
Wood-Tech Inc: Valuation of a Privately Held Firm

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This case involves the valuation of a small, privately-held manufacturing concern, Wood-Tech, Inc. The company must assess the attractiveness of a recently made offer of purchase. Recent changes in operations and management reduce the reliability of historical cash flow drivers, and the choice and appropriateness of valuation method must be considered. Finally, the issue of whether the firm's precarious financial position can be reversed with a change in operating strategy is at the heart of the valuation assessment.

INTRODUCTION

In late December 2004, Frank Lanu, the President and Chief Financial Officer of Wood-Tech sat in his office contemplating a proposal from the Chinook Group to purchase Wood-Tech for \$1.5 million. Frank had to decide whether to accept the offer to sell.

In many respects, a sale of the company was exactly what Frank had been working towards. Wood-Tech, Inc. had been acquired by a partnership two years earlier with the specific objective to improve poor financial performance, build shareholder value, and to sell the company within 5 years. At the time of purchase, the company was in a negative cash flow position and had almost \$1 million of overdue debt. Low margins, lack of owner attention to the business and lackluster product introductions had contributed to this position. Despite this, the partners had been confident that the marketing and operational skills they brought to Wood-Tech could reverse the record of poor performance.

Turning the company around had proved more difficult than anticipated and the company had been unsuccessful in meeting operational and financial goals. During the past two years considerable resources had been devoted to the task of resolving old debts, addressing manufacturing problems, building adequate inventory reserves, and adjusting inconsistent pricing policies. These problems had also required working towards stabilizing employee as well as customer relations and mending banking and creditor relationships. A sale now would resolve the serious financial problems the company had struggled with since purchase.

What concerned Frank was how to best assess the offer provided by the Chinook

Group. He was convinced that the financial statements of the company did not fully reflect the improvements in operations that had been implemented over the last several months, some of which would take several years to realize in the financial statements. He knew it would be harder to place a fair market value on a private company than a publicly traded comparable. Moreover, recent purchases of specialized manufacturing equipment promised to lower costs, increase product attractiveness, and improve forecast sales in the coming year. How could this potential be reflected in a value of Wood-Tech? What was a fair price for the company and how could Frank be sure he obtained such a value?

COMPANY HISTORY

Wood-Tech, Inc. (WTI), located in Mt. Vernon, Washington, was primarily engaged in the design, manufacture and shipping of a broad line of wooden garden furniture. The company had developed considerable expertise in designing components for the furniture, as well as in the equipment and techniques required to fabricate the furniture competitively.

Wood-Tech, Inc. was founded in 1970 by Brad Fritz and his wife, Cathy, to make knockdown furniture and storage cabinets for Tri-Mart, a large regional chain store. In 1989 Wood-Tech refocused its resources and efforts exclusively on producing wooden garden furniture. From 1992 through 1999, the company experienced a 10% annual growth rate and posted enviable profit margins while holding a strong market position in the wooden garden furniture market.

Sales volume began to fall in 1999 when two major mass-market accounts dropped the garden furniture category. Due to the advancing age of its founders and increased competition from imports, the company was sold in 2002 to the current partnership. The new management team set about the task of reversing declining sales and restoring the company to its historical position as America's leading supplier of garden furniture.

Pat Dunham, one of the three partners, and the only one involved in running the company, served initially as President and General Manager. Dunham, a former marketing executive, brought years of senior management experience from several blue-chip manufacturing and marketing companies, including Gillette and Hunt-Wesson. To oversee day-to-day operations Frank Lanu, a recent MBA, was hired in early 2003.

THE GARDEN FURNITURE INDUSTRY

The wooden garden furniture industry is part of a larger market categorized as the Retail-Outdoor Garden Furniture segment of the Wood Products Industry. Within this category the Garden Furniture sub-segment accounted for close to 30% of the total \$2.95 billion in sales in 2003.

The Garden Furniture segment had experienced steady expansion since early 1990, growing at an annual rate of almost 20% through 2002. Industry wide problems related

to obtaining wood supplies led to a negative growth rate in 2003. However, growth had rebounded to positive territory in 2004 and this category was expected to continue experiencing high growth as baby boomers increased their investments in home and gardens.

It was estimated that about \$10 million of garden furniture sales was attributable specifically to the sale of entry level wooden garden furniture. Growth forecasts in this segment were more uncertain. The rapidly increasing rates of new home ownership overall spurred sales growth as new homebuyers outfitted their homes and gardens for the first time. It was believed this group was attracted by attributes in line with the key value drivers of the product: reasonable price and quality.

WOOD-TECH'S COMPETITION

Four privately-held companies dominated the wooden garden furniture industry with close to 70% of the market share: Wood-Tech, Real Good Furniture, Garden Concepts, and Greenbriar. Wood-Tech and Real Good Furniture held similar market shares of approximately 30% with Garden Concepts and Greenbriar trailing at less than 5% each. The remaining market share was supplied by hundreds of small producers, both domestic and international in location.

Management believed that Wood-Tech's primary competitive advantages included high brand awareness, detailed product designs, and high quality. In addition to these core competencies, the company maintained a strict discipline in introducing new products at an attractive value for consumers.

A comparison of relative competencies of the major competitors (Exhibit 1), provided Frank some assurance that Wood-Tech could regain its industry leadership if it could survive the current cash flow problems. Despite recent difficulties, the assessment of competencies was consistent with the company's history of gaining considerable market share by delivering value added product designs at a lower price point than its primary competitors. Financial ratios of similar size garden furniture companies had been provided by Wood-Tech's bank (Exhibit 2) for comparison.

WOOD-TECH'S CUSTOMER BASE

The customer base in the wooden garden furniture segment was divided into two categories: dealers and end users. The end user group was made up primarily of twenty to forty year-olds who purchased the garden furniture for their own use. The dealer group included the largest and most prominent retailers, catalogers and distributors in the garden center and specialty, hardware and home improvement channels.

Wood-Tech's key sales venues were chain stores, dealers, and mail order (Exhibit 3). Based on the company's most recent sales analysis, 60% of 2003 net sales and 74% of estimated 2004 sales were attributed to five customers, all but one a top chain store (Exhibit 4).

FINANCIAL PERFORMANCE

Since the 2002 purchase of Wood-Tech, financial performance had suffered (Exhibit 5), due in part to management error and bad luck. To spur sales in 2002 and 2003, Pat Dunham, the General Manager entered into contracts with two national accounts with terms of sale at great disadvantage to Wood-Tech. The cost of sales guarantees, freight and an overly generous return policy were borne by Wood-Tech in the agreements. In each case, the terms placed enormous financial pressure on the company. Management of these accounts took attention away from other major accounts, resulting in ill will and lost sales. Despite operational changes that reduced breakeven by almost \$1 million over the same period, cash flow was significantly affected and losses resulted. The continuing poor financial performance and a lack of quality financial reporting motivated Centennial Bank, Wood-Tech's primary bank, to refuse to renew the company's credit line unless Frank was brought in as CFO. As a result of Centennial's pressures, Frank assumed the duties of interim CFO in May 2003.

By December 2003, actual sales were almost 40% less than forecast and the company had amassed over \$600,000 in operating losses. The company continued to operate under constant financial stress during 2004, exacerbated by an economy in recession and a lengthy West Coast dock strike that delayed raw material deliveries and resulted in canceled orders. Despite these difficulties, progress was made in mending bank and supplier relationships and improving costs of goods, largely due to Frank Lanu's ability to bring about additional operational improvements. At the partners' request, Frank assumed the position of President in December 2003.

MANUFACTURING CAPABILITY AND COSTS

The company's current products were primarily made out of high grade cedar and pine readily available from regional suppliers in the Pacific Northwest and Canada. In 2004, twenty-one different types of wooden garden furniture items were sold, ranging from Adirondack chairs to collapsible cedar picnic tables.

In 2004, total COGS were estimated to average 70% across all product lines down from 95% in 2003 (Exhibit 6). Future COGS improvement was expected from a redesign of operations to focus on the benefits of product modularization and lean production processes. This, coupled with a reduction in the number of products offered and price increases on the most popular items, was expected to result in a further COGS reduction by year end 2005.

Recent additions to production machinery were also expected to bring significant improvements to Wood-Tech's cost structure. In November, after months of negotiation, Frank had arranged with a supplier to install Computerized Numerical Control (CNC) machinery that allowed the furniture to be produced with labor savings of fifty percent, relative to current levels. Although this forecast improvement appeared optimistic, it was believed to be attainable. The CNC machinery allowed for quick and flexible tooling

changes that required nothing more than calling up a new software program. The current process required that 27 separate machines be hand changed over to a new product line, requiring significant man-hours and downtime to achieve. Product costs were forecast to be reduced as a result of reduced waste in the manufacturing process due to the higher efficiency of the CNC machinery. The terms allowed Wood-Tech to pay for the equipment over the next five years.

On net, productivity improvements from all sources were expected to reduce COGS to 55% by year end 2005, although Frank estimated that the actual level could range between 50% and 65%. GS&A expenditures were expected to drop as sales ramped up but Frank was uncertain how large of a reduction could be expected. Recently, costs in this category had been elevated due to unusual expenditures unwinding from Dunham's national contract account contracts in previous years. However, increases in marketing expenditures to support sales were needed yet Frank believed this would not take a large addition of personnel. In the face of this uncertainty, Frank estimate GS&A could vary between 26% and 42%.

Sales were also expected to increase as a result of the CNC technology. The ability to quickly and easily shift production to other products would allow Wood-Tech to easily develop and produce new products for the wooden garden furniture market as well as in new product markets. In addition, the quality of the end product was noticeably higher. Sales of a test run of a few models of existing products produced with the new technology were at a level 30% higher than previous years for the same model. Customer responses to a survey enclosed with all products indicated that the high quality of the product was a major driver in the purchase decision.

WOOD-TECH's OUTLOOK

In reviewing Wood-Tech's current position Frank knew that the company faced challenges on two key fronts. A cash flow and liquidity squeeze over the next several months was unavoidable until after the peak sales season. The need to build inventory ahead of the selling season, coupled with Wood-Tech's limited borrowing capacity would result in cash flow pressures that would not be reduced until after vendor payments were made in September 2005.

In addition, he believed the company's primary means to achieve long run viability was to acquire new and regain former accounts, introduce new products and improve the production process. Due to recent retirements and the cash flow problems, the company lacked a comprehensive sales and marketing program. With a product line traditionally sold face to face and based on long standing relationships in the industry, the lack of an experienced sales staff had hurt sales.

To begin to address the lack of new products, Wood-Tech began working with the CNC vendor in the fall of 2004, developing and testing new products for the fast growing trellis and arbor segment of the garden market. As part of these new product designs,

expanded marketing efforts were begun in late 2004. Since little consideration had been given to sales in recent years, it was expected that this effort would produce significant results.

Early orders from these marketing efforts and the new product lines led Frank to forecast an increase in net sales in the range of 15% - 30% over the next five years, with an expected level of 20%, which was inline with industry growth forecasts. Increased competition was expected to reduce industry growth to 5% over the long term. Given its current capacity utilization of 20%, Wood-Tech had sufficient manufacturing capacity to ramp up to service the forecast sales growth for several years without additional capital investment beyond payment for the CNC machine.

Frank was convinced that Wood-Tech was in a position to perform at a higher level of sales and profitability. He had worked hard in the last 18 months to reduce operating costs and improve key relationships with customers. The "Other" category component of costs of goods sold, which had remained high over the last four years due to some unusual circumstances, was expected to level off at 21% of sales in 2004. Although not directly broken out in the current financial statements internal accountants estimated fixed operating costs had stabilized at \$675,000 for 2004. Frank believed this would be representative of the costs for the next several years. The bankers and suppliers of Wood-Tech had also worked closely with Frank to provide the liquidity and flexibility needed to keep the company afloat. He was certain they would continue to do so as long as he was showing improved sales and profitability.

The potential for new sales and the improving banker relations resulted in a promise from Wood-Tech's key lender that current borrowing costs of 12% would not increase. Review of financial forecasts, product opportunities and a planned infusion of partner equity led Frank to believe that a debt level of 30% of capital could be achieved within two years and subsequently maintained.

Frank believed that the most significant uncertainty facing the sales outlook was consumer demand - could wooden garden furniture and related products continue to be an attractive product in a technology savvy world? Would the company continue to effectively compete in light of cheaper imports from overseas markets? The higher quality and new products would help, but would it be enough? Could Wood-Tech be competitive in the wood furniture products market soon enough to solve the liquidity pressures it faced?

ENTER THE CHINOOK GROUP'S PROPOSAL

The Chinook Group was excited about the potential for improving Wood-Tech's existing sales and leveraging its facilities and channels to introduce new products. They believed that while the company was in a rebuilding phase from a sales and marketing standpoint, its recognition as an industry leader could be further developed to increase customer awareness through a campaign focusing on point of purchase and inventory programs. Public relations, targeted advertising and sales incentive programs were areas

the Chinook Group could be applied to Wood-Tech. Improvements in the areas of distribution and sales resources were also a key part of potential improvements. They also believed, like Frank, that the potential for the new garden products was significant and could bolster growth substantially in future years. However, they felt there was enough uncertainty regarding Wood-Tech's financial health that the company did not warrant a premium price.

WHAT IS THE VALUE OF WOOD-TECH?

The Chinook Group proposed the purchase of the equity for \$1.5 million. They felt that this was a fair offer for a company with strong intangible value but poor operating performance.

Frank knew the partners would jump at the chance to sell the company for more than twice the current book value of equity. However, he also knew that book value did not reflect the economic value of a growing firm emerging from financial distress. Frank wanted to assess the reasonableness of the offer before presenting it to the partners. Although he planned on developing a discounted cash flow analysis, he was concerned about the uncertainty around estimates of sales and COGS. While he was confident in his outlook, he wanted to gauge the impact on valuation of performance outside the forecast levels. At a minimum, he believed scenario analysis was needed. To aid his evaluation, he collected some current market data (Exhibit 7) and recent sales information of privately held companies of a similar size (Exhibit 8). As a final step, Frank asked Wood-Tech's accountant, Deborah Kohn, to provide forecasts of key financial measures for the next five years (Exhibit 9). His next step was to determine the value of Wood-Tech and defend his recommendation.

Exhibit 1
Wooden Garden Furniture Competitor Profile

The wooden garden furniture segment was dominated by four companies. Since each of these competitors is privately held, there is relatively little available information.

Real Good Furniture. RGF mainly services the small dealer sector of the market, and has not been successful in penetrating the mass market to any significant degree. While prices are higher than similar Wood-Tech products, RGF currently offers higher quality cedar products. Recently, RGF has experienced long lead times which has strained its relationship with many dealers. The company's current strategy appears to be servicing the market with simple designs, quality construction, and ease of final assembly by the consumer.

Garden Concepts. GC produces a small line of foldable tables and chairs and competes primarily through pricing. They sell to small dealers, but have been inconsistent with product quality and lead times. To date, they have not proven successful in taking market share from either Wood-Tech or Real Good Furniture.

Greenbriar. A producer of a broad line of garden furniture with a poor track record for quality and reliability, Greenbriar is considered the weakest of the three primary competitors. Without a clear market strategy, Greenbriar has also changed ownership three times in the most recent five year period.

**Comparisons of Assets and Competencies of the four largest
Garden Furniture Producers, 2003**

Assets and Competencies	Wood- Tech	Real Good Furniture	Garden Concepts	Greenbriar
New product capacity	1	2	3	4
Product quality	3	2	3	4
Product differentiation	1	2	4	3
Dealer satisfaction	2	3	1	4
Sales force	3	1	2	4
Distribution	1	2	3	4
Advertising/promotion	2	1	3	4
Brand recognition	1	2	3	4
Cost structure	3	2	1	4
Market share	30%	30%	< 5%	< 5%
Overseas Sales	5-10%	5-10%	< 5%	< 5%
Est. Net Sales	\$2.6 mil	\$2.5-\$3 mil	\$500 k	\$500 k

1=highest ranking in category; 4 = lowest ranking in category

Exhibit 2
Selected Financial Ratios
Garden Furniture Industry

% of Sales Averages	
Income Statement	12/31/03
Sales growth, 1 yr	(4.7)
Cost of Goods Sold	64%
Operating Expense	31.2%
Operating Income	4.8%
Beta:	
Wood Products firms	1.6
Small firm subjective adjustment to beta	+.4
Estimate of beta for Wood-Tech	2.0

Selected Industry Ratios	12/31/03
Liquidity	
Quick Ratio	0.94
Current Ratio	1.72
Leverage	
Debt/Equity	3.81
Total Liabilities/Total Assets	0.79
Profitability	
Return on Assets	7.79%
Return on Equity	37.45%
Profit Margin	4.10%
Activity	
COGS/Inventory	3.90
Sales/Total Assets	1.90

Source: Internal company documents

Exhibit 3
Wood-Tech
Net Revenues by Channel, 2003 and 2004 forecast December 2004

	2003, Actual	2004E
Chain Stores	\$1,638,271	\$1,150,437
Distributors	54,479	27,141
Mail Order	189,878	121,365
Internet	57,434	35,397
Dealer/Retailer	327,500	118,387
Miscellaneous	335,377	49,756
Total Sales	\$2,602,939	\$1,502,483

Exhibit 4
Wood-Tech
Top 5 Customers, 2003 and 2004 forecast December 2004

	Channel	2003, Actual	2004E
Cashes	Chain Store	\$287,561	\$242,738
AC Cooper	Chain Store	381,556	226,029
GardenWorks	Chain Store	622,243	438,037
ACER Hardware	Chain Store	177,647	128,589
Poppybox	Mail-Order	91,423	83,618
Total - Top 5 Customers		\$1,560,430	\$1,119,011
Total - Top 5 customers as a % of Total Sales in Exhibit 3		60%	74%

Exhibit 5
Wood-Tech
Historical Financial Statements

Income Statement	Actual				Estimated
	12/31/00	12/31/01	12/31/02	12/31/03	12/31/04
Net Sales	\$2,036,081	\$2,317,440	\$2,941,911	\$2,602,939	\$1,502,483
Cost of Goods Sold	2,272,597	2,136,363	2,051,645	2,486,499	1,056,902
Gross Profit	(\$236,516)	\$181,077	\$890,266	\$116,440	\$445,581
GS&A	544,342	605,030	587,796	740,694	638,119
Operating Income	(\$780,858)	(\$423,953)	\$302,070	(\$624,254)	(\$192,538)
Other Income	-	107,883	6,379	-	-
Interest	-	-	89	112,423	132,643
Income before Tax	(\$780,858)	(\$316,070)	\$308,760	(\$736,677)	(\$325,181)
Income Tax	-	-	-	-	-
After Tax Profit	(\$780,858)	(\$316,070)	\$308,760	(\$736,677)	(\$325,181)

Balance Sheet	Actual				Estimated
	12/31/00	12/31/01	12/31/02	12/31/03	12/31/04
Assets					
Cash & Equivalents	\$140,570	\$209,474	\$50,846	\$89,591	\$45,880
Accts Receivable	(347,787)	472,204	1,639,594	287,203	86,334
Inventory	983,810	744,796	910,424	1,286,062	935,503
Prepaid Expenses	-	-	-	-	2,237
Deferred Income Taxes	-	-	189,400	189,750	222,373
Other Current Assets	-	-	-	252	-
Current Assets	\$776,593	\$1,426,474	\$2,790,264	\$1,852,858	\$1,292,327
PP&E - net book value	74,120	77,585	2,254	21,831	36,587
Other Assets	68,169	-	-	-	-
Total Assets	\$918,882	\$1,504,059	\$2,792,518	\$1,874,689	\$1,328,914
Liabilities					
Accts Payable	(534,641)	102,437	665,079	480,678	107,729
N/P Bank	739,980	1,022,000	815,000	347,354	-
Accrued/Other	68,669	41,666	-	-	44,064
Income Taxes Payable	-	-	-	1,010	-
Current Portion LTD	-	-	-	-	89,615
Current Liabilities	\$274,008	\$1,166,103	\$1,480,079	\$829,042	\$241,408
Long Term Debt	-	-	502,000	469,376	293,395
Other Liabilities	-	-	2,317	-	550,000
Total Liabilities	\$274,008	\$1,166,103	\$1,984,396	\$1,298,418	\$1,084,803
Book Net Worth	644,874	337,956	808,122	576,271	244,111
Total Liabilities & NW	\$918,882	\$1,504,059	\$2,792,518	\$1,874,689	\$1,328,914

Exhibit 6
Wood-Tech
Historical Cost of Goods as a Percentage of Sales
December 2004

	2001	2002	2003	2004E
Sales, net	\$2,317,438	\$2,941,911	\$2,602,939	\$1,502,483
Cost of goods sold (as a % of sales)				
Product	27.7%	20.9%	28.7%	25.3%
Wages	23.0%	17.4%	23.9%	24.0%
Other	41.5%	31.4%	43.0%	21.0%
Total COGS	92.2%	69.7%	95.6%	70.3%

Exhibit 7
Financial Market Rates
December 2004

	%
Treasury Bill, 30 day	1.92%
Treasury Bond, 10 year	4.23%
Prime Rate	5.14%
Corporate Bonds:	
AAA	5.47%
BBB	6.15%
High Yield	8.47%
Market risk premium, 1928 - 2003	6.54%

Sources: Interest rates: <http://www.treas.gov>

Market risk premium: <http://pages.stern.nyu.edu/~adamodar/>

Exhibit 8
Comparable Sale Information
Privately Held Firms, Revenue range \$1.5m - \$6.6m
2001 - 2004

	Revenue	Selling Price/Sales	Selling Price/Operating Cash Flow
Average (n=180 firms)	\$2,561,000	2.4	3.7

Source: Internal company documents

Exhibit 9
Wood-Tech
Pro Forma Estimates of Selected Financial Data
2005 - 2009

	2005	2006	2007	2008	2009
Additions to Net Working as a % of change in sales	8%	15%	18%	11%	11%
Income tax rate	0%	0%	0%	0%	30%
Depreciation	\$7,250	\$9,769	\$14,036	\$24,750	\$24,750
Capital expenditures	\$14,750	\$17,000	\$30,500	\$75,000	\$0
Total long term debt	\$295,395	\$272,008	\$251,000	\$251,000	\$251,000
Total other long term debt	\$400,000	\$200,000	\$100,000	\$0	\$0

Source: Internal company estimates