Balance Sheet and Free Cashflow Forecast

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**Executive Summary:**

I built to Pro forma statement to see the different situation that can occur in the future. The possible situation for the balance sheet will generate sales of 10,827 millions of dollars and have a working capital of 2,091 Millions of dollars. The worst performing situation for the balance sheet has sales of 8,721 millions of dollars and a negative working capital of -444 Millions of dollars. I the other hand our free cash flow’s best performing situation has a free cash flow of 3,274 millions, of dollars and sales of 10,827 millions of dollars. And the worst situation having sales of 8,721 millions of dollars and a free cash flow of 1,568 millions of dollars. Knowing that the analyzed company is a health manufacturer, an industry that requires high capital expenditures having a worst situation like the previously shared it’s not so bad.

Word Count 144.

1. **Introduction:**

In this report we forecasted the balance sheet and free cashflow to have a benchmark on how things will proceed in the future. To forecast these values, we needed to forecast our sales using a using a linear regression model with a change in slope and intercept. The balance sheet is a great snapshot the financial performance of a given period of time. A forecast of a balance sheet will help us determine what kind of situation we will end up in the future. To forecast this, we take the previous values from the balance sheet and divide the sales by the value to get a ratio. Then an average and standard deviation are taken from the ratios of the values through the years. The same approach is taken with the Free cashflow, this is cash that you have available to invest or return to stakeholders. At the end we will have a pro forma statement to see all the possible situation we can have for each value. By doing dis we also can have a sense of how volatile our value is. Therefore, we consider that risk is present in our model and react quickly to changes in the markets.

**2.0 Data and Sample:**

2.1 Data

The data utilized for this analysis is based on a stock assigned by the professor and was pulled from the ‘Compustat – Capital IQ’ in the Wharton Research Data Services (WRDS) database. To build these models we used information from the company’s Ten last year’s balance sheets (2008 – 2018). The sales forecast was built using sales from the last 25 years (1994 – 2018). Some of the accounting values we have in our dataset are in the current asset and current liabilities section of the balance sheet. We also got the EBIT, capital expenditures, income taxes and we created change in working capital by subtracting the previous year value from the current value.

2.2 Sample

BSX - Boston Scientific Corporation develops, manufactures, and markets medical devices for use in various interventional medical specialties worldwide. It operates through three segments: MedSurg, Rhythm and Neuro, and Cardiovascular. It’s part of the healthcare and is headquartered in Marlborough, Massachusetts.

**3.0 Results:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Figure 1 | Mean | Std | Low | High |
| Cash and Short-Term Investments | 7.24% | 5.32% | 1.92% | 12.56% |
| Receivables - Total | 16.97% | 0.63% | 16.34% | 17.60% |
| Inventories - Total | 11.98% | 0.83% | 11.16% | 12.81% |
| Current Assets - Other - Total | 9.73% | 4.98% | 4.74% | 14.71% |
| Adjustment | 0.00% | 0.00% | 0.00% | 0.00% |
| Current Assets - Total | 45.92% | 8.07% | 37.85% | 53.99% |
|  |  |  |  |  |
| Accounts Payable - Trade | 3.48% | 1.12% | 2.36% | 4.61% |
| Debt in Current Liabilities - Total | 5.07% | 8.44% | -3.37% | 13.51% |
| Current Liabilities - Other - Total | 28.91% | 6.18% | 22.73% | 35.09% |
| Adjustment | 0.18% | 0.60% | -0.42% | 0.78% |
| Current Liabilities - Total | 37.64% | 12.10% | 25.54% | 49.74% |
|  |  |  |  |  |
|  |  |  |  |  |
| Working Capital | 8.28% | 14.45% | -6.17% | 22.73% |

Figure 1 shows the average, risk, and lowest and highest possible values. In our table we can observe that from our current assets the receivables is our highest average value with 16.97% and a risk or standard deviation of 0.63% meaning its historical receivables data demonstrates that the company has very stable receivables in the future and they represent the largest part of the current assets. Cash and short-term investments have a standard deviation of 5.32% the highest of the current assets and almost half receivables average value. Current assets is around 8% higher than the current liabilities meaning that in average we will have a positive working capital. For current liabilities average value is other current liabilities, with a 6.18% risk. But the highest standard deviation is 8.44% short term debt its very volatile if we compare it with the cash volatility, we can say that they might have liquidity problems.

|  |  |  |  |
| --- | --- | --- | --- |
| Figure 2 | | | |
| Forecast Balance Sheet | | | |
| This table shows the forecast balance sheet and working capital for the indicated year. Cash items are in millions of dollars. | | | |
| Year | 2019 | 2023 | 2028 |
| Sales | 9,774 | 11,346 | 13,311 |
|  |  |  |  |
| **Current Assets** |  |  |  |
| Cash and Short-Term Investments | 707 | 604 | 255 |
| Receivables - Total | 1,659 | 72 | 2,175 |
| Inventories - Total | 1,171 | 94 | 1,485 |
| Current Assets - Other - Total | 951 | 566 | 631 |
| Adjustment | - | - | - |
| Current Assets - Total | 4,488 | 915 | 5,039 |
|  |  |  |  |
| **Current Liabilities** |  |  |  |
| Accounts Payable - Trade | 340 | 127 | 314 |
| Debt in Current Liabilities - Total | 496 | 957 | (448) |
| Current Liabilities - Other - Total | 2,825 | 701 | 3,025 |
| Adjustment | 18 | 68 | (56) |
| Current Liabilities - Total | 3,679 | 1,373 | 3,400 |
|  |  |  |  |
| **Working Capital** | 809 | 1,639 | (821) |

Looking at a comparison of the current year against the 1, 5, and 10-year forecast, that our sales keep increasing over time at a steady rate. Our cash and short-term investments are keep getting lower having a drastic change in 10 years. For yea 2023 we have our highest working capital leaving us with a lot of money to operate, but this money comes from current liabilities forcing us to repay that money with a high interest in the future. For year 2028 we see a negative working capital of 821 millions of dollars showing that the high current liabilities of the past discussed year will hurt our future financial health.

Figure 3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Balance Sheet Scenario Summary** |  |  |  |  |  |
| **Year 2019** | Current Values: | S1 | S2 | S3 | S4 |
| **Changing Cells:** |  |  |  |  |  |
| **Sales** | 9,774 | 8,721 | 8,721 | 10,827 | 10,827 |
| **Working Capital** | 809 | (444) | 679 | (568) | 2,091 |
| **Result Cells:** |  |  |  |  |  |
| **Current Assets** |  |  |  |  |  |
| **Cash and Short-Term Investments** | 707 | 631 | 631 | 784 | 784 |
| **Receivables - Total** | 1,659 | 1,480 | 1,480 | 1,837 | 1,837 |
| **Inventories - Total** | 1,171 | 1,045 | 1,045 | 1,298 | 1,298 |
| **Current Assets - Other - Total** | 951 | 848 | 848 | 1,053 | 1,053 |
| **Adjustment** | - | - | - | - | - |
| **Current Assets - Total** | 4,488 | 4,005 | 4,005 | 4,972 | 4,972 |
| **Current Liabilities** |  |  |  |  |  |
| **Accounts Payable - Trade** | 340 | 304 | 304 | 377 | 377 |
| **Debt in Current Liabilities - Total** | 496 | 442 | 442 | 549 | 549 |
| **Current Liabilities - Other - Total** | 2,825 | 2,521 | 2,521 | 3,130 | 3,130 |
| **Adjustment** | 18 | 16 | 16 | 20 | 20 |
| **Current Liabilities - Total** | 3,679 | 3,283 | 3,283 | 4,075 | 4,075 |

Using Excel’s situational analysis built-in feature, we have BSX’s balance sheet in 4 different situations looking at what could happen in the future using average value from our previous years. This table shows us that it’s important that we take care of our current ratio to maintain balance between our liabilities and assets.

Figure 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Mean | Std | Low | High |
| Earnings Before Interest and Taxes | 15.53% | 2.29% | 13.24% | 17.82% |
| Income Taxes - Total | -0.81% | 4.08% | -4.89% | 3.28% |
| Depreciation and Amortization | 9.81% | 0.53% | 9.29% | 10.34% |
| Capital Expenditures | 3.67% | 0.47% | 3.20% | 4.14% |
| Change in Working Capital | -4.30% | 8.23% | -12.53% | 3.93% |
|  |  |  |  |  |
| Free Cash Flow | 26.78% | 8.80% | 17.98% | 35.58% |

For our free cash flow, it’s just a simpler story, in figure 4 we see that in average returns 15.53% EBIT and its stable with a standard deviation of 2.29% sharing that most of the times our EBIT will be positive. The lowest average value is change in working capital with -4.30%. our free cash flow generates a return of 26.78% in average saying that most of the times we will have enough cashflow to re-invest.

|  |  |  |  |
| --- | --- | --- | --- |
| Figure 5 | | | |
| Free Cash Flow Forecast | | | |
| This table presents free cash flow estimated for the indicated year. Cash values are in millions of dollars. | | | |
| Year | 2019 | 2023 | 2028 |
| Sales | 9,774 | 11,346 | 13,311 |
|  |  |  |  |
| Earnings Before Interest and Taxes | 1,518 | 1,762 | 2,067 |
| Income Taxes - Total | (79) | (92) | (107) |
| Depreciation and Amortization | 959 | 1,113 | 1,306 |
| Capital Expenditures | 359 | 416 | 488 |
| Change in Working Capital | (420) | (488) | (572) |
|  |  |  |  |
| Free Cash Flow | 2,617 | 3,038 | 3,565 |

Figure 5 share the 1, 5, and 10-year forecast for our free cash flow showing us that our free cash flow keeps growing at a small constant rate, but as our free cash flow increases our capital expenditures keep increasing at a higher rate. This can represent a major problem to the free cash flow in the future specially if we fall into a worst-case scenario where our sales drop below the 2 standard deviations thresholds.

Figure 6

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Free Cash Flow Scenario Summary** |  |  |  |  |  |
| **Year 2019** | Current Values: | S1 | S2 | S3 | S4 |
| **Changing Cells:** |  |  |  |  |  |
| **Sales** | 9,774 | 8,721 | 8,721 | 10,827 | 10,827 |
| **Free Cash Flow** | 2,617 | 1,568 | 3,103 | 2,196 | 3,274 |
| **Result Cells:** |  |  |  |  |  |
| **Earnings Before Interest and Taxes** | 1,518 | 1,518 | 1,518 | 1,518 | 1,518 |
| **Income Taxes - Total** | (79) | (79) | (79) | (79) | (79) |
| **Depreciation and Amortization** | 959 | 959 | 959 | 959 | 959 |
| **Capital Expenditures** | 359 | 359 | 359 | 359 | 359 |
| **Change in Working Capital** | (420) | (420) | (420) | (420) | (420) |

Figure 6 shows the same situational analysis but now for the free cash flow. In our worst-case situation take s in consideration that our capital expenditures remain constant. Proving true that if we keep raising or constant the capital expenditures our free cash flow will suffer and generate problems to the company in the future.

**4.0 Conclusion:**

After analyzing the balance sheet and free cash flow for ‘BSX’ we saw different possible future situations and how this affect its balance sheet and future cash flow. It’s important for any finance department to have a look on these details to prepare and react quickly to any adversity. Current results indicate that BSX liabilities and Capital expenditures growth rate can be a huge draw back to the growth of working capital, and free cash flow in the future. My suggestions to BSX is to starts trying to finance more operations with assets and lowering the amount of leverage they use and in the case of capital expenditures stop increasing this cost as fast as they’ve done it.

**Appendix:**

Figure 7

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data Year - Fiscal | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Ticker Symbol | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX |
| ISO Currency Code | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD |
| Sales | $8,050 | $8,188 | $7,806 | $7,622 | $7,249 | $7,143 | $7,380 | $7,477 | $8,386 | $9,048 | $9,823 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Cash and Short-Term Investments | 1641 | 864 | 213 | 267 | 207 | 217 | 587 | 319 | 439 | 991 | 801 |
| Receivables - Total | 1402 | 1375 | 1320 | 1246 | 1217 | 1307 | 1183 | 1275 | 1472 | 1548 | 1609 |
| Inventories - Total | 853 | 920 | 894 | 931 | 884 | 897 | 946 | 1016 | 955 | 1078 | 1166 |
| Current Assets - Other - Total | 1556 | 902 | 1188 | 661 | 714 | 590 | 890 | 861 | 373 | 205 | 427 |
| Adjustment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Current Assets - Total | 5452 | 4061 | 3615 | 3105 | 3022 | 3011 | 3606 | 3471 | 3239 | 3822 | 4003 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Accounts Payable - Trade | 239 | 212 | 184 | 203 | 232 | 246 | 262 | 209 | 447 | 530 | 349 |
| Debt in Current Liabilities - Total | 2 | 3 | 504 | 4 | 4 | 3 | 403 | 3 | 64 | 1801 | 2253 |
| Current Liabilities - Other - Total | 2831 | 2807 | 1921 | 1600 | 1536 | 1575 | 2181 | 2218 | 3076 | 3323 | 2658 |
| Adjustment | 161 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Current Liabilities - Total | 3233 | 3022 | 2609 | 1807 | 1772 | 1824 | 2846 | 2430 | 3587 | 5654 | 5260 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Working Capital | 2219 | 1039 | 1006 | 1298 | 1250 | 1187 | 760 | 1041 | -348 | -1832 | -1257 |

Figure 8

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data Year - Fiscal | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Ticker Symbol | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX |
| ISO Currency Code | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD |
| Sales | 8050 | 8188 | 7806 | 7622 | 7249 | 7143 | 7380 | 7477 | 8386 | 9048 | 9823 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Cash and Short-Term Investments | 20.39% | 10.55% | 2.73% | 3.50% | 2.86% | 3.04% | 7.95% | 4.27% | 5.23% | 10.95% | 8.15% |
| Receivables - Total | 17.42% | 16.79% | 16.91% | 16.35% | 16.79% | 18.30% | 16.03% | 17.05% | 17.55% | 17.11% | 16.38% |
| Inventories - Total | 10.60% | 11.24% | 11.45% | 12.21% | 12.19% | 12.56% | 12.82% | 13.59% | 11.39% | 11.91% | 11.87% |
| Current Assets - Other - Total | 19.33% | 11.02% | 15.22% | 8.67% | 9.85% | 8.26% | 12.06% | 11.52% | 4.45% | 2.27% | 4.35% |
| Adjustment | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Current Assets - Total | 67.73% | 49.60% | 46.31% | 40.74% | 41.69% | 42.15% | 48.86% | 46.42% | 38.62% | 42.24% | 40.75% |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Accounts Payable - Trade | 2.97% | 2.59% | 2.36% | 2.66% | 3.20% | 3.44% | 3.55% | 2.80% | 5.33% | 5.86% | 3.55% |
| Debt in Current Liabilities - Total | 0.02% | 0.04% | 6.46% | 0.05% | 0.06% | 0.04% | 5.46% | 0.04% | 0.76% | 19.90% | 22.94% |
| Current Liabilities - Other - Total | 35.17% | 34.28% | 24.61% | 20.99% | 21.19% | 22.05% | 29.55% | 29.66% | 36.68% | 36.73% | 27.06% |
| Adjustment | 2.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Current Liabilities - Total | 40.16% | 36.91% | 33.42% | 23.71% | 24.44% | 25.54% | 38.56% | 32.50% | 42.77% | 62.49% | 53.55% |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Working Capital | 27.57% | 12.69% | 12.89% | 17.03% | 17.24% | 16.62% | 10.30% | 13.92% | -4.15% | -20.25% | -12.80% |
| Figure 9  Data Year - Fiscal | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Ticker Symbol | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX |
| ISO Currency Code | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD |
| Sales | 8050 | 8188 | 7806 | 7622 | 7249 | 7143 | 7380 | 7477 | 8386 | 9048 | 9823 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Earnings Before Interest and Taxes | 16.09% | 15.96% | 13.40% | 13.63% | 13.31% | 12.70% | 14.31% | 15.71% | 17.60% | 18.71% | 19.40% |
| Income Taxes - Total | 0.06% | -3.46% | 0.03% | 2.64% | -0.54% | -1.43% | -5.28% | -5.50% | -2.03% | 9.16% | -2.53% |
| Depreciation and Amortization | 10.73% | 10.19% | 10.45% | 9.41% | 9.42% | 9.65% | 9.82% | 10.24% | 9.66% | 9.25% | 9.11% |
| Capital Expenditures | 4.50% | 3.81% | 3.48% | 3.99% | 3.12% | 3.43% | 3.51% | 3.30% | 4.48% | 3.53% | 3.22% |
| Change in Working Capital | -5.61% | -14.41% | -0.42% | 3.83% | -0.66% | -0.88% | -5.79% | 3.76% | -16.56% | -16.40% | 5.85% |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Free Cash Flow | 27.88% | 40.21% | 20.77% | 12.58% | 20.82% | 21.22% | 31.69% | 24.39% | 41.37% | 31.68% | 21.98% |

Figure 10

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data Year - Fiscal | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Ticker Symbol | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX | BSX |
| ISO Currency Code | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD | USD |
| Sales | $8,050 | $8,188 | $7,806 | $7,622 | $7,249 | $7,143 | $7,380 | $7,477 | $8,386 | $9,048 | $9,823 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Earnings Before Interest and Taxes | 1295 | 1307 | 1046 | 1039 | 965 | 907 | 1056 | 1175 | 1476 | 1693 | 1906 |
| Income Taxes - Total | 5 | -283 | 2 | 201 | -39 | -102 | -390 | -411 | -170 | 829 | -249 |
| Depreciation and Amortization | 864 | 834 | 816 | 717 | 683 | 689 | 725 | 766 | 810 | 837 | 895 |
| Capital Expenditures | 362 | 312 | 272 | 304 | 226 | 245 | 259 | 247 | 376 | 319 | 316 |
| Change in Working Capital | -452 | -1180 | -33 | 292 | -48 | -63 | -427 | 281 | -1389 | -1484 | 575 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Free Cash Flow | 2244 | 3292 | 1621 | 959 | 1509 | 1516 | 2339 | 1824 | 3469 | 2866 | 2159 |