**Aurora Textile**

**Zinser 351 Investment Decision Analysis**

Submitted By:

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**How has Aurora Textile performed over the last 4 years?**

Aurora’s Sales and earnings have been in decline for the last four years (**Exhibits 1 & 10**). Additionally, most of the company’s measures of profitability have been in decline over this time (**Exhibit 10**) including its stock price which has fallen from $30 to a price of $12.

Competition from overseas, globalist trade policies and other factors have had a tumultuous impact on the U.S. Textile-mill industry. Without more information on how these changes are impacting Aurora’s industry peers, it is difficult to render a verdict on how Aurora’s management team has performed relative to the competition.

However, the decision to close the four unprofitable facilities in 2000, to reduce manufacturing costs and to right-size Aurora’s capacity given the changes occurring in the industry, looks to have been correct as ROE and Net Profit Margin saw improvement from 2001 to 2002 (**Exhibit 5**), and its Fixed Asset Turnover Ratio remained flat despite declining sales (**Exhibit 4 & 1**). However, Retained Earnings fell on a percentage basis from 1999 to 2001 (**Exhibit 7**).

In closing its unprofitable facilities, Aurora has decided to focus on the customer segments that are best poised to survive foreign competition going forward (**Exhibit 3**). Additionally, the Zinser investment consideration is an attempt by management to move towards flexible manufacturing, improve declining profit margins and position itself to be competitive in the high-end, finer-quality yarn market going forward (**Exhibits 12 & 13**).

**How well is Aurora management is doing with Expense management?**

Aurora’s management team has done a good job in maintaining SG&A expenses as a percentage of sales (**Exhibit 1**). This is especially clear when it is understood that sales declined close to 20% both in 2000 and 2001 and SG&A expenses as a percentage of sales remained constant at around 7% (**Exhibit 1**).

**Asset management?**

Aurora gets a mixed review when it comes to managing its assets. Its Asset Turnover Ratio declined from 1.34 in ’00 to 1.06 in ’02 (**Exhibits 4 & 5**). However, as we drill down into Aurora’s assets, it is the Inventory Turnover Ratio (**Exhibit 4**), which reveals that Aurora has not reduced its inventories commensurate with its recent decline in sales. Also, cotton spot prices have been in decline since ’97 yet profit margins have been flat to down from 2000 to 2002 (**Exhibit 5**); I believe tighter inventory controls are sorely needed to improve margins and free up working capital (**Exhibit 8**).

However, managements’ handling of its fixed assets has been good. Despite significant Asset Impairments in ’00 & ’01 (**Exhibit 10**) and reductions in Machinery and Equipment from ’97 – ’01 (**Exhibit 11**), Aurora’s Fixed Asset Turnover Ratio has remained relatively flat (**Exhibit 4**). This gives support for the move by Aurora’s management to close its unprofitable facilities, as they were not a significant source of revenue.

**Receivables management?**

Overall, Aurora gets a poor grade for the management of its receivables. This is illustrated by looking at its Cash Conversion Cycle (**Exhibit 2**). The days it takes Aurora to convert its investments in inventory and other resources into cash has risen from 36 days in 2000 to 63 days in 2002. This drastic rise in the company’s Cash Conversion Cycle can be primarily attributed to Aurora’s rise in Days Sales Outstanding (**Exhibit 2**). DSO measures how long it takes a firm to collect the cash it generates from its sales. In Aurora’s case, DSO has risen from 23 days in 2000 to 57 days in 2002. This is a 48% increase in two years. Similarly, Accounts Receivable as a percent of Total Assets rose from 9.7% in 2000 to 19.2% in 2002 (**Exhibit 6**). These ratios make it clear that Aurora’s management needs to improve in collecting its Accounts Receivables and converting them into cash in a timely manner.

On a positive note, Aurora’s management *has* improved on how long it is able to extend its Accounts Payables which rose from 18 days in 2000 to 29 days in 2002 (**Exhibit 2**). Similarly, the rise in Aurora’s Equity Multiplier (**Exhibit 5**) indicates that Aurora is using more debt to finance its asset purchases. However, the improvement in extending its credit terms from its suppliers is not enough to offset the rise in the firm’s CCC from the drastic rise in its Days Sales Outstanding, so additional improvements are needed.

**What is the state of the industry? How does this factor into your analysis?**

The US Textile-mill industry has been in turmoil in recent years as the search for cheaper labor, lower environmental standards and gov’t subsidized operations have pushed domestic textile-mill operations outside the US. Similarly, NAFTA and the CBI created a burden on the US textile industry by encouraging trade with Canada, Mexico, and Caribbean countries. Lower-priced goods for US consumers created an exceedingly difficult and competitive environment for US based textile companies especially when a strong dollar incentivized some foreign manufacturers to export aggressively.

As a result of the turmoil in the industry, U.S. yarn manufacturers have been declining in number. However, Aurora has survived and has identified a few select markets that are expected to survive foreign competition (**Exhibit 3**). Cost-cutting, margin-boosting, modernization, and innovation are thought to be key to remaining viable in this new environment. Similarly, research analysts believe that going forward prices and costs will increase at a 1% inflation rate for the foreseeable future. Although it is difficult to benchmark Aurora’s performance against its competition because of lack of data, the Zinser investment is a step in the right direction in gaining the margin-boosting, cost-cutting, and innovation necessary to allow Aurora to be competitive in the new competitive landscape.

**What is the NPV of the proposed Zinser 351 investment?**

The 10-year incremental **NPV** of the Zinser investment is **$6,421,000** with a 10-year incremental **IRR** of **26.43%** (**Exhibit 14**). Given the positive NPV and an IRR that easily surpasses the hurdle rate of 10%, **The Zinser investment decision is a definite yes**. If the Zinser investment reduced required raw materials inventory levels, then Aurora’s investments in net working capital would go down which would in turn increase operating cash flows and improve the investment’s NPV and IRR.

If the market collapsed in three years because of the elimination of quotas I would still recommend the investment, because if it is assumed that the Zinser machine could be sold for half of its book value each year after is purchase (**Exhibit 9**), then we can perform a linear estimate of the project’s NPV. The linear estimate states that the Zinser investment becomes profitable after the 2.42-year mark (**Exhibit 15**). Thus, at year 3, we are in positive NPV territory, so the investment still makes sense.

The marketing research costs ($15,000) and the engineering tests ($5000) are sunk costs and should not be included in the operating cash flows of our analysis.

**How do you justify your decision to the Board of Directors? Should you invest or pay a dividend?**

Ladies and Gentlemen of the Board of Directors,

After careful consideration and analysis, I am confident in recommending that we move forward with the Zinser 351 investment. The 10-year Net Present Value of this project is an impressive $6,421k with an Internal Rate of Return of 26.43%. For investment decisions like this, we have determined that a hurdle rate of 10% is appropriate. This investment will greatly exceed this benchmark providing added value to our shareholders.

Additionally, should systemic conditions worsen within the 10-year window of the machine’s useful life, I am confident that we can sell it on the open market for at least 50% of its book value. This added measure makes the NPV for the project positive after just 2.42-years.

I do not recommend that we pay a dividend in lieu of the Zinser investment. I think it would send the wrong message to our shareholders to institute a dividend policy that, during this uncertain time, we are not sure we can sustain. Instead, I recommend we pursue the operational investments to improve company profitability and help us compete in the product segments we have determined will be successful for us in the long run.

During my analysis for the Zinser investment, I found a few areas that I recommend we focus on, in addition to making the Zinser investment, that I think will improve corporate profitability. These key areas are:

* **Improve Days Sales Outstanding –**Has risen from 23 days to 57 days. This needs to come down.
* **Increase Inventory Turnover** –Has fallen from 7 to 4. Inventory levels should come down to match revenues.
* **Extend Days Payables Outstanding** –Has risen from 18 days to 29 days. Can we extend this even further?
* **Reduce Accounts Receivables** – Has risen as a % of TA from 9.7 to 19.2. We should avoid extending credit too leniently.

I am grateful for the good working relationship we have had over the years. Please reach out to me if you would like additional granularity on my Zinser investment analysis or any of my recommendations.

Thank you,

Tony Trotter

CFO – Aurora Textile

**Exhibit 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Expense Management** | | | | |
|  |  | 2000 | 2001 | 2002 |
| Sales Growth |  | -6.56% | -20.38% | -19.38% |
| SG&A |  | 6.19% | 6.36% | 6.99% |

**Exhibit 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cash Conversion Cycle** | | | | |
|  |  | 2000 | 2001 | 2002 |
| Days Sales Outstanding |  | 23 | 32 | 57 |
| Days Inventory Outstanding |  | 31 | 34 | 35 |
| Days Payables Outstanding |  | 18 | 19 | 29 |
| CCC = DIO + DSO - DPO |  | 36 | 47 | 63 |

**Exhibit 3**

**Exhibit 4**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Asset Management** | | | | |
|  |  | 2000 | 2001 | 2002 |
| Inventory Turnover |  | 6.93 | 5.84 | 4.43 |
| Days Sales Outstanding |  | 23 | 32 | 57 |
| Fixed Asset Turnover |  | 2.04 | 2.07 | 2.04 |
| Total Assets Turnover |  | 1.39 | 1.28 | 1.08 |
| Current Ratio |  | 2.88 | 2.92 | 3.16 |

**Exhibit 5**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DuPont Analysis** | | | | |
|  |  | 2000 | 2001 | 2002 |
| Net Profit Margin |  | -0.027 | -0.061 | -0.048 |
| Asset Turnover |  | 1.34 | 1.19 | 1.06 |
| Equity Multiplier |  | 2.50 | 2.56 | 2.73 |
| ROE = NPM X AT X EM |  | -0.09 | -0.18 | -0.14 |

**Exhibit 6**

**Exhibit 7**

**Exhibit 8**

**Exhibit 9**

|  |  |  |  |
| --- | --- | --- | --- |
| **Zinser Sale Assumptions** | | | |
|  | **3-Year** | **5-Year** | **7-Year** |
| **book value** | **5,775** | **4,125** | **2,475** |
| **Market** | **2,888** | **2,063** | **1,238** |
| **Loss** | **(2,888)** | **(2,063)** | **(1,238)** |
| **Tax Harvest** | **1,040** | **743** | **446** |
| **Net Benefit from sale of Zinser** | **3,927** | **2,805** | **1,683** |