College of Business
College of Forestry

Studies in Management and Accounting for the FOREST PRODUCTS INDUSTRY

CONVENTIONAL FINANCING OF TIMBER AND TIMBERLANDS IN THE 1990'S

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INTRODUCTION

This monograph provides an introduction to financing timber and timberland. It is intended to be an overview of credit underwriting for such financing. Primary users would include borrowers and their accountants, attorneys and advisors.

BACKGROUND

Forest products companies have historically relied on a variety of sources in order to meet their needs for raw materials. Those companies obtained logs by harvesting standing timber and/or purchasing them on the open market. Historically, the usual sources of standing timber were: 1) cutting contracts on U.S. Forest Service (USFS) land, 2) cutting contracts on state and other publicly owned lands, 3) cutting contracts on privately owned land, and 4) the harvesting of fee owned timberland.

During the late 1970's there existed an adequate supply of publicly available timber. The ability to acquire large amounts of timber under contract was made easier by the terms of USFS contracts. When a company won the bid for a USFS contract, a cash deposit was not required and neither the asset nor the liability were required to be booked on the company's balance sheet. In addition, contracts for terms of three to five years were not uncommon. This situation gave companies the ability to speculate in timber prices with unlimited leverage.

After the collapse of the stumpage market in the early 1980's and the subsequent defaults by bidders on USFS timber contracts, the federal government fashioned a partial rescue by allowing companies to return a portion of their contracts to the government without penalty or pay a penalty based on financial condition. Subsequent rules were then issued which were designed to reduce speculation in federal timber contracts.

A decline in speculation, combined with the eventual harvesting of the remaining high-price timber contracts, should have resulted in a return to an orderly market in public timber. This was not to be. The environmental movement was taking hold and numerous lawsuits were being filed with the objective of halting logging on most public lands. This movement has been successful in dramatically reducing the timber available from public forests.

With a decline in publicly available timber, companies are forced to look elsewhere to replace this source of supply. While the supply of purchased logs may increase from the harvesting of private timber, the only reliable sources of replacement supply are private timber cutting contracts and the purchase of fee timber. Unfortunately, the purchase of fee timber requires an extensive amount of cash, as compared to purchasing cutting contracts. As a result, many companies are finding themselves in the position of needing to borrow more money then ever before.

ANALYSIS OF INVESTMENT

The process of acquiring and financing timberland must start with an analysis of the purpose for the timber acquisition. An end-user such as a sawmill may need to make an acquisition for current consumption, medium-term consumption, or as a reserve for future use. Quite often, an acquisition will incorporate two or more of the above characteristics. For example, if after harvesting it is the owners intention not to sell off the timberland, then the land portion of the acquisition would be characterized as a long-term investment.

Once an acquisition candidate has been identified, an analysis must be completed which determines the likely management of the asset for the next 30 years, or its disposition, whichever is expected to occur first. This analysis should include projections of when and how much of the merchantable timber would likely be harvested, whether any pre-merchantable timber would be harvested, and the expected growth rate of the timber. This analysis should give the buyer reasonable projections as to source of logs and running inventory throughout the time period.

In addition to end-users, the buyers of fee timber could include intermediaries such as tree farmers who may harvest and sell logs domestically or into the export market. Whether the tree farmers harvest their own land or allow others to perform the harvesting, the primary difference between an end-user and a tree farmer is the market for the logs. The market for a tree farmer's logs will be determined by the log market within the cutting circle to which the tree farmer belongs. A sawmill operator, on the other hand, processes the logs into lumber which is sold to the domestic and international markets. Since the tree farmers' market for logs is considerably smaller than the sawmill operators' market for lumber, there exists the potential for much greater market volatility, thereby increasing a lender's credit risk.

Some tree farmers are in a position to access export markets. While this is an additional market for logs, an analysis of this market requires an understanding of numerous international economies. If the pricing of an acquisition of timberland is based on the exporting of its logs, there is the perception in the lending market that there is greater risk than if the credit were underwritten based on domestic sales.

For any purchaser of timberland who must finance a purchase with debt, it is very important that the characteristics of the debt match the characteristics of the asset. If an acquisition is being made in order to provide logs for current consumption, the associated debt should be short-term. For example, if the harvest plan will deplete all of the merchantable timber in twelve months, the cash flow generated from the harvest should retire the associated debt in less than twelve months.

When an acquisition is for medium-term consumption (three to five years), any associated debt could extend for a similar period of time. The maturity and terms for debt repayment should match the projected cash flow to be generated by the acquisition. For example, if plans are to harvest this timber during the fourth and fifth year after acquisition, a loan with minimal principal payments during the first three years, with the debt being retired during the fourth and fifth year, would be

ideal. Since the acquisition will not produce any cash flow until the harvesting begins, debt service in the form of interest and minimal principal would have to come from other sources. In the case of a sawmill operator, the usual source is excess cash flow generated by operations.

Acquisitions which are long-term investments usually have a number of components. They include land, pre-merchantable timber and merchantable timber. The land and pre-merchantable timber are long-term investments. The merchantable timber may or may not be a long-term investment, depending on the projected harvest plan. The most appropriate debt for such an acquisition would be long-term. The portion of the acquisition which is considered a long-term investment would have to be supported by the cash flow from other sources. Depending on the harvest plan, a portion of the debt could be supported by the harvesting of the merchantable timber.

An analysis of the characteristics, of timberland being acquired, including cash flow projections, helps determine the most appropriate type of associated debt. Once the type of debt has been determined, then the most appropriate type of lender needs to be matched with that debt.

CURRENT CONSUMPTION

Let's take, for example, the acquisition of 40 MMBF of merchantable timber by a sawmill operator which would be harvested over a two-year period. Since the debt associated with this acquisition should be paid in two years or less, the most appropriate lender would be a short-term lender such as a commercial bank. If the purchase price were $16 million, a commercial bank would normally require a down payment of anywhere from 20% to 40%. Since the down payment is only one of many considerations when granting a credit request, the size of the down payment may vary considerably. If our sawmill operator were heavily leveraged and/or the purchase price of the stumpage was relatively high as compared to the market, then the down payment would likely be at the high end of the spectrum. The higher down payment would reduce the future demands on the operators cash flow which would be desirable in the case of a marginally profitable operator.

If the sawmill operator generated good profits and the average delivered log price from this new acquisition was below the existing delivered log market, then the lender would likely require a smaller down payment. The stronger cash flows would allow this operator to handle heavier debt payments. If the sawmill operator has very strong cash flows and low leverage, then it is possible that no down payment would be required.

In our example, the commercial bank would take the land and timber as collateral for its loan. The amount of the down payment would determine the banks beginning loan-to-value ratio. With a 30% down payment, the loan-to-value ratio would be 70%. Just like other lenders, commercial banks hope the highest loan-to-value ratio during the life of any loan occurs on the day the loan is made. As payments are made, all lenders want their loan-to-value ratio to decline. How fast and how far the ratio declines depends on the individual circumstances of the credit. The farther into the future the lender is required to look and/or the greater

the perceived volatility in the loan-to-value ratio, the faster the lender will want this ration to decline.

For a $16 million acquisition which will be harvested over a two-year period, a commercial bank might require the loan to be fully repaid by the time 50% to 75% of the merchantable timber has been harvested. The down payment and the declining loan-to-value ratio is expected to provide the bank with a margin for error over the life of the loan. Since it is more difficult to predict events the farther one looks into the future, a lender will want the margin for error to increase over time.

For a more highly leveraged sawmill operator, a commercial bank might require a 30% down payment on the $16 million acquisition, creating a loan request for $11.2 million. If the bank wanted the loan paid off by the time 50% of the timber had been harvested, it would require severance payments of principal and interest (10%) of $590 MBF. This would be considered a very conservative loan since within six months, after 10 MMBF had been harvested, the loan-to-value ratio would have declined to 47%. In addition, in only six months the loan would be repaid in full.

A loan such as this may not be workable for a marginal operator. If the open market price to this operator for delivered logs is $600 MBF, which include logging and hauling costs of $100 MBF, and the operator is only slightly cash flow positive, then the demands by the commercial bank for $560 MBF in severance payments may be in excess of the operator's cash flow. For a commercial bank financing this transaction, the minimum severance payments will be the purchase price divided by the volume of merchantable timber-in our example , $400 MBF. The maximum severance payments will likely be the market price for delivered logs, less logging and hauling costs-in our example, $500 MBF.

For a more profitable operator, a commercial bank might require only 10% as a down payment. With this modest down payment, severance payments would likely be $500 MBF, which represents the cash outlay the operator would make if he were purchasing logs on the open market.

Since the purpose of the down payment is to reduce the loan-to-value ratio below 100%, if a borrower has additional timberland free and clear of indebtedness, then a pledge of this additional timberland could serve as the down payment.

MEDIUM TERM CONSUMPTION

Let's assume our sawmill operator wants to make an acquisition of timberland, some of which would be harvested four to five years from the acquisition date. A commercial bank would be a logical candidate for such a medium-term lender. If the acquisition price was $16 million for 40 MMBF, the down payment requirements would be similar to those required for a current consumption loan.

If our sawmill operator's plan was to harvest 30 MMBF of the 40 MMBF of merchantable timber during years four and five, then it would be likely that the bank would require smaller payments during the first three years, with the loan being paid off during the next two years. If the appropriate down payment for this operator was 30%, the bank would be looking to reduce its loan-to-value ratio

during the first three years of this loan. Most lenders would consider their ability to predict stumpage values out five years to be nil. As a result, they would structure a loan with the assumption that the market behaved poorly.

Based on a 30% down payment, the loan amount would be $11.2 million. If there were no plans to harvest any timber for the first three years, a bank might set up a seven-year amortization for the first three years, which would require principal and interest (10%) payments of $2.3 million per year. By the time harvesting was expected to begin on this acquisition, the loan would have been paid down to $7.3 million. In addition, the timber would have grown from 40 MMBF to approximately 43.7 MMBF. Using the original cost of the timber at $400 MBF, the collateral would be worth $17.5 million and the loan-to-value ratio would be down to 42%. Expressed another way, the market for stumpage over this three-year period could decline 58% before there would be insufficient collateral to cover the outstanding loan balance. At the time harvesting begins, the bank would likely require severance payments of $400 MBF which would result in the loan being paid off about halfway through the harvest plan.

The above loan structure would generally be considered conservative. It requires a 30% down payment and payments generated from cash flow totaling $2.3 million per year. Since there would be heavy dependence on cash flow generated independently from the asset being acquired, the lender would be required to analyze the likelihood there would be sufficient cash flow to make such payments. In the case of our sawmill operator, the lender would analyze the borrower's historical operating results. A lack of consistent positive cash flow over a period of at least three years would cast doubts about the operator's ability to service this debt. If historical excess cash flow were well in excess of the proposed term debt payments, then a lack of consistency from year-to-year would be less important then if excess cash flow were only 1.25 to 1.5 times the proposed debt payments.

In a loan such as this, that would run approximately four years, the lender would likely impose restrictive covenants on the borrower. The number and severity of these covenants could vary with the lender's interpretation of the risk involved. The higher the perceived risk, the more restrictive the covenants. In our example, the loan is fairly conservative and the borrower is likely to be strong since he is able to generate excess cash flow of more them $2 million per year. In this case, the lender might require covenants such as minimum tangible net worth, maximum leverage, and minimum cash flow. The minimum net worth covenant might be set at 85% to 90% of existing tangible net worth. The maximum leverage might allow for the acquisition of additional debt of approximately $10 million. Minimum cash flow might be set at 1.25 times the required payments during the first three years.

Depending on the strength of the borrower and the size of the acquisition as compared to the operator's existing balance sheet, additional covenants could include: minimum working capital; minimum current ratio; minimum fixed-charge-coverage ratio; maximum loan-to-value ratio; limitation in indebtedness; limitation of liens; limitation on distributions, loans and advances; limitations on capital expenditures; and the limitation on the ability to prepay exiting indebtedness to other lenders.

LONG-TERM INVESTMENT

The acquisition of timberland as a long-term investment carries more risk than a shorter term investments. A typical long-term investment would include timberland, pre-merchantable and merchantable timber. With a crop rotation stretching anywhere from 40 to 80 years, decades may pass before a purchaser can realize on the portion of the investment represented by pre-merchantable timber.

For a typical long-term investment, the logging plan might be based on a sustained yield harvest level. An alternative plan might be for the investor to hold the property for 10 years or more before commencing a harvest plan. Under either of these scenarios, the cash flow generated by the investment would be insufficient to service the principal and interest due on the associated debt. As a result, a lender would underwrite an acquisition loan based on the borrower's historical cash flow. The most likely lender would be an insurance company, or other such lender who is interested in placing money at a fixed rate of interest over a long period of time.

An insurance company would normally require a 50% down payment, resulting in a $12.5 million loan. Amortization could be extended to as long as 25 years, on a basis of principal, plus interest. The maturity of these loans could be anywhere between 5 to 25 years. As with other types of loans, the strength of the borrower could allow an adjustment in the down payment, which might range from 40% to 60%. Due to the long-term nature of such a loan, there would likely be significant loan covenants, including financial ratios.

EXECUTING THE LOAN REQUEST

After a borrower has analyzed the type of investment he is making and matched the appropriate lender to that investment, the next step is to approach the lender with a loan request. (It is assumed the borrower does not have a relationship with the lender). A loan request should consist of at least eight parts:

1) History: A company's background from its inception should be included. The history should tell about the founding of the company, including its owners. If the history of the company is relatively short, the discussion should describe events in detail. For example, our sawmill operator should discuss the type and size of the company's manufacturing facilities and the different types of products manufactured. If the history of the company is extensive, only significant events which shaped the company's current situation should be highlighted. If the ownership of the company has changed from inception, a discussion of those changes should be included.

2) Current Operations: After preparing a history of the company, the logical progression is to prepare a description of current operations. This should include a detailed description of the sawmill, including annual log consumption by species, overruns by product line and mill, and annual production of finished products by type. The number of employees by work function should be discussed, and a description of the non-manufacturing functions, including the forestry department and the sales department should

be provided. A discussion of the sales department should include a listing of the company's major customers and the percentage of products sold to each customer. If there has been a change in customer mix or volume mix, the history of sales and reasons for changes should be discussed.

3) Timber and Timberland: Since the point of this loan request is to borrow money to purchase additional timber and timberland, a detailed analysis of a company's timber operations should be prepared. A five-year history of log consumption and the sources of those logs should be included. Any fluctuations or trends in the source of logs should be discussed. In addition, projections for log sources covering a five-year period should be included. Evidence should be presented which will support projections. For example, if fee timber is going to provide a larger than historical source of logs, it should be explained how such a change will be accomplished. This discussion of timber and timberland should also include an explanation of how the timber division is organized. For example, who is in charge of the timber division and what that person's responsibilities are. A brief resume on the manager and the foresters should be included. Any other employee with major responsibilities should also be identified.

4) Historical Financial Analysis: A detailed historical financial analysis will help the proposed lender determine the likelihood that the borrower will be able to service the proposed loan. Generally speaking, the longer a company's financial history shows profitable operations, the better. The minimum length for a financial history is three years, with five years being the norm. If unusual events occurred during the three to five-year period, a more extensive history may be necessary to present a clearer picture of the company's historical operations. After determining the length of the analysis, the financial statements, income statements, and cash flow statements should be presented side-by-side, or spread, so the reader can more easily identify trends and changes in the company's financial position from year to year. A discussion of the base year's income statement should include a breakdown and discussion of total revenue by its components. Explanatory statements should also be included covering all other items on the income statement. After this thorough discussion of the income statement for the base period, a discussion of changes in the income statement from the base period up to the present should be included. This discussion should tell <u>why</u> things had changed; because of an increase or decrease in sales, an increase in expenses, or a decline in other income. After completing an analysis of the income statement, the same process should be applied to the balance sheet and the cash flow statement. These discussions should center on the company's leverage and why it changed either up or down. This discussion should incorporate changes in: the equity account; long term debt; property, plant, and equipment; timber an timberland holdings; and working capital. Any changes which were either unusual or larger than average should be explained in greater detail. When the historical financial analysis is complete, the reader should have a clear understanding of the company's current financial position and how it arrived to that point.

5) Loan Request: Once the lender understands both the operational and financial history and position of the company, it is time to make the loan request. The purpose of the loan request is to tell the lender what terms and conditions the company would borrow from the lender. The more detailed the request, the greater likelihood the loan will meet the borrower's needs. A pitfall borrowers fall into is not providing enough detail in their loan requests. This allows the lender to dictate some of the terms of the loan which may or may not match the borrower's needs. The loan request should include:

a) name of the borrower
b) amount of the loan request
c) purpose of the loan
d) repayment schedule
e) collateral offered
f) loan covenants

6) Collateral: Assuming the timber and timberland being acquired is also being offered as collateral, a detailed description of the acquisition should be included. This description should include total number of acres being acquired, broken down by timbered and non-timbered acres. If available, a cruise of the timber should be included. If unavailable, a minimum requirement would be an estimate of the total merchantable and pre-merchantable timber by species. This estimate should be supported by documentation. In addition to the physical characteristics of the collateral an operating plan for the timberland should be outlined. Such a plan should include when, how much, and what kind of timber would be harvested over the next five years and what plans, if any the company has for the remaining timber and land. If additional collateral is being offered to support a lower down payment, similar information about that collateral should be included.

7) Financial Projections: Financial projections are a mandatory part of the loan request. They should cover a period which is relevant to the loan request. For example, if the loan request is for two years to support an acquisition for current consumption, then projections beyond two years are not necessary. If the loan request is for five years to support medium-term consumption, then projections should cover the five-year period. For a loan which will mature in two years, projections should include monthly projections of the balance sheet and income statement. These projections should be in sufficient detail to show how the loan will be paid off; therefore, there should be cash flow projections that show the sources and uses of funds each month. These projections should be displayed in a similar format as the historical statements, however, additional detail may be required to adequately show the lender how the loan is being paid. The highest level of detail is reserved for the first 12 months of the proposed loan. For the second 12 months, projections could be consolidated and presented on a quarterly basis. For a loan request that extends five years, the projections described above would be necessary. In addition, annual projections for years three through five would be advised. It may seem that projections four and five years out are meaningless, however, a lender is seeking the company's opinion of the future of the timber industry and where they see

themselves in that future. A five-year projection would also disclose any major plans for expansion or contraction. The financial projections should be accompanied by a discussion of those projections. The discussion should be in similar detail as those of the company's historical financial results. All assumptions made should be detailed and supported.

8) Management: The final part of the loan request should include an organizational chart listing the key employees. This chart should be accompanied by resumes on the key management people.

THE LENDING ENVIRONMENT

In the above section, there was no discussion of interest rates and fees. Also, in discussing the parameters of acceptable loan requests, there is clearly a range in which loans may be granted. One factor affecting loan requests is the lending environment as it exists at the time. For example, in 1991 and 1992, on the heals of the recession in 1990 and the savings and loan crisis, the lending environment was hostile to borrowers. Loans which, during "normal" times, would have been granted, were being declined. While this was an extreme divergence from normal times, factors affecting the economy, a particular industry, and sometimes most importantly, the financial health of the individual lender, will dictate interest rates, fees and other terms. The interest rate on a loan could vary from 1% to 2% higher or lower on the same loan, depending on the factors affecting the lending environment.

MANAGING THE BORROWING RELATIONSHIP

Throughout the life of most loans, conditions will inevitably change for both the borrower and the lender. This potential for change should be kept in mind when negotiating a lender's offer for financing. A lender will usually communicate an offer by way of a term sheet. While the ultimate objective is for the lender's term sheet to mirror the borrower's loan request, this event takes place only occasionally. At this point, negotiations over the term sheet commence.

Differences between the borrower's loan request and the lender's term sheet usually fall into three categories: substantive issues; minor issues; and misunderstandings. Substantive issues are those issues where the terms being proposed cause a conflict with the business plan. Examples would include limiting the harvesting of fee timber to 15 MMBF per year by imposition of a loan-to-value ratio when the business plan calls for a harvest level of 20 MMBF, or limiting a borrower's debt-to-worth ratio to the point where the borrower is unable to take on additional indebtedness to finance capital expenditures which are part of the business plan and are necessary to generate the cash flow to repay the loan.

A disagreement over substantive issues can be caused by a variety of reasons. The reason for the disagreement must be determined before the issue can be resolved. For example, the lender may believe the borrower's sales projections are too aggressive and, therefore, not support the capital expenditures listed in the projections. This disagreement between the borrower and the lender may result from different expectations over the ability of the borrower to perform or over the expectations for the markets in which the borrower operates. Disagreements such

as these are not unusual since the borrower usually knows his business and markets much better than the lender.

Disagreements over minor issues usually develop over personal preference. For example, a lender might want a fixed charge coverage ratio instead of an interest coverage ratio because "that's the way they have always done things." A borrower may be willing to accept a minimum tangible net worth covenant with a higher minimum than the lender might have established in order not to have a limitation over distributions to owners.

Disagreements over misunderstandings usually occur when the lender doesn't fully understand the loan request and business plan, or the borrower doesn't fully understand the impact of the proposed terms. When negotiating a term sheet, the borrower should treat the lender as a "valued supplier." Disagreements based on misunderstandings are usually overcome very easily. A simple clarification by either party is all that is necessary. If there are substantive issues which the borrower finds completely unacceptable, then the borrower should explain his position clearly. This discussion will usually lead to a basic difference of opinion, followed by a compromise. As part of this process, the borrower can usually give away what he considers minor issues in exchange for a more favorable compromise on a substantive issue. This can occur because the lender may believe a particular issue is a substantive one, but the borrower believes the same issue to be minor. The trading of minor issues for major ones and the give and take over minor issues will usually result in successful negotiations.

After the term sheet has been agreed to, the lender will engage counsel to draft loan documents. The borrower should normally engage his own counsel to review the loan documents and assist in negotiating both the legal and remaining business issues. Since a term sheet usually covers the major business points of a transaction, the loan documents will likely include minor business issues not included in the term sheet. Once the loan documents are completed, the loan is closed.

Once the loan is closed, the borrower and the lender are engaged in a relationship which will last for at least the life of the loan. It is to the borrower's and lender's advantage that this relationship be a good one. If the conditions of the borrower or the lender should change and the relationship between the parties is good, the probability of successfully amending the lending relationship to meet the changing situation would be greater. The best relationships are those which are actively managed by both the borrower and the lender. The borrower should try to choose a lender who will take an active interest in the borrower's business. In addition, the borrower needs to keep the lender fully informed about the results and prospects of the borrower's operations. The borrower who actively manages his relationships will usually have a number of valued suppliers from which to select.

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