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Boston Scientific Financial Analysis

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Company, Industry and Competition Overview

Boston Scientific (BSX), located in Natick, MA, is a "worldwide developer, manufacturer and marketer of less-invasive medical devices." The products are used in a variety of medical specialties. The company offers its products in three categories: cardiovascular, endosurgery and neuromodulation.¹

"The company began in the late 1960's when the company's co-founder John Abele, acquired an equity interest in Medi-tech, a development company. Their initial products were a family of steerable catheters used in some of the first less-invasive procedures performed, and versions of these catheters are still sold today. This acquisition began a period of active, focused marketing, new product development and organizational growth. Since then, the company's net sales have increased from \$1.8 million in 1979"² to almost \$2.8 billion as of the third quarter of 2007.³ However, over the past few years, the company has stagnated in its growth.

The industry itself consists of a small number of very large companies; the rest are quite small (generally not more than 100 employees). There are a total of 3,391 medical device companies worldwide⁴ and when combined, they produce over \$75 billion of revenue per year (Andrews). The industry focuses on a wide range of medical devices used in practically every arena of medicine.

Boston Scientifics' key competitors are Medtronic Inc, St. Jude, Johnson & Johnson, and Abbot Laboratories.¹ It should be noted that the revenues and number of employees at Johnson & Johnson and Abbott Laboratories are split between medical devices, biotechnology, pharmaceuticals and consumer products, and the exact amounts from the medical devices business are unknown. Minneapolis based Medtronic (MDT) is the most successful and considered the largest "pure" medical device company in the world, and Boston Scientific is considered the second largest.¹

Exhibit #1, shown below, lists the top firms in the industry with a breakdown of revenue and number of employees. As one can see from the exhibit, Medtronic has 10,000 more employees than Boston Scientific. They also brought in over four billion dollars more in 2006.

¹ Reuters

² Boston Scientific 2001 10-k

³ Boston Scientific 2006 10-k

⁴ Google Answers

Exhibit 1: Medical Device Industry Comparison 5,6

Company	Employees	Revenue
Boston Scientific	28,600	\$8.27B
Medtronic Inc.	38,000	\$12.58B
Abbott Laboratories	65,000	\$25.914B
Johnson & Johnson	122,200	\$58.82B
St. Jude Medical	11,000	\$3.62B

Growth Strategy

The acquisition of Guidant Corporation in 2006 was a major event for Boston Scientific. By acquiring Guidant, a market leader in the treatment of cardiac disease, Boston Scientific was able to enhance their position in the Cardiac Rhythm Management (CRM) market. This acquisition will enable Boston Scientific to expand their product offerings and supply them with a long-term growth engine.

The Boston Scientific management team is focusing their growth strategy around the following initiatives⁷:

Improving Quality - Boston Scientific continues to focus on their quality systems, training all employees to adhere to the highest standards of quality.

Regaining Cardiac Rhythm Management (CRM) market share - Boston Scientific will focus their efforts on producing remote patient management and next-generation defibrillator platforms. Boston Scientific's planned defibrillator product launches include VITALITY NXT, TELIGEN, and COGNIS. Boston Scientific expects TELIGEN and COGNIS to be the company's flagship heart failure and tachycardia solutions in the future.

Maintaining Drug-Eluting Stent (DES) market leadership - The DES market contracted in 2006 due to concerns about products leading to a rare clot formation caused by stent implantations. Boston Scientific was able to maintain their market leadership position through the DES market downturn, with a 54% market share at the close of 2006. New product launches include PROMUS and TAXUS.

Controlling Costs associated with Guidant acquisition - Boston Scientific will focus on achieving their operating income and cash flow goals in 2007, while reducing debt and managing the increased costs resulting from the Guidant acquisition.

⁶ www.wikipedia.org

⁵ finance.yahoo.com

⁷ Boston Scientific 2006 Annual Report

Streamlining the Boston Scientific operating model through lean principles - Boston Scientific will focus on allocating resources to the most important business priorities.

We feel that of the above strategies, the most crucial for the next few years is controlling costs and reducing debts associated with the Guidant acquisition. This could either bring the company up or drag it down, depending on which direction it goes. As such, there is no more crucial activity at this time for the company's long term financial health. Our recommendations for management are noted at the end of this paper.

Potential Risks

Boston Scientific's diversified portfolio of product offerings opens them up to several potential markets, but also exposes them to many risks. Among the largest risk factors are the recovering cardiac rhythm (CRM) and drug eluting stents (DES) markets, which experienced a decrease in demand in 2006 due to product safety concerns. Within these critical markets there is also a risk associated with new product launches, which rely on timely regulatory approvals. Other risks to Boston Scientific include an inability to grow revenue in foreign markets, generating enough cash flow to fund operations and capital expenditures, and managing costs associated with the Guidant acquisition.³

The medical device industry as a whole is susceptible to a variety of other risks. Key industry risks overall include the failure of the FDA or other regulatory bodies to approve new devices, approved devices being pulled from the market for safety reasons, and the eroding market share, which can arise in countries that fail to enforce intellectual property rights. Additionally, expired patents and potential lawsuits are also threats to the industry.

Historical Analysis

Common Stock Market Price

The following graph illustrates the market value of a hypothetical \$10,000 investment in Boston Scientific common stock over five years, beginning in January 2003. Also, a similar investment in both Medtronic and the Standard & Poor's 500 Index is shown for comparison.

\$25,000 \$20,000 Value of Investment BSX \$15,000 MDT S&P 500 \$10,000 Index \$5,000 \$-1/3/2003 1/2/2004 12/31/2004 12/30/2005 12/29/2006 12/28/2007 **Date**

Exhibit 2: Market Value of \$10,000 Investment in BSX Common Stock

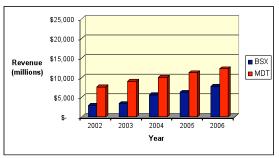
Source: www.msn.com

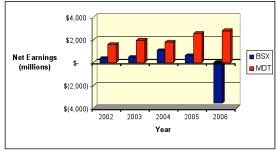
As shown above, Boston Scientific's stock quickly doubled in price, hitting a high of almost \$45 per share in April 2004. Since then, it has been in a slow declining, worth roughly half of the original investment by of 2007. While net earnings in 2006 were negatively impacted by the acquisition of Guidant, it can be noted that Wall Street had already been down on Boston Scientific for years. Medtronic's stock price has been much more consistent with the S&P, but has underperformed the index. Neither of these stocks appears to have been a good investment from 2003-2007. The four year period was chosen for Exhibit 2 to include the upward trend of 2003, and then the subsequent decline from '04-'07, in contrast to the relatively flat performance of Medtronic and modest gains of the S&P 500.

Revenue and Net Earnings

The following two graphs show the revenue and net earnings results for both Boston Scientific and Medtronic from fiscal years 2002-2006, in millions of dollars.

Exhibit 3 & 4: Revenue & Net Earnings Comparisons 2002-2006



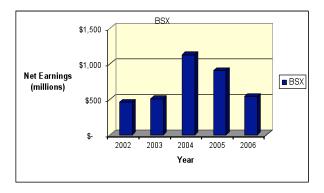


Sources: www.bostonscientific.com, www.medtronic.com

As shown in Exhibit 3, both companies have increased their revenues every year since 2002. Boston Scientific has actually shown more of an increase, averaging approximately 29% growth to Medtronic's' 13%. Looking at net earnings in Exhibit 4, however, both companies have been inconsistent. Boston Scientific peaked in 2004 and then fell for two consecutive years, while Medtronic has generally trended upward except for a slight dip in 2004. 2006 was especially poor for Boston Scientific as earnings were negative, which again was largely due to the Guidant acquisition.

Adding the purchased research and development expense from each year's earnings back in to net income that would reverse the effect of the one-time expenses due to the acquisition.

Exhibit 5: Boston Scientific Net Earnings Last 5 years



As you can see from Exhibit 5, 2006 earnings are positive after the adjustment, although still significantly below 2005 earnings.

Source: www.bostonscientific.com

Management's Guidance

Boston Scientific appears to be very straightforward in detailing the risks associated with the operations of their business. They state that their long-standing approach to growth is by strategic acquisitions of, investments in, or alliances with other companies and businesses.³ Management states that while they will continue to focus selectively on excellent opportunities, they may not always be successful in generating growth through this method.³

Another sign of management's openness is the detail they provide on the substantial patent and intellectual property rights litigation they are facing. While management opinion does not believe any legal proceedings will have a material effect on their financial condition, operations, or cash flows, the risk is present as they compete with other players with very similar medical products. For example, any legal proceedings in the heart stent market as Boston Scientific protects and defends their product may impact them financially through increased legal costs, financial settlements, or result in lost market share from pulling the product from the market.

Lastly, Boston Scientifics' sales projections are naturally tied to new products being approved by the FDA, European, and other international regulatory agencies. In reviewing 10-k reports from prior years for estimates of regulatory approvals and global product launches, the accuracy of their forecasting of when these products would impact the revenues via entrance into the market has shown to be accurate.

Ratio Analysis

Exhibit 6: Earnings Ratios⁸

		2006	2005	2004
NOWC	BSX	\$1,801,000	\$868,000	\$1,420,000
	MDT	\$3,559,000	\$4,828,000	\$2,991,000
TNOC	BSX	\$3,527,000	\$1,879,000	\$2,290,000
	MDT	\$5,621,000	\$6,709,000	\$4,850,000
NOPaT	BSX	(\$2,201,000)	\$692,000	\$1,108,000
	MDT	\$2,770,000	\$2,327,000	\$1,845,000
FCF	BSX	(\$3,849,000)	\$1,103,000	\$461,000
	MDT	\$3,858,000	\$468,000	\$1,484,000
ROIC	BSX	(62.40%)	36.83%	48.38%
	MDT	49.28%	34.68%	38.04%
EVA	BSX	(\$2,554,000)	\$504,000	\$879,000

⁸ Full calculations can be found in Appendix

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	MDT	\$2,208,000	\$1,656,000	\$1,360,000
MVA	BSX	\$15,857,000	\$19,646,000	\$27,031,000
	MDT	\$47,186,000	\$48,727,000	\$51,962,000

As shown in Exhibit 6, almost all of Boston Scientific's ratios that involve earnings were unimpressive for 2006, primarily due to acquisition and restructuring costs. Boston Scientific's free cash flow (FCF) plummeted from 2005-06, which does not speak well to their short-term strength. Also, while not a direct result of the net earnings figure, the market value added (MVA) decreased due to a decline in the stock price, which likely was influenced by the negative earnings. The only figures that have increased were the NOWC and TNOC figures, and a great deal of this was due to the cash balance.

While it can be argued that having more cash is better than no cash, having an unnecessarily large amount of cash means those assets are not being used to generate revenue. This cash could be used to purchase one of the small companies noted in the recommendations section; it could be used to purchase new devices; or it could be used to pay down debt quicker. This is particularly important because they are a potential takeover target for Johnson & Johnson (Medical Product Outsourcing, July/August 2007, "1. Johnson & Johnson). The more cash a company has, the more attractive they are to larger companies.

In general, Medtronic's ratios have all been trending upward since 2005. The market value added (MVA) has shown a slight decline, but not as significant as Boston Scientific. Medtronic's free cash flow (FCF) has shown great improvement from previous years. When compared to Boston Scientific, Medtronic proves to be the more valuable company.

Exhibit 7: Liquidity Ratios⁸

		2006	2005	2004
CR	BSX	1.86	1.78	1.26
	MDT	3.09	2.36	2.20
QR	BSX	1.58	1.50	1.12
	MDT	2.62	2.09	1.91

For the two liquidity ratios noted above, both companies have increased each ratio every year since 2004/05. Both companies have most recent quick ratios of at least 1.5, so they should not have issues meeting short-term obligations. Medtronic's ratios are almost double that of Boston Scientific, but both companies are well below the industry average of approximately 4. The difference in both current and quick ratios, indicate that Medtronic is more liquid and financially stronger than Boston Scientific.

Exhibit 8: Asset Management Ratios⁸

		2006	2005	2004
ITR	BSX	10.44x	15.03x	15.62x
	MDT	10.12x	9.59x	10.76x
DSO	BSX	93.67 days	62.97 days	74.05 days
	MDT	93.25 days	84.88 days	97.23 days
FA T0	BSX	4.53x	6.21x	6.46x
	MDT	5.96x	6.00x	5.68x
TA T0	BSX	0.25x	0.77x	0.69x
	MDT	0.63x	0.57x	0.64x

As noted above, the inventory turnover rate (ITR) at Medtronic was substantially lower than at Boston Scientific during all 3 years. Inventory turned over a 3-year average of every 28 days at Boston Scientific, whereas the inventory turned over a 3-year average of every 36 days at Medtronic. This likely demonstrates that Boston Scientific was more efficient at turning over inventory than Medtronic and as a result they presumably had more cash on hand to invest back into the business.

Boston Scientifics' days sales outstanding (DSO) ratio was impressive when compared to the industry average of 77 days. During this same time period, Medtronic averaged about 20 days longer sales outstanding than Boston Scientific. This is highly undesirable because it deprived Medtronic of funds that could have been used to invest in additional assets. Ultimately, they still pulled in far more revenue than Boston Scientific, but receiving those funds faster may have potentially created even more revenue. Boston Scientific could have also have accomplished this if they were able to beat the industry average in 2006.

The fixed asset turnover ratio (FA TO) is another ratio that demonstrated an advantage that BSX had over MDT. While the ratios are not drastically different between the two companies, Boston Scientific with the exception of 2006 (when their attention had turned to the Guidant acquisition) seemed to use their property, plant and equipment a bit more efficiently than Medtronic given their lower FA TO. In spite of this, Medtronic brought in more revenue than Boston Scientific. It is still important however to use the companies' fixed assets as efficiently as possible. In this regard, Boston Scientific proved more successful during the last two years.

Finally, with the exception of 2006/07, Boston Scientific had a higher total asset turnover ratio (TA TO) than Medtronic. In 2006 Boston Scientific returned far less sales revenue on every dollar invested because a large volume of capital went into the purchase of Guidant. The next two years however they earned more revenue on every dollar than Medtronic did. This would indicate that Medtronic should have either sold some assets or increased sales.

Exhibit 9: Debt Management Ratios⁸

		2006	2005	2004
DR	BSX	50.80%	47.76%	50.73%
	MDT	43.74%	52.29%	37.12%
TIE	BSX	(7.13)x	10.90x	24.34x
	MDT	16.42x	28.25x	47.16x
EC	BSX	(4.35)x	10.90x	24.34x
	MDT	13.05x	19.07x	23.42x

Exhibit 9 demonstrates that over the last three years Boston Scientific's debt ratio has stayed close to 50%, despite the fact that their assets increased by 3.79 times in 2006. Medtronic experienced more volatility with their debt ratio, even though their asset levels have held relatively constant. Boston Scientific's times interest earned ratio was negative in 2006 due to the Guidant acquisition. This means that they are covering their interest charges by a low margin of safety. Over the last 3 years, Medtronic has been in a better position to cover interest payments and service debt as indicated by the times interest earned (TIE) and EBITA coverage (EC) ratios.

Exhibit 10: Profitability Ratios⁸

		2006	2005	2004
PM	BSX	(45.74%)	10.00%	18.88%
	MDT	22.78%	22.55%	17.94%
BEP	BSX	(9.97%)	11.97%	19.07%
	MDT	19.18%	16.67%	15.64%
ROA	BSX	(11.50%)	7.66%	13.00%
	MDT	14.36%	12.95%	10.86%
ROE	BSX	(23.38%)	14.67%	26.39%
	MDT	25.53%	27.14%	17.26%

Boston Scientific's profitability in 2006 was drastically impacted by their acquisition of Guidant Corporation. Due to this acquisition Boston Scientific had a net income of negative \$3.57 billion, which in turn negatively impacted their profitability ratios. Despite the fact that Boston Scientific had positive net income prior to 2006, their key profitability ratios trailed those of industry competitor Medtronic.

As noted above, Boston Scientific had a profit margin of -45.74% in 2006 due to the Guidant acquisition, significantly down from their profit margins of 10.0% in 2005 and 18.88% in 2004. Boston Scientific needs to better control their expenses in the

upcoming year in order to compete with Medtronic, which posted a profit margin of 22.78% in 2007. 9

Boston Scientific's basic earning power (BEP) ratio was also down significantly in 2006 to -9.97%, compared to ratios of 11.97% in 2005 and 19.07% in 2004. The basic earning power ratio measures the earnings power of assets without taking into account taxes and leverage proving why negative earnings in 2006 significantly decreased Boston Scientific's basic earning power ratio. Alternatively, Medtronic continues to utilize their assets efficiently with a BEP ratio of 19.18% in 2007. Boston Scientific could gain a competitive advantage if they improve this ratio by increasing inventory turnover.

As was the case with the other profitability ratios, Boston Scientific's return on equity (ROE) and return on assets (ROA) were significantly impacted by the Guidant acquisition. In 2004, Boston Scientific was effectively utilizing their assets and equity, posting a return on assets of 13.0% and a return on equity 26.39%. Boston Scientific must now focus on getting their ROA and ROE ratios back to historic levels, with total assets increasing by 279% and equity increasing by 257% in 2006.

Exhibit 11: Market Value Ratios⁸

		2006	2005	2004
EPS	BSX	(2.416)x	0.764x	1.266x
	MDT	2.412x	2.092x	1.492x
P/E	BSX	(8.62)x	39.27x	38.74x
	MDT	20.77x	24.25x	32.98x
CF per share	BSX	(1.899)x	1.147x	1.594x
	MDT	2.914x	2.539x	1.875x
P/CF	BSX	(11.03)x	26.18x	30.77x
	MDT	17.20x	19.98x	26.24x
BVPS	BSX	10.334x	5.212x	4.799x
	MDT	9.448x	7.708x	8.643x
M/B	BSX	2.02x	5.76x	10.22x
	MDT	5.30x	6.58x	5.69x

Given their market value ratios in 2006, Boston Scientific is generally viewed poorly by investors. Boston Scientific increased their Shares Outstanding by 44.5% to 1.48B shares in 2006 to help raise capital, but the market did not react favorably. In fact the Boston Scientific price slid from an average of \$49.05 in 2004 to an average

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⁹ Years are slightly skewed because Medtronic's fiscal year begins in April while Boston Scientific's fiscal year begins in January.

of \$20.34 in 2006. Medtronic's price per share has been steadily hovering at \$50 per share for the last three years, while Boston Scientific has steadily declined.

As shown above, Boston Scientific's price earning (P/E) ratio was above Medtronic by 14.9% in 2004/05 and by 38.2% in 2005/06. Boston Scientific's price earning slide can be attributed to a decline in net income due to the acquisition of Guidant, which raised non-recurring expenses from \$1,056B in 2005 to \$4,119B in 2006.

Medtronic's cash flow per share (CF/S) consistently increases from 2004 to 2006, while Boston Scientific's cash flow per share ratio is also dragged down by net income in 2005. Boston Scientific's cash flow per share was only 45.2% of Medtronic's in 2005; a result of their net income plus depreciation being on \$942M compared to Medtronic's \$3B.

Book value per share (BVPS) shows a large increase from 5.21 in 2005 to 10.33 in 2006 due to the \$15.79B figure in Capital Surplus under Stockholder's Equity. Investors were confident in Boston Scientific in 2004 with a market/book (M/B) ratio of 10.22 but in 2006 it was down to a multiple of 2.02. This coincides with Boston Scientific's stock price decline. While Medtronic's book value per share shows general increases from 2005 to 2006, their market to book is stable over the last three years, averaging 5.86. This is inline with Boston Scientific's 3-year average of 6.0 despite the drop from 2004 to 2006.

Sustainable Growth Rate

Exhibit 12: BSX Sustainable Growth Rate = 2.23%

	Revenue (Millions)	Actual Growth Rate
2008E	\$8,023	-4.0%
2007	\$8,357	6.9%
2006	\$7,821	24.5%
2005	\$6,283	11.7%
2004	\$5,624	61.8%
2003	\$3,476	19.1%
2002	\$2,919	

As the table above depicts Boston Scientific is expected to have negative sales growth in fiscal 2008. When a company's actual growth rate falls below the sustainable growth the company must find a place to invest excess profits; however,

in the case of Boston Scientific they had a loss in 2006 and 2007. Assuming that Boston Scientific can become profitable again they should consider using excess profits to invest in new markets, develop new product lines, issue dividends, repurchase shares, or acquire another company.

Capital Asset Pricing Model⁸

Exhibit 13: Beta and CAPM

	Beta	CAPM
BSX	1.14	10.89%
MDT	0.19	4.71%

Although, Boston Scientific and Medtronic are competitors within the medical device industry their exposure to market risk differs significantly as illustrated by their beta scores. Boston Scientific with a beta of 1.14 tends to be riskier than the broad market, while Medtronic with a beta 0.19 tends to be much less risky than the market. The CAPM calculations further illustrate that Boston Scientific is the riskier investment with a required return of 10.89% compared to Medtronic's 4.71%.

Weighted Average Cost of Capital

Exhibit 14: WACC comparison

	WACC				
BSX	7.86%				
MDT^{10}	7.65%				

The WACC calculation is a measure of a firm's cost of financing through debt and equity. WACC is used to determine the required rate on return for financing growth. ¹¹ Management uses WACC to determine if potential growth strategies justify financing. Boston Scientific and Medtronic both have WACC numbers between 7.6% and 7.8%; thus, the firms' financing costs are very similar. Boston Scientific is currently financed 67.8% by equity and 32.2% by debt.

¹⁰ University of Connecticut School of Business, April 26, 2008. http://investing.business.uconn.edu/Current_Managers/UG_Portfolio/MDT.pdf ¹¹ Investopedia.com, April 26, 2008. www.investopedia.com/terms/w/wacc.asp

Updated Stock Price

\$13,000.00 \$12,000.00 \$11,000.00 \$10,000.00 \$9,000.00 \$12/31/07 1/14/08 1/28/08 2/11/08 2/25/08 3/10/08 3/24/08 4/7/08 4/21/08 Date

Exhibit 15: BSX Common Stock Performance 12/31/07 thru 4/21/08

Source: www.msn.com

Exhibit 13 illustrates the performance of Boston Scientific's common stock since 12/31/2007, as compared to both Medtronic and the S&P 500 Index (see original graph, Exhibit 2). As indicated, Boston Scientific has done much better recently than the 2004-2007 period, increasing approximately 12.0%, while both Medtronic and the overall market have declined (-1.4% and -5.5% respectively).

According to Standard & Poor's, the 12 month target price for BSX is \$14, which would be a gain of approximately 7.4% over the 4/21/08 closing price of \$13.03. The stock is classified as being "high-risk" due to the competitive industry, its dependence on developing new products for growth, and a potential reduction in Medicare reimbursement rates for expensive medical devices. Sales for 2008 are forecasted to be \$8 billion, a 4% decline from 2007. EPS is projected to be \$0.60 for 2008.¹²

One issue that could potentially affect Boston Scientific in the near future is the Food and Drug Administration's possible regulation of the stent industry, which has already been hurt recently due to safety concerns after some patients developed blood clots. Boston Scientific has already received a letter of warning from the FDA in January 2006, after multiple incidents, such as shipping devices that had failed inspection. Until the FDA considers the warning resolved BSX may have

¹²Standard and Poor's Stock Report, March 28, 2008. www.netadvantage.standardandpoors.com

¹³ US FDA Proposes Guidelines for Stent Manufactures, March 8, 2008. www.reuters.com

trouble getting approval for new stent products.¹⁴ Since they are dependant on developing new products for revenue growth as mentioned above, Boston Scientifics' future earnings could be negatively affected if they are unable to get approval to bring their new products to market.

Recent News Events¹⁵

On March 3, 2008 Boston Scientific Corporation announced the approval of its ACUITY(R) Spiral left ventricular lead for use with cardiac resynchronization therapy defibrillators and cardiac resynchronization therapy pacemakers.

On February 25, 2008 Boston Scientific Corporation announced U.S. Food and Drug Administration (FDA) approval for three products in its Cardiac Rhythm Management business.

On February 14, 2008 Boston Scientific Corporation announced that it has completed the sales of its Fluid Management and Venous Access businesses to Avista Capital Partners for \$425 million in cash.

On February 4, 2008 Boston Scientific Corporation announced financial results for the fourth quarter and full year ended December 31, 2007, as well as guidance for net sales and earnings per share (EPS) for the first quarter of 2008.

On January 8, 2008 Boston Scientific completes the sale of their Cardiac Surgery and Vascular Surgery businesses to Getinge Group for \$750M cash.

Estimated Sales Growth

According to Standard & Poor's and illustrated below, Boston Scientific's 2008 sales are expected to decline 4% from 2007 levels to \$8 billion. This weak sales estimate is based on persisting difficult conditions in the defibrillator and drug coated stent markets. Standard & Poor's expects increasing competition and decreasing unit prices in the stent market, as well as slowing growth rates in the defibrillator market.

Sabrient Investment Research also has a negative outlook on Boston Scientific's growth potential. Sabrient gave Boston Scientific a growth score of 32.3, 46.9%

¹⁴ FDA Issues Boston Scientific Quality-Control Warning. The Boston Globe, January 28, 2006.

¹⁵ Investor Relations, March 30, 2008. www.BostonScientific.com

¹⁶ Standard and Poor's Stock Report, March 28, 2008. www.netadvantage.standardandpoors.com

lower than the average growth score of 60.8 for their industry group.¹⁷ Furthermore, in October 2007, Boston Scientific management announced that they would take steps to increase shareholder's value in response to slowing sales growth rates. These steps include reducing R&D spending by \$500 million and SG&A by \$575 million for the two year period starting in 2008. The Board of Directors also approved the elimination of 2,300 positions worldwide in 2009.

We expect a marginal amount of positive sales growth in 2009 and 2010 based on modest improvements in the defibrillator and drug coated stent market conditions.

Exhibit 16: Three Year Sales Growth

3 Years Sales Growth						
2008	(4%)					
2009	1%					
2010	3%					

Expected Stock Price⁸

Expected Dividends Model

Boston Scientific does not currently issue bonds and there is no indication that they have plans to do so at any point in the near future. Assuming the projected sales growth noted above is accurate, we do not think it is likely that they will issue bonds in the next three years.

Free Cash Flow Approach

Boston Scientific had a free cash flow of \$1.2B in 2005, \$2.2B in 2006 and \$1.3B in 2007. They currently do not pay dividends. Medtronic had a free cash flow of \$3.3B in 2005, \$2.6B in 2006 and \$3.5B in 2007. They also paid dividends which ranged from \$405,000 in 2005 to \$505,000 in 2007. Boston Scientific had an increasing and then decreasing free cash flow from 2005 to 2007. Medtronic, on the other hand, had a decreasing and then increasing cash flow.

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¹⁷ Sabrient Stock Report, March 30, 2008. www.Sabrient.com

Scenario Analysis

Exhibit 17: Probability of stock price changing in 2008

Probability of BSX stock	price in 2008 moving:
Higher	19%
Same	21%
Lower	60%

(Source: National Venture Capital Association, NVCA annual survey, 12/17/07)

Based on the S&P target of an 11% increase in stock price during 2008, as well as the predicted EPS of 11.32%, we predict that if the stock price moves in the same direction as anticipated, it will increase by a range of 11-13%. This assumption is based on the general accuracy of S&P target prices.

If the stock price is to move higher than anticipated in 2008 due to: a) the relative safety of this industry during a recession b) economic conditions improving and the subsequent lack of a recession, or the existence of only a short recession, c) the current cost cutting efforts by management having an impact in a shorter amount of time than is currently anticipated, and/or d) the defibrillator and drug coated stent markets improving more than anticipated, we predict that it will increase by a range of 13-15%. This assumption is based on the likelihood that even if the stock price moves higher than anticipated, it will likely to move only modestly more than expected. ¹⁸

If the stock price is to move lower than expected in 2008 due to: a) a drawn out recession, b) difficulties in the defibrillator and drug coated stent markets getting worse than anticipated, and/or c) a lack of impact by the cost cutting measures during 2008, we anticipate that it will increase by 7-9%. This assumption is based on the fact that the S&P target price is assumed to have already taken these possibilities into consideration when setting the current target price. Therefore, if the target price is off, it is not anticipated to be off by a significant margin.

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¹⁸ The Boston Globe 'As recession fears grow, Massachusetts industries hunker down for a tough '08,' Robert Weisman, January 23, 2008

Cash Conversion Cycle

Exhibit 18: 3-Year Cash Conversion Comparison⁸

		2007	2006	2005
CCC	BSX	-247 days	-282 days	24 days
	MDT	-107 days	-132 days	-300 days

As one can see, the majority of the conversion cycles for each year are negative, meaning the respective company took much longer to pay for materials than it actually sold and collected payment for the goods produced with these materials. A main reason for these figures being negative is the extraordinarily large payable balances that Boston Scientific and Medtronic both carry on their balance sheets in relation to their annual cost of goods sold; in some cases, the payable balance is larger than the cost of goods sold. Also, due to the nature of the medical devices industry, both companies have low cost of goods sold as a percentage of revenue (generally around 25%) and high research & development and selling, general, and administrative costs, as compared to other manufacturing companies. A contrasting example would be Toyota, who has a percentage of COGS around 80%.

Conclusion

The 2006 acquisition of Guidant Corporation greatly changed the structure of Boston Scientific. Boston Scientific saw its total assets and equity increase by more than 3.5 times, completely changing the financial makeup of the company. For Boston Scientific to prosper in the future they will need to leverage this acquisition to become a market leader in the medical device industry.

The acquisition has supplied Boston Scientific with an instant presence in the Cardiac Rhythm Management (CRM) market, but they must continue to introduce new products to maintain their market share. Boston Scientific has many new innovative products in the pipeline that could help the company regain their financial footing and propel the company's stock price to new heights; however, to do this Boston Scientific will need to control costs, grow foreign market revenue, and continue to get timely regulatory approvals.

Recommendation

Boston Scientifics' paltry growth rate was the impetus for the merger with Guidant, which severely affected 2006's Net Income. Management chose to sell more equity and take on more long-term debt to finance growth via this merger. They have also decided to sell a few subunits for \$425M, which should be applied to reducing long-term liabilities to improve financial leverage. The leadership team needs to continue to ride out the Guidant merger with hopes to return to a positive Net Income in the next year. BSX should continue to look for opportunities to sell more

non-profiting subunits and reduce its liabilities. Finally, once it regains sustained profitability it should reward investors by introducing dividends.

Acquisition targets

Potential acquisition targets that management may consider in the future are Inner Pulse, an implantable defibrillator device company; Olympus Medical Systems, an endoscopy device company; Arthrocare Corporation, a urological/gynecological device company and Conmed, a bronchoscopy device company. The product lines at these companies could bolster the already strong portfolio the company currently has in these therapeutic areas.

At some point in the future, Boston Scientific should consider paying dividends. Up until now the company has used excess cash to pay down debts. This has been wise. It is a particularly important facet in the company's current plan to pay off the debt that resulted from the Guidant acquisition by 2011. We recommend that they hold off a couple years after paying down the \$9B debt to accumulate cash but that shortly after 2013 they begin to pay dividends. Dividend payments are often seen as a signal of financial health to the investment community and as such it would be wise to provide this signal, especially after several years of poor financial performance.

Profitability Suggestions

- 1. Stick to the current plan to pay down the Guidant acquisition debts by 2011. It is crucial to have this debt off the books as soon as possible in order to grow shareholder value.
- 2. Increase the R&D budget by approximately 10% each year. The additional revenue expected from the Guidant acquisition should be more than sufficient to cover those costs while simultaneously increasing the chance that their own engineers will design future devices.
- 3. Aggressively grow the medication coated cardiac stent and cardioverter defibrillator sales. The sooner these products increase sales the sooner the investment community will agree that acquiring Guidant was a wise decision.
- 4. Find more small companies to purchase such as those listed above. This will allow the company to increase future revenue while simultaneously avoiding significant increases in R&D expenses.
- 5. Find more devices to purchase from other companies.
- 6. Continue to cut expenses. According to Yahoo Finance, the layoffs last year are already beginning to pay off as of Q1 2008. Having wisely removed employees from the payroll the company should continue to seek out other ways to cut costs. Increasing the number of outsourced clinical trials is one way of cutting costs while utilizing a smaller workforce.

Appendix

Chapter 3 Calculations 1920

		culations		CA On a vation of		
Net C	perating	y Working Capital (NWOC) = Operati	ing	CA – Operating CL		
BSX	2006=	(\$1,668,000+749,000+2,007,000)	-	(\$2,480,000+143,000)	=	\$1,801,000
	2005=	(\$689,000+418,000+1,084,000)	-	(\$1,246,000+77,000)	=	\$868,000
	2004=	(\$1,296,000+360,000+1,141,000)	-	(\$1,265,000+112,000)	=	\$1,420,000
	2003=	(\$671,000+281,000+787,000)	-	(\$760,000+80,000)	=	\$899,000
MDT	2007=	(\$1,256,000+1,215,000+3,142,000)	-	(\$2,054,000+0)	=	\$3,559,000
	2006=	(\$2,994,000+1,177,000+2,626,000)	-	(\$1,969,000+0)	=	\$4,828,000
	2005=	(\$2,232,000+981,000+2,678,000)	-	(\$2,901,000+0)	=	\$2,991,000
	2004=	(\$1,594,000+878,000+2,192,000)	-	(\$1,882,000+0)	=	\$2,781,000
Total	Net Ope	rating Capital (TNOC) = NOWC + Ne	et F	ixed Assets		
Total BSX	Net Ope 2006=	erating Capital (TNOC) = NOWC + No \$1,801,000	et F +	ixed Assets \$1,726,000	=	\$3,527,000
					=	\$3,527,000 \$1,879,000
	2006=	\$1,801,000	+	\$1,726,000		
	2006=	\$1,801,000 \$868,000	+	\$1,726,000 \$1,011,000	=	\$1,879,000
	2006= 2005= 2004=	\$1,801,000 \$868,000 \$1,420,000	+ + +	\$1,726,000 \$1,011,000 \$870,000	=	\$1,879,000 \$2,290,000
	2006= 2005= 2004=	\$1,801,000 \$868,000 \$1,420,000	+ + +	\$1,726,000 \$1,011,000 \$870,000	=	\$1,879,000 \$2,290,000
BSX	2006= 2005= 2004= 2003=	\$1,801,000 \$868,000 \$1,420,000 \$899,000	+ + + +	\$1,726,000 \$1,011,000 \$870,000 \$744,000	=	\$1,879,000 \$2,290,000 \$1,643,000
BSX	2006= 2005= 2004= 2003= 2007=	\$1,801,000 \$868,000 \$1,420,000 \$899,000 \$3,559,000	+ + + +	\$1,726,000 \$1,011,000 \$870,000 \$744,000 \$2,062,000	= =	\$1,879,000 \$2,290,000 \$1,643,000 \$5,621,000
BSX	2006= 2005= 2004= 2003= 2007= 2006=	\$1,801,000 \$868,000 \$1,420,000 \$899,000 \$3,559,000 \$4,828,000	+ + + + +	\$1,726,000 \$1,011,000 \$870,000 \$744,000 \$2,062,000 \$1,881,000	= = = =	\$1,879,000 \$2,290,000 \$1,643,000 \$5,621,000 \$6,709,000
BSX	2006= 2005= 2004= 2003= 2007= 2006= 2005=	\$1,801,000 \$868,000 \$1,420,000 \$899,000 \$3,559,000 \$4,828,000 \$2,991,000	+ + + + + +	\$1,726,000 \$1,011,000 \$870,000 \$744,000 \$2,062,000 \$1,881,000 \$1,859,000	= = = = =	\$1,879,000 \$2,290,000 \$1,643,000 \$5,621,000 \$6,709,000 \$4,850,000

 $^{^{19}}$ BSX fiscal year ends on Dec $31^{st}.$ MDT fiscal year ends on April $27^{th}.$ All ratio comparisons are between BSX FY06/05/04 and MDT FY07/06/05.

²⁰ Data from Yahoo Finance unless noted.

Net O	perating Profit after Taxes	(NOPaT) = EBIT (1	- Tax Rate)		
BSX	2006=	(\$3,100,000)	* (1 – 29%)	=	(\$2,201,000)
	2005=	\$981,000	* (1 – 29%)	=	\$692,000
	2004=	\$1,558,000	* (1 – 29%)	=	\$1,108,000
MDT	2007=	\$3,743,000	* (1 – 26%)	=	\$2,770,000
	2006=	\$3,277,000	* (1 – 29%)	=	\$2,327,000
	2005=	\$2,599,000	* (1 – 29%)	=	\$1,845,000
Free	Cash Flow (FCF) = NOPaT	– Net Investment i	n Operating Capital		
BSX	2006=	(\$2,201,000) -	(\$3,527,000-1,879,000)	=	(\$3,849,000)
	2005=	\$692,000 -	(\$1,879,000-2,290,000)	=	\$1,103,000
	2004=	\$1,108,000 -	(\$2,290,000-1,643,000)	=	\$461,000
MDT	2007=	\$2,770,000 -	(\$5,621,000-6,709,000)	=	\$3,858,000
	2006=	\$2,327,000 -	(\$6,709,000-4,850,000)	=	\$468,000
	2005=	\$1,845,000 -	(\$4,850,000-4,489,000)	=	\$1,484,000

Liquidity Ratios

Elquidity Ratios								
Current Ratio	(CR) = Current As	ssets / Current Lia	bilities					
BSX	2006=	\$4,901,000	1	\$2,630,000	=	1.86		
	2005=	\$2,631,000	1	\$1,479,000	=	1.78		
	2004=	\$3,289,000	1	\$2,605,000	=	1.26		
MDT	2007=	\$7,918,000	1	\$2,563,000	=	3.09		
	2006=	\$10,377,000	1	\$4,406,000	=	2.36		
	2005=	\$7,422,000	1	\$3,380,000	=	2.20		

Quick Ratio (QR) = (Current Assets – Inventory) / Current Liabilities								
BSX	2006=	(\$4,901,000-749,000)	1	\$2,630,000	=	1.58		
	2005=	(\$2,631,000-418,000)	1	\$1,479,000	=	1.50		
	2004=	(\$3,289,000-360,000)	1	\$2,605,000	=	1.12		
MDT	2007=	(\$7,918,000-1,215,000)	1	\$2,563,000	=	2.62		
	2006=	(\$10,377,000-1,177,000)	1	\$4,406,000	=	2.09		
	2005=	(\$7,422,000-981,000)	1	\$3,380,000	=	1.91		

Asset Management Ratios

Asset Man	agement	Ratios				
Inventory T	urnover	ratio (ITR) = Sales	/In	ventory		
BSX	2006=	\$7,821,000	/	749,000	=	10.44x
	2005=	\$6,283,000	/	418,000	=	15.03x
	2004=	\$5,624,000	/	360,000	=	15.62x
MDT	2007=	12,299,000	1	1,215,000	=	10.12x
	2006=	\$11,292,000	1	1,176,900	=	9.59x
	2005=	\$10,555,000	1	981,400	=	10.76x
Days Sales day	Outstan	ding (DSO) = Re	ece	ivables/Average/Sales per		
BSX	2006=	\$2,007,000	/	\$7,821,000/365=\$21,427	=	93.67 days
	2005=	\$1,084,000	/	\$6,283,000/365=\$17,214	=	62.97 days
	2004=	\$1,141,000	/	\$5,624,000/365=\$15,408	=	74.05 days
MDT	2007=	\$3,142,000		\$12,299,000/365=\$33,696	=	93.25 days
MDT	2007=	\$3,142,000 \$2,625,800	1	\$12,299,000/365=\$33,696 \$11,292,000/365=\$30,937	=	93.25 days 84.88 days
MDT			1			•

	2005=	\$2,678,300	1	\$10,054,600/365=\$27,547	=	97.23 days
Fixed Asse	t Turnove	r Ration (FA T0)	= S	ales/Net Fixed Assets		
BSX	2006=	\$7,821,000	1	\$1,726,000	=	4.53x
	2005=	\$6,283,000	1	\$1,011,000	=	6.21x
	2004=	\$5,624,000	/	\$870,000	=	6.46x
MDT	2007=	\$12,299,000	/	\$2,062,000	=	5.96x
	2006=	\$11,292,000	1	\$1,881,100	=	6.00x
	2005=	\$10,555,000	/	\$1,859,300	=	5.68x
Total Asset	Turnove	Ratio = (FA T0)	= S	ales/Total Assets		
BSX	2006=	\$7,821,000	1	\$31,096,000	=	0.25x
	2005=	\$6,283,000	1	\$8,196,000	=	0.77x
	2004=	\$5,624,000	1	\$8,170,000	=	0.69x
MDT	2007=	\$12,299,000	1	\$19,512,000	=	0.63x
	2006=	\$11,292,000	/	\$19,664,800	=	0.57x
	2005=	\$10,555,000	/	\$16,617,400	=	0.64x

Debt Management Ratios

Debt R	atio= Total I	Liabilities/ Total					
Assets							
BSX	2006=	\$15,798,000	/	\$31,096,000	=	50.8%	
	2005=	\$3,914,000	/	\$8,196,000	=	47.8%	
	2004=	\$4,145,000	/	\$8,170,000	=	50.7%	
Times 1	Times Interest Earned Ration (TIE) = EBIT/ Interest						
Expens	e						

BSX	2006=	(\$3,100,000)	/	\$435,000	=	(7.1) x
	2005=	\$981,000	/	\$90,000	=	10.9 x
	2004=	\$1,558,000	/	\$64,000	=	24.3 x

		rage Ratio (EC				\$341,	000	+ \$63,0	000	1				
	(EBIT +Depr & Amort + Lease pmts) / (interest expense + lease pmts+ Loan pmts)													
BSX	2006=	(\$3,100,000)	+	\$275,000	+	\$50,000	/	\$435,000	+	\$80,000	+	0	=	(4.35)
	2005=	\$981,000	+	\$583,000	+	\$112,000	/	\$90,000	+	\$63,000	+	0	=	9.05
	2004=	\$1,558,000	+	\$543,600	+	\$89,000	/	\$64,000	+	\$50,000	+	0	=	16.52
MDT	2007=	\$3,743,000	+	\$463,300	+	\$79,000	/	\$228,000	+	\$112,000	+	0	=	13.05
	2006=	\$3,277,300	+	\$543,600	+	\$89,000	/	\$116,000	+	\$89,000	+	0	=	19.07
	2005=	\$2,598,600	+	\$463,300	+	\$79,000	/	\$55,100	+	\$79,000	+	0	=	23.42

Profitability Ratios

Profitability Ratios								
Profit Margin on Sales (PM) = Net Income/ Sales								
DCV	2006-	(#2 F77 000)	,	67 004 000	_	(45.740/)		
BSX	2006=	(\$3,577,000)	/	\$7,821,000	=	(45.74%)		
	2005=	\$628,000	1	\$6,283,000	=	10.00%		
	2004=	\$1,062,000	/	\$5,624,000	=	18.88%		
MDT	2007=	\$2,802,000	/	\$12,299,000	=	22.78%		
	2006=	\$2,546,700	/	\$11,292,000	=	22.55%		
	2005=	\$1,803,900	/	\$10,054,600	=	17.94%		
Basic Earr	nings Powe	r (BEP) = EBIT/ Tot	tal	Assets				
BSX	2006=	(\$3,100,000)	/	\$31,096,000	=	(9.97%)		
	2005=	\$981,000	/	\$8,196,000	=	11.97%		
	2004=	\$1,558,000	/	\$8,170,000	=	19.07%		

MDT	2007=	\$3,743,000	1	\$19,512,000	=	19.18%
	2006=	\$3,277,300	1	\$19,664,800	=	16.67%
	2005=	\$2,598,600	/	\$16,617,400	=	15.64%
Return on	Assets (RO	A) = Net Income/	ot	al Assets		
BSX	2006=	(\$3,577,000)	/	\$31,096,000	=	(11.50%)
	2005=	\$628,000	1	\$8,196,000	=	7.66%
	2004=	\$1,062,000	/	\$8,170,000	=	13.00%
MDT	2007=	\$2,802,000	1	\$19,512,000	=	14.36%
	2006=	\$2,546,700	/	\$19,664,800	=	12.95%
	2005=	\$1,803,900	1	\$16,617,400	=	10.86%
Return on	Equity (ROE	E) = Net Income/ C	on	nmon Equity		
	_455 (110-	.,				
BSX	2006=	(\$3,577,000)	1	\$15,298,000	=	(23.38%)
	2005=	\$628,000	/	\$4,282,000	=	14.67%
	2004=	\$1,062,000	1	\$4,025,000	=	26.39%
MDT	2007=	\$2,802,000	/	\$10,977,000	=	25.53%
	2006=	\$2,546,700	1	\$9,382,500	=	27.14%
	2005=	\$1,803,900	/	\$10,449,500	=	17.26%

Market Value Ratios

Market Value Ratios

Earnings Per Share (EPS) = Net Income²¹ / Shares outstanding

²¹ Net Income calculation uses Net Receivables

BSX	2006=	(\$3,577,000)	1	1,480,340	=	(2.416)x
	2005=	\$628,000	1	821,567	=	0.764x
	2004=	\$1,062,000	1	838,757	=	1.266x
MDT	2007=	\$2,802,000	1	1,161,800	=	2.412x
	2006=	\$2,546,700	1	1,217,300	=	2.092x
	2005=	\$1,803,900	1	1,209,000	=	1.492x
Price/Earnings (P/E) = Mkt. Price	Per Share ²² / E	PS			
BSX	2006=	20.335	/	(2.416)	=	(8.62)x
	2005=	30.020	1	0.764	=	39.27x
	2004=	49.05	/	1.266	=	38.74x
MDT	2007=	50.1	1	2.412	=	20.77x
	2006=	50.730	1	2.092	=	24.25x
	2005=	49.22	1	1.492	=	32.98x
CF per share = (Ne						
BSX	2006=	(\$2,796,000)	/	1,480,340	=	(1.889)x
	2005=	\$942,000	/	821,567	=	1.147x
	2004=	\$1,337,000	1	838,757	=	1.594x
MDT	2007=	\$3,385,000	/	1,161,800	=	2.914x
	2006=	\$3,090,300	/	1,217,300	=	2.539x
	2005=	\$2,267,200	/	1,209,000	=	1.875x
Price/Cash Flow (P	/CF) = Mkt. Pri	ce Per Price ² /	CF pe	r Share		

 $^{^{\}rm 22}$ Mkt. Price per Share calculated by using average of the closing prices on first & last day of the fiscal cycle

BSX	2006=	20.335	1	(1.899)	=	(11.03)x
	2005=	30.020	1	1.147	=	26.18x
	2004=	49.045	1	1.594	=	30.77x
MDT	2007=	50.1	1	2.914	=	17.20x
	2006=	50.730	1	2.539	=	19.98x
	2005=	49.215	1	1.875	=	26.24x
Book Value Per Sh	are (BVPS) = Co	om. Equity / SI	hares (Outstanding		
BSX	2006=	\$15,298,000	1	1,480,340	=	10.334x
		Ψ.0,200,000	,	1, 100,010		10.554
	2005=	\$4,282,000	1	821,567	=	5.212x
	2005=					
MDT		\$4,282,000	1	821,567	=	5.212x
MDT	2004=	\$4,282,000 \$4,025,000	1	821,567 838,757	=	5.212x 4.799x

Sustainable Growth Rate Calculation

BSX_{2006 Payout Ratio} = Retention Rate & Payout Ratio = Dividends Paid / Net Income

$$=504^{23} / 845^{24} = 0.5964$$
 or $465 / 845 = 0.5503$

 $BSX_{2006 Retention Rate} = 0.4036$

1. ROE

$$ROE_{2006} = 845^{24} / 15,298 = 0.0552$$

 $g^* = R \times ROE_{2006}$

$$= 0.4036 \times 0.0552 = 0.0223 = 2.23\%$$

2. ROA

 $ROA_{2006} = 845^{24} / 31,096 = 0.0272$

²³ BSX does not pay Dividends. BSX's '06 diluted Normalized EPS was 0.43. Their main competitor, MDT, had a Dividend per Share of 0.44 on 1,143.41 shares outstanding in '07.

²⁴ Since BSX's Net Income was -3,577 in '06, I will use an average of their Net Income in '05 - \$628M and '04 - \$1,062M.

$$BSX_{2006 Equity Multiplier} = 31,096 / 15,298 = 2.0327$$

$$= 0.4036 \times 2.0327 \times 0.0272 = 0.0223 = 2.23\%$$

CAPM Calculation

$$CAPM = r_f + \beta(r_m - r_f)$$

where, $r_f =$ the risk free rate

 r_m = the return on the market

 $(r_m - r_f)$ = is the market risk premium

 β = is a measure of market risk

 $r_f = 3.48\% (10 \text{ year note})^{25}$

Beta 26 = BSX 1.14, MDT 0.19

$$(r_m - r_f) = 6.5\%^{27}$$

BSX CAPM=
$$3.48\%$$
 + $(1.14)(6.5\%)$

BSX CAPM= 10.89%

MDT CAPM = 3.48% + (0.19)(6.5%)

MDT CAPM= **4.715%**

WACC Calculation

$$WACC = w_d r_d (1 - T) + w_{ps} r_{ps} + w_{ce} r_s$$

 $r_d = cost of debt$

S&P,Fitch, & Moody's Rating = BB+/Ba1 (non-investment grade)

 $r_d = 7.5878\%^{28}$

²⁵ Current 10-year Treasury bond price available via http://finance.google.com

²⁶ BSX beta value on http://finance.google.com

²⁷ Highest value in the 5% - 6.5% range because of current investors risk aversion

 $^{^{28}}$ Comparable Ba1/BB+ bond listed at https://www.bonddesk.com with coupon rate of 7.25, maturity 03/15/2018, price 960.25

$$.075878(1 - T) = .075878(1 - .29^{29}) = 5.39\%$$

r_{ps} = preferred stock

no preferred stock

r_s = common equity

CAPM

$$r_s = r_{RF} + (RP_M)b_i = 3.48\%^{30} + (6.5\%^{31})1.14^{32} = 10.89\%$$

DCF

$$r_s = D_1/P_0 + g = 0.44^{33}/12.60 + 2.15\%^{34} = 0.0564 = 5.64\%$$

Bond Yield + RP

$$r_s = r_d + RP = 7.5878\% + 3\%^{35} = 10.5878\%$$

Method	Estimate
CAPM	10.89%
DCF	5.64%
Bond Yield + RP	10.5878%
Average	$r_s = 9.0393\%$

$$V_{ce} = \$12.60(1.49B) = \$18.774B$$
 $V_{ps} = 0$ $V_{d} = \$8.902B^{36}$

$$V_{ps} = 0$$

$$V_d = \$8.902B^{36}$$

Total = \$27.6760B

$$W_{ce} = 18.774/27.6760 = 0.6783$$

$$W_d = 8.902 / 27.6760 = 0.3217$$

$$WACC = w_d r_d (1 - T) + w_{ce} r_s$$

WACC=
$$0.3217(0.0539) + 0.6783(0.090393) = 7.865\%$$

http://finance.google.com/finance?fstype=bi&q=NYSE:BSX

²⁹ Tax rate is an average of two prior positive net-incomes years since 2006 had negative net-income thus a rather low tax-rate of 1.2%

³⁰ Current 10-year Treasury bond price available via http://finance.google.com

³¹ Highest value in the 5% - 6.5% range because of current investors risk aversion

³² BSX beta value on http://finance.google.com

³³ BSX does not pay Dividends. BSX's '06 diluted Normalized EPS was 0.43. Their main competitor, MDT, had a Dividend per Share of 0.44 on 1,143.41 shares outstanding in '07.

³⁴ EPS (MRQ) vs Qtr. 1 Yr. Ago growth rate from

http://stocks.us.reuters.com/stocks/ratios.asp?rpc=66&symbol=BSX

³⁵ Lower value of the 3% - 5% range due to current market conditions

³⁶ BSX Total Debt as of 12-31-2006 from

Thompson One WACC = 8.45%

Expected Stock Price Calculation

EPS Expected long term EPS growth is 11.32%, providing a stock price of **\$14.04** by the end of 2008 per Yahoo Finance.

FCF The expected stock price by the end of 2008 as valued by Free Cash Flow is **\$14.14** per the following equation:

FCF=Cash from operations – capital expenditures (Dec 2007) per Yahoo Finance

$$= $934M - ($363M) = $934M + $363M = $1,297M$$

$$V = FCF(1 + g) = $1,297M (1 + (.04)) = $1,297M (.96) = $1245M =$$

\$31,125M

WACC-g

.07865-(.04)

.04

.04

\$31,125M-(\$256M (debt) + \$0 preferred stock) = \$30869 1449M(outstanding shares) = **\$21.30**

MM Market multiples: P/E ratio. The current stock price is 12.64(4/23/08)/11.32 (EPS) = 1.12, 1.12 x 12.64 = 14.16

The expected stock price by the end of 2008 as valued by market multiples is **\$14.16**.

Cash Conversion Cycle Calculation

Inventory Conversion Period = Inventory / (Sales / Days)

ICP BSX 2005 = 418,000 / 6,283,000 / 365 = 18.2566

ICP BSX 2006 = 749,000 / 7,821,000 / 365 = 34.9552

ICP BSX 2007 = 1,824,000 / 8,357,000 / 365 = 79.6650

ICP MDT 2005 = 981,400 / 10,054,600 / 365 = 35.6266

ICP MDT 2006 = 1,176,900 / 11,292,000 / 365 = 38.0418

ICP MDT 2007 = 1,215,000 / 12,299,000 / 365 = 36.0578

Receivables Collection Period = Receivables / (Sales / Days)

```
RCP BSX 2005 = 1,084,000 / 6,283,000 / 365 = 62.9731
```

$$CCC BSX 2005 = 18.2566 + 62.9731 - 328.1313 = (246.90)$$

$$CCC MDT 2005 = 35.6266 + 97.2271 - 432.8855 = (300.03)$$

$$CCC MDT 2006 = 38.0418 + 84.8758 - 255.2783 = (132.36)$$

CCC MDT 2007 = 36.0578 + 93.2458 - 236.6509 = (107.35)