SFAS No. 157, the Company has classified its financial assets and liabilities that are required to be measured at fair value as of December 31, 2008 as follows:

	Balance at December 31, 2008	Fair Value Measurements at December 31, 2008		
		Level 1	Level 2	Level 3
Cash and restricted cash	$12,905	$12,905	$ —	$—
Available for sale securities	70,546	279	70,267	—

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities*, including an amendment of FASB Statement No. 115, ("SFAS No. 159"). SFAS No. 159 permits entities to choose, at specified election dates, to measure eligible items at fair value. The Company has not elected to adopt SFAS No. 159.

(5) Investment in Sales-Type Leases

The Company leases equipment to customers under sales-type leases. The components of the Company's net investment in sales-type leases are as follows:

	December 31,	
	2008	2007
Total minimum lease payments receivable	$3,457	$5,655
Less:		
Unearned interest income	459	849
Allowance for lease payments	487	715
Net investment in sales-type leases	2,511	4,091
Less — current portion	1,057	1,473
	$1,454	$2,618

Future minimum lease payments due under non-cancelable leases as of December 31, 2008 are as follows:

Year Ending December 31,	
2009	$1,305
2010	899
2011	536
2012	182
2013	48
	$2,970

(tabular amounts in thousands except per share amounts and percentages)

(6) Inventory

Inventory consists of the following:

	December 31, 2008	December 31, 2007
Raw materials	$4,552	$4,027
Work-in-progress	25	52
Finished goods	3,219	3,034
	$7,796	$7,113

For the years ended December 31, 2008, 2007 and 2006, approximately $36,000, $0 and $176,000, respectively, of raw material components of monitors were written down to zero cost and subsequently scrapped or used for repair and service.

(7) Property and Equipment

Property and equipment consist of the following:

	Useful Life in Years	December 31, 2008	December 31, 2007
Construction in progress	—	$ 811	$ 2,516
Computer equipment	3	7,774	6,981
Demonstration, evaluation and rental equipment	2	—	—
Machinery and equipment	3 to 5	10,408	8,097
Furniture and fixtures	5	2,486	2,450
Leasehold improvements	Shorter of the lease or useful life of the asset	1,388	1,304
Business systems	5	544	—
Equipment under capital lease (see Note 13)	3 to 5	247	127
		23,658	21,475
Accumulated depreciation and amortization		(15,339)	(13,020)
		$ 8,319	$ 8,455

Depreciation expense for property and equipment, including equipment under capital lease, was approximately $2,446,000, $2,297,000 and $1,597,000 for the periods ended December 31, 2008, 2007 and 2006, respectively.

During the first quarter of 2008, the Company changed its depreciation period for its furniture and fixtures and business systems from three years to five years in order to better reflect the useful lives of these assets. This change in accounting estimate was applied prospectively from January 1, 2008 in accordance with SFAS No. 154, *Accounting For Changes and Error Corrections* ("SFAS No. 154"). As a result of the change in estimated life of these assets, loss from operations for the year ended December 31, 2008 was $182,000 less and net income after tax

(tabular amounts in thousands except per share amounts and percentages)

for the year ended December 31, 2008 was $99,000 higher. No material effect on net income per share, basic and diluted, resulted from this change.

(8) Income Taxes

The components of income before provision (benefit) for income taxes are as follows:

	December 31,		
	2008	2007	2006
Domestic	$19,836	$5,136	$8,786
Foreign	637	517	412
Income before income taxes	$20,473	$5,653	$9,198

The provision (benefit) for income taxes consists of the following:

	December 31,		
	2008	2007	2006
Current tax expense:			
Federal	$ 611	$ 163	$ 244
State	607	187	—
Foreign	158	125	108
Total current expense	1,376	475	352
Deferred tax expense (benefit):			
Federal	6,700	3,131	4,108
State	489	(209)	558
Foreign	—	—	—
Change in valuation allowance	807	—	(32,909)
Total deferred tax expense (benefit)	7,996	2,922	(28,243)
Total provision (benefit)	$9,372	$3,397	$(27,891)

The Company's effective rate varies from the statutory rate as follows:

	December 31,		
	2008	2007	2006
United States federal income tax rate	$ 6,965	$1,923	$ 3,131
State taxes, net of federal benefit	1,070	312	513
Stock-based compensation	882	1,280	1,199
Other permanent differences, net	186	202	375
United States federal and state tax credits	(1,317)	(627)	(552)
Other	779	307	352
Change in deferred tax valuation allowance	807	—	(32,909)
	$ 9,372	$3,397	$(27,891)

(tabular amounts in thousands except per share amounts and percentages)

The components of the Company's net deferred tax assets and related valuation allowances are as follows:

	December 31,		
	2008	2007	2006
Net operating loss carryforwards	$ 5,874	$15,071	$17,525
Tax credit carryforwards	4,435	3,910	3,702
Deferred revenue	124	49	2,122
Deferred compensation	4,845	3,051	1,148
Other	2,348	2,820	3,745
Deferred tax assets	17,626	24,901	28,242
Valuation allowances	(807)	—	—
Net deferred tax asset	$16,819	$24,901	$28,242

As of September 30, 2006, the Company's United States net operating losses ("NOLs") and other deferred tax assets were fully offset by valuation allowances primarily because, pursuant to SFAS No. 109, *Accounting For Income Taxes* ("SFAS No. 109"), the Company did not have sufficient history of income to conclude that it was more likely than not that the Company would be able to realize the tax benefits of those deferred tax assets. Based upon the Company's cumulative history of earnings before taxes for financial reporting purposes over a 12 quarter period and an assessment of the Company's expected future results of operations as of December 31 2006, the Company determined that it was more likely than not that it would realize all of its United States NOL carryforward tax assets prior to their expiration and other deferred tax assets. As a result, during the fourth quarter of 2006, the Company reversed a total of $28,200,000 of its deferred tax asset valuation allowances. The entire amount of the $28,200,000 valuation allowance release was recorded as a discrete benefit for income taxes on the Company's consolidated statement of income in 2006.

The need to establish valuation allowances for deferred tax assets is assessed periodically by the Company based on the SFAS No. 109 more-likely-than-not realization threshold criterion. At December 31, 2008 and December 31, 2007, the Company's net deferred tax assets totaled $16,819,000 and $24,901,000, respectively. During 2008, the Company concluded that its federal research and development credits generated in tax years 1994 to 1997 of approximately $236,000 (net of federal benefit) did not meet the more-likely-than-not realization criterion of SFAS No. 109. Additionally, the Company generated capital loss carryforwards of approximately $571,000 (tax effected) in the current period related to the sale and impairment of certain investments. As the Company does not anticipate capital gain income within the applicable carryforward period, these losses do not meet the more-likely-than not realization criterion of SFAS No. 109. Based on the Company's assessment, it appears more likely than not that the net deferred tax assets will not be realized. Accordingly, the Company recorded a $807,000 valuation allowance on these deferred tax assets during 2008. The Company will continue to assess the realizabilty of its deferred tax assets and the need for a valuation allowance in the future.

As of December 31, 2008, the Company had United States federal operating NOL carryforwards of approximately $17,233,000 and state operating NOL carryforwards of approximately $407,000, which expire at various dates through 2027. The Company has an additional $15,302,000 of federal and state net operating losses not reflected above (net of tax), that are attributable to stock option exercises which will be recorded as an increase in additional paid in capital on the consolidated balance sheet once they are "realized" in accordance with SFAS No. 123R. As of December 31, 2008, the Company had federal and state tax research and development credit carryforwards of approximately $2,235,000 and $1,665,000, respectively, which expire at various dates through 2028. Additionally, the net operating loss and tax credit carryforwards are subject to review by the Internal Revenue Service. Ownership changes, as defined under Sections 382 and 383 in the Internal Revenue Code, may limit the amount of these tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The

(tabular amounts in thousands except per share amounts and percentages)

amount of the annual limitation is determine based on the Company's value immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years.

The federal research and development credit was reenacted on October 3, 2008 as part of "The Emergency Economic Stabilization Act of 2008". This act extends the federal research and development credit until December 31, 2009 (tax years 2008 and 2009). The Company has recorded the impact of this tax legislation change in its income tax provision during the fourth quarter of 2008, which was the quarter in which this legislation was enacted.

Effective January 1, 2007, the Company adopted the provisions of FIN 48. This Interpretation clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS No. 109 and prescribes a recognition threshold of more-likely-than-not to be sustained upon examination. Upon adoption of FIN 48, the Company's policy to include interest and penalties related to gross unrecognized tax benefits within the Company's provision for income taxes did not change. The net adjustment to retained earnings upon adoption to FIN 48 on January 1, 2007 was $371,000.

A reconciliation of the beginning and ending amount of the Company's gross unrecognized tax benefits ("UTB") is as follows:

	2008	2007
Gross UTB at January 1	$ 661	$626
Additions based on tax positions related to the current year	136	51
Additions for tax positions of prior years	114	—
Reductions for tax positions of prior years	(106)	(16)
Settlements	—	—
Reductions due to lapse of applicable statute of limitations	—	—
Gross UTB at December 31	$ 805	$661
Net UTB impacting the effective tax rate at December 31	$ 144	$ 35

As of December 31, 2008, the total amount of UTBs was $805,000 (net of the federal benefit on state tax issues), all of which if realized, would favorably affect the Company's effective income tax rate in future periods.

The Company classifies interest and penalties related to unrecognized tax benefits as income tax expense. These amounts are not reflected on the reconciliation above. The total amount of interest and penalties related to uncertain tax positions and recognized in the statement of income for 2008 and in the accompanying balance sheet as of December 31, 2008 was $16,000 for interest and $3,000 for penalties.

The Company does not reasonably estimate that its unrecognized tax benefit will change significantly within the next twelve months. The Company or one of its subsidiaries files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. The Company is generally no longer subject to income tax examinations by U.S. federal, state and local or non-U.S. income tax examinations by tax authorities for years before 1993.

The tax years 1994 through 2007 remain open to examination by major taxing jurisdictions to which the Company is subject, which are primarily in the United States, as carryforward attributes generated in years past may still be adjusted upon examination by the Internal Revenue Service or state tax authorities if they have or will be used in a future period. The Company is currently not under examination by the Internal Revenue Service or any other jurisdiction for any tax years.

(9) Stockholders' Equity

Common Stock

At December 31, 2008, the Company had approximately 5,634,000 shares of common stock authorized but unissued under the Company's equity incentive plans and approximately 32,000 shares of common stock for issuance under the Company's 1999 Employee Stock Purchase Plan.

(10) Equity Incentive Plans

The Company has three employee stock incentive plans, one non-employee director stock option plan and an employee stock purchase plan. Stock options and restricted common stock generally vest over three to four years and provide, in certain instances, for the acceleration of vesting upon a change of control of the Company. Options under the employee stock incentive plans expire ten years from the date of grant. The Company's employee stock incentive plans, excluding the Employee Stock Purchase Plan, provide for the grant, at the discretion of the Board of Directors, of options for the purchase of up to 12,110,000 shares of common stock to employees, directors, consultants and advisors. Option exercise prices are determined by the Board of Directors. At December 31, 2008, approximately 1,369,000 shares of common stock were available for future grant under the Company's equity incentive plans.

1991 Amended and Restated Stock Option Plan

The Company's 1991 Amended and Restated Stock Option Plan provides for the granting, at the discretion of the Board of Directors, of options for the purchase of up to 3,360,000 shares of common stock to employees, directors and advisors. This plan is no longer active.

1998 Stock Incentive Plan

The 1998 Stock Incentive Plan ("the 1998 Incentive Plan"), provides for the granting, at the discretion of the Compensation Committee, of options for the purchase of up to 3,000,000 shares of common stock (subject to adjustment in the event of stock splits and other similar events) to employees, directors and advisors. This plan is no longer active.

Amended and Restated 1998 Director Equity Incentive Plan

Under the Amended and Restated 1998 Director Equity Incentive Plan (the "Director Plan"), directors of the Company who are not employees of the Company are eligible to receive nonstatutory options to purchase common stock, restricted stock awards and other common stock-based awards. At December 31, 2008, a total of 350,000 shares of common stock were available for issue under the Director Plan. The Board of Directors administers the Director Plan, including the date on which awards will be issued, the type of award that will be issued and any vesting provisions for stock options and the terms under which restrictions on restricted stock awards will lapse. In certain circumstances, including a change of control (as defined in the Director Plan), the vesting of options and the restrictions applicable to restricted stock awards, will accelerate. No awards may be granted under the Director Plan after April 2015.

1999 Employee Stock Purchase Plan

The 1999 Employee Stock Purchase Plan (the "Purchase Plan") allows eligible employees the right to purchase shares of common stock at the lower of 95% of the closing price per share of common stock on the first or last day of an offering period. Each offering period is six months. An aggregate of 300,000 shares of common stock have been reserved for issuance pursuant to the Purchase Plan. As of December 31, 2008, approximately 268,000 shares of the Company's common stock had been issued under the Purchase Plan.

(tabular amounts in thousands except per share amounts and percentages)

2001 Stock Incentive Plan

The Company's 2001 Stock Incentive Plan (the "2001 Incentive Plan") provides for the granting, at the discretion of the Compensation Committee, of options for the purchase of up to 5,400,000 shares of common stock (subject to adjustment in the event of stock splits and other similar events) to employees, directors, consultants and advisors. Option exercise prices are determined by the Compensation Committee, but cannot be less than 100% of fair market value on the grant date for incentive stock options.

Stock Option Activity:

A summary of stock option activity as of December 31, 2008 is as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value
Outstanding at December 31, 2007	4,266	$17.31		
Granted	463	9.08		
Exercised	(176)	4.30		
Canceled	(288)	16.45		
Outstanding at December 31, 2008	4,265	$17.02	5.42	$5
Vested or expected to vest at December 31, 2008	4,224	$17.04	5.39	$5
Exercisable at December 31, 2008	3,489	$17.53	4.64	$5

Cash received from stock option exercises under all stock-based compensation plans for the year ended December 31, 2008 was approximately $757,000. The intrinsic value of options exercised during the years ended December 31, 2008, 2007 and 2006 was approximately $580,000, $2,137,000 and $4,915,000, respectively. The estimated fair value of options that vested during the years ended December 31, 2008, 2007 and 2006 was approximately $5,203,000, $6,903,000 and $6,329,000, respectively.

A summary of nonvested restricted stock as of December 31, 2008 is as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2007	275	$16.90
Granted	306	11.30
Vested	220	14,87
Non-vested at December 31, 2008	361	$13.39

As of December 31, 2008, total compensation cost related to non-vested restricted stock not yet recognized was $4,821,000 which is expected to be recognized in the statement of income over a weighted-average period of 30 months. The fair value of shares that vested during the years ended December 31, 2008 and 2007 was approximately $2,378,000 and $1,779,000, respectively.

(tabular amounts in thousands except per share amounts and percentages)

Grant-date fair value:

The Company uses the Black-Scholes option pricing model to calculate the grant-date fair value of an award. During the years ended December 31, 2008, 2007 and 2006, the Company calculated the grant-date fair value using the following weighted average assumptions:

	December 31, 2008	December 31, 2007	December 31, 2006
Options granted	463	481	671
Weighted average exercise price	$ 9.08	$ 15.81	$ 26.78
Weighted average grant date fair value	$ 4.46	$ 7.42	$ 11.72
Assumptions:			
Risk-free interest rate	3.21%	4.53%	4.71%
Expected term	5.8 years	5.2 years	5 years
Expected volatility	51%	46%	43%
Expected dividend yield	—	—	—

Risk-free interest rate: The implied yield currently available on U.S. Treasury zero-coupon issues with a remaining term equal to the expected term used as the assumption in the model.

Expected term: The expected term of an employee option is the period of time for which the option is expected to be outstanding. The Company uses a Monte Carlo simulation model to estimate the expected term assumption for the grant date valuation as it believes that this information is currently the best estimate of the expected term of a new option.

Expected volatility: In estimating its expected volatility, the Company considers both trends in historical volatility and the implied volatility of its publicly traded options. The Company has used a combination of its implied volatility and historical volatility to estimate expected volatility for the year ended December 31, 2008. The Company believes that in addition to the relevance of historical volatility, consideration of implied volatility achieves the objectives of SFAS No. 123R since it represents the expected volatility that marketplace participants would likely use in determining an exchange price for an option, and is therefore an appropriate assumption to use in the calculation of grant date fair value.

Expected dividend yield: This assumption is not applicable in the Company's calculation as the Company has not declared, nor does it expect to declare in the foreseeable future, any dividends.

Expense: The Company uses the straight-line attribution method to recognize expense for all options and restricted stock granted prior to the adoption of SFAS No. 123R and for all options and restricted stock granted after January 1, 2006, the adoption date of SFAS No. 123R. The amount of stock-based compensation expense recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest. Stock-based compensation expense is recorded on a straight-line basis over the requisite service period, which is generally the vesting period. SFAS No. 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The term "forfeitures" is distinct from "cancellations" or "expirations" and represents only the unvested portion of the surrendered option. For the year ended December 31, 2008, the Company applied a forfeiture rate of approximately 5.3%. The Company re-evaluates its forfeiture rate on a quarterly basis and adjusts the rate as necessary. Prior to the adoption of SFAS No. 123R, the Company recorded forfeitures on an actual basis as they occurred. As a result of the adoption of SFAS No. 123R, the Company's results for the year ended December 31, 2008 include stock-based compensation expense of approximately $7,589,000, of which approximately $96,000 relates to tax on deferred compensation, that is included in the consolidated statement of income within the applicable operating expense where the Company reports the option holders' compensation cost.

As of December 31, 2008, total compensation cost related to non-vested stock options not yet recognized was $5,256,000, which is expected to be recognized in the statement of operations over a weighted-average period of approximately 2.0 years.

For the year ended December 31, 2008, the Company recorded stock-based compensation expense for non-employees of approximately $7,000 resulting from the grant of 500 shares of restricted common stock and 500 stock options to a consultant.

For the year ended December 31, 2007, the Company recorded stock-based compensation expense for non-employees of approximately $23,000 resulting from the grant of stock options to purchase 800 shares of common stock to one consultant and an award of 1,200 shares of common stock to another consultant.

For the year ended December 31, 2006, the Company recorded stock-based compensation expense for non-employees of approximately $36,000. The Company also granted a stock option to purchase 800 shares of common stock to a consultant which resulted in approximately $10,000 of stock-based compensation expense and awarded 1,200 shares of common stock to a consultant which resulted in approximately $26,000 of stock-based compensation expense.

(11) Deferred Revenue

On August 7, 2002, the Company formed a strategic alliance with Boston Scientific Corporation (the "2002 agreement"). In connection with this strategic alliance, the Company recorded approximately $6,300,000 of deferred revenue which was to be recognized ratably over the term of the 2002 agreement. This represented the Company's best estimate of its period of significant continuing obligation to provide Boston Scientific Corporation exclusive distribution rights to the applicable newly developed technology. In June 2007, the Company entered into a Termination and Repurchase Agreement with Boston Scientific Corporation under which the Company terminated the 2002 agreement and recognized approximately $3,835,000 of deferred revenue (see Note 19).

Additionally, for the years ended December 31, 2008 and December 31, 2007, the Company had approximately $330,000 and $126,000, respectively, in deferred revenue related to revenue arrangements which is being deferred until the revenue recognition criteria in SAB No. 104 and other authoritative accounting literature have been met.

(12) 401(k) Savings Plan

The Company has a 401(k) savings plan ("the Plan"), in which substantially all domestic employees can participate. Employer contributions are at the discretion of the Board of Directors and vest ratably over five years. The Company contributed approximately $766,000, $687,000, and $644,000 to the Plan in the years ended December 31, 2008, 2007 and 2006, respectively.

(13) Lease Commitments

In February 2006, the Company entered into a lease agreement pursuant to which the Company agreed to lease approximately 136,500 square feet of research and development, sales and marketing, production and general and administrative space in Norwood, Massachusetts. The lease expires in December 2016, and the Company has been granted the option to extend the term for three additional five-year periods. In connection with this lease, the Company provided an original security deposit in the amount of $911,000 to the lessor in accordance with the terms of the lease agreement. This security deposit was subsequently reduced to $759,000 in 2008. This lease is classified as an operating lease. The lease contains a rent escalation clause that requires additional rental amounts in the later years of the term. Rent expense is being recognized on a straight-line basis over the minimum lease term.

(tabular amounts in thousands except per share amounts and percentages)

Effective January 1, 2007, the Company entered into an operating lease for the Company's international organization for approximately 9,280 square feet of office space in De Meern, The Netherlands. This lease expires in December 2011.

Rent expense was approximately $1,832,000, $1,717,000 and $1,282,000 in 2008, 2007 and 2006, respectively.

The Company's capital leases consist of equipment and software leases. As of December 31, 2008, the Company had approximately $247,000 in gross assets under its capital lease agreements and related accumulated depreciation of approximately $64,000.

Future gross minimum lease commitments for all non-cancelable capital and operating leases as of December 31, 2008 are as follows:

Year Ending December 31,	Capital Lease	Operating Leases
2009	$ 86	$ 2,369
2010	83	2,289
2011	26	2,156
2012	1	2,123
2013	—	2,112
Thereafter	—	6,289
Total minimum lease payments	$196	$17,338
Less: Amount representing interest	(25)	
Minimum future payments of principal	171	
Less: Current portion	(71)	
Long-term portion	$100	

(14) Commitments and Contingencies

Legal Proceedings

On October 10, 2007, a purported holder of the Company's common stock (the plaintiff), filed suit in the U.S. District Court for the Western District of Washington against Morgan Stanley and Deutsche Bank AG, the lead underwriters of the Company's 2000 initial public offering, alleging violations of Section 16(b) of the Securities Exchange Act of 1934 (the "Exchange Act"). The complaint alleges that the combined number of shares of the Company's common stock beneficially owned by the lead underwriters and certain of the Company's unnamed officers, directors, and principal stockholders exceeded ten percent of the Company's outstanding common stock from the date of its initial public offering on January 28, 2000, through at least January 27, 2001. The complaint further alleges that those entities and individuals were subject to the reporting requirements of Section 16(a) of the Exchange Act and the short-swing trading prohibition of Section 16(b) of the Exchange Act, and failed to comply with those provisions. The complaint seeks to recover from the lead underwriters any "short-swing profits" obtained by them in violation of Section 16(b) of the Exchange Act. The Company was named as a nominal defendant in the action, but has no liability for the asserted claims. None of its directors or officers serving in such capacities at the time of its initial public offering (many of whom still serve as officers or directors of the Company) are currently named as defendants in this action, but there can be no guarantee that the complaint will not be amended, or a new complaint or suit filed, naming such directors or officers as defendants in this action or another action alleging a violation of the same provisions of the Exchange Act. On February 25, 2008, the plaintiff filed an amended complaint asserting substantially similar claims as those set forth in the initial complaint. On July 25,

(tabular amounts in thousands except per share amounts and percentages)

2008, the Company joined with 29 other issuers to file the Issuer Defendants' Joint Motion to Dismiss. The plaintiff filed her opposition on September 8, 2008, and the Company and the other Issuer Defendants filed their Reply in Support of Their Joint Motion to Dismiss on October 23, 2008. Oral argument on the Joint Motion to Dismiss was held on January 16, 2009 at which time the Judge took the pending notice to dismiss under advisement. The Judge has stayed discovery until he rules on all motions to dismiss. The Company currently believes that the outcome of this litigation will not have a material adverse impact on its consolidated financial position and results of operations.

The underwriters of the Company's initial public offering are named as defendants in several class action complaints which have been filed allegedly on behalf of certain persons who purchased shares of the Company's common stock between January 28, 2000 and December 6, 2000. These complaints allege violations of the Securities Act and the Exchange Act. Primarily, the complaints allege that there was undisclosed compensation received by the Company's underwriters in connection with the Company's initial public offering. While the Company and its officers and directors have not been named as defendants in these suits, based on comparable lawsuits filed against other companies there can be no assurance that the Company and its officers and directors will not be named in similar complaints in the future.

(15) Accrued Liabilities

Accrued liabilities consist of the following:

	December 31,	
	2008	2007
Payroll and payroll-related	$ 7,921	$6,179
Professional services	793	597
Warranty	270	250
Deferred rent expense	151	107
Taxes payable	1,549	592
Interest payable	76	139
Unvouchered invoices	525	520
Other accrued liabilities	2,003	1,339
Total accrued liabilities	$13,288	$9,723

(tabular amounts in thousands except per share amounts and percentages)

(16) Segment Information and Enterprise Reporting

The Company operates in one reportable segment as it markets and sells one family of anesthesia monitoring systems. The Company does not disaggregate financial information by product or geographically, other than sales by region and sales by product, for management purposes. Substantially all of the Company's assets are located within the United States. All of the Company's products are manufactured in the United States.

Revenue by geographic destination and as a percentage of total revenue is as follows:

	Year Ended December 31,		
	2008	2007	2006
Geographic Area by Destination			
Domestic	$69,101	$73,107	$70,729
International	30,166	24,217	20,605
Total	$99,267	$97,324	$91,334

	Year Ended December 31,		
	2008	2007	2006
Geographic Area by Destination			
Domestic	70%	75%	77%
International	30	25	23
Total	100%	100%	100%

The Company did not have sales in any individual country, other than the United States, or to any individual customer, that accounted for more than 10% of the Company's total revenue or accounts receivable for the years ended December 31, 2008, 2007 and 2006.

Revenue by products and as a percentage of total revenue is as follows:

	2008	2007	2006
BIS Sensor revenue	$84,161	$75,372	$64,752
Percent of total revenue	85%	78%	71%
Equipment revenue	$15,106	$16,706	$20,266
Percent of total revenue	15%	17%	22%
Strategic alliance revenue	$ —	$ 5,246	$ 6,316
Percent of total revenue	—	5%	7%
Total revenue	**$99,267**	**$97,324**	**$91,334**

The Company's long-lived assets included the following:

	Year Ended December 31,	
	2008	2007
Property and equipment		
Domestic	$8,125	$8,296
International	194	159
Total	$8,319	$8,455

(tabular amounts in thousands except per share amounts and percentages)

(17) Valuation and Qualifying Accounts

The following tables set forth activity in the Company's valuation and qualifying accounts:

	Balance at Beginning of Period	Additions: Charges (Credits) to Expenses and Costs of Revenue	Additions: Charges (Credits) to Revenue	Deductions	Balance at End of Period
Allowance for Doubtful Accounts					
Year Ended —					
December 31, 2006	$ 116	$ 141	$ —	$ 39	$218
December 31, 2007	218	129	—	25	322
December 31, 2008	322	(115)	—	86	121
Reserve for Excess or Obsolete Inventory					
Year Ended —					
December 31, 2006	$ 122	$ 267	$ —	$176	$213
December 31, 2007	213	32	—	—	245
December 31, 2008	245	114	—	52	307
Allowance for Lease Payments					
Year Ended —					
December 31, 2006	$ 777	$ —	$ 110	$ 21	$866
December 31, 2007	866	—	80	231	715
December 31, 2008	715	—	70	298	487
Tax Valuation Allowance					
Year Ended —					
December 31, 2006	$47,327	$(19,085)	$(28,242)	$ —	$ —
December 31, 2007	—	—	—	—	—
December 31, 2008	—	807	—	—	807

(18) Loan Agreements

In May 2008, the Company renewed its revolving line of credit agreement with a commercial bank. The Company is entitled to borrow up to $5,000,000 under the revolving line of credit, which expires in May 2009. The line of credit may be extended on an annual basis at the discretion of the commercial bank. Interest on any borrowings under the revolving line of credit is, at the election of the Company, either the prime rate or at the London Inter-Bank Offer Rate, or LIBOR, plus 2.25%. Up to $1,500,000 of the $5,000,000 revolving line of credit is available for standby letters of credit. At December 31, 2008, the Company had outstanding standby letters of credit with the commercial bank of approximately $823,000. At December 31, 2008, there was no outstanding balance under this revolving line of credit.

The revolving line of credit agreement contains restrictive covenants that require the Company to maintain liquidity and net worth ratios and is secured by certain investments of the Company, which are shown as restricted cash in the accompanying consolidated balance sheets. The Company is required to maintain restricted cash in an amount equal to 102% of the outstanding amounts under the revolving line of credit agreement. At December 31, 2008, the Company had $839,000 classified as restricted cash on the consolidated balance sheet relating to standby letters of credit issued in connection with the Company's leased building in Norwood, Massachusetts and an international service provider. At December 31, 2008, the Company was in compliance with all covenants contained in the revolving line of credit agreement.

(19) Termination and Repurchase Agreement with Boston Scientific Corporation

On June 11, 2007, the Company entered into a Termination and Repurchase Agreement with Boston Scientific Corporation. Under the terms of the agreement, the Company and Boston Scientific Corporation agreed to terminate the following agreements:

- the OEM Product Development Agreement dated as of August 7, 2002 (as amended January 31, 2005 and February 5, 2007, the "2002 Agreement"), pursuant to which the Company was to develop certain products that Boston Scientific Corporation would then commercialize in the area of monitoring patients under sedation in a range of less invasive medical specialties, and pursuant to which the Company granted Boston Scientific Corporation an exclusive option to become the distributor for a period of time of certain products;

- the Product Development and Distribution Agreement dated as of May 23, 2005 (the "2005 Agreement"), pursuant to which the Company was to develop new applications of its brain-monitoring technology in the area of the diagnosis and treatment of neurological, psychiatric and pain disorders and Boston Scientific was appointed the exclusive distributor of such products; and

- the Letter Agreement dated August 7, 2002, and Security Agreement dated August 7, 2002, pursuant to which Boston Scientific Corporation agreed to make revolving interest-bearing loans to Aspect from time to time at the request of Aspect, such revolving loans being evidenced by a promissory note in the original principal amount of $5,000,000 dated August 7, 2002.

In addition to the termination of the agreements referenced above, on June 13, 2007, the Company repurchased 2,000,000 shares of its common stock held by Boston Scientific Corporation at a price of approximately $15.91 per share, for an aggregate repurchase price of $31,816,000. The per share price represented the average of the closing prices of the Company's common stock as reported on the Nasdaq Global Market for the 20 consecutive trading days up to and including the date of the Termination and Repurchase Agreement. These shares have been cancelled and retired. In accordance with the agreement, for a period of 180 days following the date of the agreement, the Company had the right to purchase any or all of the balance of its shares of common stock held by Boston Scientific Corporation at a price of $15.00 per share or the average of the closing prices for the Company's common stock over the 10 trading days prior to the Company's exercising its right to repurchase, whichever is higher. Additionally, Boston Scientific Corporation had agreed that for a period of 180 days after the effective date of the agreement that it would not sell, contract to sell, grant any option to purchase or dispose of any of the shares of the Company's common stock held of record by Boston Scientific Corporation on the effective date. On July 10, 2007, the Company exercised its right under the Termination and Repurchase Agreement and repurchased an additional 2,500,000 shares of common stock from Boston Scientific Corporation for $37,655,000. The repurchased shares were cancelled and retired. On November 7, 2007, the Company agreed to waive the lock-up and the call option set forth in the Termination and Repurchase Agreement with respect to the remaining 1,513,239 shares of the Company's common stock held by Boston Scientific Corporation because Boston Scientific Corporation and a third party reached an agreement pursuant to which that third party agreed to purchase all of such shares.

Additionally, in connection with the termination of the 2002 Agreement and the 2005 Agreement, the Company recognized approximately $3,550,000 of strategic alliance revenue in June 2007. Approximately $3,835,000 had been recorded previously as deferred revenue relating to the 2002 Agreement, which represented the unamortized portion of the purchase price of $7.00 per share in excess of the closing price of the Company's common stock on August 7, 2002 of $2.59 per share. The $3,835,000 of deferred revenue was offset by approximately $285,000 for a receivable from Boston Scientific Corporation which had been recognized by the Company during the quarter ended March 31, 2007 relating to the 2005 Agreement with Boston Scientific Corporation. Upon the termination of the 2005 Agreement, the Company reversed the receivable against strategic alliance revenue where it was originally recorded in the income statement.

(20) Convertible Debt

In June 2007, the Company completed a private placement of $125,000,000 aggregate principal amount of 2.5% convertible notes due 2014 (the "notes"). The notes are senior unsecured obligations and will rank equally with all of the Company's existing and future senior debt and to all of the Company's subordinated debt. Interest on the notes is payable semiannually in cash on June 15th and December 15th of each year with the first payment being made on December 15, 2007. The notes will mature on June 15, 2014. Net proceeds received from the issuance of the notes were approximately $121,000,000, which is net of the underwriter's discount of approximately $4,000,000. In connection with the notes offering, the Company incurred total offering costs of approximately $4,559,000 which have been recorded as deferred financing fees in the consolidated balance sheet and are being amortized on a straight-line basis over the term of the notes. As of December 31, 2008, approximately $2,707,000 of the offering costs have been amortized to interest expense.

Holders may convert notes at their option on any day prior to the close of business on the scheduled trading day immediately preceding March 15, 2014 only under the following circumstances:

- during the five business day period after any five consecutive trading day period (the "measurement period") in which the price per note for each trading day of that measurement period was less than 97% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such day;
- during any calendar quarter (and only during such quarter) after the calendar quarter ending September 30, 2007, if the last reported sale price of the Company's common stock for 20 or more trading days in a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter exceeds 120% of the applicable conversion price in effect on the last trading day of the immediately preceding calendar quarter; or
- upon the occurrence of specified corporate events.

The notes will be convertible, regardless of the foregoing circumstances, at any time from, and including, March 15, 2014 through the scheduled trading day immediately preceding the maturity date of the notes.

The initial conversion rate for the notes is 52.4294 shares of common stock per $1,000 in principal amount of notes, which is equivalent to an initial conversion price of approximately $19.07 per share of common stock. The conversion rate will be subject to adjustment in some events but will not be adjusted for accrued interest. In addition, if a "make-whole fundamental change" (as defined in the indenture dated as of June 20, 2007 between the Company and U.S. Bank National Association, (the "Indenture")) occurs prior to the maturity date of the notes, the Company will in some cases increase the conversion rate for a holder that elects to convert its notes in connection with such "make-whole fundamental change". No adjustment to the conversion rate will be made if the Company's stock price is less than $15.57 per share or if the stock price exceeds $50.00 (in each case subject to adjustment).

Unless the Company obtains stockholder authorization to utilize the net share settlement feature of the notes and the Company irrevocably elects such settlement method at any time on or prior to the 45th scheduled trading day preceding the maturity date of the notes, upon conversion the Company will deliver a number of shares of its common stock equal to the conversion rate on the related conversion date for each $1,000 principal amount of notes. The Company will deliver cash in lieu of any fractional shares of its common stock based on the last reported sale price of its common stock on the related conversion date (or, if the conversion date is not a trading day, on the next succeeding trading day). If the Company obtains stockholder approval of the net share settlement feature in connection with the potential conversion of the notes, then upon conversion of the notes the Company would (1) pay cash in an amount equal to the lesser of one-fortieth of the principal amount of the notes being converted and the daily conversion value (the product of the conversion rate and the current trading price) of the notes being converted and (2) issue shares of its common stock only to the extent that the daily conversion value of the notes exceeded one-fortieth of the principal amount of the notes being converted for each trading day of the relevant 40 trading day observation period.

(tabular amounts in thousands except per share amounts and percentages)

The Company will not make any sinking fund payments in connection with the notes and the notes may not be redeemed by the Company prior to maturity date.

In connection with the offering of the notes, the Company repurchased an additional 1,000,000 shares of its common stock for $15,570,000 in privately negotiated transactions during 2007. These shares have been cancelled and retired.

During 2008, the Company repurchased an aggregate of $60,000,000 of its 2.5% convertible notes for total consideration of $30,431,000, plus accrued interest of approximately $617,000 through the dates of repurchase. As a result of these transactions, the Company recorded a gain on debt repurchase of $27,793,000 in 2008, which is net of the write-off of the ratable portion of unamortized deferred financing fees.

(21) Stock Repurchase Program

On August 3, 2006, the Company's Board of Directors authorized the repurchase of up to 2,000,000 shares of the Company's common stock through the open market or in privately negotiated transactions. The repurchase program may be suspended or discontinued at any time. There were no repurchases under this plan in 2007 or 2008. As of December 31, 2008, the Company has repurchased a total of 276,493 shares of common stock under this repurchase program for $5,008,000. Repurchased shares are held in treasury pending use for general corporate purposes, including issuances under various employee stock plans. As of December 31, 2008, the Company is authorized to repurchase an additional 1,723,507 shares of common stock in the future.

(22) Subsequent Event

In February 2009, the Company repurchased an additional $7,000,000 of its 2.5% convertible notes for total consideration of approximately $3,800,000, including accrued interest of approximately $28,000. As a result of this transaction, the Company recorded a gain on debt repurchase of approximately $3,000,000 in February 2009, which is net of the write-off of the ratable portion of unamortized deferred financing fees.

(23) Summarized Quarterly Financial Data (Unaudited)

The tables that follow summarize unaudited quarterly financial data for the years ended December 31, 2008 and December 31, 2007:

	For the Quarter Ended			
	March 29, 2008	June 28, 2008	September 27, 2008	December 31, 2008
Revenue	$24,428	$25,185	$24,758	$24,896
Gross profit	17,942	18,832	18,654	18,576
Operating expenses	18,083	19,778	20,790	21,565
Income tax provision	424	1,270	1,883	5,795
Net (loss) income	(235)	1,899	1,040	8,397
Net (loss) income per share				
Basic	(0.01)	0.11	0.06	0.48
Diluted	(0.01)	0.10	0.06	0.40

(tabular amounts in thousands except per share amounts and percentages)

	For the Quarter Ended			
	March 31, 2007	June 30, 2007	September 29, 2007	December 31, 2007
Revenue	$24,119	$26,641	$22,632	$23,932
Gross profit	18,040	20,874	17,099	17,992
Operating expenses	17,929	18,409	17,145	17,879
Income tax provision	576	1,882	683	255
Net income (loss)	517	1,488	(156)	408
Net income (loss) per share				
Basic	0.02	0.07	(0.01)	0.02
Diluted	0.02	0.07	(0.01)	0.02

EXHIBIT INDEX

Exhibit No.	Exhibit
3(i).1	Restated Certificate of Incorporation is incorporated herein by reference to Exhibit 3.2 to the Registrant's Second Amendment to its Registration Statement on Form S-1 filed on December 9, 1999 (File No. 333-86295).
3(ii).1	Amended and Restated By-Laws are incorporated herein by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended March 31, 2001, filed on May 14, 2001.
3(ii).2	Amendment to Amended and Restated By-Laws are incorporated herein by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 5, 2007.
3.2	Certificate of Designations of Series A Junior Participating Preferred Stock, dated November 29, 2004, is incorporated herein by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on December 1, 2004.
4.1	Specimen common stock certificate is incorporated herein by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 filed on August 31, 1999 (File No. 333-86295).
4.2	See Exhibits 3(i).1, 3(ii).1 and 3(ii).2 for provisions of the Registrant's certificate of incorporation and by-laws defining the rights of holders of common stock.
4.3	Rights Agreement, dated November 29, 2004, by and between the Registrant and EquiServe Trust Company, N.A., which includes as Exhibit A the form of Certificate of Designations of Series A Junior Participating preferred Stock, as Exhibit B the form of Rights Certificate and as Exhibit C the Summary of Rights to Purchase Preferred Stock, is incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on December 1, 2004.
4.4	Amendment No. 1, dated May 23, 3005, to Rights Agreement, dated November 29, 2004, by and between the Registrant and EquiServe Trust Company, N.A. is incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on May 23, 2005.
4.5	Amendment No. 2, dated November 1, 2007, to Rights Agreement, dated November 29, 2004, by and between the Registrant and Computershare Trust Company, N.A. (formerly EquiServe Trust Company, N.A.) is incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on November 5, 2007.
4.6	Amendment No. 3, dated June 2, 2008, to Rights Agreement, dated November 29, 2004, by and between the Registrant and Computershare Trust Company, N.A. (formerly EquiServe Trust Company, N.A.) is incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on June 2, 2008.
4.7	Indenture, dated June 20, 2007, by and between the Registrant and U.S. Bank National Association is incorporated herein by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on June 21, 2007.
4.8	Form of 2.50% Convertible Senior Note due 2014 is incorporated herein by reference to Exhibit 4.9 to the Registrant's Registration Statement on Form S-3 filed on August 29, 2007 (File No. 333-145779).
10.1*	Amended and Restated 1998 Director Equity Incentive Plan is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 1, 2005.
10.2*	Form of Nonstatutory Stock Option Agreement Granted Under 1998 Director Stock Option Plan is incorporated herein by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on June 1, 2005.
10.3*	Form of Restricted Stock Agreement Granted Under the Amended and Restated 1998 Director Equity Incentive Plan is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 1, 2005.
10.4*	Form of Restricted Stock Agreement Granted Under the Amended and Restated 1998 Director Equity Incentive Plan is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on February 22, 2006.
10.5*	2001 Stock Incentive Plan is incorporated herein by reference to the Registrant's Proxy Statement on Schedule 14A filed on April 18, 2001.
10.6*	Amendment to 2001 Stock Incentive Plan is incorporated herein by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on June 1, 2005.

Exhibit No.	Exhibit
10.7*	Amendment to 2001 Stock Incentive Plan is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on May 22, 2008.
10.8*	Form of Incentive Stock Option Agreement Granted Under 2001 Stock Incentive Plan is incorporated herein by reference to Exhibit 10.39 to the Registrant's Annual Report on Form 10-K filed on March 15, 2005.
10.9*	Form of Restricted Stock Agreement Granted Under 2001 Stock Incentive Plan is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on March 30, 2005.
10.10*	Key Employee Change in Control Severance Benefits Plan is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on September 24, 2008.
10.11*	Severance Agreement and General Release, dated January 5, 2009, by and between the Registrant and Michael Falvey is incorporated herein by reference to Exhibit 10.1 to Registrant's Current Report on Form 8-K filed on January 12, 2009.
10.12†	International Distribution Agreement, dated January 21, 1998, by and between the Registrant and Nihon Kohden Corporation is incorporated herein by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 filed on August 31, 1999 (File No. 333-86295).
10.13†	International License Agreement, dated January 21, 1998, by and between the Registrant and Nihon Kohden Corporation is incorporated herein by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 filed on August 31, 1999 (File No. 333-86295).
10.14	License Agreement, dated October 31, 1995, by and between the Registrant and Siemens Medical Systems, Inc. is incorporated herein by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 filed on August 31, 1999 (File No. 333-86295).
10.15†	Product Agreement, dated May 5, 1999, by and between the Registrant and Drager Medizintechnik GmbH is incorporated herein by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1 filed on August 31, 1999 (File No. 333-86295).
10.16†	Distribution and License Agreement, dated April 1, 1996, between SpaceLabs Medical, Inc. and the Registrant is incorporated herein by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form S-1 filed on August 31, 1999 (File No. 333-86295).
10.17	Revolving Credit Facility, dated May 16, 2001, by and between the Registrant and Fleet National Bank, together with Promissory Note, dated May 16, 2001, by and between the Registrant and Fleet National Bank, and Pledge Agreement, dated as of May 16, 2001, by and between the Registrant and Fleet National Bank is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended June 30, 2001, filed on August 13, 2001.
10.18	First Amendment, dated December 21, 2001, to Loan Agreement, dated May 16, 2001, by and between the Registrant and Fleet National Bank is incorporated herein by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K, for the year ended December 31, 2001, filed on March 29, 2002.
10.19	Third Amendment, dated March 21, 2003, to Loan Agreement, dated May 16, 2001, by and between the Registrant and Fleet National Bank is incorporated herein by reference to Exhibit 10.33 to the Registrant's Annual Report on Form 10-K, for the year ended December 31, 2002, filed on Mach 28, 2003.
10.20	Fifth Amendment, dated May 14, 2004, to Loan Agreement, dated May 16, 2001, by and between the Registrant and Fleet National Bank, together with Deposit Pledge Agreement, dated May 14, 2004, by and between the Registrant and Fleet National Bank is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended July 3, 2004, filed on August 11, 2004.
10.21	Sixth Amendment, dated October 8, 2004, to Loan Agreement, dated May 16, 2001, by and between the Registrant and Fleet National Bank is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended October 2, 2004, filed on November 10, 2004.
10.22	Advisory Board Agreement, dated as of January 23, 2002, by and between the Registrant and Stephen E. Coit is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, for the period ended March 30, 2002, filed on May 13, 2002.

Exhibit No.	Exhibit
10.23†	OEM Development and Purchase Agreement, dated August 6, 1999, by and between the Registrant and Philips Medizinsysteme Boeblingen GmbH (formerly Agilent Technologies, Inc.) is incorporated herein by reference to Exhibit 10.7 to the Registrant's First Amendment to its Registration Statement on Form S-1 filed on October 6, 1999 (File No. 333-86295).
10.24†	Letter Agreement, dated August 27, 1999, by and between the Registrant and Philips Medizinsysteme Boeblingen GmbH (formerly Agilent Technologies, Inc.) is incorporated herein by reference to Exhibit 10.8 to the Registrant's First Amendment to its Registration Statement on Form S-1 filed on October 6, 1999 (File No. 333-86295).
10.25†	Addendum 2, dated December 16, 2003 with prices effective January 1, 2004, to the OEM Development and Purchase Agreement, dated August 6, 1999, by and between the Registrant and Philips Medizinsysteme Boeblingen GmbH (formerly Agilent Technologies, Inc.) is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, for the period ended April 3, 2004, filed on May 12, 2004.
10.26†	Addendum 3, dated February 3, 2006 with prices effective September 1, 2004, to the OEM Development and Purchase Agreement, dated August 6, 1999, by and between the Registrant and Philips Medizinsysteme Boeblingen GmbH (formerly Agilent Technologies, Inc.) is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ending September 30, 2006, filed on August 10, 2006.
10.27†	OEM Development and Purchase Agreement, dated February 13, 2003, by and between the Registrant and Dixtal Biomedica Ind E Com Ltda. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended March 29, 2003, filed on May 13, 2003.
10.28†	OEM Development and Purchase Agreement, dated July 24, 2003, by and between the Registrant and Datascope Corp. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended September 27, 2003, filed on November 10, 2003.
10.29†	BISx Development, Purchase and License Agreement, dated January 28, 2004, by and between the Registrant and Draeger Medical Systems, Inc. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended April 3, 2004, filed on May 12, 2004.
10.30†	BISx License, Development, and Supply Agreement, dated October 17, 2005, by and between the Registrant and Spacelabs Medical, Inc. is incorporated herein by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on November 10, 2005.
10.31†	BISx International License Agreement, dated March 21, 2008, by and between the Registrant and Nihon Kohden Corporation, is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended March 29, 2008, filed on May 8, 2008.
10.32†	Exclusive License Agreement, dated July 1, 2004, by and between the Registrant and The Regents of the University of California is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, for the period ended July 3, 2004, filed on August 11, 2004.
10.33†	Capital Equipment Supplier Agreement for Level of Consciousness, dated January 27, 2005, between the Registrant and Novation, LLC is incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the period ended April 2, 2005, filed on May 12, 2005.
10.34†	Purchase Agreement, dated August 30, 2005, by and between the Registrant and General Electric Company is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 10, 2005.
10.35	Net Lease, dated February 3, 2006, by and between the Registrant and CFRI/CQ Norwood Upland, L.L.C. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on February 9, 2006.
10.36	Second Amendment, dated July 26, 2006, to Net Lease, dated February 3, 2006, by and between the Registrant and CFRI/CQ Norwood Upland, L.L.C. is incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, for the period ended July 1, 2006, filed on August 10, 2006.
10.37	Termination and Repurchase Agreement, effective June 11, 2007, by and between the Registrant and Boston Scientific Corporation is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 12, 2007.

Exhibit No.	Exhibit
10.38	Registration Rights Agreement, dated June 11, 2007, by and between the Registrant and Boston Scientific Corporation is incorporated herein by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on June 12, 2007.
10.39	Registration Rights Agreement, dated June 20, 2007, by and between the Registrant and Goldman, Sachs & Co. is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 21, 2007.
10.40	Letter, dated November 7, 2007, by and between the Registrant and Boston Scientific Corporation is incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 7, 2007.
21.1	Subsidiaries of the Registrant
23.1	Consent of Ernst & Young LLP.
31.1	Certification by Chief Executive Officer Pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification by Chief Financial Officer Pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification by Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification by Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

† Confidential treatment has been requested as to certain portions of this Exhibit. Such portions have been omitted and filed separately with the Securities and Exchange Commission.

* Management contracts and compensatory plan or arrangements required to be filed as an Exhibit pursuant to Item 15(b) of Form 10-K.

ASPECT MEDICAL SYSTEMS, INC.

One Upland Road
Norwood, Massachusetts 02062

NOTICE OF 2009 ANNUAL MEETING OF STOCKHOLDERS

To Be Held on June 5, 2009

To our stockholders:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of Aspect Medical Systems, Inc. will be held on Friday, June 5, 2009 at 9:00 a.m., local time, at our corporate offices, One Upland Road, Norwood, Massachusetts 02062. We refer to Aspect Medical Systems, Inc. herein as "Aspect," "we," or "us." At the Annual Meeting of Stockholders, our stockholders will consider and vote on the following matters:

1. the election of three (3) members to our board of directors to serve as Class III directors, each for a term of three years;
2. to approve a one-time stock option exchange program under which eligible employees (excluding our executive officers and directors) would be able to elect to exchange outstanding stock options with an exercise price of $15.00 or greater issued under our 1998 Stock Incentive Plan or our 2001 Stock Incentive Plan for new lower-priced stock options;
3. to approve an amendment to our Amended and Restated By-Laws, as amended, which provides that, subject to limited exceptions, future annual meetings of stockholders will be held no later than May 25 in each year; and
4. the ratification of the selection by the Audit Committee of our board of directors of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2009.

The stockholders will also act on any other business that may properly come before the Annual Meeting of Stockholders or any adjournment thereof.

Stockholders of record at the close of business on April 13, 2009, are entitled to notice of, and to vote at, the Annual Meeting of Stockholders or any adjournment thereof. Your vote is important regardless of the number of shares you own. Our stock transfer books will remain open for the purchase and sale of our common stock.

We hope that all stockholders will be able to attend the Annual Meeting of Stockholders in person. However, in order to ensure that a quorum is present at the annual meeting, please date, sign and promptly return the enclosed proxy card whether or not you expect to attend the Annual Meeting of Stockholders. A postage-prepaid envelope, addressed to Computershare Trust Company, N.A., our transfer agent and registrar, has been enclosed for your convenience. Sending in your proxy will not prevent you from voting your stock at the Annual Meeting of Stockholders if you desire to do so, as your proxy is revocable at your option.

All stockholders are cordially invited to attend the Annual Meeting of Stockholders.

By Order of the Board of Directors,

J. Neal Armstrong
Secretary

Norwood, Massachusetts
April 30, 2009

WHETHER OR NOT YOU EXPECT TO ATTEND THE ANNUAL MEETING, PLEASE COMPLETE, DATE AND SIGN THE ENCLOSED PROXY CARD AND PROMPTLY MAIL IT IN THE ENCLOSED ENVELOPE IN ORDER TO ASSURE REPRESENTATION OF YOUR SHARES AT THE ANNUAL MEETING. NO POSTAGE NEED BE AFFIXED IF THE PROXY CARD IS MAILED WITHIN THE UNITED STATES.

ASPECT MEDICAL SYSTEMS, INC.

One Upland Road
Norwood, Massachusetts 02062

PROXY STATEMENT

for the 2009 Annual Meeting of Stockholders
To Be Held on June 5, 2009

This Proxy Statement and the enclosed proxy card are being furnished in connection with the solicitation of proxies by the board of directors of Aspect Medical Systems, Inc. for use at the 2009 Annual Meeting of Stockholders to be held on Friday, June 5, 2009 at 9:00 a.m., local time, at the corporate offices of Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts 02062, and at any adjournment thereof.

All proxies will be voted in accordance with the instructions contained in those proxy cards. If no choice is specified, the proxies will be voted in favor of the matters set forth in the accompanying Notice of 2009 Annual Meeting of Stockholders. Any proxy may be revoked by a stockholder at any time before it is exercised by signing another proxy with a later date, by delivery of written revocation to our Secretary or by appearing at the annual meeting and voting in person.

Our Annual Report to Stockholders for the fiscal year ended December 31, 2008 is being mailed to stockholders with the mailing of the Notice of Annual Meeting of Stockholders and this Proxy Statement on or about May 5, 2009.

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to be Held on June 5, 2009: The proxy statement and annual report to stockholders are available at www.edocumentview.com/aspm.

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 as filed with the Securities and Exchange Commission, except for exhibits, will be furnished without charge to any stockholder upon written or oral request to our Investor Relations Department, Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts 02062, telephone: (617) 559-7000.

Voting Securities and Votes Required

Stockholders of record at the close of business on April 13, 2009 will be entitled to notice of, and to vote at, the 2009 Annual Meeting of Stockholders. On that date, 17,415,429 shares of our common stock were issued and outstanding. Each share of common stock entitles the holder to one vote with respect to all matters submitted to stockholders at the 2009 Annual Meeting of Stockholders. We have no other securities entitled to vote at the meeting.

The representation in person or by proxy of at least a majority of the shares of common stock issued, outstanding and entitled to vote at the 2009 Annual Meeting of Stockholders is necessary to establish a quorum for the transaction of business at the 2009 Annual Meeting of Stockholders. If a quorum is not present, the annual meeting will be adjourned until a quorum is obtained.

Directors are elected by a plurality of votes cast by stockholders entitled to vote at the 2009 Annual Meeting of Stockholders. To be approved, the one-time stock option exchange program requires the affirmative vote of the holders of a majority of votes cast on the proposal. To be approved, the amendment to our By-Laws requires the affirmative vote of the holders of a majority of our shares issued, outstanding and entitled to vote at the Annual Meeting of Stockholders. To be approved, the ratification of Ernst & Young LLP as our independent registered public accounting firm, requires the affirmative vote of the majority of shares present in person or represented by proxy at the 2009 Annual Meeting of Stockholders. The votes will be counted, tabulated and certified by a representative of Computershare Trust Company, N.A., who will serve as the inspector of elections at the 2009 Annual Meeting of Stockholders.

Shares which abstain from voting as to a particular matter, and shares held in "street name" by banks, brokerage firms or nominees who indicate on their proxy cards that they do not have discretionary authority to vote such shares as to a particular matter, which we refer to as "broker non-votes," will not be considered as present and entitled to vote with respect to a particular matter and will not be considered a vote cast on such matter. Accordingly, neither abstentions nor broker non-votes will have any effect upon the outcome of voting with respect to any matters voted on at the 2009 Annual Meeting of Stockholders, but will be counted for the purpose of determining whether a quorum exists.

Stockholders may vote in person or by proxy. Execution of a proxy will not in any way affect a stockholder's right to attend the annual meeting and vote in person. Any stockholder voting by proxy has the right to revoke the proxy at any time before it is exercised by giving our Secretary a duly executed proxy card bearing a later date than the proxy being revoked at any time before that proxy is voted, by giving our Secretary written notice that you want to revoke your proxy or by appearing at the annual meeting and voting in person. The shares represented by all properly executed proxies received in time for the annual meeting will be voted as specified in those proxy cards. If the shares you own are held in your name, and you do not specify in the proxy card how your shares are to be voted, they will be voted:

- in favor of the election as Class III directors of those persons named in this Proxy Statement;
- in favor of the approval of the one-time stock option exchange program under which eligible employees (excluding our executive officers and directors) would be able to elect to exchange outstanding stock options with an exercise price of $15.00 or greater issued under our 1998 Stock Incentive Plan or our 2001 Stock Incentive Plan for new lower-priced stock options;
- in favor of the approval of an amendment to our Amended and Restated By-Laws, as amended, which provides that, subject to limited exceptions, future annual meetings of stockholders will be held no later than May 25 in each year;
- in favor of the ratification of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2009; and
- with respect to any other items that may properly come before the meeting.

If the shares you own are held in "street name," the bank, brokerage firm or nominee, as the record holder of your shares, is required to vote your shares in accordance with your instructions. In order to vote your shares held in "street name," you will need to follow the directions your bank, brokerage firm or nominee provides you. If you desire to vote your shares held in "street name" at the Annual Meeting by proxy, you will need to obtain a proxy card from the holder of record.

Householding of Annual Meeting Materials

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our Proxy Statement and Annual Report to Stockholders may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you upon written or oral request to our Investor Relations Department, Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts 02062, telephone: (617) 559-7000. If you want to receive separate copies of our Proxy Statement or Annual Report to Stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

STOCK OWNERSHIP INFORMATION

The following table sets forth information regarding beneficial ownership of our common stock as of January 31, 2009 by:

- each person or entity known to us to beneficially own more than 5% of the outstanding shares of our common stock,
- each of our directors and nominees for director,
- each of the executive officers named in the "Executive Compensation — Summary Compensation Table" below, whom we refer to herein as our named executive officers, and
- all of our directors, nominees for director and executive officers as a group.

The number of shares of common stock beneficially owned by each person or entity is determined in accordance with the applicable rules of the Securities and Exchange Commission, or SEC, which rules require us to include shares of our common stock over which such person or entity has voting or investment power. The information contained in the following table is not necessarily indicative of beneficial ownership for any other purpose and the inclusion of any shares in the table does not constitute an admission of beneficial ownership of those shares. Shares of our common stock issuable under stock options exercisable on or before April 1, 2009 are deemed beneficially owned and such shares are used in computing the percentage ownership of the person holding the options, but are not deemed outstanding for computing the percentage ownership of any other person. Unless otherwise indicated, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under community property laws. Unless otherwise indicated, the address of all directors, nominees and executive officers is c/o Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts 02062.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned(1)	Percentage of Common Stock Beneficially Owned
5% Stockholders		
Coghill Capital Management, L.L.C. (2) One North Wacker Drive Suite 4350 Chicago, IL 60606	2,798,515	16.1
First Manhattan Co. (3) 437 Madison Avenue New York, NY 10022	2,355,620	13.6
Ronald J. Juvonen (4) c/o Downtown Associates, L.L.C 674 Unionville Road, Suite 105 Kennett Square, PA 19348	1,759,433	10.1
Security Investors, LLC (5) One Security Benefit Place Topeka, KS 66636	937,463	5.4
Zazove Associates, LLC (6) 1001 Tahoe Blvd. Incline Village, NV 89451	1,211,119	7.0
Directors, Nominees for Director and Named Executive Officers		
Jon C. Biro	0	*
Boudewijn L.P.M. Bollen (7)	117,057	*
Nassib G. Chamoun (8)	849,359	4.8
John Coolidge	112,070	*
J. Breckenridge Eagle (9)	489,190	2.8
Michael A. Esposito (10)	16,167	*
Michael Falvey (11)	27,068	*
David W. Feigal, Jr., M.D. (12)	30,500	*
William H. Floyd	297,139	1.7
Edwin M. Kania, Jr. (13)	135,768	*
Melvin L. Keating	0	*
Scott D. Kelley, M.D. (14)	287,254	1.6
James J. Mahoney, Jr. (15)	47,501	*
John J. O'Connor	16,167	*
Donald R. Stanski, M.D.	48,000	*
All directors, nominees for director and executive officers as a group (20 persons)	3,264,501	17.0

* Less than 1% of our outstanding common stock.

(1) Includes the following number of shares of our common stock issuable upon the exercise of outstanding stock options which may be exercised on or before April 1, 2009 by Mr. Bollen: 93,306; Mr. Chamoun: 463,021; Mr. Coolidge: 77,002; Mr. Eagle: 173,342; Mr. Esposito: 7,667; Mr. Falvey: 0; Dr. Feigal: 23,000; Mr. Floyd: 136,071; Mr. Kania: 23,000; Dr. Kelley: 246,413; Mr. Mahoney: 22,500; Mr. O'Connor: 7,667; Dr. Stanski: 40,500; and all directors and executive officers as a group: 1,888,760.

(2) This information is taken from a Schedule 13G/A filed with the SEC on February 17, 2009 by Coghill Capital Management, L.L.C., jointly with its affiliates CCM Master Qualified Fund, Ltd. and Clint D. Coghill. Of the 2,798,515 shares of common stock deemed beneficially owned, each reporting person reported sole voting power as to none of the shares.

(3) This information is taken from a Schedule 13G/A filed with the SEC on February 10, 2009.

(4) This information is taken from a Schedule 13G/A filed with the SEC on March 20, 2008. The shares of common stock are held by Downtown Associates I, L.P., Downtown Associates II, L.P., Downtown Associates III, L.P. and Downtown Associates V, L.P. (collectively referred to as the "Downtown Funds"). The general partner of the Downtown Funds is Downtown Associates, L.L.C. Ronald J. Juvonen, as the Managing Member of the General Partner, has sole voting power to vote and direct the disposition of all shares and thus is deemed to beneficially own all of such shares.

(5) This information is taken from a Schedule 13G filed with the SEC on February 13, 2009.

(6) This information is taken from a Schedule 13G filed with the SEC on February 13, 2009.

(7) Mr. Bollen resigned as our director, effective immediately prior to the Annual Meeting.

(8) Includes 120,000 shares of common stock held by The Nassib G. Chamoun 1998 Irrevocable Trust, a trust for the benefit of Mr. Chamoun's minor children. Mr. Chamoun disclaims beneficial ownership of all shares held in this trust.

(9) Includes 20,000 shares of common stock held by Jeanne Warren Eagle, as Trustee for the Trust for John Warren Eagle, of which Mr. Eagle disclaims beneficial ownership and 120,000 shares of common stock held by The Nassib G. Chamoun 1998 Irrevocable Trust, of which Mr. Eagle is the Trustee and disclaims beneficial ownership.

(10) Mr. Esposito, a Class III director, is not standing for re-election at the Annual Meeting.

(11) Mr. Falvey resigned from his position as Vice President, Chief Financial Officer and Secretary effective December 31, 2008.

(12) Dr. Feigal resigned as our director, effective immediately prior to the Annual Meeting.

(13) Includes 1,605 shares held by Mr. Kania's minor children.

(14) Includes 10,500 shares pledged to Merrill Lynch as security for an outstanding loan.

(15) Mr. Mahoney, a Class III director as of the date of this proxy statement, is not standing for re-election and will be elected to serve as a Class I director by our board of directors to fill the vacancy created by Dr. Feigal's resignation.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our directors, executive officers and the holders of more than 10% of our common stock to file with the SEC initial reports of ownership of our common stock and other equity securities on a Form 3 and reports of changes in such ownership on a Form 4 or Form 5. Officers, directors and 10% stockholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. Based solely on our review of copies of reports filed by the reporting persons furnished to us, or written representations from reporting persons, we believe that during the fiscal year ended December 31, 2008, the reporting persons complied with all Section 16(a) filing requirements, other than with respect to two Forms 4 filed by Mr. Stanski on January 12, 2009 to report purchases of an aggregate of 40,000 shares of common stock made between December 16, 2008 through December 24, 2008 and a Form 4 filed by Mr. Kania on May 29, 2008 to report our grant to Mr. Kania on May 21, 2008 of 2,000 shares of common stock and a stock option to purchase 3,000 shares of common stock.

PROPOSAL ONE — ELECTION OF DIRECTORS

General Information

We have a classified board of directors consisting of nine members: three Class I Directors, three Class II Directors and three Class III Directors. At each Annual Meeting of Stockholders, one class of directors is elected for a full term of three years to succeed those directors whose terms are expiring. Based on the recommendation of the Corporate Governance and Nominating Committee, the board of directors has nominated Jon C. Biro, Nassib G. Chamoun, and Melvin L. Keating to serve as Class III directors. The persons named in the enclosed proxy card will vote to elect, as Class III Directors, Jon C. Biro, Nassib G. Chamoun and Melvin L. Keating, the three director nominees, unless the proxy card is marked otherwise. Each Class III Director will be elected to hold office until the 2012 Annual Meeting of Stockholders and until his successor is elected and qualified. If a stockholder returns a proxy card without contrary instructions, the persons named as proxies will vote to elect as directors the nominees identified below. Mr. Chamoun is the only nominee who is currently a member of our board of directors. The nominees have indicated their willingness to serve if elected. However, if any director nominee should be unable to serve, the shares of common stock represented by proxies may be voted for a substitute nominee designated by our board of directors or our board of directors may reduce the number of nominees. Our board of directors does not believe that any of the nominees will be unable or unwilling to serve if elected.

For each member of our board of directors as of the Annual Meeting of Stockholders, including those who are nominees for election as Class III Directors, there follows information given by each such director concerning his age and length of service as a member of our board of directors, principal occupation and business experience during the past five years and the names of other publicly-held companies of which he serves as a director. No director or executive officer is related by blood, marriage or adoption to any other director or executive officer.

Pursuant to the terms of our agreement dated April 8, 2009 with First Manhattan Co., First BioMed Management Associates, LLC and First BioMed, L.P., which we collectively refer to as First Manhattan, the following changes will be made to our Board of Directors prior to the Annual Meeting of Stockholders:

- Michael A. Esposito, a current Class III director, is not standing for re-election at the Annual Meeting of Stockholders.
- Boudwijn L.P.M. Bollen, a Class II director, has resigned effective immediately prior to the Annual Meeting of Stockholders and the Board intends to elect Vincent P. Scialli to the fill the vacancy created by his resignation, the election of Mr. Scialli to be effective immediately prior to the Annual Meeting of Stockholders.
- David W. Feigal Jr., M.D., a Class I director, has resigned effective immediately prior to the Annual Meeting and the Board intends to elect James J, Mahoney, a current Class III director, to fill the vacancy created by Dr. Feigal's resignation, the election of Mr. Mahoney to be effective immediately prior to the Annual Meeting of Stockholders.

We refer to this agreement as the Agreement. For a further discussion of the Agreement, see "Director Nomination and Election Arrangements" below.

Director Nomination and Election Arrangements

Pursuant to the Agreement, we have agreed to the following arrangements with respect to the nomination and/or election of directors:

- Jon C. Biro and Melvin L. Keating, whom we collectively refer to as the designated directors, have been nominated as our Class III directors, together with Nassib G. Chamoun, our President and Chief Executive Officer, for election at the Annual Meeting, for terms that will expire in 2012;
- David W. Feigal, Jr., M.D. and Boudewijn L.P.M Bollen, have resigned from the class of directors up for election in 2010 and 2011, respectively, in each case effective immediately prior to the Annual Meeting;

- James J. Mahoney, Jr., and Vincent P. Scialli will be elected as directors for terms ending at the 2010 and 2011 annual meeting of stockholders, respectively, to fill the vacancies created by the resignations of Dr. Feigal and Mr. Bollen, in each case effective immediately prior to the Annual Meeting;
- neither Aspect nor the Board will take any action that would shorten the terms of the designated directors or Mr. Scialli or any other nominee of First Manhattan pursuant to the Agreement, provided that the board of directors can recommend to stockholders that a given director be removed for cause if directors, after consultation with counsel, determine in good faith that their fiduciary duties require it;
- we have agreed to use all reasonable best efforts to ensure that the designated directors are elected at the Annual Meeting and have agreed to recommend to stockholders that they vote in favor of the election of the designated directors;
- we have agreed to nominate Mr. Scialli for re-election in 2011, unless the Corporate Governance and Nominating Committee of the Board determines that Mr. Scialli does not meet the criteria for considering a candidate to be qualified to serve as a director set forth in our Corporate Governance Guidelines and Director Qualification Standards, in which case First Manhattan will be entitled to designate another individual deemed to be qualified by the Board who the Board will nominate for election in 2011;
- if either of the designated directors or Mr. Scialli become unable to serve prior to the Annual Meeting or ceases to serve at some point before the 2012 election, First Manhattan will be entitled to designate an individual deemed to be qualified by the Board who the Board will then nominate for election or elect to fill such vacancy;
- until the 2011 annual meeting of stockholders, the size of the Board will not be increased beyond nine members unless at least eight members approve the increase; and
- Mr. Biro will become a member of our Audit Committee, Mr. Scialli will become a member of our Corporate Governance and Nominating Committee and Mr. Keating will become a member of our Compensation Committee.

Pursuant to the terms of the Agreement, each of our officers and directors has agreed to vote all of his or her shares for the designated directors.

We have the right to terminate the Agreement by delivering a written notice of termination at any time on or after the earlier of:

- the date on which our 2012 annual meeting of stockholders is held; and
- the first date on which First Manhattan no longer beneficially owns at least 500,000 shares of our common stock, in which case, First Manhattan would cause Mr. Scialli to immediately offer his written resignation as a director of Aspect.

The foregoing is not a complete description of the terms of the Agreement. For a copy of the Agreement, and a further description of its terms, please see our Current Report on Form 8-K, which we filed with the SEC on April 9, 2009.

Board Recommendation

Our board of directors believes that the election of Jon C. Biro, Nassib G. Chamoun, and Melvin L. Keating to serve as Class III directors is in the best interests of Aspect and our stockholders and, therefore, the board of directors unanimously recommends that the stockholders vote "FOR" the nominees.

Nominees for Term Expiring at the 2012 Annual Meeting (Class III Directors)

Jon C. Biro, age 43, is a director nominee.

Jon C. Biro has served as Executive Vice President, Chief Financial and Accounting Officer, Treasurer, Secretary and a director of Consolidated Graphics, Inc., a commercial printer with operations in the United States, Canada and the Czech Republic, since January 2008. Prior to joining Consolidated Graphics, Mr. Biro held several

executive positions with ICO, Inc., a company specializing in the manufacturing of specialty resins and concentrates. From April 2002 to January 2008, Mr. Biro was the Chief Financial Officer and Treasurer of ICO and served as its Interim Chief Executive Officer from July 2003 to February 2004. From September 1996 to April 2002, Mr. Biro was the Senior Vice President, Chief Accounting Officer and Treasurer of ICO. From October 1994 to September 1996, he was the Controller of ICO. Prior to his employment with ICO, Mr. Biro was employed by PriceWaterhouse Coopers LLP. Mr. Biro is a certified public accountant.

Nassib G. Chamoun, age 46, became a director in 1987.

Nassib G. Chamoun is a founder of Aspect and has served as a director since 1987. Mr. Chamoun has served as President of Aspect since 1996 and Chief Executive Officer since 1995. He also served as Chairman of the board of directors from 1987 to 1996 and as Chief Scientific Officer from 1991 to 1995. Prior to 1995, Mr. Chamoun also served as our President and Chief Executive Officer at various times since founding Aspect in 1987. From 1984 to 1987, Mr. Chamoun was a fellow in cardiovascular physiology at the Lown Cardiovascular Laboratory of the Harvard School of Public Health.

Melvin L. Keating, age 62, is a director nominee.

Melvin L. Keating was President and Chief Executive Officer of Alliance Semiconductor Corporation, a worldwide manufacturer and seller of semiconductors, from 2005 to 2008. From 2004 to 2005, Mr. Keating served as Executive Vice President, Chief Financial Officer and Treasurer of Quovadx Inc., a healthcare software company. Mr. Keating was employed as a Strategy Consultant for Warburg Pincus Equity Partners from 1997 to 2004, providing acquisition and investment target analysis and transactional advice. Mr. Keating also was President and Chief Executive Officer of Sunbelt Management Company, a private, European-owned real estate development firm, from 1995 to 1997. From 1986 to 1995, Mr. Keating was Senior Vice President, Financial Administration of Olympia & York Companies/Reichmann International, responsible for joint ventures, financial reporting and acquisitions.

Directors Whose Terms Expire at the 2010 Annual Meeting (Class I Directors)

James J. Mahoney, Jr., age 65, became a director in 2003.

As of the date of this proxy statement, Mr. Mahoney is a Class III director, but is not standing for re-election and will be elected to serve as a Class I director by our board of directors to fill the vacancy created by Dr. Feigal's resignation. The election will become effective immediately prior to the 2009 Annual Meeting of Stockholders.

James J. Mahoney, Jr. joined Aspect as a director in March 2003 and has served as lead director since August 2005. Since January 2004, Mr. Mahoney has served as President and has managed The Mahoney Group, an investment firm. Mr. Mahoney is a founding partner and principal of HLM Management Company, a private equity firm that invested in small entrepreneurially managed growth stocks and in privately-held venture capital backed companies. From January 1999 to March 2002, Mr. Mahoney managed HLM Management Company's venture capital program and, from April 2002 to April 2004, he acted as a consultant to HLM Management Company. From 1984 to December 1998, Mr. Mahoney co-managed the stock and venture capital portfolios of, and served as Chief Investment Officer of, HLM Management Company. Mr. Mahoney currently serves as Chairman of the Board and a member of the audit committee of NMT Medical, an advisor to four investment firms and a member of investment committees of three charitable organizations.

John J. O'Connor, age 61, became a director in 2006.

John J. O'Connor joined Aspect as a director in December 2006. Prior to his retirement in November 2006, Mr. O'Connor was a partner at PricewaterhouseCoopers LLP, an independent public accounting firm, from 1982 to November 2006, most recently serving as vice chairman of services from June 2002 to November 2006. Mr. O'Connor served as the leader of the U.S. audit practice at PricewaterhouseCoopers from September 2000 to June 2002, and served as the managing partner of the firm's Boston office from 1995 to September 2000. Mr. O'Connor also serves as a director for LeMaitre Vascular, Inc.

Donald R. Stanski, M.D., age 59, became a director in 1996.

Donald R. Stanski joined Aspect as a director in 1996. Since November 2005, Dr. Stanski has served as Vice President and Global Head of Modeling and Simulation, leading a group of scientists who apply quantitative methods to optimize drug developments, at Novartis Pharmaceuticals, a pharmaceutical company. Dr. Stanski has been a Professor in the Department of Anesthesia at Stanford University since 1979 and is trained as an anesthesiologist/clinical pharmacologist. He became professor emeritus at Stanford University in November 2005. From January 2004 until November 2005, Dr. Stanski was on public service duty at the United States Food and Drug Administration as a Scientific Advisor for the Director, Center for Drug Evaluation and Research. He served as Chair of the Department of Anesthesia at Stanford University from 1992 to 1997. From July 1998 to June 2001, Dr. Stanski served as the Vice President of Scientific and Medical Programs for Pharsight Corporation, a company that assists in the development of therapeutic products.

Directors Whose Terms Expire at the 2011 Annual Meeting (Class II Directors)

J. Breckenridge Eagle, age 59, served as a director from 1988 to 1991 and from 1996 to the present.

J. Breckenridge Eagle joined Aspect as a director in 1988 and served in that position until 1991. He became a director again in 1996 and has served as Chairman of the board of directors since that date. Mr. Eagle served as President and Chief Operating Officer of Aspect in 1996 and as a consultant to Aspect in 1995. From 1989 to 1995, he was President of ECS, Inc., a medical practice management company, which he founded in 1989. From 1981 to 1988, Mr. Eagle was Chief Financial Officer, Vice President and General Manager of The Health Data Institute, Inc., a health care services company, which he co-founded.

Edwin M. Kania, Jr. age 51, became a director in 1995.

Edwin M. Kania, Jr. joined Aspect as a director in 1995. Since 2000, Mr. Kania has served as Managing Partner and Chairman of Flagship Ventures, a venture capital firm, which he co-founded. Previously, Mr. Kania served as the managing partner of OneLiberty Ventures, a venture capital firm, which was formed in 1995, and as a general partner at Morgan Holland Ventures, a predecessor entity of OneLiberty Ventures, which he joined in 1985. Mr. Kania also serves as a director of EXACT Sciences Corporation.

Vincent P. Scialli, age 39, will be elected as a director by our board of directors immediately prior to the 2009 Annual Meeting to fill the vacancy created by Mr. Bollen's resignation.

Vincent P. Scialli has been a Managing Director of First Manhattan Co., a privately held investment manager, since 2005. From 2001 to 2005, Mr. Scialli was Vice President and Assistant Portfolio Manager at Lord Abbett & Co. LLC., a privately held money management firm. From 2000 to 2001, Mr. Scialli was a Senior Research Analyst at Bear Stearns & Co., Inc., an investment bank. Prior to joining Bear Stearns, Mr. Scialli had been an Analyst at Prudential Insurance, a multi-line insurance company and asset management firm.

Executive Officers of the Corporation

Margery Ahearn, age 46, became an executive officer in 2006.

Margery Ahearn joined Aspect in April 1998 and has served as Vice President of Human Resources since January 2006. Ms. Ahearn served as our Director of Human Resources from 1998 to December 2005. From 1985 through 1998, Ms. Ahearn held a variety of positions, including Senior Human Resource Representative, at Wang Laboratories, Inc., Director of Human Resources at Boston Business Group and Senior Employment Specialist at GTE.

J. Neal Armstrong, age 70, became an executive officer in 2009

J. Neal Armstrong has served as our Vice President, Chief Financial Officer and Secretary since January 2009. Mr. Armstrong served as Vice President of Investor Relations of Aspect from 2005 to 2006 and prior to that, served as Vice President, Chief Financial Officer, Secretary and Treasurer of Aspect from 1996 until his retirement from that position in 2005. Mr. Armstrong remained retired until his return to Aspect in January 2009. From 1990 to 1996, Mr. Armstrong served as Vice President of Finance, Chief Financial Officer and as a director of Haemonetics,

Inc., a manufacturer of blood processing systems. Mr. Armstrong serves as a director, Chairman of the Audit Committee and member of the Compensation Committee of deCODE genetics, Inc. and also serves as a member of the Board of Directors and the Audit Committee of TransMedics, Inc., AngioScore, Inc. and Vapotherm, Inc. Mr. Armstrong also serves as a member of the Board of Directors, Audit Committee and Compensation Committee of Salient Surgical Technologies, Inc.

John Coolidge, age 48, became an executive officer in 2004.

John Coolidge joined Aspect in May 1997 and has served as Vice President of Manufacturing Operations since January 2001. Mr. Coolidge served as our Director of Manufacturing from May 1997 to January 2001. From 1995 to 1997, he served as Engineering Manager and was responsible for product development and manufacturing engineering management for the Interventional Vascular business of Medtronic, Inc., a medical technology company. From 1987 to 1995, Mr. Coolidge held a variety of engineering and manufacturing management positions at Johnson and Johnson Medical, Inc., a manufacturer and provider of health care products and services, the most recent of which was Business Unit Manager.

Marc Davidson, age 45, became an executive officer in 2004.

Marc Davidson joined Aspect in December 1999 and has served as Vice President of Engineering since November 2001. Mr. Davidson served as our Director of OEM Engineering from December 1999 to November 2001. From 1985 through 1999, Mr. Davidson held a variety of marketing, engineering, sales and management positions at Hewlett-Packard Company, a manufacturer of computers and medical devices.

Philip H. Devlin, age 52, became an executive officer in 1994.

Philip H. Devlin joined Aspect in 1990 and has served as Vice President of Emerging Technologies and General Manager of Neuroscience since November 2001. From 1994 to November 2001, Mr. Devlin served as Vice President of Research and Development of Aspect, and from 1990 to 1994, he held the position of Director of Product Development of Aspect. From 1984 to 1985 and from 1986 to 1990, Mr. Devlin served as Software Engineer and Manager of Software Engineering at Lifeline Systems, Inc., a medical products and communications company. From 1980 to 1984, he held the position of Chief Biomedical Engineer at Beth Israel Hospital in Boston, Massachusetts and from 1985 to 1986, he served as Technical Marketing Engineer in the Medical Product Group of Hewlett-Packard Company, a manufacturer of computers and medical devices.

William Floyd, age 52, became an executive officer in 2001.

William Floyd joined Aspect in May 2001 and has served as Vice President of Sales and Marketing since September 2002. Mr. Floyd served as Vice President of Marketing from May 2001 to September 2002. From May 2000 to May 2001, Mr. Floyd was Principal of Casco Scientific, LLC, a medical device consulting group. From 1992 to 2000, Mr. Floyd held a variety of positions with Boston Scientific Corporation, a manufacturer of medical devices, the most recent of which was Vice President of Marketing, Microvasive Division.

Scott D. Kelley, M.D., age 50, became an executive officer in 2000.

Scott D. Kelley joined Aspect in July 2000 and has served as Vice President and Medical Director since that time. Prior to joining Aspect, Dr. Kelley served as an Associate Professor of Clinical Anesthesia and Director of Liver Transplant at the University of California, San Francisco Medical School from 1990 to 2000.

Paul J. Manberg, Ph.D., age 54, became an executive officer in 1991.

Paul J. Manberg joined Aspect in 1991 and has served as Vice President of Clinical, Regulatory and Quality Assurance since that time. From 1984 to 1990, Dr. Manberg held a variety of clinical research positions at Serono Laboratories, a pharmaceutical company, including Vice President, Research and Development. From 1979 to 1984, he was employed as a Clinical Research Scientist at Burroughs — Wellcome Company, a pharmaceutical company, and served as an Adjunct Research Scientist at the University of North Carolina.

No arrangements or understandings exist between any executive officer and any other person pursuant to which such executive officer is to be selected as an executive officer.

For information relating to shares of our common stock owned by each of our directors, our chief executive officer, chief financial officer and our three most highly compensated executive officers and all directors and executive officers as a group, see the disclosure set forth above under the heading "Stock Ownership Information."

CORPORATE GOVERNANCE

Our board of directors has long believed that good corporate governance is important to ensure that Aspect is managed for the long-term benefit of our stockholders. This section describes key corporate governance guidelines and practices that our board of directors has adopted. Complete copies of our corporate governance guidelines, board committee charters and code of conduct described below are available on our website at www.aspectms.com. Alternatively, you can request a copy of any of these documents by contacting: Investor Relations Department, Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts 02062, telephone: (617) 559-7000.

Corporate Governance Guidelines

Our board of directors has adopted corporate governance guidelines to assist the board of directors in the exercise of its duties and responsibilities and to serve the best interests of Aspect and its stockholders. These guidelines, which provide a framework for the conduct of the board of directors' business, provide, among other things, that:

- the principal responsibility of the directors is to oversee the management of Aspect;
- a majority of the members of the board shall be independent directors;
- the independent directors meet at least twice a year in executive session;
- directors have full and free access to management and, as necessary and appropriate, independent advisors;
- new directors participate in an orientation program and all directors are expected to participate in continuing director education on an ongoing basis; and
- at least annually the corporate governance and nominating committee oversees a self-evaluation of the board of directors and its committees to determine whether they are functioning effectively.

Executive and Director Compensation Processes

The Compensation Committee has implemented an annual performance review program for our executives, under which corporate and individual performance goals are determined at the beginning of each performance cycle. Annual salary, bonuses, stock options and restricted stock awards granted to our executives are tied to the achievement of these corporate and individual performance goals.

In evaluating each executive officer's performance, the Compensation Committee generally conforms to the following process:

- business and individual goals and objectives are set for each performance cycle;
- at the end of the performance cycle, the accomplishment of the executive's goals and objectives and his or her contributions to Aspect are evaluated;
- the executive's performance is then compared with peers within Aspect and the results are communicated to the executive; and
- the comparative results, combined with comparative compensation practices of other companies in the industry, are then used to determine salary and stock compensation levels.

The Compensation Committee does not rely on a formula that assigns a pre-determined value to each of the criteria, but instead evaluates an executive officer's contribution in light of all criteria.

In addition, in accordance with the terms of our corporate governance guidelines, our Compensation Committee is required to annually review the compensation of our directors, consult with the members of the Corporate Governance and Nominating Committee on such findings and then make recommendations to the board of directors with respect to director compensation.

Board Determination of Independence

Under applicable Nasdaq Marketplace Rules, a director of Aspect will only qualify as an "independent director" if, in the opinion of the board of directors, that person does not have a relationship which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. The board of directors has determined that none of Jon C. Biro, Michael A. Esposito, David W. Feigal, Jr., Edwin M. Kania, Jr., Melvin L. Keating, James J. Mahoney, Jr., John J. O'Connor or Donald R. Stanski has a relationship which would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors and nominees for director qualifies as an "independent director" as defined under Rule 4200(a)(15) of the Nasdaq Marketplace Rules.

Director Nomination Process

The process followed by the Corporate Governance and Nominating Committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the Corporate Governance and Nominating Committee and the board of directors. Jon C. Biro and Melvin L. Keating have been nominated to serve on our board of directors pursuant to the terms of the Agreement we entered into with First Manhattan Co., First BioMed Management Associates, LLC and First BioMed, L.P. For a further discussion of the Agreement, see "Director Nomination and Election Arrangements" beginning on page 5.

In considering whether to recommend any particular candidate for inclusion in the board of directors' slate of recommended director nominees, the Corporate Governance and Nominating Committee applies the criteria set forth in our Corporate Governance Guidelines. These criteria include the candidate's integrity, business acumen, knowledge of Aspect's business and industry, experience, diligence, conflicts of interest and the ability to act in the interests of all stockholders. The Corporate Governance and Nominating Committee does not assign specific weights to particular criteria and no particular criterion is a prerequisite for each prospective nominee. Our Corporate Governance Guidelines also provide that any director who reaches the age of 75 while serving as a director will retire from our board of directors effective at the end of his or her then current term. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow the board of directors to fulfill its responsibilities.

Stockholders may recommend individuals to the Corporate Governance and Nominating Committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least a year as of the date such recommendation is made, to Chairman, Corporate Governance and Nominating Committee, c/o Aspect Medical Systems, Inc., One Upland Road, Norwood, Massachusetts 02062. Assuming that appropriate biographical and background material has been provided on a timely basis, the Corporate Governance and Nominating Committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others.

Stockholders also have the right under our bylaws to directly nominate director candidates, without any action or recommendation on the part of the Corporate Governance and Nominating Committee or the board of directors, by following the procedures set forth in the second paragraph under "Stockholder Proposals" below.

Communicating with the Independent Directors

The board of directors will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. The Chairman of the Corporate Governance and Nominating

Committee is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the other directors as he considers appropriate.

Communications will be forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the Chairman of the Corporate Governance and Nominating Committee considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to the board of directors should address such communications to Chairman, Corporate Governance and Nominating Committee, c/o Aspect Medical Systems, Inc., One Upland Road, Norwood, MA 02062.

Board Meetings and Attendance

The board of directors met nine times during the fiscal year ended December 31, 2008, either in person or by teleconference. During the fiscal year ended December 31, 2008, each director attended at least 75% of the aggregate of the number of board of director meetings and the number of meetings held by all committees on which he or she then served.

Director Attendance at Annual Meeting of Stockholders

Our corporate governance guidelines provide that directors are encouraged to attend the annual meeting of stockholders in the event that Aspect determines their attendance is warranted. Three directors attended the 2008 Annual Meeting of Stockholders.

Board Committees

Our board of directors has established three standing committees — Audit, Compensation and Corporate Governance and Nominating — each of which operates under a charter that has been approved by the board of directors. Current copies of each committee's charter are posted on the "Investors — Corporate Overview" section of our website, www.aspectms.com.

Our board of directors has determined that all of the members of each of the board's three standing committees, including Mr. Biro, Mr. Keating and Mr. Scialli, who will join our standing committees at the time of the Annual Meeting, are independent as defined under Nasdaq Marketplace Rules, including, in the case of all members of the Audit Committee, the independence requirements contemplated by Rule 10A-3 under the Securities Exchange Act of 1934, as amended.

Audit Committee

The Audit Committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of certain reports from our independent registered public accounting firm;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- discussing our risk management policies;
- establishing policies regarding hiring employees from our independent registered public accounting firm and procedures for the receipt and retention of accounting related complaints and concerns;

- meeting independently with our independent registered public accounting firm and management; and
- preparing the audit committee report required by SEC rules (which is included in this Proxy Statement).

The current members of the Audit Committee are Mr. O'Connor (Chairman), Dr. Feigal and Mr. Mahoney. Dr. Feigal has resigned from the board of directors effective immediately prior to the Annual Meeting. If elected, Mr. Biro will join the Audit Committee. Our board of directors has determined that each of Mr. Mahoney and Mr. O'Connor is an "audit committee financial expert" as defined by applicable SEC rules. The Audit Committee met six times during the fiscal year ended December 31, 2008.

Compensation Committee

The Compensation Committee's responsibilities include:

- annually reviewing and approving corporate goals and objectives relevant to our Chief Executive Officer's compensation;
- determining our Chief Executive Officer's compensation;
- reviewing and approving, or making recommendations to the board of directors with respect to, the compensation of our other executive officers;
- overseeing an evaluation of our senior executives;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to the board of directors with respect to director compensation;
- reviewing and discussing annually with management our "Compensation Discussion and Analysis;" which is included beginning on page 16 of this Proxy Statement, and
- preparing the Compensation Committee report required by SEC rules, which is included on page 23 of this Proxy Statement.

The processes and procedures followed by our Compensation Committee in considering and determining executive and director compensation are described above under the heading "Executive and Director Compensation Processes".

The current members of the Compensation Committee are Mr. Kania (Chairman), Mr. Esposito and Dr. Stanski. Mr. Esposito is not standing for re-election as a director. If elected, Mr. Keating will join the Compensation Committee. The Compensation Committee met three times during the fiscal year ended December 31, 2008.

Corporate Governance and Nominating Committee

The Corporate Governance and Nominating Committee's responsibilities include:

- identifying individuals qualified to become members of our board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- reviewing and making recommendations to the board of directors with respect to management succession planning;
- developing and recommending to the board of directors corporate governance principles; and
- overseeing the evaluation of the board of directors.

The processes and procedures followed by the Corporate Governance and Nominating Committee in identifying and evaluating director candidates are described above under the heading "Director Nomination Process".

The current members of the Corporate Governance and Nominating Committee are Dr. Stanski (Chairman), Mr. Kania and Mr. O'Connor. Upon his election as a director by the board of directors, Mr. Scialli will join the Corporate Governance and Nominating Committee. The Corporate Governance and Nominating Committee met one time during the fiscal year ended December 31, 2008.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We have posted a current copy of the code on our website, www.aspectms.com. In addition, we intend to post on our website all disclosures that are required by law or Nasdaq stock market listing standards concerning any amendments to, or waivers from, any provision of the code.

Audit Committee Report

Management is responsible for the preparation of the financial statements and for maintaining an adequate system of disclosure controls and procedures and internal control over financial reporting for that purpose. The Company's independent registered public accounting firm is responsible for conducting an independent audit of the annual financial statements in accordance with United States generally accepted accounting principles and issuing a report on the results of their audit. The Audit Committee is responsible for providing independent, objective oversight of these processes.

In response to the requirements of Section 404 of the Sarbanes-Oxley Act of 2002 and related rules and regulations, management completed the documentation, testing and evaluation of Aspect's system of internal control over financial reporting for the year ended December 31, 2008. The Audit Committee provided oversight and guidance to management and financial personnel during the testing and evaluation process. In connection with this oversight, both management and the independent registered public accounting firm regularly provided updates to the Audit Committee at Audit Committee meetings. At the conclusion of the process, management presented to the Audit Committee for its review a report on the effectiveness of Aspect's internal control over financial reporting. The Audit Committee also reviewed the independent registered public accounting firm's report included in the Annual Report on Form 10-K for the year ended December 31, 2008 related to their audit of the effectiveness of internal control over financial reporting. The Audit Committee will continue to oversee the efforts pertaining to internal control over financial reporting and management's preparations for the evaluation of internal controls in the fiscal year ending December 31, 2009.

The Audit Committee also reviews, evaluates and discusses with management, internal accounting and financial personnel and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures.

The Audit Committee has reviewed the audited financial statements for the fiscal year ended December 31, 2008, and has discussed these financial statements with management and the independent registered public accounting firm.

The Audit Committee has also received from, and discussed with, our independent registered public accounting firm various communications that our independent registered public accounting firm is required to provide to the Audit Committee, including the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (AICPA, Professional Standards, Vol. 1, AU section 380), or SAS 61, as adopted by the Public Company Accounting Oversight Board in Rule 3200T. SAS 61 requires the independent registered public accounting firm to discuss with the Audit Committee, among other things, the following:

- all critical accounting policies and practices used; material alternative treatment within United States Generally Accepted Accounting Principles, or GAAP, that have been discussed with management including the ramification of the alternative treatment as well as the auditors preference; and other material communications between the auditor and management;
- significant adjustments, management judgment and accounting estimates, significant new accounting policies, and disagreements with management;

- discussion of the independent auditor's judgments about the quality, not just the acceptability, of the Company's accounting principles; and
- any uncorrected misstatements pertaining to the current period whose effects management believes are immaterial to the financial statements as a whole.

The Audit Committee has received the written disclosures and the letter from the Company's independent registered public accounting firm required by applicable requirements of the Public Company Accounting Oversight Board regarding the registered public accounting firm's communications with the audit committee concerning independence, and has discussed with the independent registered public accounting firm the independent registered public accounting firm's independence.

Based on the review and discussions referred to above, the Audit Committee recommended to the Company's board of directors that the audited financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2008.

By the Audit Committee of the Board of Directors of Aspect Medical Systems, Inc.

John J. O'Connor (Chairman)
David W. Feigal, Jr., M.D.(1)
James J. Mahoney, Jr.

(1) Dr. Feigal has resigned from the board of directors effective immediately prior to the Annual Meeting. If elected, Mr. Biro will join the Audit Committee.

Registered Public Accounting Firm's Fees

Ernst & Young LLP audited our financial statements for the fiscal years ended December 31, 2008 and December 31, 2007. The following table summarizes the fees that Ernst & Young LLP billed to us for each of the last two fiscal years for audit services and for other services:

Fee Category	2008	2007
Audit Fees	$523,900	$666,495
Audit-Related Fees	$ —	$ —
Tax Fees	$ —	$124,540
All Other Fees	$ —	$ —
Total Fees	$523,900	$791,035

Audit Fees

Audit fees consist of fees for the audit of our financial statements, the audit of our internal control over financial reporting, the review of the interim financial statements included in our Quarterly Reports on Form 10-Q, accounting consultations related to the audited financial statements and other professional services provided in connection with statutory and regulatory filings or engagements.

Audit-Related Fees

Audit-related fees consist of fees for assurance and related services that are reasonably related to the performance of the audit and the review of our financial statements and which are not reported under "Audit Fees." These services relate to employee benefit audits. None of the audit-related fees billed in the fiscal years ended December 31, 2008 and 2007 related to services provided under the de minimus exception to the Audit Committee pre-approval requirements.

Tax Fees

Tax fees consist of fees for tax compliance, tax advice and tax planning services. There were no tax fees billed in the fiscal year ended December 31, 2008. Tax compliance services, which relate to preparation of original and amended tax returns, accounted for $55,000 of the total tax fees paid for 2007. Tax advice and tax planning services relate to assistance with tax planning strategies, tax audits and appeals and employee benefit plans. None of the tax fees billed in for the fiscal year ended December 31, 2007 related to services provided under the de minimus exception to the Audit Committee pre-approval requirements.

All Other Fees

We did not incur any fees that may be classified as "All Other Fees" during the fiscal years ended December 31, 2008 or 2007.

The percentage of hours expended by Ernst & Young LLP on the audit of our financial statements for the fiscal year ended December 31, 2008 attributed to work performed by persons other than Ernst & Young LLP's full-time, permanent employees did not exceed fifty percent.

Pre-Approval Policy and Procedures

The Audit Committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy generally provides that Aspect will not engage its independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee or the engagement is entered into pursuant to one of the pre-approval procedures described below.

From time to time, the Audit Committee may pre-approve specified types of services that are expected to be provided to Aspect by its independent registered public accounting firm during the following 12 months. Any such pre-approval is detailed as to the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

The Audit Committee may also delegate to each individual member of the Audit Committee the authority to approve any audit or non-audit services to be provided to Aspect by its independent registered public accounting firm. Any approval of services by a member of the Audit Committee pursuant to this delegated authority is reported on at the next meeting of the Audit Committee.

EXECUTIVE AND DIRECTOR COMPENSATION

Compensation Discussion and Analysis

This Compensation Discussion and Analysis describes Aspect's executive compensation program for 2008 and program changes for 2009. We use this program to motivate and reward those individuals whom our Board of Directors has selected to lead our business.

Objectives of Our Executive Compensation Program

Program Objectives

The Compensation Committee of our Board of Directors, which we generally refer to herein as the Committee, oversees our executive compensation program. In this role, the Committee annually reviews and approves all compensation decisions relating to our named executive officers. Our goal is to align executive officers' compensation with Aspect's short-term and long-term performance. A significant portion of each executive officer's total compensation opportunity is directly related to Aspect's stock price performance as well as to other performance factors measuring our progress towards the goals of our long-term strategic plan.

Our executive compensation program is structured to provide the compensation and incentives needed to attract, motivate and retain key executives that are crucial to Aspect's long-term success.

Compensation Principles

Our Compensation Committee arrives at its executive compensation decisions based in part upon its goal of implementing a compensation program that is built upon specific compensation principles. These principles, and the ways in which the Committee draws upon these principles can be summarized as follows:

- *Competitive and Fair Compensation* — our policy is to provide total compensation that is competitive for comparable work and comparable corporate performance among other public companies in our industry with whom we believe we compete for such executive talent. In addition, the Committee seeks to ensure fairness among the executive management team by motivating and recognizing the contributions each executive makes to our success.
- *Sustained Performance* — The Committee recognizes the importance of improving long-term value and maintaining alignment with shareholders. Therefore, our compensation approach is more heavily weighted on long-term incentives. We believe long-term incentives reinforce the focus on sustained performance and provide a link between the executives' interests and shareholders' long-term success.

Philosophy

Our executive compensation philosophy is intended to provide flexible, yet consistent direction and guidance to the Committee to assist in making decisions annually. It is not intended that the philosophy will change dramatically from year to year; however, it may change, where appropriate, as the focus of the business changes.

Compensation Mix

- *Fixed versus Variable Compensation* — The Committee believes that the attainment of the above objectives requires an appropriate mix of fixed and variable compensation, with an emphasis on variable compensation. The mix between fixed and variable compensation emphasizes our goals of providing fair and competitive compensation packages and motivating executives to achieve short- and long-term company objectives.
- *Short versus Long-Term Compensation* — The Committee seeks to structure a meaningful balance between achieving strong short-term annual results and ensuring long-term viability and success. Therefore, the mix of incentives is reviewed and determined each year by the Committee based on the short- and long-term objectives of the business. In general, our compensation approach is more heavily weighted towards long-term incentives that we believe reinforce the focus on sustained performance.

Elements of Total Compensation

We are committed to providing an executive compensation program that helps us attract, motivate and retain highly qualified and experienced executives. The primary elements, purpose and determination factors of the three core elements of the executive compensation program are:

Compensation	Purpose	Determination Factor	Deliverable
Base Salary and Benefits	Recognize the experience, skills, knowledge and responsibilities required of the applicable position and to provide competitive benefits programs.	Individual responsibility and performance, tenure, executive potential, historical compensation, competitive market data, and internal equity.	Base Salary — Fixed cash payments. Benefits — health and welfare insurance and retirement savings programs.
Short-Term Incentive Plan	Create an incentive for the achievement of pre-defined annual corporate and personal objectives.	For target bonus — competitive market data and internal equity. For actual bonus payouts — performance achievement against pre-established financial and individual goals.	Annual variable cash payout.
Long-Term Incentive Plan	Align the interests of executives with shareholders to focus on sustained performance while creating appropriate retention incentives.	Individual position and contribution, market data and trends, ability to execute the Company's long-term strategy, internal equity, and Company performance.	Annual variable awards of stock options and restricted stock.

In making recommendations regarding executive compensation, the Committee considers competitive market data as further discussed below, and seeks input from the Chief Executive Officer and the Vice President of Human Resources. The Chief Executive Officer, in turn, assesses each executive officer's contributions to the business and his or her ability to execute on our long-term strategy when making any recommendations regarding compensation. The Chief Executive Officer does not participate in the determination of his own compensation.

Short-Term Performance

Base Salary. Base salary is designed to provide a fixed amount of compensation for performing day-to-day responsibilities. Salaries are used to recognize the experience, skills, knowledge and responsibilities required of all our employees, including our executives. When establishing base salaries for 2008, the Compensation Committee considered a variety of factors, including:

- the seniority of the individual;
- the level of the individual's responsibility;
- the ability to replace the individual;
- the base salary of the individual at his or her prior employment, if applicable;
- the number of well qualified candidates to assume the individual's role;
- compensation for comparable positions in our similarly situated companies in our industry; and
- the historical compensation levels of our executives and actual corporate and individual performance vis-à-vis the targeted performance criteria and subjective performance criteria discussed above.

In February 2008, the Board of Directors approved, upon recommendation of the Compensation Committee, an increase to 2007 base salaries to bring salaries paid to our executives up to the 50th percentile of our peer group.

The peer group is further discussed below. The Compensation Committee has determined not to increase base salaries in 2009.

Annual Incentive Plan. Under the Annual Incentive Plan, we award cash bonuses for achievement of Aspect's short-term financial goals and other strategic objectives measured over the current year. Bonuses are structured to provide competitively based incentives to our executives to drive company performance. There are two components to our short-term incentive plan:

- corporate revenue and profit targets, which account for up to 60% of the bonus amount; and
- the achievement of personal performance goals, such as demonstrating effective leadership, successfully completing difficult assignments, demonstrating integrity, teamwork, excellence and accountability, contribution to staff development and retention, contributing to the strategic planning process and the achievement of personal objectives that are aligned with each executive's individual area of responsibility, which account for up to 40% of the bonus amount.

The individual performance component is based on the personal performance goals established by the Chief Executive Officer at the beginning of each calendar year after consultation with each executive, other than the CEO. The Chief Executive Officer's individual performance goals are established at the beginning of a calendar year in collaboration with the Compensation Committee. The annual cash bonus incentive program provides a direct link between the executive's compensation and our annual financial performance. The program is designed to provide a competitive payout for appropriate levels of performance achievement, which is in line with our compensation philosophy and principles. In addition, the individual performance component recognizes and rewards each executive's contributions to the success of the business, which is in line with the "fairness" aspect of our compensation principles.

In February 2008, the Committee adopted the 2008 Annual Incentive Plan. Under the plan, the portion of each individual executive bonus was calculated by a formula that compares Aspect's financial performance against the targets that were established for the year. Depending on the executive's job function, the target bonus that an executive was eligible to receive under the 2008 Annual Incentive Plan ranged between 41% and 75% of his or her then annual base salary when 100% of the corporate plan for both product revenue and profit targets (before bonus and tax), for the year and all individual performance goals were achieved. The table below shows for 2008 (1) the target award as a percentage of base salary assuming achievement of 100% of the corporate plan for revenue and profits and individual performance goals, (ii) actual payouts, based upon the Committee's assessment of the degree to which corporate and individual performance objectives had been achieved, and (iii) payouts as a percentage of the target level for each of our named executive officers:

Name	Target Incentive Compensation as a Percentage of Base Salary	2008 Incentive Compensation Award ($)	2008 Incentive Compensation Award as a Percentage of Target (%)
Nassib G. Chamoun	75%	207,188	85%
Michael Falvey(1)	60%	121,355	85%
William Floyd	75%	133,647	85%
Scott D. Kelley, M.D.	41%	94,886	85%
John Coolidge	60%	102,153	85%

(1) Michael Falvey resigned from the Company effective December 31, 2008.

Each executive achieved 100% of his individual performance goals and 45% of the corporate financial goals were achieved, which would have resulted in a payout of 45% of the target bonus amount for each executive. The Committee in its discretion, however, determined to pay each executive 85% of his target bonus amount after considering the following three important business initiatives:

Sales Force Expansion — In 2008, after Aspect had set revenue and profit targets under the 2008 Plan, we decided to expand the size of our sales force. The costs associated with the sales force expansion had a

significant impact on our profitability. The Committee recommended that these expenses be excluded when assessing Aspect's financial performance for the purpose of determining bonus payouts;

Sales Retention Program — On March 13, 2008, the *New England Journal of Medicine* published an article that compared BIS monitoring to an anesthetic regimen based on predetermined dosing levels of volatile anesthetics as a means of reducing the risk of anesthetic awareness. The authors concluded that the study did not support routine BIS monitoring as part of standard practice. Aspect management was concerned that the article could have a potential negative effect on the selling environment and a potential loss of key sales personnel. As a result, Aspect implemented a sales retention program that provided to members of its sales force cash incentives both six months and a year after the article's release. The Committee recommended that these expenses be included when assessing Aspect's financial performance for the purpose of determining the actual bonus payouts; and

Reduction in Force — During the 2009 planning process, it was clear that several expenses needed to be reduced or eliminated in order to protect our profitability. Unfortunately, a reduction to our workforce was part of those efforts. Considerable time was spent discussing the timing of the staff reductions and it was determined that, in the best interests of the company, these reductions would take place in December rather than delay them until January 2009. The expenses associated with the staff reductions affected our profitability in the fourth quarter of 2008. The Committee recommended that these costs be excluded when assessing Aspect's financial performance for the purpose of determining the actual bonus payouts.

In February 2009, the Committee adopted the 2009 Annual Incentive Plan ("the 2009 Plan"). In an effort to reduce expenses and drive effective spending behaviors, the Committee recommended, and the Board of Directors adopted, two significant changes to the 2009 Plan. First, as part of our cost reduction efforts, the 2009 target payouts have been reduced such that upon achievement of 100% of both our revenue and profit targets for 2009, participants will receive only 67% of their targeted annual bonus. Second, in prior years, the annual incentive plan gave equal weighting to both revenue and profit achievements. The 2009 Plan will place a 33% weighting on revenue goals and 67% on profit goals to focus on "bottom line" results.

Long-Term Performance

We currently utilize two long-term incentive instruments: stock options and restricted stock, which are intended to provide alignment with the interests of the shareholders. Stock options and restricted stock encourage executives to focus on share price appreciation and Aspect's success the long term, while the service-based restrictions serve as a retention tool. The mix of stock options versus restricted stock is determined annually by the Committee based on the needs of the business, including such factors as the business strategy and objectives, corporate governance, retention and dilution requirements. Currently for 2008, the mix of long-term incentive compensation for our named executive officers is 50 percent in stock options and 50 percent in restricted stock. Because almost all previously awarded stock options were significantly underwater, these options offered our executive officers very little value in terms of executive retention and incentives. We believed a blend of both stock options and restricted stock better align the interests of our executives with those of our shareholders.

Each element of compensation outlined above is considered both individually and collectively when considering compensation adjustments. In addition, the Committee may apply discretion in determining the specific compensation levels of individual executives. The Committee evaluates compensation programs annually in light of the evolving business strategies and plans of the Company and seeks to ensure the compensation programs align with shareholder interests and current market trends.

Competitive Positioning

Competitive Market Defined

Aspect has retained Pearl Meyers & Partners as an independent consultant to help management and the Committee design the appropriate mix of compensation and the amount of compensation and to evaluate proposed compensation. The Committee relies on Pearl Meyers to annually review and develop a set of appropriate comparator firms called the "peer group" and to identify and use industry-specific compensation survey sources.

The Committee uses this combination of peer group analyses and industry-specific compensation surveys to identify competitive market compensation practices for base salaries, short and long-term incentives and the Company's overall competitive position. The Committee believes the most relevant talent pool for its executives is specialty medical device and diagnostic companies of similar size in terms of revenue and market capitalization. Companies that meet at least two or more of the selection criteria are included in the peer group.

The Committee reviews the peer group every year in order to maintain its appropriateness for compensation comparison purposes. In addition, the Committee reviews and validates the selection criteria every year to ensure it is in line with our business strategies. For 2008, these companies represented our peer group:

Abaxis, Inc.	Cardiac Science Corp.	Masimo Corp.	Palomar Medical Technologies Inc.
Abiomed Inc.	Cerus Corp.	Micrus Endovascular Corp.	Possis Medical Inc.
AngioDynamics Inc.	Cyberonics Inc.	Natus Medical Inc.	Spectranetics Corp.
Candela Corp.	HealthTronics Inc.	NeuroMetrix Inc.	Zoll Medical Corp.

In addition, the Committee also reviews the survey source(s) used for corporate and group positions annually to ensure they appropriately represent size-specific, specialty medical device and diagnostics companies and provide reasonable and reliable compensation data.

Positioning of Compensation

It is our policy to provide total compensation that is competitive for comparable work and comparable corporate performance among our peer group. Our general executive compensation competitive targeting strategy is to pay each executive officer total direct compensation at the 75th percentile of our peer group companies' total direct compensation levels. We target base salary to be at the 50th percentile of our peer group companies' total direct compensation levels. We target base salary plus short-term incentive plan payments to be at the 65th percentile of our peer group companies' total cash compensation levels. Finally, we target the sum of base salary, short-term incentive plan payments and long-term incentive plan payments to be at the 75th percentile of our peer group companies' total direct compensation levels.

Actual pay levels can be above or below targeted levels depending on factors such as individual and company performance, tenure and executive potential. In general, the Committee desires to reward executives equitably from both a market perspective and internally, but reserves the right to use discretion to deviate when necessary to recruit executives and/or retain the right executive talent.

Individual performance criteria vary for each executive based on his business group or area of responsibility, and may include:

- achievement of the operating budget for Aspect as a whole or of a business group of Aspect;
- ability to identify and hire consistently high performing employees, and to train them to contribute to our long-term success;
- continued innovation in development and commercialization of our technology;
- timely development, regulatory approval and commercial introduction of new products or processes or expanded uses of existing products;
- development and implementation of successful marketing and commercialization strategies; and
- implementation of financing strategies and establishment of strategic development alliances with third parties.

Subjective performance criteria include:

- an executive's ability to motivate, develop and challenge others;
- the development of skills necessary to grow as our business matures;
- the ability to recognize and pursue new business opportunities;

- the ability to initiate programs to enhance our growth and success; and
- the consistent demonstration of shared corporate values.

Other Executive Compensation Programs and Policies

Other Employee Benefits

Executives are eligible to participate in all of the current benefit plans, in each case on the same basis as other employees, including health and dental insurance, life and disability insurance and eligibility to participate in our 401(k) plan and an employee stock purchase plan.

- *Health and Welfare Benefits* — we recognize that our greatest resource are our employees, and therefore believe that it is appropriate to offer comprehensive and affordable health and welfare benefits to all employees and their eligible family members. Benefits in this category include medical, dental and vision insurance, disability coverage and life insurance.
- *Retirement Benefits* — we believe that Aspect's 401(k) savings plan assists executives in preparing for retirement and are essential to attract and retain senior talent.
- *Employee Stock Purchase Plan* — we believe in the concept of "own the business" and it is important to provide a program that helps link compensation to the value created for the shareholders including the employees of the Company, who own the business.

We do not provide any supplemental benefits or perquisites to our executive officers, with the exception of a company automobile lease for the Chief Executive Officer.

Change in Control Benefits

Pursuant to the terms of our stock incentive plans, in the event of a change of control all unvested stock options held by our executive officers will be assumed or equivalent options will be substituted by the acquiring corporation and such awards will become exercisable in full, and all restricted stock awards will become free and clear of all restrictions and conditions, upon the earlier of (1) the executive's termination without cause by the successor corporation or for good reason by the executive, or (2) one year after such change in control, in the case of our chief executive officer, and 15 months after such change in control, in the case of our other executive officers. This is a so-called "double trigger" change of control arrangement because it provides for change of control benefits only in the event of a change in control, the first trigger, followed by the earlier of the termination of the executive or the passage of a specified period of time, the second trigger.

On September 24, 2008, we implemented the Key Employee Change in Control Severance Benefits Plan. This plan was established to offer additional protection in the form of cash severance compensation and continuation of health and welfare benefits for our named executive officers. As described earlier in the Compensation Discussion and Analysis, the March 2008 release of the *New England Journal of Medicine* article had an immediate adverse impact on our business. During the months following the article's release, employees became increasingly concerned about job security and the potential corporate actions that could transpire. We implemented a program designed to minimize these distractions and potential turnover caused by the dramatic downturn in our stock price. The Committee believes that the severance benefits payable under these severance arrangements in connection with a change of control align executive and shareholder interests by enabling the executive officers to consider corporate transactions that are in the best interests of our shareholders without undue concern over whether the transactions may jeopardize the officers' own employment.

We have determined to provide for these change of control benefits because we recognize that, as is the case with many publicly-held corporations, the possibility of a change in control of Aspect exists and such possibility, and the uncertainty and questions which it may raise among our executive officers, could result in the departure or distraction of executive officers to the detriment of Aspect and our shareholders. We believe a "double trigger" maximizes shareholder value because it prevents an unintended windfall to executives in the event of a friendly change in control, while still providing them appropriate incentives to cooperate in negotiating any change of

control in which they believe they may lose their jobs. We believe that this plan is reasonable when compared with similar arrangements adopted by other companies in our industry that are of similar size.

We do not consider specific amounts payable under these arrangements when establishing annual compensation. We do believe, however, that these arrangements are necessary to offer compensation packages that are competitive.

Tax and Accounting Considerations

Section 162(m) of the Internal Revenue Code of 1986, as amended, generally disallows a tax deduction for compensation in excess of $1.0 million paid to our chief executive officer and our other three named executive officers (other than the chief financial officer) whose compensation is required to be disclosed to our stockholders under the Exchange Act by reason of being among our most highly compensated officers. Qualifying performance-based compensation is not subject to the deduction limitation if specified requirements are met. We periodically review the potential consequences of Section 162(m), and we generally intend to structure the performance-based portion of our executive compensation, where feasible, to comply with exemptions in Section 162(m) so that the compensation remains tax deductible to us. However, the Compensation Committee may, in its judgment, authorize compensation payments that do not qualify for the exemptions in Section 162(m) when it believes that such payments are appropriate to attract and retain executive talent. The Company does not currently have stock ownership or disposition guidelines in place for its executives, nor does it currently seek tax deductibility of performance-based compensation payouts above $1.0 million for the short-term incentive plan under Internal Revenue Code's section 162(m).

We account for equity compensation paid to our employees under the rules of Statement of Financial Accounting Standards No. 123 (revised 2004), Share Based Payment, referred to as SFAS No. 123(R), which requires us to measure and recognize compensation expense in our financial statements for all share-based payments based upon an estimate of their fair value over the service period of the award. We record cash compensation as an expense at the time the obligation is accrued. Our Compensation Committee generally assesses the accounting impact of restricted stock grants and option awards to our executives, but has not historically factored such impact into the nature or size of such awards.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of SEC Regulation S-K with management. Based on such review and discussions, the Compensation Committee recommended to the board of directors that the Compensation Discussion and Analysis be included in the registrant's proxy statement on Schedule 14A.

By the Compensation Committee of the Board of Directors of Aspect Medical Systems, Inc.

Edwin M. Kania, Jr. (Chairman)
Michael A. Esposito(1)
Donald R. Stanski, M.D.

(1) Mr. Esposito is not standing for re-election as a director. If elected, Mr. Keating will join the Compensation Committee.

Compensation Committee Interlocks and Insider Participation

The current members of the Compensation Committee are Mr. Kania (Chairman), Mr. Esposito and Dr. Stanski. No member of the current Compensation Committee was at any time during the fiscal year ended December 31, 2008, or formerly, an officer or employee of Aspect or any subsidiary of Aspect. No member of the current Compensation Committee had any relationship with us during the fiscal year ended December 31, 2008 requiring disclosure under Item 404 of Regulation S-K under the Securities Exchange Act of 1934.

None of our executive officers has served as a director or member of the compensation committee (or other committee serving an equivalent function) of any other entity, one of whose executive officers served as a director of or member of the current Compensation Committee.

Summary Compensation Table

The table below summarizes information regarding compensation earned by our named executive officers for the years ended December 31, 2008, 2007 and 2006 for our named executive officers.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)(1)	Option Awards ($)(2)	Non-Equity Incentive Plan Compensation(3)	All Other Compensation ($)	Total ($)
Nassib G. Chamoun	2008	325,000	—	280,762	461,192	207,188	20,201(6)	1,294,343
Chief Executive Officer	2007	281,216	30,000(5)	226,037	581,411	185,603	19,626(6)	1,323,893
and President	2006	270,400	—	74,591	555,021	131,820	17,890(6)	1,049,722
Michael Falvey	2008	237,950	—	106,452	211,169	121,355	340,078(7)	1,017,004
Vice President,	2007	228,800	22,300(5)	87,512	361,146	120,806	6,750(8)	827,314
Chief Financial Officer	2006	220,000	—	24,664	337,333	85,800	6,600(8)	674,397
and Secretary								
William Floyd	2008	225,000	—	118,765	158,778	133,647	6,900(8)	643,090
Vice President of Sales	2007	208,100	23,100(5)	87,512	211,410	150,165	6,750(8)	687,037
and Marketing	2006	200,096	—	24,664	216,709	143,702	6,600(8)	591,771
Scott D. Kelley, M.D.	2008	272,270	—	106,452	158,778	94,886	6,900(8)	639,286
Vice President and	2007	261,797	22,500(5)	87,512	206,547	94,456	6,750(8)	679,562
Medical Director	2006	244,227	—	24,664	204,586	76,296	6,600(8)	556,373
John Coolidge	2008	200,300	42,968(4)	106,452	158,778	102,153	6,900(8)	617,551
Vice President of Manufacturing								

(1) The amounts included in the "Stock Awards" column represents the compensation cost we recognized in 2008, 2007 and 2006 related to all outstanding restricted stock awards as described in SFAS No. 123(R). For a discussion of the valuation assumptions, see Note 10 to our consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2008.

(2) The amounts included in the "Options Awards" column represents the compensation cost we recognized in 2008, 2007 and 2006 related to all outstanding stock option awards as described in SFAS No. 123(R). For a discussion of the valuation assumptions, see Note 10 to our consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2008.

(3) The amounts included in the "Non-Equity Incentive Plan Compensation" column consist of amounts earned by the named executive officer under the 2008 Plan, which were paid in February 2009, with the exception of Mr. Floyd's bonus of which $32,709 was paid throughout the quarters in 2008.

(4) Represents a relocation bonus paid to Mr. Coolidge.

(5) Represents a one-time bonus for a 2007 base market adjustment for the executive team.

(6) Includes $12,296 in car lease payments we paid on behalf of Mr. Chamoun, $6,900 we paid to match his 401(k) contributions and approximately $1,000 we paid for insurance. In 2007, we paid approximately $11,871 in car lease payments, $6,750 to match his 401(k) contributions and approximately $1,000 for insurance. In 2006, we paid approximately $10,285 in car lease payments, $6,600 to match his 401(k) contributions and approximately $1,000 we paid for insurance.

(7) Mr. Falvey resigned from his positions at Aspect effective December 31, 2008. This amount includes a lump sum severance payment of $237,950 paid to Mr. Falvey in January 2009 and a severance bonus payment of $95,228 to be paid in two lump sums as follows (a) $75,228 to be paid following execution of the severance agreement between Aspect and Mr. Falvey, dated January 5, 2009, effective December 31, 2008 and, (b) $20,000 to be paid following the execution of the release of claims which he is required to execute on or after April 1, 2009 but no later than April 22, 2009. This amount also includes $6,900 paid to match his 401 (k) contribution.

(8) Consists of amounts we paid to match such named executive officer's 401(k) contribution in 2008, 2007 and 2006.

Grants of Plan-Based Awards

The table below sets forth information concerning grants of compensation in the form of plan-based awards made to the named executive officers during the fiscal year ended December 31, 2008.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1) Threshold ($)	Target ($)	Maximum ($)	All Other Stock Awards: Number of Shares of Stock or Units (#)(2)	All Other Option Awards: Number of Securities Underlying Options (#)(3)	Exercise or Base Price of Option Awards ($/Sh)	Grant Date Fair Value of Stock and Option Awards ($)(4)
Nassib G. Chamoun	2/12/2008	—	—	—	—	55,556	11.82	307,780
	2/12/2008	—	—	—	22,222	—	0.01	262,664
	n/a	0	243,750	365,625			—	—
Michael Falvey	2/12/2008	—	—	—	—	19,231	11.82	106,540
	2/12/2008	—	—	—	7,692	—	0.01	90,919
	n/a	0	142,770	214,155	—	—	—	—
William Floyd	2/12/2008	—	—	—	—	19,231	11.82	106,540
	2/12/2008	—	—	—	12,692	—	0.01	150,019
	n/a	0	168,750	253,125	—	—	—	—
Scott D. Kelley, M.D. . . .	2/12/2008	—	—	—	—	19,231	11.82	106,540
	2/12/2008	—	—	—	7,692	—	0.01	90,919
	n/a	0	111,631	167,447	—	—	—	—
John Coolidge	2/12/2008	—	—	—	—	19,231	11.82	106,540
	2/12/2008	—	—	—	7,692	—	0.01	90,919
	n/a	0	120,180	180,270	—	—	—	—

(1) Represents amounts payable under our 2008 Plan.

(2) Represents restricted stock awards granted under our 2001 Stock Incentive Plan.

(3) We granted these stock options on February 12, 2008 under our 2001 Stock Incentive Plan with the exception of the grant to Mr. Chamoun which was granted from our 1998 Stock Incentive Plan. These stock options become exercisable as to one-eighth of the shares of common stock underlying each option six months after the date of grant, with the remaining seven-eighths becoming exercisable in equal monthly installments thereafter over a forty-two month period. Each option has an exercise price equal to the closing price of our common stock on the date of grant as reported on the Nasdaq Global Market.

(4) Represents the grant date fair value of each award computed in accordance with SFAS No. 123(R).

All stock option grants referenced in the foregoing table vest ratably on a monthly basis over a four-year period beginning on the last day of each month. Our right to repurchase shares pursuant to restricted stock awards granted in 2008 lapses as to 100% of the shares four years from the date the shares were issued.

Pursuant to the terms of our stock incentive plans, in the event of a change in control all then-unexercisable stock options held by our executive officers will be assumed or equivalent options will be substituted by the acquiring corporation and such options will become exercisable in full, and all restricted stock awards will become free and clear of all restrictions and conditions, upon the earlier of (1) the executive's termination without cause by the successor corporation or for good reason by the executive, or (2) one year after such change in control, in the case of our chief executive officer, and 15 months after such change in control, in the case of our other executive officers.

Outstanding Equity Awards at Fiscal Year-End

The following table shows information regarding unexercised stock options and unvested restricted stock held by the named executive officers as of December 31, 2008.

	Option Awards				Stock Awards	
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)
Nassib G. Chamoun	50,000		10.20	10/5/2009(1)	61,243	208,839
	50,000		23.63	7/12/2010(2)		
	25,000		11.69	2/21/2011(3)		
	75,000		10.00	1/1/2012(4)		
	5,000		3.85	7/5/2012(5)		
	14,537		3.68	1/24/2013(6)		
	100,000		15.66	2/4/2014(7)		
	75,000		20.61	2/17/2015(8)		
	33,750	11,250	29.25	2/14/2016(9)		
	15,000	15,000	16.15	2/28/2017(10)		
	10,417	45,139	11.82	2/12/2018(11)		
Michael Falvey	125,000		14.91	4/2/2014(12)	—	—
	22,500		20.61	2/17/2015(8)		
	12,657		29.25	2/14/2016(9)		
	6,250		16.15	2/28/2017(10)		
	3,606		11.82	2/12/2018(11)		
William Floyd.	26,000		12.50	5/28/2011(13)	28,785	98,157
	2,604		10.00	1/1/2012(4)		
	3,646		3.85	7/5/2012(5)		
	9,479		3.26	9/12/2012(14)		
	4,640		3.68	1/24/2013(6)		
	11,250		10.12	10/10/2013(15)		
	30,000		15.66	2/4/2014(7)		
	22,500		20.61	2/17/2015(8)		
	12,657	4,218	29.25	2/14/2016(9)		
	6,250	6,250	16.15	2/28/2017(10)		
	3,606	15,625	11.82	2/12/2018(11)		
Scott D. Kelley, M.D. . .	75,000		23.63	7/12/2010(2)	23,785	81,107
	15,000		8.56	11/27/2010(17)		
	13,433		12.50	5/28/2011(13)		
	25,000		10.00	1/1/2012(4)		
	12,500		3.85	7/5/2012(5)		
	6,875		3.26	9/12/2012(14)		
	7,028		3.68	1/24/2013(6)		
	13,125		10.12	10/10/2013(15)		
	30,000		15.66	2/4/2014(7)		
	22,500		20.61	2/17/2015(8)		
	12,657	4,218	29.25	2/14/2016(9)		
	6,250	6,250	16.15	2/28/2017(10)		
	3,606	15,625	11.82	2/12/2018(11)		
John Coolidge.	1,875		10.00	1/22/2012(16)	23,785	81,107
	1,875		3.85	7/5/2012(5)		
	4,687		3.68	1/24/2013(6)		
	20,113		15.66	2/4/2014(7)		
	22,500		20.61	2/17/2015(8)		
	12,657	4,218	29.25	2/14/2016(9)		
	6,250	6,250	16.15	2/28/2017(10)		
	3,606	15,625	11.82	2/12/2018(11)		

(1) Option vests over 48 months at a rate of 1/48th per month, beginning June 30, 1999.

(2) Option vests over 48 months at a rate of 1/48th per month, beginning July 1, 2000.

(3) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2001.

(4) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2002.

(5) Option vests over 48 months at a rate of 1/48th per month, beginning July 1, 2002.

(6) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2003.

(7) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2004.

(8) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2005.

(9) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2006.

(10) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2007.

(11) Option vests over 48 months at a rate of 1/48th per month, beginning March 1, 2008.

(12) Option vests over 48 months at a rate of 1/48th per month, beginning April 1, 2004.

(13) Option vests over 48 months at a rate of 1/48th per month, beginning June 1, 2001.

(14) Option vests over 48 months at a rate of 1/48th per month, beginning September 12, 2002.

(15) Option vests over 48 months at a rate of 1/48th per month, beginning November 1, 2003.

(16) Option vests over 48 months at a rate of 1/48th per month, beginning January 1, 2002.

Option Exercises and Stock Vested

The following table shows amounts received by the named executive officers upon exercise of stock options and vesting of restricted stock during 2008.

	Option Awards		Stock Awards	
Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise ($)(1)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting ($)(2)
Nassib G. Chamoun	32,647	46,971	4,583	46,367
Michael Falvey	—	—	1,563	16,151
William Floyd	—	—	1,563	16,151
Scott D. Kelley, M.D.	—	—	1,563	16,151
John Coolidge	—	—	1,563	16,151

(1) Represents the difference between the exercise price and the fair market value of our common stock on the date of exercise.

(2) The value realized on vesting of restricted stock awards is determined by multiplying the number of shares that vested by the fair market value of our common stock on the vesting date.

Potential Payments Upon Termination or Change in Control

The following tables were prepared as though our named executive officers were terminated on December 31, 2008 using that day's closing stock price of $3.41. The amounts under the column labeled "Termination by the Company without Cause or by the Executive Officer with Good Reason on or after a Change of Control" assumed a change in control occurred and that the executive was terminated as of December 31, 2008. However, the named executive officers included in this analysis were not terminated and a change in control did not occur on this date. As a result there can be no assurance that a termination of employment, a change in control or both would produce the same or similar results as those described below on any other date or at any other stock price.

For the purpose of this analysis, we have made the following assumptions with respect to payments and benefits provided for termination following a change in control for a named executive officer:

All the arrangements listed below are per the "Key Employee Change in Control Severance Benefits Plan", or the Severance Benefits Plan.

Cash Severance

- A change in control was assumed to have occurred on December 31, 2008, although no change in control actually occurred on this date.
- All the executives are assumed to have terminated their employment on December 31, 2008, although none of the executives included in this analysis actually terminated their employment on this date. Mr. Falvey's employment was terminated (not following a change in control) on December 31, 2008 under a separate severance arrangement; therefore, we did not include Mr. Falvey in this analysis.
- Per the terms of the Severance Benefits Plan, Mr. Chamoun, our chief executive officer, is eligible to receive a cash severance payment equal to two times (2x) base salary plus a bonus equal to the average sum of the actual bonuses paid over the last three years. All other named executive officers are eligible to receive a cash severance payment equal to one and one quarter times (1.25x) base salary plus a bonus equal to the average sum of the actual bonuses paid over the last three years.
- For this analysis, we have assumed that severance payments include a pro-rata bonus payout for time worked in the year of termination. Since we assumed a termination date of December 31, 2008, the pro-rata bonus is equal to 100% of the target bonus.
- We have assumed that none of the executives have any accrued or unused vacation remaining at the time of termination and all base salary amounts have been paid for time worked as of December 31, 2008.

Benefits Continuation

- Mr. Chamoun is eligible to receive 24 months' continuation, and all other named executive officers are eligible to receive 15 months' continuation, of all medical and dental benefits that such executive participated in prior to termination.
- For this analysis, all executives would receive continuation of both medical and dental benefits.

Equity

- The 1998 and 2001 Stock Incentive Plans provide for full acceleration of all unvested stock options and restricted shares upon the employment termination within a specified period of time following a change in control. For this analysis, we assumed that employment termination occurs on the date of the change in control, so all awards accelerate.
- The analysis reflects the value of all unvested stock options and restricted shares as of December 31, 2008 based on the closing price of $3.41 on December 31, 2008. This amount does not reflect the value of any vested and outstanding stock options.
- This analysis excludes the value associated with the potential acceleration of shares purchased under the Employee Stock Purchase Plan. Acceleration would be based on a present value of the 5% discount at the time of the change in control and termination.

Golden Parachute (280G Gross-up)

The Severance Benefits Plan provides each executive with the same treatment for the "Golden Parachute" excise tax.

- The agreement provides for a "Best Net Benefit" treatment. This means that the total severance payments should be total compensatory payments that are contingent on the Company sale, reduced to the extent so that no portion of the payment shall be subject to the excise tax, but only if, the executive's "net after-tax benefit" shall exceed what the net after-tax benefit would have been if such reduction were not made and the executive paid such excise tax.

Name	Termination by the Company Without Cause or by the Named Executive Officer with Good Reason on or After Change of Control
Nassib G. Chamoun	
Cash Severance(1)	$1,029,186
Pro-rata bonus(2)	$ 243,750
Accelerated Vesting of Unvested Equity(3)(4)	$ 208,839
Benefits Continuation(5)	$ 26,727
280G Payment Reduction(6)	$ —
Total(7)	$1,508,502
William Floyd	
Cash Severance(1)	$ 489,154
Pro-rata bonus(2)	$ 168,750
Accelerated Vesting of Unvested Equity(3)(4)	$ 98,157
Benefits Continuation(5)	$ 16,704
280G Payment Reduction(6)	$ —
Total(7)	$ 772,765
Scott D. Kelley, M.D.	
Cash Severance(1)	$ 459,633
Pro-rata bonus(2)	$ 111,631
Accelerated Vesting of Unvested Equity(3)(4)	$ 81,107
Benefits Continuation(5)	$ 16,704
280G Payment Reduction(6)	$ —
Total(7)	$ 669,075
John Coolidge	
Cash Severance(1)	$ 358,765
Pro-rata bonus(2)	$ 120,180
Accelerated Vesting of Unvested Equity(3)(4)	$ 81,107
Benefits Continuation(5)	$ 16,704
280G Payment Reduction(6)	$ —
Total(7)	$ 576,756

(1) Per the terms of the Severance Benefits Plan, Mr. Chamoun is eligible to receive a cash severance payment equal to two times (2x) base salary plus a bonus equal to the average sum of the actual bonuses paid over the last three years. All other named executive officers are eligible to receive a cash severance payment equal to one and one quarter times (1.25x) base salary plus a bonus equal to the average sum of the actual bonuses paid over the last three years.

(2) Reflects the pro-rata bonus based on each executive's target bonus award opportunity. Since we assumed a termination date of December 31, 2008, the pro-rata bonus reflects 100% of each executive's target bonus award opportunity.

(3) Reflects the value of all unvested stock options and restricted shares as of December 31, 2008 based on the closing price of $3.41 on December 31, 2008. This amount does not reflect the value of any vested and outstanding stock options.

(4) Represent the in-the-money value of any outstanding and unvested stock options and unvested restricted shares that accelerate and become fully exercisable upon a change-in-control as defined in the Aspect Medical Systems 1998 and 2001 Stock Incentive Plans.

(5) Represents 24 months (CEO) and 15 months (all other named executive officers) of medical and dental benefits continuation.

(6) Per the terms of the Severance Benefits Plan, this value reflects the estimated payments that would be reduced so that no excise tax is triggered, if such a reduction results in a better "net after-tax benefit" for the executives.

(7) Does not include the accelerated value of the ESPP benefit since the parachute values are likely to be immaterial.

Compensation of Directors

We reimburse our non-employee directors for reasonable out-of-pocket expenses incurred in attending meetings of the board of directors or any committee of the board of directors. Non-employee directors also receive:

- a $15,000 annual retainer;
- a $10,000 annual retainer for service as lead director;
- a $10,000 annual retainer for service as chair of the Audit Committee;
- a $6,000 annual retainer for service as chair of the Compensation Committee;
- a $4,000 annual retainer for service as chair of the Corporate Governance and Nominating Committee;
- $1,500 for each board meeting attended in person;
- $500 for each board meeting attended by telephone;
- $1,000 for each meeting of the Audit Committee, Compensation Committee or Corporate Governance and Nominating Committee attended in person; and
- $500 for each meeting of the Audit Committee, Compensation Committee or Corporate Governance and Nominating Committee attended by telephone.

No director who also serves as an employee receives compensation for services rendered as a director. If all of our director nominees are elected we will have seven non-employee directors on our board of directors as of the date of the Annual Meeting: Mr. Biro, Mr. Kania, Mr. Keating, Mr. Mahoney, Mr. O'Connor, Mr. Scialli and Dr. Stanski.

In addition, our non-employee directors are eligible to receive non-statutory stock options, restricted stock and other stock-based awards under our Amended and Restated 1998 Director Equity Incentive Plan, which we refer to as our 1998 restated director plan. Our 1998 restated director plan was initially adopted by our board of directors and stockholders in February 1998, was amended in December 1999 to increase the number of shares of common stock authorized under the plan from 100,000 to 200,000 shares and was amended and restated in May 2005 to (i) increase the number of shares of common stock authorized under the plan from 200,000 to 350,000 shares, (ii) permit restricted stock grants, and (iii) provide for automatic awards of a fixed number of options upon initial election and subsequent re-election to our board of directors and, in lieu of such automatic awards, permit the board discretion in determining the timing, type of award and number of shares issuable pursuant to awards granted under this plan.

Pursuant to our 1998 restated director plan, each non-employee director, on the date of his or her election to the board of directors, is eligible to receive (i) a non-statutory stock option to purchase 8,000 shares of our common

stock, which we refer to as an initial option, and (ii) a restricted stock award to purchase 3,000 shares of our common stock, which we refer to as the initial restricted stock award. The initial option is exercisable as to 50% of the shares underlying such initial option immediately upon such director's initial election and the remainder becomes exercisable in equal annual installments on each of the first, second and third anniversaries of the date of grant, provided that the holder of the initial option continues to serve as a director on each such anniversary of the grant date. We have a right of repurchase with respect to the shares of common stock subject to the initial restricted stock award, which right of repurchase lapses as to one-third of the shares on each of the first, second and third anniversaries of the date of grant, provided that the holder of the initial restricted stock award continues to serve as a director on each such anniversary of the grant date.

Additionally, pursuant to our 1998 restated director plan, each non-employee director serving as a director on the date of our annual meeting of stockholders (provided that such director has served as a director for at least six months prior to such annual meeting), is eligible to receive (i) a non-statutory stock option to purchase 4,000 shares of common stock, which we refer to as an annual option, and, together with an initial option, a director option and (ii) a restricted stock award to purchase 4,500 shares of common stock, which we refer to as an annual restricted stock award, and, together with an initial restricted stock award, a director restricted stock award. The annual option is exercisable in equal annual installments on each of the first, second and third anniversaries of the date of grant, provided that the holder of the annual option continues to serve as a director on each such anniversary of the grant date. We have a right of repurchase with respect to the shares of common stock subject to the annual restricted stock award, which right of repurchase lapses as to one-third of the shares on each of the first, second and third anniversaries of the date of grant, provided that the holder of the annual restricted stock award continues to serve as a director on each such anniversary of the grant date.

The following table summarizes the compensation of each of our directors for the year ended December 31, 2008.

DIRECTOR COMPENSATION

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)(1)(2)	Option Awards ($)(3)(4)	Non-Equity Incentive Plan Compensation($)	All Other Compensation ($)	Total ($)
Michael A. Esposito(5)	25,750	33,605	21,714	—	—	81,069
David W. Feigal, Jr., M.D.(6)	22,750	27,801	18,678	—	—	69,229
Edwin M. Kania, Jr.	30,250	27,801	33,332	—	—	91,383
James J. Mahoney, Jr.	38,750	27,801	33,332	—	—	99,883
John J. O'Connor	37,250	33,605	21,714	—	—	92,569
Donald R. Stanski, M.D.	28,250	27,801	33,332	—	—	89,383
Boudewijn L.P.M. Bollen(7)	—	30,845	138,209	29,400(8)	—	169,054
J. Breckenridge Eagle(9)	—	123,272	185,783	85,085(10)	—	309,055

(1) These amounts reflect compensation cost recognized by us in 2008 for a portion of the current and prior year restricted stock awards to directors as described in SFAS No. 123R. For a discussion of the valuation assumptions, see Note 10 to our consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2008.

(2) All stock awards referenced had a purchase price of $0.01 per share.

(3) These amounts reflect compensation cost recognized by us in 2008 for a portion of the current and prior year stock option awards to directors as described in SFAS No. 123R. For a discussion of the valuation assumptions, see Note 10 to our consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2008.

(4) All option awards referenced were granted with an exercise price equal to the closing price of our common stock on the Nasdaq Global Market on the date of grant.

(5) Mr. Esposito will not be standing for re-election as a director at the Annual Meeting.

(6) Dr. Feigal resigned as our director, effective immediately prior to the Annual Meeting.

(7) Mr. Bollen resigned as our director, effective immediately prior to the Annual Meeting.

(8) Represents commission payment to Mr. Bollen.

(9) Mr. Eagle is an employee of the Company and also serves as Chairman of the Board of Directors.

(10) Represents bonus pursuant to the 2008 Annual Bonus Plan.

The following table shows the aggregate number of outstanding stock options and unvested shares of restricted stock held by each of our directors as of December 31, 2008:

Name	Stock Options (#)	Unvested Shares of Restricted Stock (#)
Michael A. Esposito	14,000	5,833
David W. Feigal, Jr.	29,000	5,499
Edwin M. Kania, Jr.	29,000	5,499
James J. Mahoney, Jr.	28,500	5,499
John J. O'Connor	14,000	5,833
Donald R. Stanski, M.D.	46,500	5,499
Boudewijn L.P.M. Bollen	104,250	4,593
J. Breckenridge Eagle(1)	200,204	27,655

(1) Mr. Eagle is an employee of the Company and also serves as Chairman of the Board of Directors.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information as of December 31, 2008 about the securities authorized for issuance under our equity compensation plans, consisting of our 2001 Stock Incentive Plan, as amended, our 1998 Stock Incentive Plan, as amended, our 1998 director plan, as amended, and our 1999 Employee Stock Purchase Plan. All of our equity compensation plans were adopted with the approval of our stockholders.

Equity Compensation Plan Information

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity compensation approved by stockholders	4,264,588	$17.02	1,369,403
Equity compensation plans not approved by stockholders	—	—	—
Total	4,264,88	$17.02	1,369,403

Policies and Procedures for Related Party Transactions

In accordance with the terms of the charter of our Audit Committee, our Audit Committee is required to review all related person transactions on an ongoing basis and all such transactions must be approved by the audit committee. A related person transaction, as defined in Item 404(a) of Regulation S-K is any transaction, arrangement or relationship in which Aspect is a participant, the amount involved exceeds $120,000, and one of our executive officers, directors, director nominees or 5% stockholders (or their immediate family members), each of whom we refer to as a "related person," has a direct or indirect material interest.

We have also adopted a policy providing that all material transactions between us and our officers, directors and other affiliates must be:

- approved by a majority of the members of our board of directors and by a majority of the disinterested members of our board of directors; and
- on terms no less favorable to us than could be obtained from unaffiliated third parties.

PROPOSAL TWO — APPROVAL OF A ONE-TIME STOCK OPTION EXCHANGE PROGRAM

Introduction

We are seeking stockholder approval of an option exchange program that would allow us to cancel significantly "underwater" stock options currently held by some of our employees, excluding our officers and directors, in exchange for the issuance of new stock options exercisable for fewer shares of our common stock, with a lower exercise price that equals the current fair market value of our common stock and extended vesting terms. Underwater stock options have an exercise price which is greater than the market price of the underlying stock. We are proposing this program because we believe that it will provide a more cost-effective retention and incentive tool to our key contributors than issuing incremental equity or paying additional cash compensation to offset the adverse affect of these underwater stock options. Assuming we receive stockholder approval of our option exchange program, we estimate a reduction in outstanding stock options of approximately 892,163 shares, assuming full participation in the option exchange program.

Overview

In February 2009, the compensation committee recommended to our board of directors, and our board subsequently authorized, a one-time stock option exchange program, or the Option Exchange Program, subject to stockholder approval.

Stock options will be eligible for exchange if they have an exercise price per share greater than or equal to $15.00 and were granted under our 1998 Stock Incentive Plan, as amended, or our 2001 Stock Incentive Plan, as amended, collectively referred to as the Plans. We refer to such options as Eligible Options. The opportunity to participate in the Option Exchange Program will be offered to all of our domestic and certain of our foreign employees, excluding our executive officers and directors, collectively referred to as the Eligible Participants. Eligible Options surrendered for exchange under the Option Exchange Program will, upon the closing of the exchange offer, be exchanged for new options, which we refer to as New Options, granted under the 2001 Stock Incentive Plan, as amended.

Under the proposed Option Exchange Program, each New Option will have: (1) an exercise price per share equal to the closing price of our common stock as reported on the Nasdaq Global Market on the day that our exchange offer expires; (2) a new expiration date of six years from the date of grant; and (3) the following vesting schedule:

- new Options granted in exchange for Eligible Options that were fully vested and exercisable as of the day that our exchange offer expires shall vest with respect to 100% of the underlying shares on the one year anniversary of the New Option's grant date; and
- new Options granted in exchange for Eligible Options that were not fully vested as of the day that our exchange offer expires shall be subject to one additional year of vesting pursuant to the original terms of the Eligible Option for which such New Option was exchanged.

The ratio of shares underlying exchanged Eligible Options to shares underlying New Options is expected to fall within a range of 3:1 to 350:1, with the majority of shares underlying exchanged options being within a range of 3:1 to 5:1, based on the relative fair value of the exchanged Eligible Options to the New Options. We intend for the fair value of the New Options to be approximately equal to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program. We expect that this exchange should result in no adverse impact on our reported earnings. All New Options will be nonstatutory options regardless of whether the Eligible Options exchanged therefor were incentive stock options or nonstatutory stock

options. Please see "— Description of the Option Exchange Program — Accounting Treatment" and "— US Federal Income Tax Treatment" below for a further discussion of certain accounting and tax aspects of the Option Exchange Program.

We believe that, if approved by our stockholders, the Option Exchange Program will permit us to:

- enhance long-term stockholder value by restoring competitive incentives to Eligible Participants so they are further motivated to complete and deliver the important strategic and operational initiatives of our company, as underwater options undermine the effectiveness of options as employee performance and retention incentives; and
- reduce the number of shares issuable upon the vesting and exercise of currently outstanding stock options and other stock awards, by reducing the total number of currently outstanding stock options.

If our stockholders approve this proposal, our board of directors intends to close the exchange offer at 5:00 p.m. on or about July 7, 2009. If we do not obtain stockholder approval of this proposal, we will not be able to implement the Option Exchange Program.

Reasons for the Option Exchange Program

We believe that an effective and competitive employee incentive program is imperative for the future growth and success of our business. We rely on highly skilled and educated technical and managerial employees to implement our strategic initiatives, expand and develop our business and satisfy customer needs. Competition for these types of employees, particularly in the medical devices industry, is intense and many companies use stock options as a means of attracting, motivating and retaining their best employees. At Aspect, stock options constitute a key part of our incentive and retention programs because our board of directors believes that equity compensation encourages employees to act like owners of the business, motivating them to work toward our success and rewarding their contributions by allowing them to benefit from increases in the value of our shares.

Many of our employees now hold stock options with exercise prices significantly higher than the current market price of our common stock. For example, on March 31, 2009, the closing price of our common stock on the Nasdaq Global Market was $4.19 per share and Eligible Participants held outstanding stock options exercisable for approximately 1,147,325 shares of our common stock that had exercise prices of $15.00 or more. These options were generally issued at varying times prior to November 2007. Although we continue to believe that stock options are an important component of our employees' total compensation, many of our employees view these existing underwater options that have exercise prices in excess of $15.00 per share as having little or no value due to the significant difference between the exercise prices and the current market price of our common stock. As a result, for many employees, these options are ineffective at providing the incentive and retention value that our board believes is necessary to motivate our employees to increase long-term stockholder value. We believe that the opportunity to exchange Eligible Options for New Options exercisable for fewer shares, together with a new minimum vesting requirement, represents a reasonable and balanced exchange program with the potential for a significant positive impact on employee retention, motivation and performance.

In addition to the underwater options having little or no retention value, they also would remain outstanding until they are exercised or expire unexercised. These outstanding options expose our stockholders to potential dilution and may place downward pressure on our stock price even if they are underwater and not likely to be exercised. This potential dilution and downward pressure caused by outstanding stock options is referred to as overhang. If approved by our stockholders, the Option Exchange Program will reduce outstanding stock options by eliminating underwater options that are currently outstanding. Under the proposed Option Exchange Program, Eligible Participants will receive stock options covering fewer shares than the options surrendered. As a result, the number of shares subject to all outstanding equity awards will be reduced. If all Eligible Options were exchanged, then based on the number of Eligible Options outstanding on March 31, 2009, options to purchase approximately 1,147,325 shares would be surrendered and cancelled, while New Options covering approximately 255,162 shares would be issued. This would result in a net reduction in outstanding stock options by approximately 892,163 shares, or approximately 5.1% of the number of shares of our common stock outstanding as of March 31, 2009. The actual reduction in the number of stock options outstanding that may result from the Option Exchange Program could vary

significantly and is dependent upon the actual level of participation in the Option Exchange Program. All Eligible Options that are not exchanged will remain outstanding and in effect in accordance with their existing terms.

In addition, if we are unable to implement the Option Exchange Program, we may determine it is necessary to issue additional options to our employees at current market prices, thereby increasing the aggregate number of stock options outstanding. These grants would deplete the current pool of options available for future grants under the 2001 Stock Incentive Plan and could also result in decreased reported earnings which could negatively impact our stock price.

Consideration of Alternatives

Our compensation committee reviewed and evaluated various strategies to address the issue of underwater stock options and concluded, based on the reasons discussed above, that a program under which employees could exchange stock options with an exercise price greater than or equal to $15.00 is the best alternative for both our employees and our stockholders.

Description of the Option Exchange Program

Implementing the Option Exchange Program. Eligible Participants will be offered the opportunity to participate in the Option Exchange Program pursuant to an Offer to Exchange which will be filed with the Securities and Exchange Commission, or the SEC on Schedule TO. From the time the Offer to Exchange commences, Eligible Participants will be given at least 20 business days to make an election to surrender all of their Eligible Options in exchange for New Options. The New Options will be granted on the day the Offer to Exchange expires, which we expect will be on or about July 7, 2009. Even if the Option Exchange Program is approved by our stockholders, our board will retain the authority, in its sole discretion, to terminate or postpone the program at any time prior to the closing of the Offer to Exchange or to exclude certain Eligible Options or Eligible Participants from participating in the Option Exchange Program due to tax, regulatory or accounting reasons or because participation would be inadvisable or impractical. Stockholder approval of the Option Exchange Program applies only to this specific exchange program. If we were to implement a different stock option exchange program in the future, we would once again need to seek stockholder approval.

Outstanding Options Eligible for the Option Exchange Program. To be eligible for exchange under the Option Exchange Program, an option must have an exercise price that is greater than or equal to $15.00. As of March 31, 2009, options to purchase approximately 4,674,793 shares of our common stock were outstanding, of which options to purchase approximately 1,147,325 shares would be eligible for exchange under the Option Exchange Program.

Eligibility. The Option Exchange Program will be open to all of our domestic and certain of our foreign employees, excluding our executive officers and directors, who hold Eligible Options. Our directors and executive officers are not eligible to participate in the Option Exchange Program. To be eligible, an employee must be employed by us at the time the Offer to Exchange commences. Additionally, in order to receive the New Options, an Eligible Participant who surrenders his or her Eligible Options for exchange must be an employee on the date the New Options are granted. As of March 31, 2009, approximately 197 employees held Eligible Options.

Exchange Ratios. In the proposed exchange offer, Eligible Participants would be offered a one-time opportunity to exchange all of their Eligible Options for New Options covering a smaller number of shares. The actual number of shares subject to New Options will be determined in accordance with exchange ratios that reflect a value approximately equal to that of the exchanged Eligible Options. We intend for the fair value of the New Options to be approximately equal to the fair value of the Eligible Options surrendered based on a Black-Scholes valuation methodology calculated by an independent third party as of the close of the Option Exchange Program. The ratio of Eligible Options to New Options is expected to be in a range of 3:1 to 350:1, with the majority of the shares underlying exchanged options being within a range of 3:1 to 5:1.

The following table shows (a) the number of shares underlying outstanding Eligible Options in each exercise price range above $15.00 per share as of March 31, 2009, (b) a hypothetical example of the exchange ratios that would be applied to calculate the number of shares subject to New Options upon to be granted in exchange for surrendered Eligible Options, and (c) the number of New Options to be issued based up such assumed exchange

ratios. The exchange ratios set forth in the table were determined based upon a Black-Scholes calculation of the assumed fair value of the Exchange Options and New Options. This Black-Scholes calculation takes into account factors that include original grant price, remaining vesting period, remaining option term and volatility.

1998 Stock Plan Options

Price	Number of Eligible Options (1)	Exchange Ratio (2)	Number of New Options
$15.000	1,625	15:1	108
$23.625	59,045	15:1	3,936
$24.500	7,500	15:1	500
$28.625	38,500	40:1	963
$47.875	7,500	350:1	21
TOTALS	114,170	—	5,528

2001 Stock Plan Options

Price	Number of Eligible Options (1)	Exchange Ratio (2)	Number of New Options
$15.230	8,250	4:1	2,063
$15.590	9,025	3:1	3,008
$15.660	158,236	4:1	39,559
$16.150	196,850	3:1	65,617
$16.980	39,800	3:1	13,267
$17.000	3,083	4:1	771
$17.300	479	4:1	120
$17.990	27,391	4:1	6,848
$18.200	7,728	4:1	1,932
$20.610	222,872	5:1	44,574
$26.790	36,181	5:1	7,236
$27.000	32,500	4:1	8,125
$29.250	203,960	5:1	40,792
$31.800	30,150	5:1	6,030
$32.330	7,500	5:1	1,500
$34.900	49,150	6:1	8,192
TOTALS	**1,033,155**	—	**249,634**

(1) Excludes options grant to our executive officers and members of our board of directors. Such options are not eligible for exchange pursuant to the Option Exchange Program.
(2) The weighted average of these exchange ratios is 4.5:1

The actual exchange ratios will be determined once the closing price of our common stock on the day prior to the closing of the exchange offer is reported by the Nasdaq Global Market. We currently expect to close the exchange offer on or about July 7, 2009, assuming the Option Exchange Program is approved by our stockholders. New Options granted in accordance with the actual exchange ratios will be rounded down to the nearest whole share on a grant-by-grant basis. Adjustments to any of the assumptions used to calculate the information in the above table will result in a change to the number of shares underlying New Options that may be granted under the Option Exchange Program.

Election to Participate. Participation in the Option Exchange Program will be voluntary. Eligible Participants will only be permitted to exchange all or none of their Eligible Options for New Options.

Exercise Price of New Options. All New Options will be granted with an exercise price equal to the closing price of our stock on the Nasdaq Global Market on the day of the close of the exchange offer.

Vesting of New Options. The New Options will vest as follows:

- New Options granted in exchange for Eligible Options that were vested and exercisable as of the day that our exchange offer expires shall vest monthly until 100% of the underlying shares are vested on the one year anniversary of the New Option's grant date; and
- New Options granted in exchange for Eligible Options that were unvested as of the day that our exchange offer expires shall be subject to an additional one-year of vesting pursuant to the original terms of the Eligible Option for which such New Option was exchanged. For example, if a New Option is granted in exchange for an Eligible Option that vests monthly and has two years of vesting remaining, such New Option would vest monthly over three years.

Term of the New Options. The New Options will have a new expiration date of six years from the date of grant.

Other Terms and Conditions of the New Options. Other terms and conditions of the New Options will be set forth in option agreements to be entered into as of the New Option grant date. Any additional terms and conditions will be comparable to the existing terms and conditions of the Eligible Options. All New Options will be nonstatutory stock options granted under our Plan regardless of the tax status of the Eligible Options tendered for exchange.

Return of Surrendered Eligible Options to Plan. Consistent with the terms of the 2001 Plan, the pool of shares available for the grant of future awards under our 2001 Stock Incentive Plan will be increased by that number of shares equal to the difference between (a) the number of shares underlying surrendered Eligible Options granted under the 2001 Stock Incentive Plan and (b) the number of shares underlying all New Options granted under the 2001 Stock Incentive Plan. Because we are making no further grants under the 1998 Plan, the shares underlying surrendered Eligible Options granted under the 1998 Stock Incentive Plan will be cancelled.

Accounting Treatment. We have adopted the provisions of Financial Accounting Standards Board Statement of Financial Accounting Standards No. 123 (Revised), or SFAS 123(R), regarding accounting for share-based payments. Under SFAS 123(R), we are required to recognize any incremental compensation cost of the stock options granted in the Option Exchange Program. Incremental compensation cost is measured as the excess, if any, of the fair value of each New Option granted to employees in exchange for surrendered Eligible Options, measured as of the date the New Options are granted, over the fair value of the Eligible Options surrendered in exchange for the New Options, measured immediately prior to the cancellation. Such incremental compensation cost, if any, is recognized ratably over the vesting period of the New Options. However, because the exchange ratios will be calculated to result in the fair value of Eligible Options surrendered being equal to the fair value of the New Options replacing them, we do not expect to recognize any incremental compensation expense for financial reporting purposes as a result of the Option Exchange Program. As would be the case with Eligible Options, in the event that any of the New Options are forfeited prior to their vesting due to termination of service, the compensation cost for the forfeited New Options will not be recognized.

U.S. Federal Income Tax Consequences. The following is a summary of the material United States federal income tax consequences of the Option Exchange Program for those Eligible Participants who are subject to United States federal income tax. This summary is based on the federal tax laws in effect as of the date of this proxy statement. Changes to these laws could alter the tax consequences described below. A more detailed summary of the applicable tax considerations to Eligible Participants will be provided in the Exchange Offer. This summary does not discuss all of the tax consequences that may be relevant to an Eligible Participant in light of his or her personal circumstances, nor is it intended to be applicable in all respects to all categories of Eligible Participants.

We believe that the exchange of Eligible Options for New Options pursuant to the Option Exchange Program should be treated as a non-taxable exchange, and no income should be recognized for United States federal income tax purposes by the Eligible Participants upon the issuance of the New Options. All New Options will be nonstatutory stock options, even if the exchanged options are incentive stock options. As a result, upon the exercise

of the New Options, the Eligible Participants will recognize ordinary compensation income equal to the excess, if any, of the fair market value of the purchased shares on the exercise date over the exercise price paid for those shares. Upon disposition of the shares, the Eligible Participants will recognize capital gain or loss (which will be short-term or long-term depending on whether the shares were held for more than one year from the date of exercise) equal to the difference between the selling price and the fair market value of the shares on the date of exercise. The holding period for the shares acquired through the exercise of an option will begin on the day after the date of exercise. If Eligible Options that are incentive stock options are not exchanged in the Option Exchange Program, then such options may be deemed to be newly granted for United States federal income tax purposes, depending on the final terms of the Option Exchange Program.

There will be no tax consequences to us with respect to the Option Exchange Program or the exercise of New Options (or Eligible Options not exchanged) except that we will be entitled to a deduction when an Eligible Participant has compensation income. Any such deduction will be subject to the limitations of Section 162(m) of the Internal Revenue Code.

Potential Modifications to Terms to Comply with Governmental Requirements. The terms of the Option Exchange Program will be described in an Offer to Exchange that we will file with the SEC. Although we do not anticipate that the SEC will require us to modify the terms significantly, it is possible we will need to alter the terms of the Option Exchange Program to comply with comments from the SEC. Changes in the terms of the Option Exchange Program may also be required for tax purposes for participants in the United States as the tax treatment of the Option Exchange Program is not entirely certain.

Effect on Stockholders

We are not able to predict the impact the Option Exchange Program will have on your interests as a stockholder, as we are unable to predict how many participants will exchange their Eligible Options or what the future market price of our common stock will be on the date that the New Options are granted. If the Option Exchange Program is approved, the exchange ratios should result in (1) the issuance of fewer shares subject to the New Options than were subject to the cancelled Eligible Options tendered in the exchange offer and (2) the fair value of Eligible Options surrendered being approximately equal to the fair value of the New Options replacing them. As a consequence, we do not expect to recognize any incremental compensation expense for financial reporting purposes from the Option Exchange Program. In addition, the Option Exchange Program is intended to reduce both the number of outstanding stock options and our need to issue supplemental stock options in the future to remain competitive with other employers.

While we cannot predict how many Eligible Options will be exchanged, assuming full participation in the Option Exchange Program, a market price of our common stock of $4.19 per share, an exercise price of the New Options of $4.19 per share and exchange ratios that result in the fair value of the New Options being less than the fair to the fair value of the Eligible Options surrendered based on valuation assumptions made as of the close of the Option Exchange Program, the total number of shares underlying our outstanding options would be reduced by approximately 892,163 shares, which represents a reduction of approximately 5.1% of the number of shares of our common stock outstanding as of March 31, 2009. The actual reduction in the number of outstanding stock options that could result from the Option Exchange Program could vary significantly and is dependent upon a number of factors, including the actual level of participation in the Option Exchange Program.

Board Recommendation

Our Board of Directors unanimously recommends that the stockholders vote "FOR" the approval of the stock option exchange program for employees (excluding our executive officers and directors).

PROPOSAL THREE — AMENDMENT OF BY-LAWS

General Information

Our board of directors has unanimously adopted resolutions, subject to stockholder approval, approving and declaring the advisability of amending our Amended and Restated By-Laws, as amended (the "By-Laws") to provide that, subject to limited exceptions, future annual meetings will be held no later than May 25 in each year.

Section 1.2 of our By-Laws currently provides that our board of directors, the chairman of our board of directors or our President may designate the date and time of our annual meeting of stockholders and that a special meeting may be held in lieu of the annual meeting of stockholders.

The proposed amendment requires that the date of the annual meeting of stockholders shall not be later than May 25 in any year, unless the filing date of our Form 10-K is delayed beyond March 31, in which case the annual meeting of stockholders may be extended by up to a number of days equal to the number of days between March 31 and the date the Form 10-K is actually filed, but in no event may the date be extended beyond June 9 of that year. The amendment allows for the extension of the date of the annual meeting of stockholders beyond May 25 if our board of directors reasonably determines that we have material non-public information, the premature disclosure of which would be against our interests, but in no event may our board of directors extend the deadline beyond June 9 of that year. The amendment also requires the affirmative vote by stockholders holding at least 50% of our shares of capital stock entitled to vote or by a number of directors at least equal to 80% of the full size of the board in order to amend, repeal or adopt any provision inconsistent with Section 1.2. The amendment also eliminates the clause in Section 1.2 that permitted a special meeting to be held in lieu of the annual meeting.

Reason for Proposal

Our board of directors approved the amendment to our By-Laws, subject to stockholder approval, pursuant to our Agreement with First Manhattan, which is described in part above under the heading "Director Nomination and Election Arrangements" and is more fully described in our Current Report on Form 8-K, filed on April 8, 2009 with the SEC.

Amendment to By-Laws

The proposed amendment of our By-Laws is set forth in Appendix A in its entirety, and we have also shown the changes to the relevant sections resulting from the amendment, with deletions indicated by strike-outs and additions indicated by underlining. If this proposal is approved, it will become effective upon such approval.

Board Recommendation

Our board of directors unanimously recommends that the stockholders vote "FOR" the amendment to our By-Laws.

PROPOSAL FOUR — RATIFICATION OF SELECTION OF REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of our board of directors has selected the firm of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2009. Although stockholder approval of the Audit Committee's selection of Ernst & Young LLP is not required by law, our board of directors believes that it is advisable to give stockholders an opportunity to ratify this selection. If this proposal is not approved at the 2009 Annual Meeting of Stockholders, our Audit Committee will reconsider its selection of Ernst & Young LLP. Representatives of Ernst & Young LLP are expected to be present at the annual meeting and will have the opportunity to make a statement, if they desire to do so, and will be available to respond to appropriate questions from our stockholders.

Board Recommendation

Our board of directors unanimously recommends that the stockholders vote "FOR" the ratification of the selection of Ernst & Young LLP as Aspect's registered public accounting firm for the fiscal year ending December 31, 2009.

OTHER MATTERS

Our board of directors does not know of any other matters which may come before the annual meeting. However, if any other matters are properly presented to the meeting, it is the intention of the persons named in the accompanying proxy card to vote, or otherwise act, in accordance with their judgment on those matters.

SOLICITATION OF PROXIES

The cost of solicitation of proxies will be borne by Aspect. In addition to the solicitation of proxies by mail, officers and employees of Aspect may solicit proxies in person or by telephone. We may reimburse brokers or persons holding stock in their names, or in the names of their nominees, for their expenses in sending proxies and proxy material to beneficial owners.

REVOCATION OF PROXY

Subject to the terms and conditions set forth in this proxy statement, all proxies received by us will be effective, notwithstanding any transfer of the shares to which those proxies relate, unless prior to the closing of the polls at the annual meeting, our Secretary receives a written notice of revocation signed by the person who, as of the record date, was the registered holder of those shares, our Secretary receives a duly executed proxy card bearing a later date than the proxy being revoked at any time before that proxy is voted or the registered holder appears at the meeting and votes in person.

STOCKHOLDER PROPOSALS

In order to be included in the proxy materials for our 2010 Annual Meeting of Stockholders, stockholders' proposed resolutions must be received by us at our principal executive offices, One Upland Road, Norwood, Massachusetts 02062 no later than December 12, 2009. We suggest that proponents submit their proposals by certified mail, return receipt requested, addressed to our Secretary.

If a stockholder wishes to present a proposal at our 2010 Annual Meeting of Stockholders, but does not wish to have the proposal considered for inclusion in the Proxy Statement and proxy card, the stockholder must also give written notice to our Secretary at the address noted above. The required notice must be given within a prescribed time frame, which is generally calculated by reference to the date of our most recent annual meeting. Assuming that our 2010 Annual Meeting of Stockholders is held on or after May 1, 2010 and on or before June 9, 2010 (as we currently anticipate), our bylaws would require notice to be provided to our Secretary at our principal executive offices no earlier than February 14, 2010 and no later than March 14, 2010. If a stockholder fails to provide timely

notice of a proposal to be presented at the 2010 Annual Meeting of Stockholders, the proxies designated by our board of directors will have discretionary authority to vote on that proposal.

By Order of the Board of Directors,

J. NEAL ARMSTRONG
Secretary

Norwood, Massachusetts
April 30, 2009

OUR BOARD OF DIRECTORS HOPES THAT STOCKHOLDERS WILL ATTEND THE ANNUAL MEETING. WHETHER OR NOT YOU PLAN TO ATTEND, YOU ARE URGED TO COMPLETE, DATE, SIGN, AND RETURN THE ENCLOSED PROXY CARD IN THE ACCOMPANYING ENVELOPE. A PROMPT RESPONSE WILL GREATLY FACILITATE ARRANGEMENTS FOR THE MEETING AND YOUR COOPERATION WILL BE APPRECIATED. STOCKHOLDERS WHO ATTEND THE ANNUAL MEETING MAY VOTE THEIR STOCK PERSONALLY EVEN THOUGH THEY HAVE SENT IN THEIR PROXY CARDS.

APPENDIX A

AMENDMENT TO AMENDED AND RESTATED BY-LAWS

Section 1.2 of Article 1 of the By-Laws of Aspect Medical Systems, Inc., as amended (the "By-Laws"), is deleted in its entirety and the following substituted therefor:

"*Annual Meeting.* The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on a date and at a time designated by the Board of Directors, the Chairman of the Board or the President, which date shall not be a legal holiday in the place where the meeting is to be held and which date shall not be later than May 25 in any year, and shall not be adjourned without the vote of the holders of a majority in voting power of the shares represented in person or by proxy at such meeting; provided, however, that (a) if the filing of the corporation's Form 10-K is delayed beyond March 31 in any year, the Board of Directors may extend the May 25 deadline in that year by up to a number of days equal to the number of days between March 31 and the date that Form 10-K is actually filed, but in no event may the Board of Directors extend the deadline beyond June 9 of that year, and (b) the Board of Directors may extend the May 25 deadline in any year if the Board of Directors, after consulting with counsel and financial advisers, reasonably determines in good faith that the corporation has material non-public information the premature disclosure of which would be against the best interests of the corporation and its stockholders and that the delay is necessary (and is no longer than necessary) in order to avoid a premature disclosure that would be against the best interests of the corporation and its stockholders, but in no event may the Board of Directors extend the deadline beyond June 9 of that year. Notwithstanding Section 6.1 of these By-Laws, and notwithstanding any other provision of law, the Certificate of Incorporation or these By-Laws, either the affirmative vote of the holders of at least fifty percent (50%) of the shares of the capital stock of the corporation issued and outstanding and entitled to vote or approval by a number of directors at least equal to 80% of the full size of the board (counting any vacant seats as part of the full board for this purpose) shall be required to amend or repeal, or to adopt any provision inconsistent with, this Section 1.2."

The changes to Section 1.2 of the By-Laws are shown as follows, with deletions indicated by strike-outs and additions indicated by underlining :

1.2 Annual Meeting. The annual meeting of stockholders for the election of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on a date and at a time designated by the Board of Directors, the Chairman of the Board or the President, ~~(which date shall not be a legal holiday in the place where the meeting is to be held). If no annual meeting is held in accordance with the foregoing provision, a special meeting may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these By-Laws to the annual meeting of the stockholders shall be deemed to refer to such special meeting.~~, which date shall not be a legal holiday in the place where the meeting is to be held and which date shall not be later than May 25 in any year, and shall not be adjourned without the vote of the holders of a majority in voting power of the shares represented in person or by proxy at such meeting; provided, however, that (a) if the filing of the corporation's Form 10-K is delayed beyond March 31 in any year, the Board of Directors may extend the May 25 deadline in that year by up to a number of days equal to the number of days between March 31 and the date that Form 10-K is actually filed, but in no event may the Board of Directors extend the deadline beyond June 9 of that year, and (b) the Board of Directors may extend the May 25 deadline in any year if the Board of Directors, after consulting with counsel and financial advisers, reasonably determines in good faith that the corporation has material non-public information the premature disclosure of which would be against the best interests of the corporation and its stockholders and that the delay is necessary (and is no longer than necessary) in order to avoid a premature disclosure that would be against the best interests of the corporation and its stockholders, but in no event may the Board of Directors extend the deadline beyond June 9 of that year. Notwithstanding Section 6.1 of these By-Laws, and notwithstanding any other provision of law, the Certificate of Incorporation or these By-Laws, either the affirmative vote of the holders of at least fifty percent (50%) of the shares of the capital stock of the corporation issued and outstanding and entitled to vote or approval by a number of directors at least equal to 80% of the full size of the board (counting any vacant seats as part of the full board for this purpose) shall be required to amend or repeal, or to adopt any provision inconsistent with, this Section 1.2.