Baldwin Sensors Corporate Strategy

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Industry and Company Background

Baldwin Sensors is a leading supplier of sensors to various manufacturing firms, which use these sensors for a variety of products ranging from LCD televisions to timing machines for mechanical watches. Baldwin Sensors was one of the six companies formed when Baldwin Inc. was broken up as part of an antitrust ruling. Baldwin Sensors retains both the original name, and also Baldwin Inc.’s original location on Madison Avenue in New York City. For this reason, Baldwin Sensors is very proud of its heritage as a leading B2B supplier of sensors, and traces its roots to the founding of Baldwin Inc. in 1910.

Baldwin Sensors was founded by James C. Baldwin and Chester V. S. Ericcson III in 1910 and soon established a good reputation by supplying canaries for use in detecting carbon monoxide and other fumes in coal mines. For this reason, Baldwin Sensors recently celebrated its 100th anniversary by updating its logo to feature a canary wearing a miner’s helmet.

Competitive Landscape and the Five Forces

Competition-High
Baldwin Sensors faces competition from Andrews, Chester, Digby, Ferris, and Erie, which also supply sensors to many of the same industries and companies served by Baldwin Sensors. Baldwin Sensors currently serves customers in five segments: low-end, traditional, high-end, performance and size. Notably, Baldwin Sensors dominates the High-End segment, with two strong products earning a combined 31% market share. As Baldwin’s strategy is essentially defined by high-end differentiation, Baldwin Sensors favors high-margin segments. For example, it opted to add a product to the Size segment rather than Performance, due to that segment’s higher margins at the time of the decision. Another issue which defines the competitive landscape in the sensor industry is the extent to which each competitor is present in each segment.

Andrews-
Andrews has consolidated its product portfolio into the Traditional, Low-End, and High-End segments. Its withdrawal from the Size and Performance segments caused havoc with our forecasts in early rounds, and Andrews’ pathetic financial situation makes it a must-watch for possible changes in strategic direction, as it struggles to find profitability. However, Andrews’s options are limited due to its DDD credit rating. Andrews seems plagued by an inability to accurately forecast demand, and frequently relies on the industry’s infamous loan shark “Big Al.”

Chester-
Chester, which also faces a difficult financial situation, requiring frequent emergency loans from Big Al. Unlike Andrews, Chester competes fairly well in some markets,
notably Performance, yet due to financing activities and inventory carrying costs its stock has been trending downward, and ended 2015 trading at just over $2 per share.

**Digby-**
Digby broke its trend of unprofitability this year by posting a small gain, resulting in a slight rise in stock. Digby, like Baldwin Sensors, offers 8 products and competes in all segments. Digby must be watched because they make competitive products, which lead some industries in market share. However, Digby does not seem proficient in managing multiple products in like segments, the way, and while it often has two or more products in a segment, it never achieves double-digit market share for more than one.

**Erie-**
Erie had a decent year, and could have been a rival if it had not stocked out of most of its product line. In spite of this, Erie turned a profit and should be monitored carefully because it could turn into an industry threat if it figures out a way to accurately forecast demand.

**Ferris-**
Ferris, also known as “The Silent Killer,” has been an unpredictable competitor, one that has complicated forecasting. Ferris is dangerous because it sells 8 products and competes in all 5 segments, and does so more successfully than other competitors which do the same. Baldwin Sensors is aware that it must prepare for Ferris’ moves in order to achieve consistent growth and profitability.

**Threat of Substitutes-Low**
Due to the nature of industrial sensors, the threat of substitutes is low.

**Threat of New Entrants-Low**
The threat of new entrants to the sensor industry is perceived to be relatively low. However, existing competitors can leave and enter the various markets relatively easily, drastically affecting the accuracy of forecasts

**Buyer Power-High**
Buyers have a great deal of power because their demands determine product specifications, and consequently many strategic decisions. Buyer’s demands regarding price often determine a segment's profitability as well.

**Supplier Power-Low**
Little is known about industry suppliers, but they are sensitive to payment terms, and thus Baldwin Sensors must pay for materials as quickly as it deems cost effective in order to ensure a steady supply of materials.
Mission, Vision and Values

Baldwin Sensors’ mission is to be a leading supplier of high-quality sensors while providing a good return for all stakeholders, including shareholders, employees, customers, and members of the community.

Baldwin Sensors’ vision is to shape the future of the sensor industry, increasing the value it delivers to customers through strong customer relationships and intensive reinvestment in R&D.

Baldwin Sensors’ values include providing a good return for stakeholders while simultaneously innovating and increasing quality. Baldwin Sensors also values being a good corporate citizen, as a vital part of its strategy to attain its vision.

Ethics

While many firms claim that ethics is important, Baldwin Sensors has taken a bold step and actually made ethics a part of its identity, by publishing a formal promise regarding its practices.

“Baldwin Sensors is committed to being a valuable member of the community, and to being a friend to employees, customers, and investors, and to advancing the ethical standards within the sensor industry. Baldwin Sensors strives to be a role model not only for other businesses, but for all organizations and individuals.”

Strategy, Goals, and Objectives

Baldwin Sensors’ strategy naturally follows its vision. As such, it has opted to produce 8 products, carefully placed as part of a strategy it has termed, “Clustered Tri-Axial Drift.” CTAD is a strategy which places products based not only on what customers currently want, but what Baldwin Sensors expects them to want in the future. On the perceptual map, this means that Baldwin Sensors’ products tend to line up in three diagonal lines, one that goes through Low-end, Traditional, and High-end, while another goes through Performance and yet another goes through Size. In this way, Baldwin Sensors has at least one product with nearly ideal specifications in all segments most of the time.

A necessary consequence of this strategy is that Baldwin Sensors often offers products with subpar specifications, as the company allows these products to stay unchanged in order to appeal to different customers at a later time. Baldwin Sensors has been able to maintain profitability with this strategy by throttling its spending on marketing and production to match anticipated returns.
Production and Forecasting

Baldwin Sensors also believes firmly in the necessity of accurate forecasting, particularly with a strategy that requires production throttling. Thus, the firm has made forecasting a primary objective and has developed a proprietary forecasting mechanism internally referred to as “Canary” which uses data from the standard industry publication, the Capstone Courier, to predict demand using such factors as segment growth rate, market share, customer survey scores, number of competitors products and possible high and low competitors’ customer survey scores. Canary is used to calculate optimistic and pessimistic forecasts. Baldwin Sensors spent 2012 and 2013 developing Canary, which has proved very effective in 2014 and 2015. Baldwin Sensors anticipates the continued effectiveness of Canary for years to come.

R&D

CTAD often dictates that, in a given segment, Baldwin Sensors may have as many as three products, but may not have any that are “perfect,” as determined by customer requirements. However, Baldwin Sensors has found that it is often cost prohibitive to create a “perfect” product, and that it can make more of a profit with a merely great product supported by a decent product. This has been the driving force behind the development and marketing of Baldwin Sensors’ three newest products, Buzzed, Bender and Beaver. This use of what Baldwin Sensors internally refers to as a “relief product” enables fewer and more cost-effective product redesigns.

Finance

Baldwin Sensors’ primary financial objective is to stay solvent while accomplishing strategic goals and establishing a scalable infrastructure capable of future growth. Baldwin Sensors began 2012 knowing it would likely be unprofitable in the short-term, but that early capital spending would be necessary in order to pursue future opportunities. Such capital investments, which included increasing automation and capacity, have translated directly into increased profits and shareholder value in the last few years. Of course, Baldwin Sensors strives to invest responsibly, and to only use short-term debt to finance short-term expenses.

Baldwin Sensors’ target leverage in 2012-2013 was an asset/equity ratio of 1.8-2.8, but the firm has made it clear that growth is very important and it will not hesitate to increase leverage to finance growth. As Baldwin Sensors becomes more profitable, target A/E ratio will be near 2.8 in order to balance risk with capital structure for maximum benefit.

Baldwin Sensors considered completely retiring and reissuing all existing company debt at reduced interest rate in 2012, but ultimately decided against such action. While NPV was positive and the company could have avoided any debt principal repayments for the next 8 years, it would have reduced the year’s cash flow by about $3-4 million; money that was
needed for more immediate concerns like fixed assets and marketing. Since the company took an emergency loan in 2012, this turned out to be a missed opportunity.

TQM, HR, and Advanced Marketing

Goals that support these objectives include minimizing administration and materials costs, as well as reducing per unit costs, as sales volume is expected to increase as segments grow and Baldwin Sensors’ market share increases. These goals are being met with sustained investment in automation and Total Quality Management (TQM) spending in categories which result in decreases in costs in these areas. In fact, the reductions in materials costs which resulted from these investments enabled Baldwin Sensors to weather the fluctuations in oil prices during the crisis in Libya during the spring of 2011. Human Resources (HR) investments are also an important part of Baldwin Sensors strategy, and the firm takes pride in spending generously on recruiting the best personnel and training them effectively. Baldwin Sensors’ marketing strategy is directed at hitting the most efficient level of spending. To this end, Baldwin Sensors typically focuses on marketing channels which provide the best return, while ignoring those that provide a poor return. This strategy is designed to reconcile the firm’s desire to grow and also achieve the highest possible margins.

Risks

Primary risks include competitor stock-outs and withdrawals; as such actions cause Baldwin Sensors’ forecasts to be inaccurate. Predatory pricing is another possible risk, but due to Baldwin Sensors’ strong position in the less price sensitive segments, and due to the fact that its competitors are ill equipped to undercut its pricing, Baldwin Sensors is less concerned about such tactics.

Key Success Measures

Baldwin Sensors has stated the following measures as key to its successful fulfillment of its mission and realization of its vision.

Cumulative profit (25%)

• Net income is the primary metric by which Baldwin Sensors operates. Other things equal, the company will make decisions which maximize pro forma net income. Early losses are expected to be recouped in later rounds, and profits should outpace any early-gaining rivals as the company reaps the benefits of investing heavily during the growth rounds.

Average market share (0)

• While Baldwin Sensors’ product placement makes high market share likely, this is a difficult and expensive position to defend. If sales decline, the company is prepared to
abandon market share in favor of profitability and efficiency; therefore, it receives no weight.

Average ROS (25%)
• Precision forecasting methods and superbly efficient resource allocation based on exhaustive technical analysis compose Baldwin Sensors’ most formidable sustainable competitive advantage. These strengths, in combination with high levels of automation and TQM, should allow the company to control costs, enjoy high margins, and exert a degree of control over both its top and bottom line.

Average asset turnover & Average ROA (0)
• Although Baldwin Sensors’ expects to use assets efficiently and generate a competitive turnover, especially in later rounds, investing heavily in fixed assets early on puts the company at an inherent disadvantage for ratios denominated by total assets. Additionally, these would be difficult to maintain in the event of periods of low sales.

Average ROE (25%)
• Baldwin Sensors’ emphasis on efficiency and profits, in addition to a highly-leveraged financial structure with debt-financed stock buybacks in later rounds, lead to an expectation that average ROE will be higher than competitors.

Ending stock price (25%)
• Same as above - higher profits and less equity financing should lead to higher stock price. This is also controllable to some degree through share repurchase and dividend payout, regardless of low sales or other adversity.

Ending market cap (0)
• While stock price may be high, Baldwin Sensors’ financial structure objectives may lead to lower numbers of shares outstanding, which may result in lower market cap despite higher price per share.