

Research Department
Federal Reserve
Bank of
San Francisco

May 11, 1984

Timber Contract Problems

In 1983, the Pacific Northwest lumber industry moved out of the depths of recession and into recovery. This year, due to the strength expected in homebuilding and other lumber markets, lumber production and prices may show further moderate improvement. Nevertheless, scores of firms could face financial pressures arising from the cost of raw materials not only in 1984 but in the remainder of this decade. Those pressures result from the high-cost public timber under contract that is unprofitable to harvest at current and foreseeable lumber prices.

To date, the affected companies have received extensions of contract expiration dates, but they are pressing for federal legislation that would dissolve some of their contracts. They argue that the federal government shares responsibility for their difficulties because it affects housing markets and controls both the amount of their raw material supply and the methods by which public timber is sold.

This *Letter* will describe the contracts and lumber market conditions that contributed to the present problem. It will show that while the "forward" contract method of selling public timber provides some benefits to purchasers, it also subjects them to great uncertainty about the profitability of the timber under contract. To prevent a possible recurrence of the current problem, public timber management agencies should consider reforming the sales system to derive the price paid for timber more directly from the prevailing price for lumber. The discussion will focus on National Forests in the western half of Oregon and Washington. The heavy preponderance of the key homebuilding Douglas-fir species in that region, along with the absence of a mechanism to adjust prices downward in contracts awarded before August 1983, have made the problem of uneconomic timber the most serious there.

Forest Service contracts

In keeping with the general pattern throughout the West, lumber manufacturers in western Oregon and Washington rely heavily on publicly owned lands for their timber supply. In 1976, the latest date for which official data are available, about 22 percent of the total sawtimber harvested on commercial forestlands in that region came from National Forests managed by the U.S. Forest Service. Another 20 percent came from publicly owned lands managed by the U.S. Bureau of Land Management and state agencies. The remaining 58 percent came from lands owned by the forest products industry and other private landowners. In contrast, outside the West, public lands account for only 10 percent of the total annual harvest. Nearly all lumber firms operating in western Oregon and Washington rely on public lands to some degree for their raw material, but dependence is especially great for small, non-integrated producers.

The Forest Service sells the rights to harvest given tracts of standing timber (stumpage) on National Forests through a competitive bidding process. The contracts then call for the winning bidder to harvest the tract within the life of the contract, usually of several years duration to allow for road construction and logging. The purchaser pays a small initial cash outlay but is not required to make full payment until the timber is cut. For contracts awarded in western Oregon and Washington before August 1, 1983, purchasers are to pay the original bid price at time of harvest. As such, the contracts are forward contracts. Even with subsequent reforms, the contracts require companies to formulate their bid prices by forecasting the production costs and selling prices for lumber and other wood products they expect to prevail when the timber will be harvested.

These forward contracts afford purchasers certain benefits. They permit firms to secure

Federal Reserve Bank of San Francisco

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, or of the Board of Governors of the Federal Reserve System.

a contract with a small outlay of capital "upfront". And they allow the purchaser to pay only for the actual volume of useable, non-defective raw material found as the trees designated for harvest are removed and measured. But the contracts also render the purchaser vulnerable to changes in lumber prices. If lumber prices should rise more than the firms expected when they formulated their initial bid, they may receive a larger profit than they expected. On the other hand, if purchasers expect lumber prices to rise but they fall instead, firms may receive less profit than they had anticipated or they may even suffer losses.

Origins of the problem

Long contracts, requiring little initial capital and no specific interim payments, encourage purchasers to secure and hold large volumes of timber when they expect prospective demand and prices for lumber to rise sharply. Federal contracts in use in the late 1970s were particularly conducive to such behavior. Most contracts ran from three to as much as seven years in duration. Besides the nominal deposit with bid, the winning bidder posted only a performance bond when the contract was signed and no interim payments were required until the purchaser cut the timber, often in the last year of the contract. Unlike Forest Service contracts elsewhere in the West, they contained no stumpage rate adjustment clause to adjust original bid prices upward or downward in response to changes in lumber prices.

Lumber market conditions in the late 1970s encouraged bidder optimism. Between 1977 and 1979, producer prices for Douglas-fir lumber rose at an average annual rate of 16 percent (see chart). Homebuilding—by far lumber's largest market—was booming. During those years, the number of new homes built annually averaged 1.8 million units, with a near-record high of 2.0 million units being reached in 1978. Demographic factors suggested that at least 2 million housing starts per year would be needed during the decade of the 1980s to

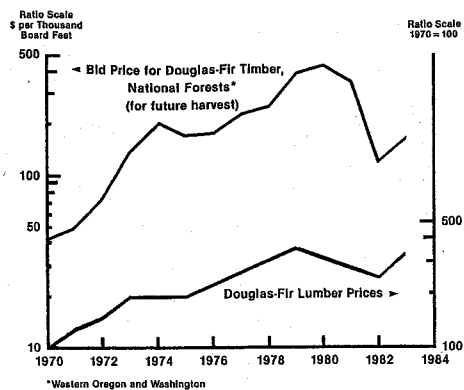
meet the requirements of the post-World War II baby boom. Meanwhile, increasing amounts of commercial forestland were set aside for wilderness purposes.

Expecting that strong product demand and tight raw material supplies would continue to push lumber prices upward throughout the 1980s, mills bid frantically for public timber during the late 1970s. On National Forests in western Oregon and Washington, the average winning bid price for Douglas-fir timber nearly doubled between 1977 and 1980 (see chart).

But, instead of continuing upward as expected, prices for softwood lumber dropped between 1979 and 1982. For example, the price of Douglas-fir fell by 31 percent. This occurred as housing starts plunged downward to only 1.0 million units by 1982 and lumber consumption also fell in other markets. When housing starts recovered to 1.7 million units in 1983, lumber prices rose sharply on an annual basis but failed to regain their 1979 peaks. Prices continue to lag behind 1979 levels because they showed renewed weakness in the latter half of 1983 before rising during the first quarter of 1984. The end-result is that many firms currently hold sizeable volumes of unprofitable timber under contracts awarded during the late 1970s.

Magnitude of the problem

At present, firms hold about 9.5 billion board feet of uncut timber on National Forests in western Oregon and Washington in contracts awarded before January 1, 1982. (Contracts awarded thereafter are not a problem because bid prices fell dramatically.) The average bid price on the timber awarded before 1982 is \$316 per thousand board feet. Forest Service and market data show that it currently would cost an average operator about \$482/thousand board feet to harvest and deliver that timber in log form to the mill (including stumpage), while such logs would bring an average market price of only \$281/thousand board feet. At current



finished lumber prices, such contract holders therefore would incur an average loss of about \$201/thousand board feet on timber contracts awarded before 1982.

This analysis does not mean that all of the 9.5 billion board feet sold prior to January 1982 is currently uneconomic to harvest since the \$316/thousand board foot price is an average. But it does suggest that lumber prices would have to rise sharply in the future to make much of this timber worth harvesting.

Government response

To give firms more time to meet their obligations, the Forest Service, in May 1980 and October 1981, extended contracts by one and two years in programs known as Soft I and Soft II. Then, on July 28, 1983, the Secretary of Agriculture announced that all federal timber sales contracts awarded before 1981 could be extended for another five years without payment of interest on the bid value of the uncut timber that would have been due. Holders of those contracts still argue that this proposed "Five-Year Multi-Sale Extension Plan" is unworkable because domestic lumber prices are not likely to rise sharply enough over the 1984-90 period to permit them to harvest that timber profitably, nor is demand likely to be great enough to combine that volume with new Forest Service offerings. In February, over one hundred contract holders won a court injunction temporarily prohibiting the Forest Service from enforcing those contracts or the February 15, 1984 deadline for submission of harvest schedules for the five-year extension plan.

Beyond extending contracts, the Forest Service on April 15, 1982, introduced a number of new provisions for future contracts designed to reduce the upward pressure on bid prices. Those measures, in effect, make it more expensive for purchasers to hold timber under contract. They include, for example, requiring a 5 percent cash deposit on the total value of the bid within 30 days after

award and certain payments mid-way through the life of the contract. The agency also shortened the term of new contracts.

The Forest Service introduced perhaps its most important reform on August 1, 1983 when it added a stumpage rate adjustment clause to new contracts in western Oregon and Washington. The clause permits the bid price to be increased or decreased, within stated limits, in accordance with changes in lumber prices. The procedure, already in use on National Forests elsewhere in the West, adjusts bid prices to reflect 50 percent of any upward change in the lumber price index and 100 percent of any decline in lumber prices below a base level. Its purpose is to transfer some of the profits and losses that would otherwise accrue to purchasers during periods of rising and falling lumber prices to the federal government, thereby reducing the variability in the lumber companies' profits. However, because the adjustment mechanism is skewed more to protect buyers from the risk of downside loss than to remove profits in a rising market, it will impart an upward bias on bid prices and will not completely eliminate earnings variability.

To eliminate uncertainty about the profitability of public timber, the Forest Service would have to sell timber at spot prices derived directly from contemporaneous finished lumber prices. Such a system exists in British Columbia. There, the government allocates the supply of public timber available for sale to forest product firms under long-term contracts. The price it charges for timber cut in any given year is a residual value based on the current price of lumber minus costs of conversion and a reasonable margin of profit. Its objective is to provide forest products firms with secure timber supplies at a profitable price, and thereby promote the growth of the industry.

Yvonne Levy

FIRST CLASS

Alaska • Nevada • Oregon • Utah • Washington
Idaho • California • Hawaii

San Francisco
Bank of
Federal Reserve
Research Department

PRESORTED
FIRST CLASS MAIL
U.S. POSTAGE PAID
PERMIT NO. 752
San Francisco, Calif.

BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding	Change from	Change from 12/28/83	
	4/25/84	4/18/84	Dollar	Percent Annualized
Loans, Leases and Investments ^{1 2}	178,572	- 244	2,547	4.4
Loans and Leases ^{1 6}	158,827	- 65	3,472	6.8
Commercial and Industrial	47,372	130	1,409	9.3
Real estate	59,612	- 30	713	3.7
Loans to Individuals	27,926	123	1,275	14.6
Leases	4,994	0	- 69	- 4.1
U.S. Treasury and Agency Securities ²	12,074	- 154	- 433	- 10.5
Other Securities ²	7,670	- 26	- 493	- 18.4
Total Deposits	184,539	-3,535	- 6,458	- 10.3
Demand Deposits	43,133	-2,445	- 6,104	- 37.9
Demand Deposits Adjusted ³	28,844	-1,152	- 2,487	- 24.2
Other Transaction Balances ⁴	12,124	- 834	- 651	- 15.5
Total Non-Transaction Balances ⁶	129,281	- 257	296	0.7
Money Market Deposit Accounts—Total	39,617	- 477	20	0.1
Time Deposits in Amounts of \$100,000 or more	38,004	202	- 161	- 1.2
Other Liabilities for Borrowed Money ⁵	21,183	2,167	- 1,824	- 24.2
Weekly Averages of Daily Figures	Week ended 4/23/84	Week ended 4/9/84		
Reserve Position, All Reporting Banks				
Excess Reserves (+)/Deficiency (-)	68	273		
Borrowings	174	53		
Net free reserves (+)/Net borrowed(-)	- 106	220		

¹ Includes loss reserves, unearned income, excludes interbank loans

² Excludes trading account securities

³ Excludes U.S. government and depository institution deposits and cash items

⁴ ATS, NOW, Super NOW and savings accounts with telephone transfers

⁵ Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

⁶ Includes items not shown separately

Editorial comments may be addressed to the editor (Gregory Tong) or to the author Free copies of Federal Reserve publications can be obtained from the Public Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 974-2246.