Diversification in the Canadian Lumber Industry

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Summary

Market pressures and supply/demand balances are forcing eastern SPF producers to reevaluate their product mixes and to seek out new market opportunities. This trend to diversification is leading the industry to smaller specialty markets that require new marketing approaches and significant changes to operational procedures that have been part of the commodity lumber business for many years. Meeting the expectations of specialty products end users requires the development of close working relationships with new partners while continuing to maintain existing relationships that have been the mainstay of the commodity lumber business for many years.

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Canadian lumber producers are currently going through a very difficult period. The industry in general is struggling with a changing cost base and a variety of market pressures that could spell disaster for companies that are unable to make the necessary changes. The globalization of lumber markets has created some particularly serious challenges while others are Canadian made.

Market factors that draw the most attention from Canadian lumber producers include :

- The Canada /US Softwood Lumber Agreement
- Excess lumber capacity in North America
- Global market shifts
- Cheap offshore lumber sources
- Changing housing markets
- Increased emphasis on production of value added products

The softwood lumber agreement between Canada and the United States has created a two tier market for Canadian producers. The penalty for exceeding the established quota for each company makes it essentially prohibitive to export above the quota levels. This control on Canadian exports has kept US lumber prices higher and been very beneficial for US producers. The Canadian lumber demand/capacity ratio has remained in the range of 0.87 for the last five years and is not expected to improve in the near future, see Figure 1. Of course this excess capacity situation has worsened with the recent reduction in Asian demand and the return of additional western Canadian lumber to the North American market.

Additional imports of lumber into North America are also arriving from large "wood baskets" around the world and this volume is expected to increase in the future. Favorable exchange rates and a growing demand for foreign capital have made the US market very attractive to international lumber brokers and suppliers. The Canadian market advantage in North America is in jeopardy.

US housing starts are important indicators for the North American lumber industry. It is currently the largest single market for Canadian wood products. 1998 has been the best year for some time with an annualized rate in excess of 1.6 million starts according to the National Home Builders Association (NHBA). However it is anticipated that a significant drop in house construction will occur in 1999. Obviously there is a large number of factors involved in establishing the prices for commodity lumber however there is a relationship between housing starts and average lumber prices. Figure 2 was prepared by plotting quarterly averages for annualized US housing starts with average quarterly lumber prices (US$ for eastern Canadian SPF) for the same periods. Over the last five years while lumber prices were under $450 per thousand board feet there appears to be a direct relationship. Based on this analogy the anticipated reduction in US housing for 1999 would be expected to place further downward pressure on lumber prices.

With the large number of homes now existing in the US there is a growing repair and renovation (R&R) market for wood products which is expected to exceed the new house construction market in the next two to three years. This dramatic change will have a large impact on the type of lumber or wood products in demand in the future. For example NHBA data suggests that the most common R&R projects are kitchen and bathroom remodeling, adding additional living space and adding an exterior deck. Many of these projects require a large percentage of finished or remanufactured wood products and smaller percentages of construction grade lumber.

Processing of lumber in Canadian mills can be quite different from region to region although may factors are common. Some of the key processing factors that continue to have a major impact on a company's profitability include:

- Wood costs
- Financing and labor
- Capital investments
- Improved efficiencies

The escalation of wood costs for Canadian firms was described in a recent paper by Law, 1998. The author notes that in particular stumpage charges have increased sharply in the last five years. Each province has taken a slightly different approach to stumpage charges however the average increase in provincial rates has been over 200 percent in this period. This increase in wood costs must be controlled or Canadian mills will no longer be competitive on the world market. There are signs that the provinces realize the seriousness of the issue and at least one province has recently made reductions to stumpage charges.

Other production costs in general have increased modestly over the past few years with favorable interest rates for financing operations and low inflation factors to impact on the cost of supplies and labor settlements. There have been significant improvements in mill efficiencies especially in Eastern Canada and additional capacity has been put in place. As shown in Figure 3, Eastern Canadian SPF production has increased consistently each of the last five years. More softwood lumber is now being produced and sold "east of the Rockies" than in British Columbia for the first time in recent Canadian history. The provinces of Ontario, Quebec and New Brunswick now represent over 40% of the total Canadian production.

Although softwood allocations have nearly reached maximum sustainable levels in Eastern Canada there have been improvements in small-log processing which has increased yields from the available resource. There continues to be frequent announcements of investments in new equipment and consolidation moves which will further improve mill margins. In general the eastern provinces have evolved into efficient low cost lumber producers.

For the future, eastern SPF mills in Ontario and Quebec must however accept a difficult commodity market for softwood lumber and look to new opportunities and a diversification of the product mix. In order to consider new markets through product development and the sale of value added products, it is important to carefully examine the existing wood supplies.

The northern boreal forest region in Ontario and Quebec is primarily black spruce (*picea mariana*) with small amounts of jack pine (*pinus barksiana*) and balsam fir (*abies balsmea*). Further south the percentages of jack pine increase significantly and additional amounts of balsam fir are also encountered. In the transition zone from the boreal to the Great Lakes/St Lawrence (temperate zone) forest region we encounter large percentages (pockets) of the softer pines such as eastern white pine (*pinus strobus*) and red pine (*pinus resinosa*). Some wood properties, for comparison of the key SPF species, are shown in Table 1. (reproduced from a report by Jessome, 1986) It should be noted that significant differences in wood properties may be encountered from one location to another however these data are fairly representative for eastern Canada. SPF lumber with a high percentage of black spruce is highly desirable in the North American construction industry. Since jack pine has similar properties to black spruce minor amounts in the mix have a limited impact on properties. Jack pine does however have other desirable properties for preserved wood products and furniture applications. Species separation should be considered when small percentages of other species can be segregated for special product development.

Specialty markets usually require a species with specific wood properties. Once a sufficient volume of the desired species is identified for a new product, the market development challenge must be addressed. New product (value added) development can be a challenging process compared to the commodity business. The business factors to consider were described in a paper by Lopez, 1998.

- Access to financial resources for the initial investment and contingencies
- Company tolerance to risk based on corporate principles and guidelines
- Access to human resources internally and externally
- Market risks competing with different producers
- Market fragmentation will bring smaller operations into market competition
- Competitive cost base – initial margins may change with time

For the lumber industry there are several types of products to consider. Included are simple high grading, remanufacturing and various conversion operations. The types of new products to consider as "High Grading" can occur at the harvesting stage, during sawing or simply producing special grades of lumber. MSR lumber is a good example of this type of value added product. The risk is relatively low and it provides a good test of an organization's commitment to value added.

The second type of value added is the traditional "remaning" operation of upgrading a low value material. These types of products can be produced by simple dressing and molding operations or may extend to such things as finger jointing lumber. The potential risks are greater because wood recoveries and labor costs become very important to the success of the enterprise. The reward is an increase in mill net for the same raw material supply.

The third type value added product usually results in a new processing line for the manufacture a new product from a waste or low value raw material source. Laminated veneer lumber (LVL) is an example of a product produced from low grade round wood such as SPF or aspen. The intent is to maximize the value from the existing fiber base however there is usually a substantial amount of capital required to successfully bring such a product to market. This type of added value product essentially results in a new commodity product line.

The partnerships required to produce and market these products combine some of the traditional lumber contacts and some very new groups that are not necessarily familiar with our lumber operations. The provincial governments are still important partners and in fact are very interested in the industry's move into new markets. New products should add value creating more profitable and stable wood products operations. There is also the promise of increased employment in northern communities.

The traditional lumber wholesalers and distributors will continue to play an important role for wood producers but there is a tendency for value added producers to move further up the market chain and sell products closer to the end user. There is a trend to develop relationships with secondary manufacturers and lumber "treaters" supplying desired wood species and in the desired grade and dimensions. As they grow their new product lines, wood products companies will be successful if they can meet delivery expectations and marketing conditions of their new partners without failing their existing relationships in the commodity lumber business.

References

Jessome, A.P. 1996, Strength and Related Properties of Woods Grown in Canada. Special Publication SP 514E, Forintek Canada Corp.

Law, J. 1998, Effect of Government Timber Policies in North America. Proceedings of the World Wood Summit, Chicago, USA .

Lopez, J. 1998, Value Added – A Profit Strategy for the Ontario Lumber Industry. Proceedings of Higher Value Wood Manufacturing Conference, Sault Ste. Marie, Canada

Table 1

Comparison of Some Properties for the Main Eastern SPF Species

	Specific Gravity	Modulus of Rupture (MPa)	Modulus of Elasticity (MPa)
Black Spruce *Picea mariana*	0.428	78.3	10,400
Jack Pine *Pinus banksiana*	0.444	77.9	10,200
White Spruce *Picea glauca*	0.354	62.7	9,930
Balsam Fir *Abies balsamea*	0.35	58.3	9,650

Canadian Softwood Lumber Demand/Capacity

(Billions of Board Feet)

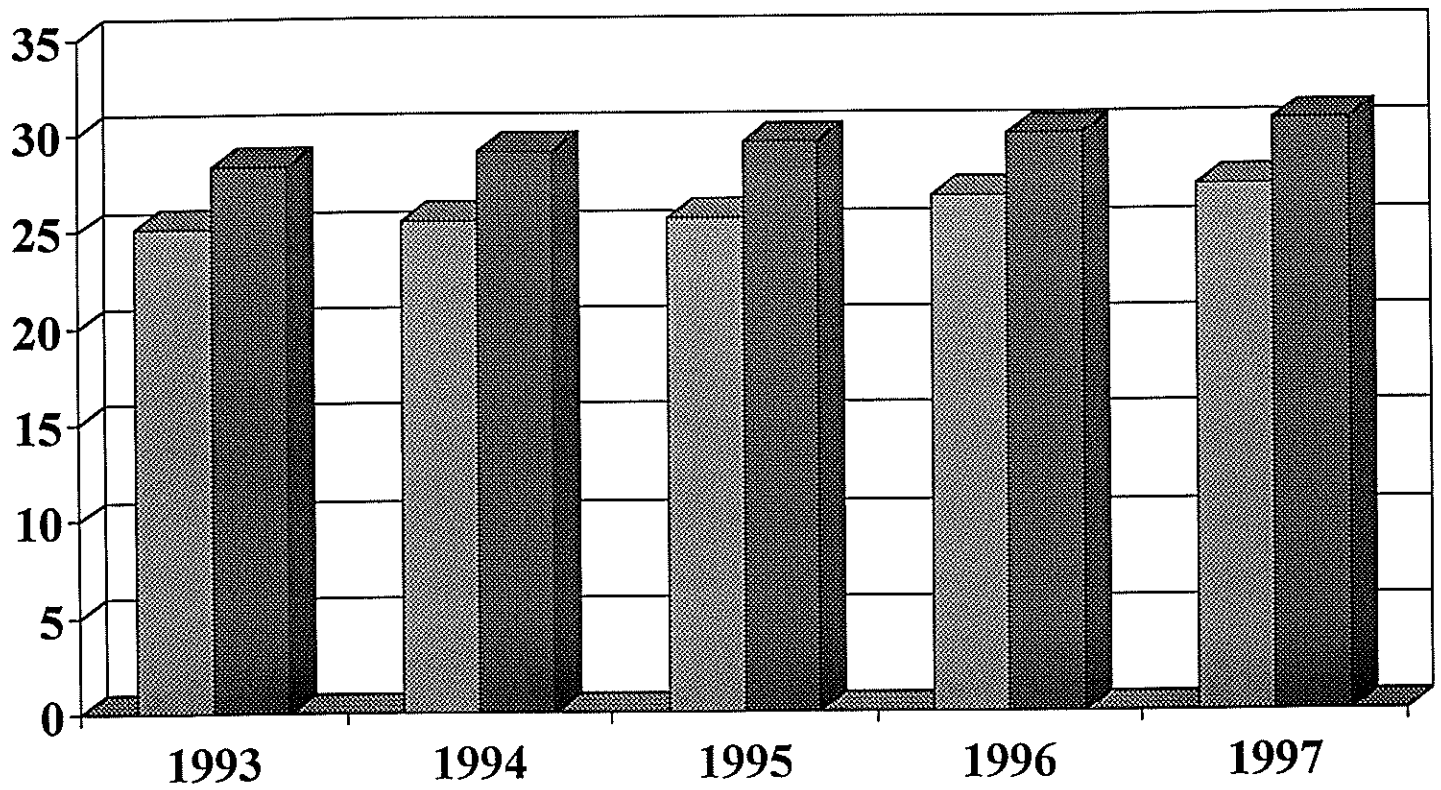

Figure 1

Relationship of Lumber Prices to Housing Starts

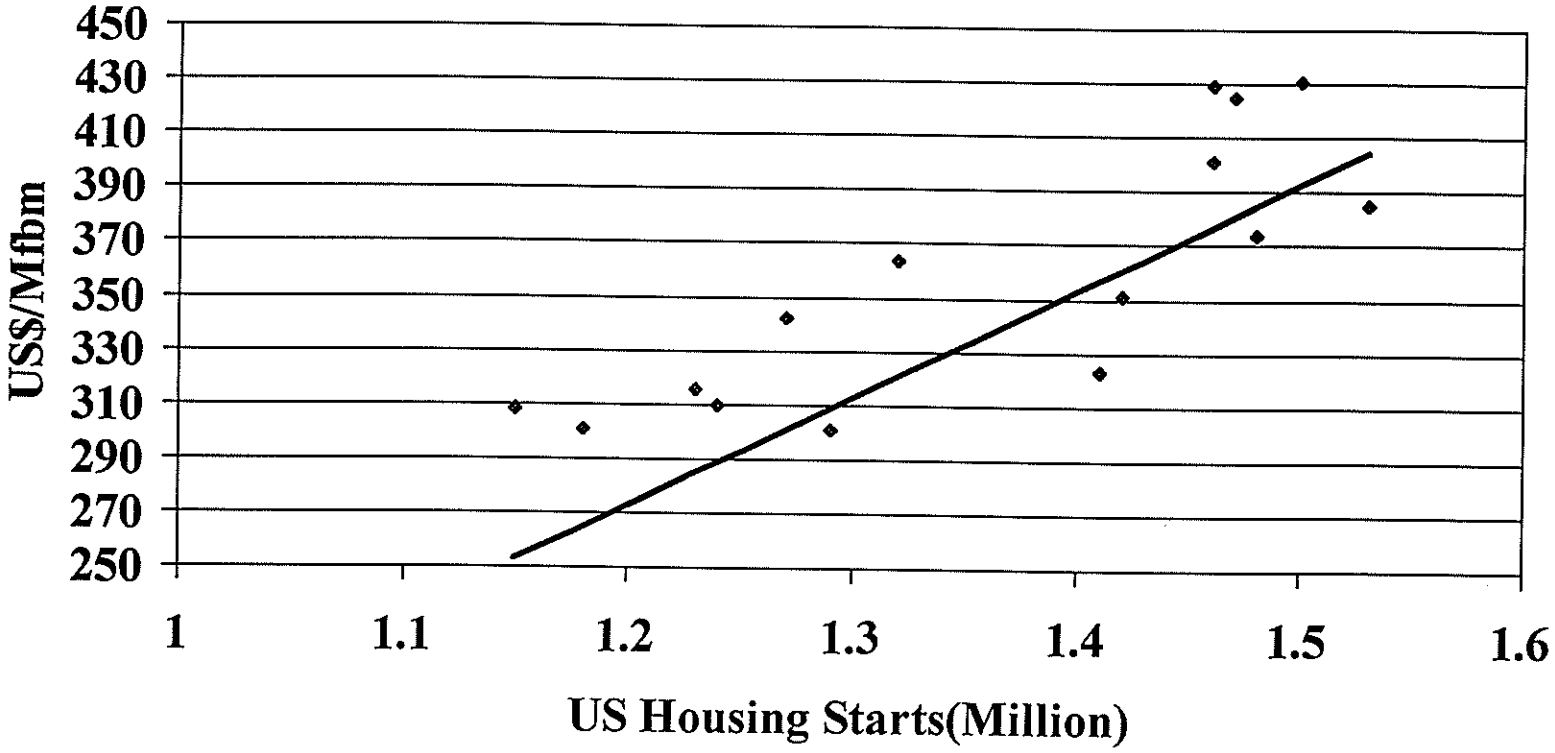

Figure 2

Figure 2

Canadian Softwood Lumber Production by Region

(Billions of Board Feet)

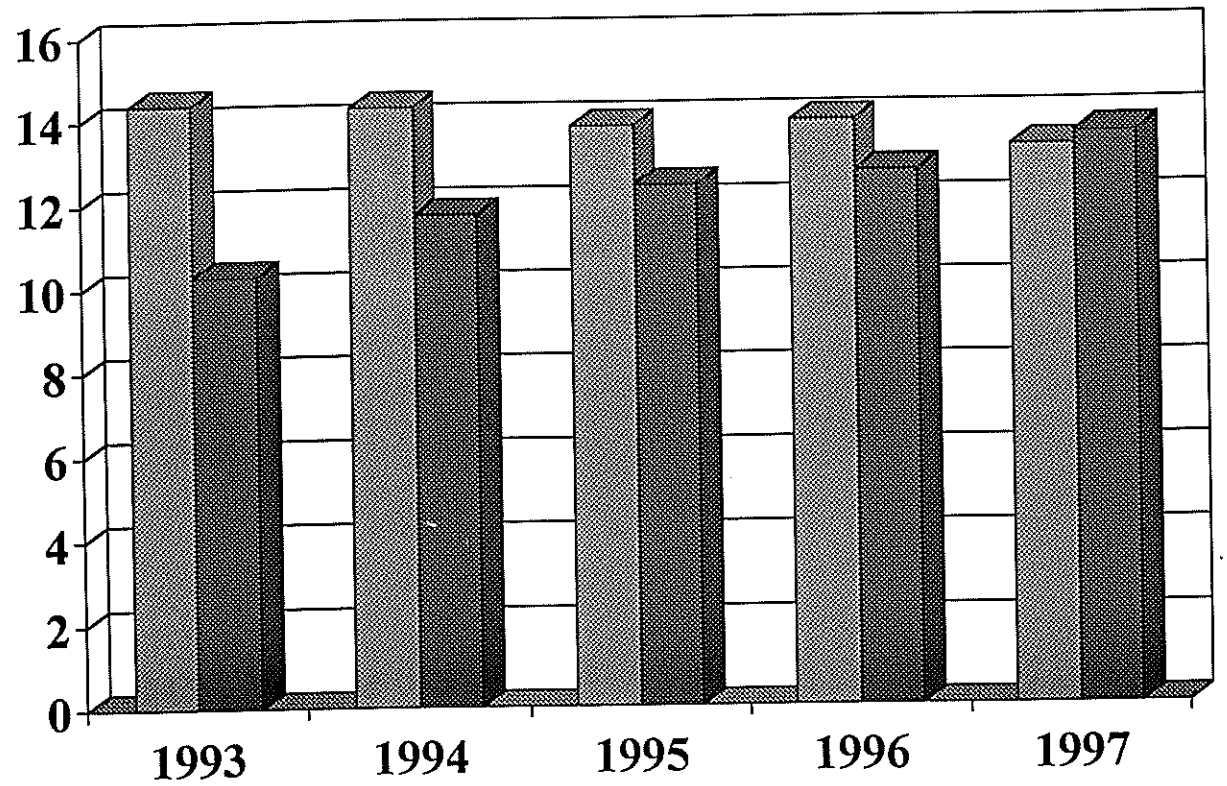

Figure 3