



# Yale SCHOOL of MANAGEMENT

## Advanced Environmental Recycling Technologies, Inc. (AERTA)

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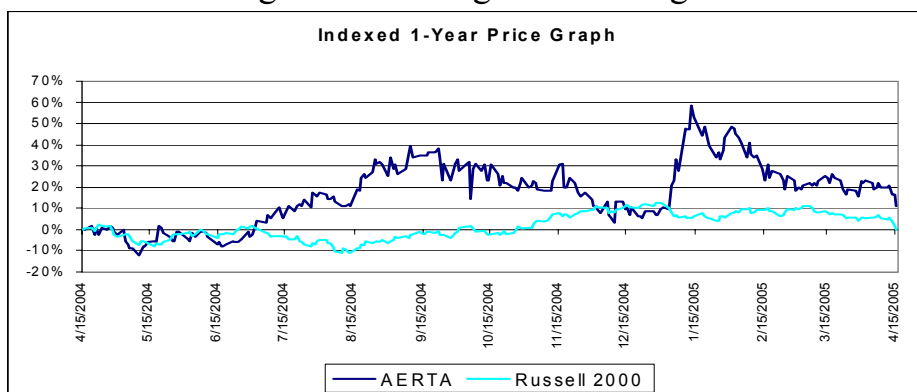


Advanced Environmental  
Recycling Technologies, Inc.

### A different use for Recycling

#### *Recommendation: Overweight*

- The composite decking industry is poised to do well as the economy continues to improve and the number of home repair and remodeling projects increase.
- AERTA is well positioned to benefit from a gain in the market share of composite decking to the total decking market with exclusive through Lowe's Home Improvement Stores, and enhanced flexibility on current distribution contracts.
- With a target price of \$1.70 and an upside of 32.73%, we initiate coverage with a rating of Overweight.



Target Price	\$ 1.70
%Chg	32.73%
Price	\$ 1.28
Mkt Cap (M)	\$ 42.76
52 Wk H	\$ 1.85
52 Wk L	\$ 1.00
Avg. Vol. (3m)	92,181
Shrs Out. (M)	33.41

As of April 15, 2005



Please see the disclaimer at back of this report for important information.

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## Company Overview

*Company Description.* Advanced Environmental Recycling Technologies, Inc., herein referred to as AERT, is a composite building materials supplier. It recycles waste plastics and plastic byproducts of paper-recycling mills, and combines this recycled plastic with cedar or hardwood fiber to create the composite building materials. These materials are used in place of traditional wood products for exterior applications in building and remodeling homes and for certain other industrial or commercial building purposes.

AERT begun operations in 1989 and the first trading prices that we have are from 1990. Even so, there is little institutional play on this stock, since it is only just over 1% owned by institutions. Management believes one reason for the low level of institutional ownership is because of the high number of potentially dilutive warrants outstanding.<sup>1</sup> We address this issue in our valuation assumptions. Insiders still own about 36% of the outstanding shares, so while they have a large influence they do not completely control the company.

*Recent Results.* AERT grew revenues in 2004 by 46%, as demand for their product exceeded their manufacturing capacity. They had some inconsistent results relative to the previous year in Net Income due to residual insurance income claims from a plant fire in 2003, which will be discussed later in the report. Here is a summary of the 2004 numbers compared to 2003:

**Exhibit 1: Results for AERT**

<i>(in Millions)</i>	<u>2004</u>	<u>2003</u>	<u>% Chg</u>
Sales	63.6	43.5	46%
Operating Income	3.5	0.1	4283%
NI (Before Xtra)	1.1	(0.9)	
NI (After Xtra)	1.3	2.0	-37%
EPS (Fully Diluted - \$)	0.03	0.07	-57%

*Data Source: Company Reports*

*Product Attributes.* AERT markets its commercial and residential decking products under the Weyerhaeuser ChoiceDek and MoistureShield brands, and exterior door, window, and housing components under MoistureShield as well. These products are all made from the same basic recycled composite material. The various attributes that make composite decking superior to traditional wood include, but are not limited to, the following:

- Not chemically treated
- Do not require treating or staining
- Greater Durability and Stability

<sup>1</sup> 2004 AERT 10-K



- Helps minimize waste from extruding to desired shapes
- Less subject to rotting, cracking, warping, and splintering <sup>2</sup>

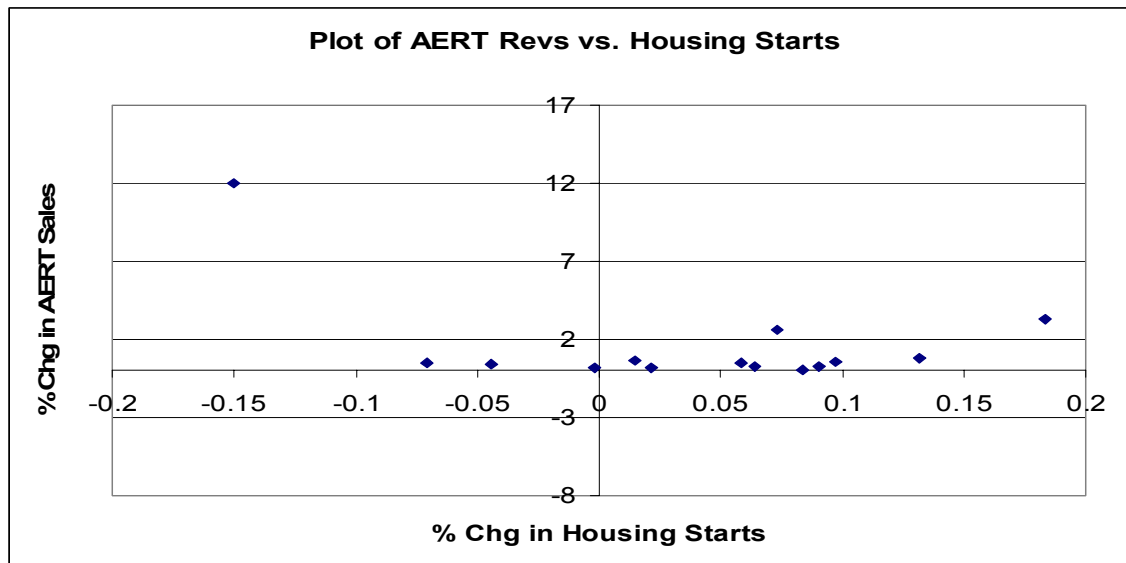
These advantages are attributed to the plastic in the decking material, and this material also keeps the feel and look of wood because of the wood fiber that it contains.

## Demand for Composite Decking

Many people mistakenly think that it is new home construction that is the driver of the decking industry, but it is actually repair and home improvement that is the majority of deck construction. If the myth were true, we would expect to see a high correlation between home starts and sales, but in fact we don't. To see if there was a meaningful relationship between the series, we took the percentage change in annual home starts and plotted that against the percentage change in AERT's sales numbers for the past 15 years, and we see that there is a slightly positive relationship.

As a caveat to these numbers, we understand that using Industry data would be much more representative, but we could not find a data set big enough to provide a good number of data points in our searches. We also tried to proxy this using the leading composite materials manufacturer's (Trex Company) financials along with AERT's, but again the data points were not representative. Nonetheless, as we will detail, this does show our point.

**Exhibit 2**



Source Data: Company 10-K and Census Bureau

This plot includes all of the data points, but if we take out the outliers from the first few years when the company was in an abnormally high sales growth stage (from 200% to 1200%) the correlation that we get is 0.12, which is consistent with the plot.

<sup>2</sup> 2004 AERT 10-K

And, the regression that we run has an R-Squared of .01 which has almost no explanatory power. As you can see, this test does not have much power, most likely due to the small sample size after adjusting for outliers.

**Exhibit 3**

Correlation Matrix: Percentage Changes		
	<i>AERT Sales</i>	<i>Home Starts</i>
AERT Sales	1	
Home Starts	<b>0.12</b>	1

Source Data: Company 10-K and Census Bureau

Regression Statistics	
Multiple R	0.12
R Square	<b>0.01</b>
Adjusted R Sq	-0.10
Standard Error	0.24
Observations	11

However, the point that new home construction is not the main driver for AERT's sales is still justified by an industry study that states that only about 13% of all deck construction comes from new homes, with the remainder on existing homes (whether from existing home sales or replacement of old decks).<sup>3</sup>

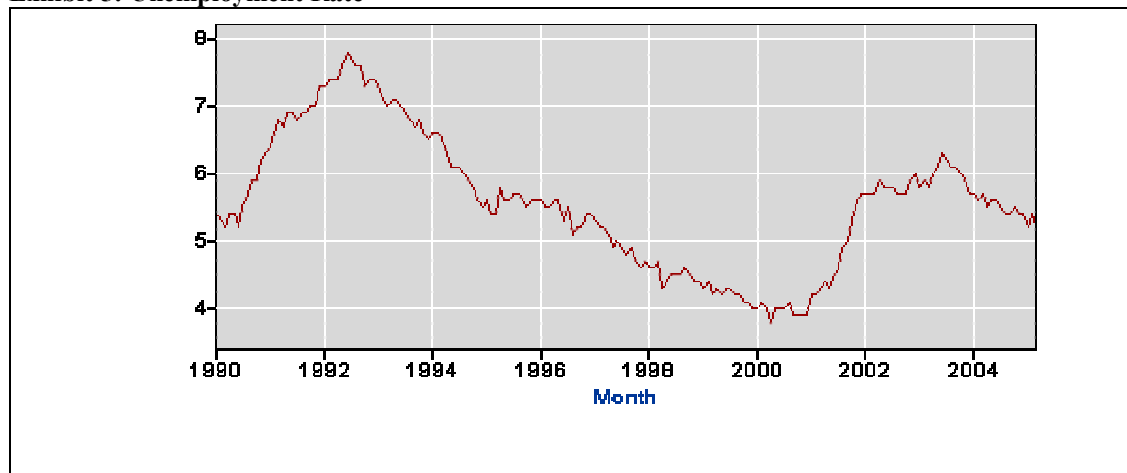
There are several economic numbers that are good indicators of demand for replacement driven decks, including the Unemployment Rate and the Consumer Confidence Index (CCI). The reason is that this is more of a product that consumers would buy when they are comfortable with their job and they have some extra discretionary income to spend on home improvements.

The unemployment rate has been decreasing recently as shown in the graph below, and we expect this trend to continue, while the CCI, as you can see to the right, has been pretty high over the past few months although it is slowing down recently. According to the Conference Board's Consumer Research Center, "Consumers overall assessment of the current economic conditions remains favorable, and their short-term outlook suggests little change in the months ahead." The outlook for the labor market improved recently as well.<sup>4</sup>

**Exhibit 4: CCI (From Conference Board)**

<sup>3</sup> Study sourced in TREX company's 2004 10-K

<sup>4</sup> Conference Board's latest press release from March 29, 2005, "Consumer Confidence Index Dips in March"

**Exhibit 5: Unemployment Rate**

Source: Bureau of Labor Statistics

Demand for all decking, a \$4.3 billion industry<sup>5</sup>, should be pretty strong, forecasted at 2.3% per year through 2007<sup>6</sup> due to these factors. All of these factors are defined as residential demand, and we also expect commercial demand to be strong as well because of more money from increasing corporate profits.

We now turn to the demand of composite materials versus traditional wood. We explored some of the product attributes that make composite decking favored over wood for AERT's products in the company overview section, and because of these reasons composite decking materials make up about 12% of the total decking industry sales (2003), according to industry sources, which is up from about 2% in 1992.<sup>7</sup> This trend should continue into the future as composite material continues to gain acceptance.

One other factor fueling this trend is the growing awareness of the process of treating wood products with chemicals to prevent insects from causing decay. There was heightened press coverage over the decision of manufacturers to eliminate the use of CCA (Chromated Copper Arsenate) as pesticide for the pressure-treated lumber, and use alternative chemical compounds. This has brought negative connotations on the traditional wood products, and has therefore helped the acceptance of composite materials that are not treated.

Somewhat offsetting all the benefits of composite decking is the added cost. Depending on features and installation, composite decking can cost between 20-40% more than a traditional wood deck<sup>8</sup>. However, the long-run costs of treating traditional wood decking make the lifelong costs of composite decking actually cheaper than traditional decking.

<sup>5</sup> From Industry Study referenced in March 24, 2005 Legg Mason Trex Analyst Report

<sup>6</sup> <http://www.mindbranch.com/products/R154-1031.html>

<sup>7</sup> <http://www.mindbranch.com/products/R154-1031.html> and Company 10-K

<sup>8</sup> Trex Company 10-K and Legg Mason Trex Analyst Report referenced above

As we already stated, the total decking industry is expected to grow at 2.3% at least through 2007, and some analysts feel that the composite decking sector should grow at an annual rate of 20-25% over the next few years.<sup>9</sup> We have taken our projected sales figures from our Discounted Cash Flow valuation and compared them to both the overall decking industry and the composite decking industry (estimated to be 14% of the overall decking industry<sup>10</sup>).

#### Exhibit 6

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<b>Growth Rate</b>
Projected AERT Sales	63.64	76.37	91.64	109.97	20%
Total Decking Market	4300	4399	4500	4604	2.30%
AERT % of Total Decking	1.48%	1.74%	2.04%	2.39%	
Composite Decking Market	602	722	867	1040	20%
Composite as % of Total	14.00%	16.42%	19.26%	22.60%	
AERT as % of Composite	10.57%	10.57%	10.57%	10.57%	

As can be seen, we don't have AERT gaining any market share in the composite decking market. Instead, their growth is attributable to the composite decking sector gaining market share in the total decking market. Even so, their share of the total decking market only increases from 1.48% in 2004 to 2.39% in 2007.

## Competition

AERT's main competition is against manufacturers of other construction materials, primarily high-grade woods, aluminum, and plastics used for decking and framing material. In the section on product attributes, we discussed the advantages that alternative materials have over traditional wood products. As awareness continues to grow, we anticipate the percentage of alternative decking materials to increase.

While we see an increase in market share for these alternative products, AERT faces tough competition within this segment. The largest competitor for AERT is Trex Company. Trex is the current market leader in this segment and has countered AERT's exclusive arrangement with Lowe's by signing a sales agreement with Home Depot. While AERT will likely benefit from Trex's efforts to increase awareness of the alternative decking market, AERT has significantly less resources with which to compete. A listing of other competitors and their anticipated 2004 market share is below.

<sup>9</sup> Correspondence with Weyerhaeuser and also Wall Street Transcript interview on 1/19/2005 with Keith Hughes, SunTrust Robinson Humphrey Capital Markets

<sup>10</sup> Study sourced in TREX company's 2004 10-K

**Exhibit 7**

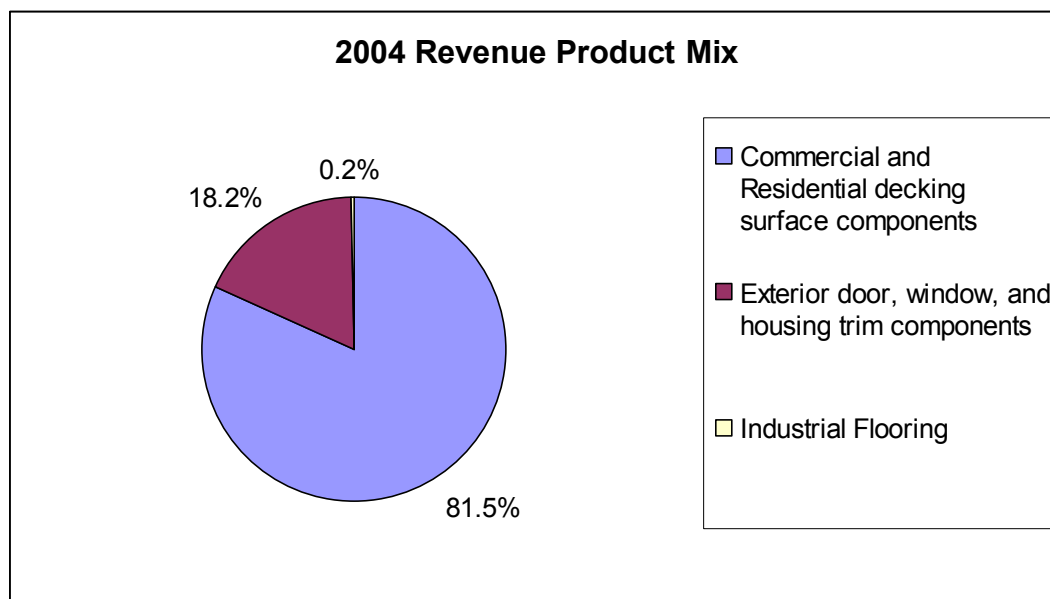
	Anticipated Market Share
Trex	38%
TimberTech	13%
Louisiana-Pacific	10%
AERT	11%

Source: Our Estimates Revised from Legg Mason  
Estimates

Since a primary source of competition is price, AERT might benefit if they are able to reduce their dependence on third-party suppliers of plastic processing (60% of Cost of Goods Sold). Discussed later in the section on supply, AERT wants to move more of their plastic processing in-house. If they can meet this goal, they will be less susceptible to the cost fluctuations of polyethylene.

**Revenue Mix**

82% of AERT's revenue comes from decking, including commercial and residential, and we will therefore concentrate on those product lines.

**Exhibit 8**

Source: Company 10-K

AERT's revenues are concentrated through Weyerhaeuser, which contributed approximately 81% of the total revenue of the company in 2004. Although this is indeed a risk, management has been able to mitigate this by renegotiating the contract with



Weyerhaeuser in the fall of 2004. Instead of producing only ChoiceDek Premium decking exclusively for Weyerhaeuser, AERT can now produce other composite decking materials for sale through the rest of their distribution network. This is why AERT began producing the MoistureShield brand of composite materials.

However, Weyerhaeuser still must agree to purchase a minimum amount of ChoiceDek Premium decking in 2005, and this minimum will be set for each year thereafter. Weyerhaeuser will continue to sell ChoiceDek Premium exclusively through Lowe's Home Improvement retail stores. This exclusivity at Lowe's helps AERT compete with Trex who does not have an exclusivity agreement with Home Depot. Lowe's has agreed to provide retail shelf space in all of its stores (1,000+ which is substantially greater than Trex's deal of 100 Home Depot stores) and to promote the product through a national print and advertising campaign.

This new contract gives AERT a competitive advantage since they have the flexibility to produce and sell to other customers while at the same time enjoying exclusivity in the retail home improvement space, and will therefore increase demand for AERT's composite decking materials.

## **Capacity Constraints**

According to the company, the demand for their products exceeded their capacity, and they are therefore looking into ways of improving this metric to help support their high sales growth in the future. According to management, they expect to increase production capacity at both of their current manufacturing facilities, and to build a third plant next to their current plant in Springdale, Arkansas in 2005. With the planned increase in production facilities, in March 2005 AERT also opened a new warehouse and reload facility adjacent to its current recycling plant in Lowell, Arkansas. According to their press release, this new facility will "positively affect the ever increasing demand for AERT decking products" due to the new storage and shipping area.

AERT's sales should benefit from the planned capital expenditures to increase the capacity of their production system. After speaking with the company, their current capacity and their expected expansion do cover our projected sales numbers in 2005 and 2006 in our valuation. However, they did not want to disclose any particular guidance on these numbers since there are too many risks involved with reaching their estimates. As you will see in valuation, we also have high capital expenditures in those years to cover any future expansion.

## **Supply - Raw Materials**

Although AERT does have supply contracts, a majority of their raw materials are from purchase orders, or one-time purchases with no long-term obligation (68% of plastic

and 51% of waste wood). Management expects this type of ordering to continue in the future, which will help by not constraining them in long-term contracts.

The cost of obtaining wood fiber, which is a waste byproduct generated by hardwood furniture and flooring manufacturers, remains a small portion of their overall costs. Two suppliers accounted for about 82% of their total wood fiber supply in 2004, but this concentration is not a cause for concern since management has spoken with other waste wood fiber suppliers about possible future demand.

AERT does have a competitive advantage over many other composite materials manufacturer's because they use recycled plastic. Purchasing new plastic can be very costly in the manufacturing process. AERT uses both industrial and consumer waste polyethylene, which comes from, among other things, mixed plastic grocery bags from supermarket and store collection programs, ground container material, and stretch film from warehouses and packing waste. This waste is highly contaminated, and is therefore of less use to traditional plastic recyclers. AERT's proprietary recycling process does not require the plastic to be pure, and therefore produce a lower cost recycled product. Management has a goal to produce 75% of plastic raw materials in-house, currently they stand at 55%.

The prices of this recycled plastic has increased over the past few years due to competition from other composite material suppliers, decline of the US dollar relative to Asian currency and therefore inviting competition from abroad, and the rise in oil prices increased the rise in virgin plastics, for which scrap plastics can be substituted. The prices of raw materials are an uncertainty that management believes will become more predictable with increased supply in the future.

## **Plant Fires and Pending Litigation**

With AERT's current manufacturing process, they are at a higher risk of loss due to plant fires. AERT experienced a series of fires in 1996 that severely disrupted operations, but they were determined to be arson. In 2003, there was an accidental fire in their Junction, TX facility that caused a plant stoppage and significant operating losses in that year and residually in 2004. However, the lost revenue was reimbursed through insurance claims as extraordinary gains.

In January 2005, Lloyd's of London filed suit against AERT (who reversed receivables for those claims in 2004 of \$864,000) claiming fraud in the rebuilding of the Junction, TX facility, and wanted to be held not liable for the reimbursement, and also tried to retroactively cancel its portion of the insurance policy. AERT filed a counterclaim the following week because they feel that this claim is without merit.

What is not taken into account here is the fact that Lloyd's is AERT's third tier insurer, meaning that they have already reaped the full benefit allowed from two other insurers for this fire. With Lloyd's being the only one bringing claim, we have to side

with management and agree that this claim is without merit. AERT seeks to gain \$1.8 million in actual damages plus fees.

We know that fire is a huge uncertainty, but management is aware of the greater risk of fire in their process and has put many new prevention processes in place to mitigate this risk.

## Valuation

*Risks to estimation.* Before beginning our discussion of our valuation process, we wanted to first address some of the risks that might cause a change in our valuation. The Building Products industry as a whole is dependent upon the weather, since consistently severe weather may dampen sales. The residential home improvement market is also highly dependent upon the strength of the economy as a whole, and any unexpected downturn may hurt sales. Another thing that we touched upon in the report that might be risky is the uncertainty of litigation suits in respect to insurance claims. Another related uncertainty is that a severe fire may cause a stoppage at one of the manufacturing plants, as we have seen in the past for AERT. These are just some of the many risks inherent in our target price and valuation.

*DCF Valuation.* We used a DCF analysis for our target price and a multiple analysis for justification for our DCF valuation (please see below for details of multiple analysis). Using the DCF we have an estimated fair value for Advanced Environmental Recycling Technologies, Inc. stock of \$1.70, which implies about 33% upside potential over Friday, April 15, 2005 closing price of \$1.28. Our projections imply a 12% annualized 10-year Sales Growth translating into a 15% 10-year annualized growth in net income.

We list out here our assumptions for the DCF model according to our discussion in the previous sections of this report that draw the basis for the underlying growth rates and projections. Please see detailed valuation tables and historical financial statements in the exhibits after this discussion. As you will see in our historical tables, we looked at historical averages and ratios back from 1990 through the present for AERT.

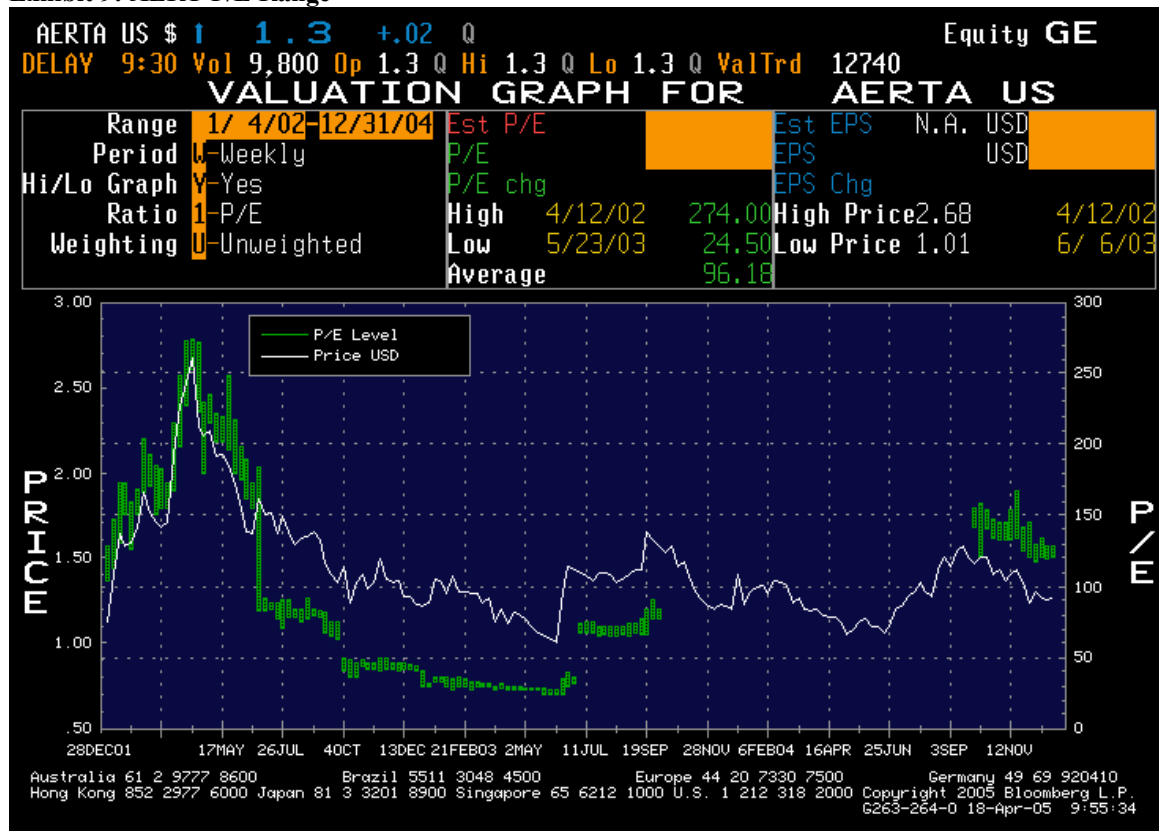
- Our WACC of 9.04% was based off of the Cost of Equity using the CAPM and a Beta from Bloomberg, along with the Cost of Debt from Bloomberg.
- We based all items as a percentage of sales because this is an operating company and its scalability, profit, and growth are all tied to sales growth.
- We used 41.07 Million shares for our calculation, which is the fully dilutive amount at current levels. If the price were to rise to close to \$2.5 or above, then another 7 Million shares would become dilutive and could drop the value from \$2.5 down to \$2.15. However, our target is below this potential, and we thus believe any risk of dilutive shares as been fully taken into account.

- We grew sales at the low end of expectations for the first several years as discussed previously in the report, and continuing the trend down to a long run rate. One reason we rapidly lower sales growth and then have a low (2.5%) long term rate is that since this product is highly durable, as more decks become composite then replacement will occur at lower rates than currently for wood decks.
- We dropped Cost of Goods Sold over the next several years due to the increase in in-house plastic processing. In the long run we have this rising as a higher percentage of sales due to competition.
- We keep SG&A fairly stable as a percentage of sales, although decreasing slightly due to a decrease in the advertising budget with greater acceptance of composite building materials.
- Interest expense is fairly stable compared to historical levels, and keeps the debt coverage ratio near the covenant requirement of 250% of Operating Income.
- We assumed a 32% effective tax rate after 2009 based on historical net operating loss carry forwards of approximately \$25 million at the end of 2004.
- Other income, which is Premium's on Preferred Stock, was kept stable in the future.
- Total Assets we have increasing at substantial rates over the next two years due to capital expansion, and then stabilizing to a long run low growth consistent with sales.
- Total Liabilities increase in 2005 in line with asset growth as they support the increasingly high demand. They then decrease as they near terminal growth reducing capital commitments generated from their expansion.
- We have the current ratio continuing to trend upward from the current level of 0.78 to the required level of 1.0 over the next several years. We feel that while the bondholders have only granted a waiver of the covenant through 2005, with steady progress towards the required 1.0 current ratio, bondholders will have little incentive to discontinue this waiver.
- Our Growth rate for the final year of our projections is 2.5%, and while we believe this rate could be sustained for a substantial time period, especially since it is below normal GDP growth of 3.25%, we used a sensitivity analysis of this terminal rate both raising and lowering it by 1%. Sensitivities to this Terminal rate are shown in the Appendix.

**Multiples Valuation.** We wanted to also utilize price valuation ratios in order to validate our target price from the DCF. You will be able to find the detailed comparable numbers at the end of this report, but here is the summary calculations, and results.

The P/E Ratio for AERT has been all over the map since it is in a high growth stage over the past 5 years as you can see from the graph below, rendering a historical P/E ratio without much value equivalent to 96 times earnings. The range is from a low of 24.5 times earnings to a high of 274 times earnings.

**Exhibit 9: AERT P/E Range**



Source: Bloomberg

Instead we take a comparable report with many different items for companies in the Building Products – Misc. Sector (classified from Bloomberg). Since finding exact comparables in this business is tough, we also took the current and 5-year average P/E ratio for Trex since they are the leaders in the composite decking business as discussed in the competition section.

In order to set a target value for the shares of Advanced Environmental Recycling Technologies, Inc., we took the forward one year EPS of \$0.07 for 2005, which flows through from our income projections in the DCF, and multiplied that by the current industry P/E of 22.17, for a target price of \$1.55. As you can see, this says that the current shares are undervalued by 21%. We can also see the other calculations in the exhibit below using Trex's multiple numbers.

**Exhibit 10: P/E Multiples Price Targets**

	<u>P/E</u>	<u>Target</u>	<u>% Chg</u>
<i>Industry P/E</i>	22.17	\$ 1.55	21%
<i>Trex 5-Yr Avg. P/E</i>	27.38	\$ 1.92	50%
<i>Trex Current</i>	21.43	\$ 1.50	17%
<i>2005 EPS Est</i>	\$ 0.07		

As mentioned above, it is hard to get a true comparable number for AERT, and we do feel that our DCF analysis is conservative and is a more accurate representation of our target price. With this being said, you can see that even with this comparable P/E numbers, the value we derive is similar to that of the DCF and we confidently feel that AERT is undervalued and would rate them as Overweight.

As you can see in the detailed comparables report, AERT trades a premium to other building products companies according to P/B, but they trade a discount to Trex. They also trade at a discount to Sales in the industry and at a huge discount to Trex according to P/S ratio.

The following exhibits detail our projected financial statements, DCF analysis, and comparable valuation that we described above.

## Appendix

Exhibit 11: Comparables Report

Ticker	Name	Div Yld	Price	Mkt Cap	P/B	P/S	P/CF	P/E	Est EPS Curr Year	P/E Curr Year	Est EPS Next Year	P/E Next Year	WACC
<b>AVERAGE:</b>													
AERTA	ADVANCED ENVIR RECYCL -CL A	0.00	1.30	44.50	3.25	0.65	39.11	22.17	2.84	13.27	3.00	11.72	7.82
SSD	SIMPSON MANUFACTURING CO	0.57	27.51	1320.15	2.85	1.89	56.84	16.47	1.94	14.22	2.23	12.36	9.90
USG	USG CORP	0.00	41.22	1785.38	1.74	0.39	4.15	5.54	6.00	6.87	4.75	8.68	11.04
NCS	NCI BUILDING SYSTEMS INC	0.00	35.13	730.88	1.72	0.63	42.98	12.87	3.03	11.59	3.55	9.89	7.50
ELK	ELK CORP	0.58	33.81	674.35	2.85	1.03	49.28	18.68	2.55	13.26	2.84	11.90	7.71
TWP	TREX COMPANY INC	0.00	39.44	585.74	3.69	2.27	10.88	21.43	2.18	18.08	2.70	14.60	8.79
IBI	INTERLINE BRANDS INC	0.00	17.51	562.12					1.04	16.84	1.21	14.50	
DW	DREW INDUSTRIES INC	0.00	37.70	390.61	3.30	0.73	196.05	15.14	3.13	12.04	3.74	10.08	8.28
IAL	INTERNATIONAL ALUMINUM CO	3.55	31.17	132.39	1.15	0.57	54.17	14.30					7.39
OWENQ	OWENS CORNING	0.00	4.97	275.05		0.05	0.66	1.67					5.91
ACKHQ	ARMSTRONG HOLDINGS INC	0.00	4.00	162.68		0.05	0.91	47.06					9.12
PATK	PATRICK INDUSTRIES INC	0.00	9.35	44.40	0.73	0.15		85.00					4.84
CGM	CONGOLEUM CORP-CL A	0.00	5.20	42.95		0.19	1.97	5.70					6.94

**Exhibit 12: Projected Income Statement**

Ticker: AERTA US Equity  
Name: ADVANCED ENVIR  
RECYCL

Currency: USD

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
		Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated
Sales/Revenue/Turnover	63.64	76.37	91.64	109.97	126.47	145.44	159.98	175.98	180.38	184.89	189.51
	<b>46%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>15%</b>	<b>15%</b>	<b>10%</b>	<b>10%</b>	<b>2.5%</b>	<b>2.5%</b>	<b>2.5%</b>
Cost of Goods Sold/F.E. & P. & G.	48.96	53.46	64.15	76.98	94.85	109.08	127.98	140.78	153.32	157.15	161.08
	<b>77%</b>	<b>70%</b>	<b>70%</b>	<b>70%</b>	<b>75%</b>	<b>75%</b>	<b>80%</b>	<b>80%</b>	<b>85%</b>	<b>85%</b>	<b>85%</b>
Profit Margin	<b>23%</b>	<b>30%</b>	<b>30%</b>	<b>30%</b>	<b>25%</b>	<b>25%</b>	<b>20%</b>	<b>20%</b>	<b>15%</b>	<b>15%</b>	<b>15%</b>
SG&A / Oth Op / Dep Op & Maint	11.20	17.56	18.33	16.50	12.65	14.54	16.00	17.60	14.43	14.79	15.16
	<b>18%</b>	<b>23%</b>	<b>20%</b>	<b>15%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>8%</b>	<b>8%</b>	<b>8%</b>
Operating Income (Losses)	3.48	5.35	9.16	16.50	18.97	21.82	16.00	17.60	12.63	12.94	13.27
Operating Margin	<b>5%</b>	<b>7%</b>	<b>10%</b>	<b>15%</b>	<b>15%</b>	<b>15%</b>	<b>10%</b>	<b>10%</b>	<b>7%</b>	<b>7%</b>	<b>7%</b>
Interest Expense	2.12	2.29	2.75	3.30	3.79	4.36	4.80	5.28	5.41	5.55	5.69
	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>
Net Non-Oper Losses(Gains)	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Income	-0.28	-0.27	-0.27	-0.27	-0.26	-0.26	-0.26	-0.26	-0.26	-0.26	-0.26
Inc(Loss) bef Extraord Items	1.09	2.78	6.14	12.93	14.92	17.19	10.94	12.06	6.96	7.14	7.32
Extraord L(G) bef Tax Effects	-0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	3.00
Taxes	0.00	0.00	0.00	0.00	0.00	0.00	3.50	3.86	2.23	2.28	2.34
Net Income/Net Profit (Losses)	1.27	2.78	6.14	12.93	14.92	17.19	7.44	8.20	4.73	4.85	4.98
Diluted EPS	0.03	0.07	0.15	0.31	0.36	0.42	0.18	0.20	0.12	0.12	0.12
Shares for Fully Diluted EPS	41.07										
Debt Coverage Ratio	164%	233%	333%	500%	500%	500%	333%	333%	233%	233%	233%



**Exhibit 13: Projected Balance Sheet**

Ticker: AERTA US Equity  
 Name: ADVANCED ENVIR  
 RECYCL

Currency: USD

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
		Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated
Current Assets Reported	12.29	22.91	27.49	32.99	31.62	36.36	39.99	35.20	27.06	27.73	28.43
% of Sales	19.3%	30.0%	30.0%	30.0%	25.0%	25.0%	25.0%	20.0%	15.0%	15.0%	15.0%
Tangible Fixed Assets	25.48	38.18	50.40	58.28	63.23	65.45	71.99	70.39	63.13	64.71	66.33
% of Sales	40.0%	50.0%	55.0%	53.0%	50.0%	45.0%	45.0%	40.0%	35.0%	35.0%	35.0%
Other Assets/Def Chgs&Oth	5.57	5.73	6.87	8.25	8.85	10.18	9.60	10.56	9.02	9.24	9.48
% of Sales	8.8%	7.5%	7.5%	7.5%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%
Total Assets	43.34	66.82	84.77	99.52	103.70	111.99	121.58	116.14	99.21	101.69	104.23
YOY Growth	19.0%	54.2%	26.9%	17.4%	4.2%	8.0%	8.6%	-4.5%	-14.6%	2.5%	2.5%
Current Liabilities	15.76	28.26	33.91	38.49	36.67	39.27	43.19	36.96	27.06	27.73	28.43
% of Sales	24.8%	37.0%	37.0%	35.0%	29.0%	27.0%	27.0%	21.0%	15.0%	15.0%	15.0%
Non Current Liabilities	15.85	19.09	22.91	27.49	31.62	36.36	39.99	43.99	45.09	46.22	47.38
% of Sales	24.9%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Total Liabilities	31.61	47.35	56.82	65.98	68.29	75.63	83.19	80.95	72.15	73.95	75.80
YOY Growth	15.1%	49.8%	20.0%	16.1%	3.5%	10.7%	10.0%	-2.7%	-10.9%	2.5%	2.5%
Total Shareholders' Equity	11.73	19.47	27.95	33.54	35.41	36.36	38.39	35.20	27.06	27.73	28.43
Total Liabilities and Equity	43.34	66.82	84.77	99.52	103.70	111.99	121.58	116.14	99.21	101.69	104.23
Book Value per Share	0.37	0.61	0.88	1.05	1.11	1.14	1.21	1.11	0.85	0.87	0.89
Shares Outstanding	31.82										
Current Ratio	0.78	0.81	0.81	0.86	0.86	0.93	0.93	0.95	1.00	1.00	1.00

**Exhibit 14: Discounted Cash Flow Analysis**

Terminal Growth	2.50%
WACC	9.04%

	Sensitivity to Terminal Growth	
Rate	1.50%	2.50%
Price	1.51	1.70
		1.86

Risk Free Rate	4.5%
Beta (Bloomberg)	1.13
Market Risk Premium	5.00%
<b>Cost of Equity</b>	<b>10.16%</b>
Equity Percentage	72.9%
Cost of Debt (Bloomberg)	6.0%
After-Tax Cost of Debt	6.0%
Debt Percentage	27.1%

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
		Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate
EBIT (operating inc)	3.48	5.35	9.16	16.50	18.97	21.82	16.00	17.60	12.63	12.94	13.27
Taxes on EBIT & int inc	0	0	0	0	0	0	5.12	5.63	4.04	4.14	4.24
Implied Effective tax rate	0%	0%	0%	0%	0%	0%	32%	32%	32%	32%	32%
after-tax EBIT or NOPAT	3.48	5.35	9.16	16.50	18.97	21.82	10.88	11.97	8.59	8.80	9.02
Adjustments											
-Change in WC	-1.56	-1.88	-1.07	0.92	0.44	2.15	-0.29	1.44	1.76	0.00	0.00
- Net Effect of Depr. and Capex	3.26	12.86	13.36	9.26	5.55	3.54	5.96	-0.64	-8.80	1.80	1.85
FCF	1.78	-5.64	-3.13	6.32	12.98	16.12	5.21	11.17	15.62	7.00	7.17
Present value factor	1.00	1.09	1.19	1.30	1.41	1.54	1.68	1.83	2.00	2.18	2.38
Present value of FCF	1.78	-5.17	-2.63	4.88	9.18	10.46	3.10	6.09	7.82	3.21	3.02
Terminal Value		109.67									
PV of Terminal Value		46.16									
PV of Company		87.89									
PV of Debt		18.12									
PV of Equity		69.77									
# of shares		41.07									
Price		<b>1.70</b>									

**Exhibit 15: Historical Income Statement**

Ticker: AERTA US Equity  
Name: ADVANCED ENVIR  
RECYCL

Currency: USD

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Sales/Revenue/Turnover	0.01	0.13	0.56	2.04	3.67	5.58	6.95	7.98	12.41	19.92	27.51	33.42	41.41	43.52	63.64
<b>YOY Growth</b>		<b>1200%</b>	<b>331%</b>	<b>264%</b>	<b>80%</b>	<b>52%</b>	<b>25%</b>	<b>15%</b>	<b>56%</b>	<b>61%</b>	<b>38%</b>	<b>21%</b>	<b>24%</b>	<b>5%</b>	<b>46%</b>
Cost of Goods Sold/F.E. & P. & G.	0.00	0.00	0.00	0.00	4.92	6.18	7.82	7.64	11.69	17.17	22.65	24.21	29.80	34.36	48.96
<b>% of Sales</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>134%</b>	<b>111%</b>	<b>113%</b>	<b>96%</b>	<b>94%</b>	<b>86%</b>	<b>82%</b>	<b>72%</b>	<b>72%</b>	<b>79%</b>	<b>77%</b>
Profit Margin					<b>-34%</b>	<b>-11%</b>	<b>-13%</b>	<b>4%</b>	<b>6%</b>	<b>14%</b>	<b>18%</b>	<b>28%</b>	<b>28%</b>	<b>21%</b>	<b>23%</b>
SG&A / Oth Op / Dep Op & Maint	1.51	1.70	3.78	5.59	6.43	1.35	1.69	2.09	3.22	3.77	5.96	7.63	8.04	9.08	11.20
<b>% of Sales</b>		<b>1308%</b>	<b>675%</b>	<b>274%</b>	<b>175%</b>	<b>24%</b>	<b>24%</b>	<b>26%</b>	<b>26%</b>	<b>19%</b>	<b>22%</b>	<b>23%</b>	<b>19%</b>	<b>21%</b>	<b>18%</b>
Operating Income (Losses)	-1.50	-1.57	-3.22	-3.55	-2.76	-1.96	-2.56	-1.75	-2.50	-1.02	-1.10	1.58	3.57	0.08	3.48
Operating Margin	<b>15000%</b>	<b>1208%</b>	<b>-575%</b>	<b>-174%</b>	<b>-75%</b>	<b>-35%</b>	<b>-37%</b>	<b>-22%</b>	<b>-20%</b>	<b>-5%</b>	<b>-4%</b>	<b>5%</b>	<b>9%</b>	<b>0%</b>	<b>5%</b>
Interest Expense	0.05	0.06	0.10	0.14	0.19	0.27	0.20	0.17	1.10	0.46	0.82	1.90	1.47	2.03	2.12
<b>% of Sales</b>	<b>500%</b>	<b>46%</b>	<b>18%</b>	<b>7%</b>	<b>5%</b>	<b>5%</b>	<b>3%</b>	<b>2%</b>	<b>9%</b>	<b>2%</b>	<b>3%</b>	<b>6%</b>	<b>4%</b>	<b>5%</b>	<b>3%</b>
Net Non-Oper Losses(Gains)	-0.09	0.02	-0.09	0.01	0.02	0.53	0.18	0.00	0.00	0.00	0.00	-0.93	0.91	-1.29	-0.01
Other Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-0.29	-0.29	-0.29	-0.28	-0.28	-0.28
Inc(Loss) bef Extraord Items	-1.46	-1.65	-3.23	-3.70	-2.97	-2.76	-2.94	-1.92	-3.65	-1.77	-2.21	0.32	0.91	-0.94	1.09
Extraord L(G) before Tax Effects	0.00	0.00	0.00	0.00	-0.88	0.00	-0.04	-0.76	0.00	0.00	0.00	0.00	0.00	-2.96	-0.17
Taxes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Income/Net Profit (Losses)	-1.46	-1.65	-3.23	-3.70	-2.09	-2.76	-2.90	-1.16	-3.65	-1.77	-2.21	0.32	0.91	2.03	1.27
Diluted EPS	-0.24	-0.26	-0.34	-0.34	-0.15	-0.17	-0.15	-0.05	-0.16	-0.07	-0.08	0.01	0.02	0.07	0.03
Shares for Fully Diluted EPS	5.98	6.35	9.58	10.85	14.17	15.78	19.13	21.80	22.90	24.60	26.06	37.18	42.67	30.02	41.07
Debt Coverage Ratio	-3000%	2617%	3220%	2536%	1453%	726%	1280%	1029%	227%	222%	134%	83%	243%	4%	164%

**Exhibit 16: Historical Balance Sheet**

Ticker: AERTA US Equity

Name: ADVANCED ENVIR RECYCL

Currency: USD

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Current Assets Reported	0.12	0.20	1.91	1.42	0.89	0.82	1.77	1.58	2.26	19.79	20.97	23.07	22.73	8.61	12.29
% of Sales	1200.0%	153.8%	341.1%	69.6%	24.3%	14.7%	25.5%	19.8%	18.2%	99.3%	76.2%	69.0%	54.9%	19.8%	19.3%
Tangible Fixed Assets	4.62	4.78	7.78	7.45	7.58	6.21	4.61	5.65	8.30	10.92	12.81	11.47	14.53	22.12	25.48
% of Sales	46200.0%	3676.9%	1389.3%	365.2%	206.5%	111.3%	66.3%	70.8%	66.9%	54.8%	46.6%	34.3%	35.1%	50.8%	40.0%
Other Assets/Def Chgs&Oth	0.16	0.17	0.23	0.28	0.31	0.33	0.35	0.41	0.38	0.75	1.48	1.85	2.08	5.67	5.57
% of Sales	1600.0%	130.8%	41.1%	13.7%	8.4%	5.9%	5.0%	5.1%	3.1%	3.8%	5.4%	5.5%	5.0%	13.0%	8.8%
Total Assets	4.90	5.15	9.93	9.15	8.78	7.36	6.73	7.64	10.94	31.46	35.26	36.39	39.34	36.41	43.34
YOY Growth		5.1%	92.8%	-7.9%	-4.0%	-16.2%	-8.6%	13.5%	43.2%	187.6%	12.1%	3.2%	8.1%	-7.4%	19.0%
Current Liabilities	0.35	1.07	1.10	2.12	1.49	2.38	2.67	4.70	6.89	27.55	27.77	27.60	29.29	10.52	15.76
% of Sales	3500.0%	823.1%	196.4%	103.9%	40.6%	42.7%	38.4%	58.9%	55.5%	138.3%	100.9%	82.6%	70.7%	24.2%	24.8%
Non Current Liabilities	0.03	0.76	0.60	1.89	1.84	1.27	0.96	0.59	0.28	0.40	4.78	4.59	4.28	16.93	15.85
% of Sales	300.0%	584.6%	107.1%	92.6%	50.1%	22.8%	13.8%	7.4%	2.3%	2.0%	17.4%	13.7%	10.3%	38.9%	24.9%
Total Liabilities	0.38	1.83	1.70	4.01	3.34	3.64	3.62	5.29	7.16	27.95	32.55	32.19	33.58	27.46	31.61
YOY Growth		381.6%	-7.1%	135.9%	-16.7%	9.0%	-0.5%	46.1%	35.3%	290.4%	16.5%	-1.1%	4.3%	18.2%	15.1%
Total Shareholders' Equity	4.52	3.32	8.23	5.14	5.45	3.71	3.10	2.35	3.78	3.51	2.71	4.20	5.76	8.95	11.73
Total Liabilities and Equity	4.90	5.15	9.93	9.15	8.78	7.36	6.73	7.64	10.94	31.46	35.26	36.39	39.34	36.41	43.34
Book Value per Share	0.38	0.27	0.50	0.30	0.26	0.22	0.15	0.11	0.16	0.14	0.10	0.15	0.19	0.29	0.37
Shares Outstanding	11.80	12.13	16.45	17.18	21.13	17.16	20.67	21.78	23.71	25.72	27.22	28.63	29.80	30.74	31.82
Current Ratio	0.34	0.19	1.74	0.67	0.60	0.34	0.66	0.34	0.33	0.72	0.76	0.84	0.78	0.82	0.78

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