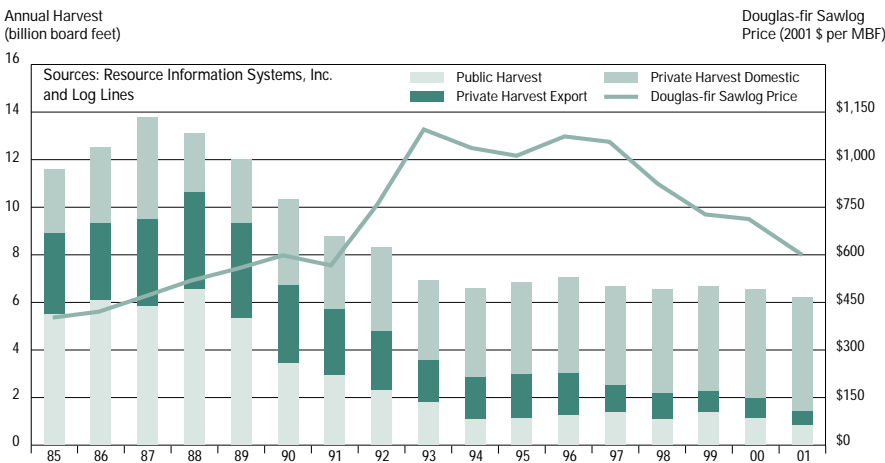


A “New” Timber Economy in the US Pacific Northwest?

Much has changed in the Pacific Northwest’s timber economy.

For most of the post-World War II era, public lands supplied nearly half of the timber consumed in Pacific Northwest (PNW) mills. In the late 1980s, concerns over endangered species, particularly the northern spotted owl, produced rapid and dramatic reductions in US Forest Service timber harvests (Chart 1). This supply restriction caused timber prices to spike throughout the United States and all around the Pacific Rim. They are only now returning to pre-owl levels.

Chart 1: U.S. Pacific Northwest Annual Sawtimber Harvest and Sawlog Price



The demand for logs has changed as well. Japan—once the destination for large quantities of high-value PNW logs—has seen protracted economic decline. Housing construction is the single most important end-use of lumber in Japan. Housing construction has fallen from peak levels of over 2 million units a year, to about 1.25 million units currently. New export-log

suppliers, especially New Zealand and post-perestroika Russia, have taken market share away from the PNW. Lumber imported from such remote locations as Sweden and domestically manufactured laminated wood products have displaced lumber manufactured by the small, inefficient domestic Japanese sawmills that once used PNW logs. As a consequence, log

exports from the PNW have fallen by 85 percent since 1988, and now comprise only 10 percent of the region’s total harvest.

This combination of factors has produced a variety of changes in the timber economy of the Pacific Northwest. Mills dependent on Forest Service timber were forced to purchase timber from private timberland owners (like HTRG), but were not all favorably located to do so. As a consequence, many simply went out of business. Lumber-producing capacity in the region declined by nearly 3 billion board feet between 1988 and 1994.

As appears inevitable in any economic adjustment, the reduction in capacity overshot. A recovery in the private inventory (as a result of its age-class structure) and the diversion of logs once headed for export into domestic

continued on page 2

A “New” Timber Economy in the US Pacific Northwest? *continued*

markets has permitted new mills to locate into the region. These mills tend to be larger than the ones that closed, more efficient in their use of smaller sawlogs and focused on US domestic markets. Since the bottom in 1994, sawmill capacity in the PNW has increased by nearly 1 billion board feet, largely with the construction of three large mills in Washington.¹ Industry analysts generally expect this trend to continue.

How have these structural changes affected timberland investors? On one hand, timber supply from federal lands is far more price elastic than is supply from private lands.² Hence, the reduction in federal supply as a fraction of the total should make timber prices more volatile than they were prior to the supply restrictions. On the other hand, export markets tend to be more volatile than domestic ones. As long as the correlation between US and Japanese markets was reasonably high, collapse of export markets for timber should reduce price volatility. And, given the greater focus of the PNW sawmills on domestic markets, the correlation of timber prices between the PNW and the other US regions should increase. What are the facts?

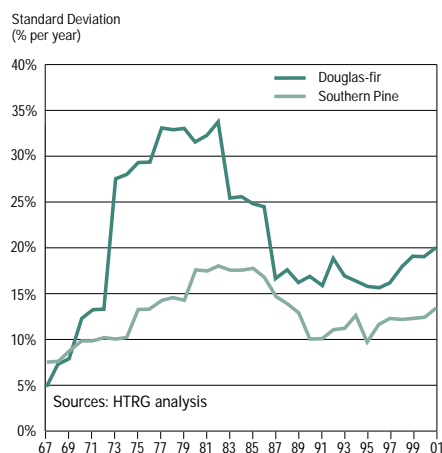
Chart 2 compares the standard deviation of annual rates of change in real Douglas-fir stumpage prices in

the PNW and real southern pine stumpage prices in the South over rolling 10-year periods. Both regions show the same pattern of volatility—rising through the 1980s then falling—although the series peak at different times. Over the full time period the volatility of western prices is about two-thirds greater than the volatility of southern prices, and the ratio is not materially different since the reduction in US Forest Service harvests in the PNW.³ Remarkably, over the last half century the relative riskiness of the PNW, as measured by timber price volatility, has remained roughly constant. Evidently, the reduction in price volatility due to the decline in export markets has largely offset the increase in volatility due to the reduction in US Forest Service harvests. In the future, we expect timber prices to remain

more volatile in the PNW than in the South since both regions now face largely domestic demand, and the timber supply is much less elastic in the PNW.

Of course, for an astute timberland investor, return volatility in one region alone does not matter as much as does the volatility of a geographically diversified timberland portfolio. Portfolio volatility depends on the correlations among regions as well as the within-region volatilities. Chart 3 (page 6) shows the correlation between Douglas-fir stumpage and southern pine stumpage, again on the same trailing 10-year basis as in Chart 2. The correlations were relatively stable until the late 1980s, and then began to gyrate. Calculated over the full period, the correlation averaged 0.46, a figure that has fallen to 0.34 since 1990. The structural changes in PNW timber markets appear to have lowered the interregional correlation of returns, a surprising result given the PNW's shift toward domestic markets that the South also serves. This result may be due to the chaos in the PNW caused by the rapid reduction of federal timber sales, which impacted the PNW directly and the South only indirectly. The increase in the correlation from 1997 onward may presage a return toward its long-run average.

Chart 2: Volatility of Annual Rates of Change in Real Sawimber Stumpage Prices over Rolling 10-Year Periods



continued on page 6

¹ H. Spelter. 2002. Sawmill closures, openings and net capacity changes in the softwood lumber sector, 1996-2003. USDA Forest Service Research Paper FPL-RP-603.

² D. Adams, C.S. Binkley and P.A. Cardellicchio. 1990. Is the level of national forest timber harvest sensitive to price? *Land Econ.* 67:74-84.

³ For the full period, the ratio of PNW volatility to southern volatility is 1.68; for the post-90 period the ratio is 1.56.

Quarterly Average Regional Composite Prices for Softwood Sawtimber Stumpage (US\$ per MBF)

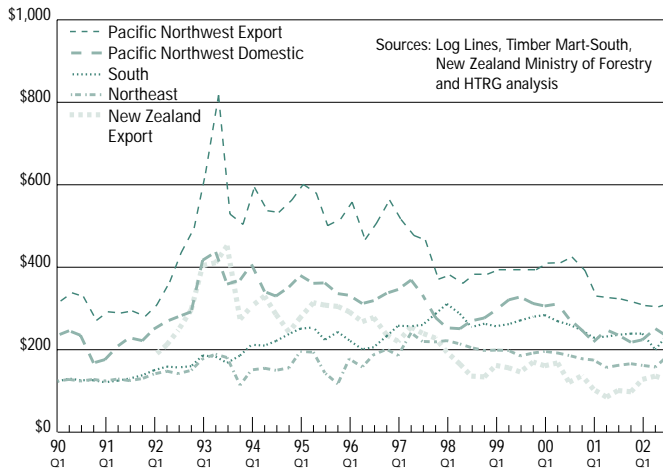


Figure 1. Softwood Sawtimber Stumpage Prices

Prices for most softwood sawtimber stumpage products were stable during the third quarter. Exceptions were prices in Pacific Northwest domestic markets for both Douglas-fir and western hemlock, which softened after rising sharply last quarter. Also, in the U.S. Northeast, prices for spruce and fir increased by nearly 20 percent.

Quarterly Average Prices for U.S. South Lumber and Sawlogs (\$ per MBF - lumber scale)

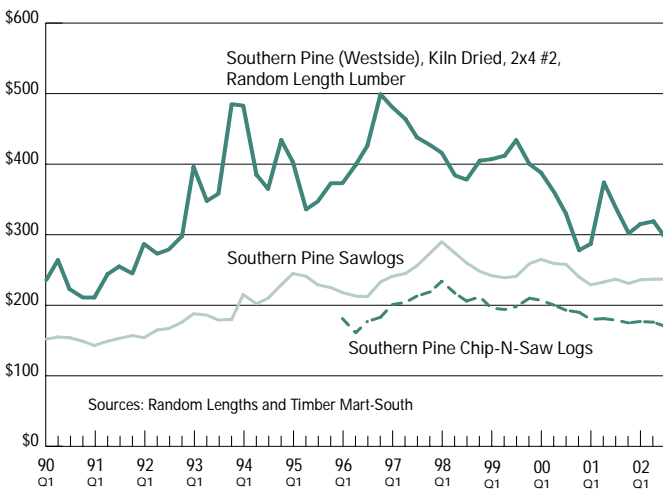


Figure 2. Lumber and Sawlog Prices in the U.S. South

Southern pine lumber prices fell by \$25 per MBF during the third quarter. As has been widely observed, import duties on Canadian lumber have had the unintended consequence of increasing lumber production in Canadian mills. This has placed downward pressure on lumber prices in the United States, including the South. Delivered southern pine sawlog prices held steady, so the gap between lumber and sawlog prices, which was already relatively low by historical standards, narrowed further. This continues to suggest that lumber price increases will be needed to support a rebound in southern pine sawlog prices.

Quarterly Average Prices for U.S. Pacific Northwest Lumber and Sawlogs (\$ per MBF - lumber scale)

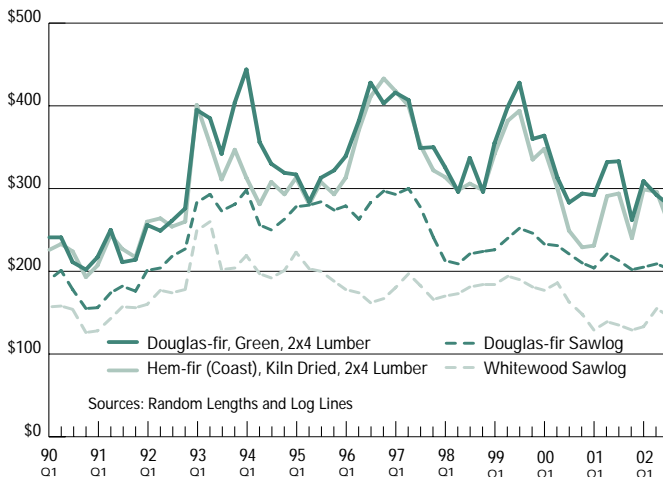


Figure 3. Lumber and Sawlog Prices in the U.S. Pacific Northwest

Prices for lumber in the Pacific Northwest also declined during the third quarter. The decline was sharpest for western hemlock lumber, which now trades at its traditional discount to green Douglas-fir. Western hemlock (whitewood) sawlog prices dropped significantly in concert with the fall in hem-fir lumber prices, yet remain above levels that persisted during much of last year.

Quarterly Average Regional Composite Prices for Softwood Pulpwood Stumpage (\$ per ton)

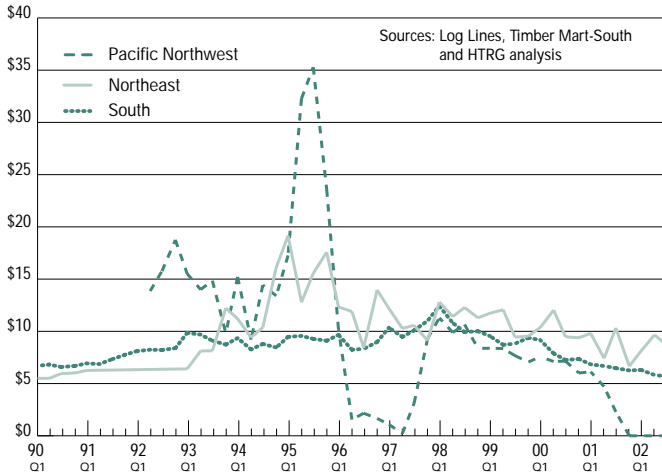


Figure 4. Softwood Pulpwood Stumpage Prices

Pulpwood markets continued to weaken during the third quarter of this year. Southern pine pulpwood stumpage prices fell yet again to another new historical low. Our estimate of pulpwood stumpage value in the Pacific Northwest remained at zero—average log and haul costs are higher than average delivered pulp log prices.

Quarterly Average Prices for Market Pulp (\$ per metric ton) and U.S. Pulp Logs (\$ per 10 tons)

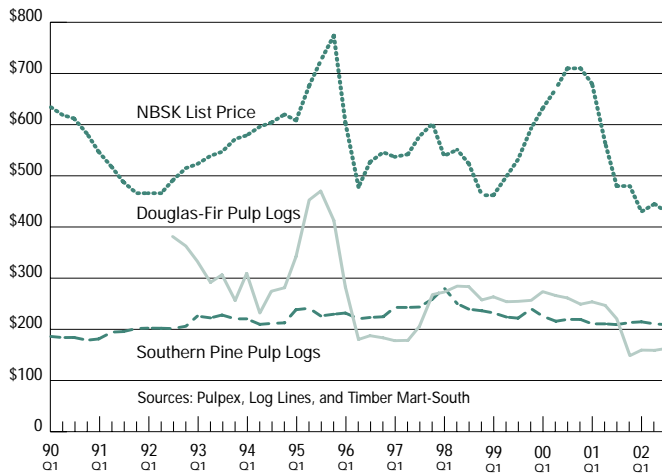


Figure 5. Market Pulp and U.S. Pulp Log Prices

Market pulp prices fell back during the third quarter after rising modestly during the second quarter. Analysts generally conclude that there is little downside in current pulp prices, but also suspect that a recovery may not begin until the second half of next year. Pulp log values, which held steady last quarter at historically low levels, should move upward in response to a recovery in prices for market pulp.

Quarterly U.S. Timberland Values (\$ per acre)

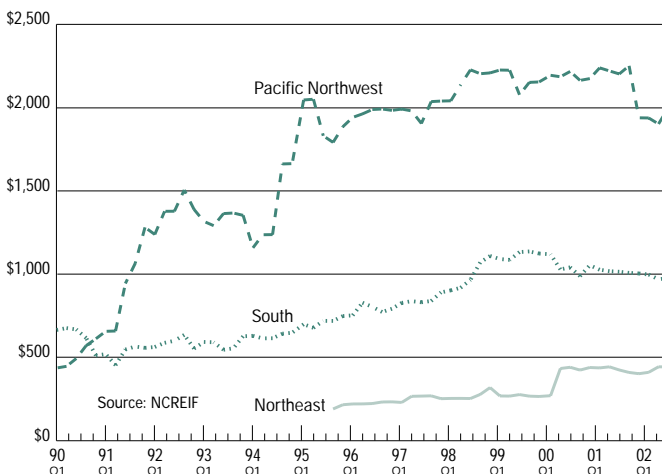


Figure 6. U.S. Timberland Values in Private Property Markets

Timberland values in private property markets as reported by NCREIF were relatively stable. Many properties in the NCREIF Timberland Property Index are not revalued until year end, so the results reported in the next edition of Hancock Timberland Investor will be more meaningful.

Quarterly EBITDDA Multiples for Privately Traded Timberland (trailing 4-quarter EBITDDA)

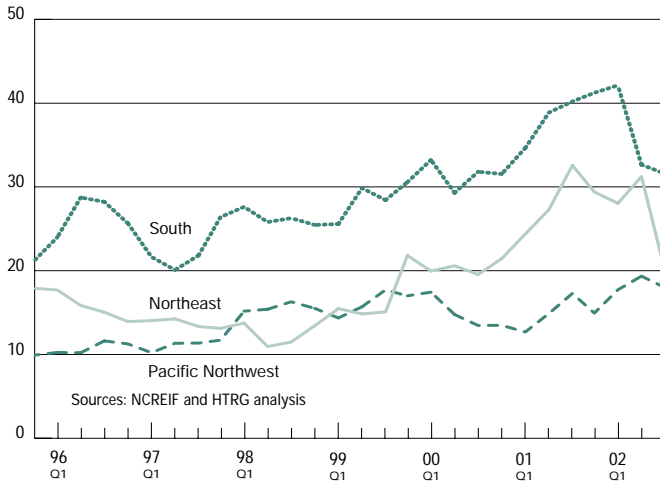


Figure 7. U.S. Timberland Valuation Multiples in Private Property Markets

Pricing multiples dropped sharply during the third quarter in the Northeast. An unusually strong Q3 2002 EBITDDA level replaced an average Q3 2001, boosted the 4-quarter trailing average substantially, and contracted the multiple.

Monthly Securitized Timberland Share Value (Indexed to 100 at start date)

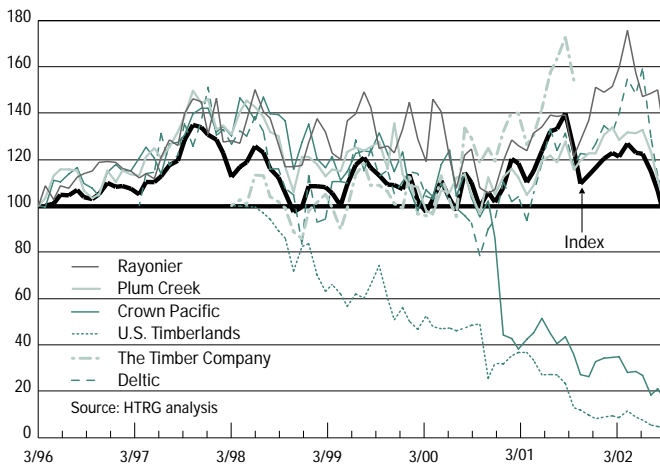


Figure 8. Hancock Securitized Timberland Index

Share prices of the timber-focused public companies all trended downward last quarter. Our Hancock Securitized Timberland Index fell by nearly 25 percent from June to September. Prices for Crown Pacific and U.S. Timberlands remain at historically low levels.

Quarterly U.S. South Timberland Values (\$ per acre)

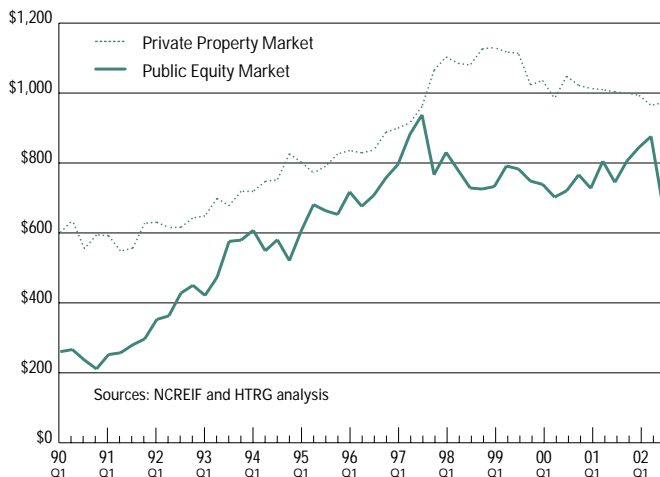
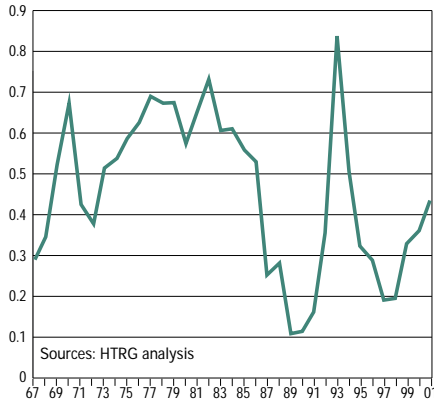


Figure 9. U.S. South Timberland Values in Public Equity and Private Property Markets

As we speculated in the last edition of Hancock Timberland Investor, the gap between private-market and public-market timberland values widened during the third quarter as a result of substantial declines in public-market values. The declines in public values are of course prices shown in Figure 8.

Chart 3: Correlation between Rates of Change in Real Prices for Douglas-fir and Southern Pine Sawtimber Stumpage over 10-Year Rolling Periods



What do these results mean for timberland investors?

- There is no evidence from this analysis of timber price volatility that the riskiness of holding PNW timberland has fallen relative to southern timberland.
- The correlation between rates of timber price change in the PNW and the South appears to have fallen a bit in recent years,

although we expect it to return to historical averages in the future.

- Timberland investors benefit from holding geographically diversified portfolios where the regional weights are actively managed to take advantage of asset mispricings.

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NOTES:

Figure 1. The composite price for southern sawtimber is based on quarterly average Timber Mart-South published prices for pine sawtimber and chip-n-saw stumpage. Pacific Northwest prices are derived from quarterly average Log Lines published prices for whitewoods and Douglas-fir with internal analysis of logging costs for stumpage calculations. New Zealand export prices are based on New Zealand Ministry of Forestry quarterly average published prices for Radiata unpruned A, J and K sort export logs with internal analysis of logging costs for stumpage calculations. Northeast sawtimber prices are calculated from internal analysis.

Figure 2. Quarterly southern pine (westside), kiln dried, 2x4 #2 lumber price published by Random Lengths. Timber Mart-South published southern pine sawlog and chip-n-saw log prices converted to lumber scale using RISI historical lumber recovery rates as published in North American Lumber Forecast.

Figure 3. Quarterly Douglas-fir, green 2x4 lumber (Portland rate) and Hem-Fir (coast), kiln dried, 2x4 lumber prices published by Random Lengths. Douglas-fir and whitewood sawlog prices derived from Log Lines published prices for #2 and #3 sawlogs in various regions in the Pacific Northwest converted to lumber scale using RISI historical lumber recovery rates as published in North American Lumber Forecast.

Figure 4. Pulpwood composite prices are derived from quarterly average Timber Mart-South published prices for southern pine pulp wood stumpage, Log Lines published whitewood and Douglas-fir pulp logs with internal analysis of logging costs for the Pacific Northwest, and HTRG analysis of Spruce/Fir pulpwood in the Northeast.

Figure 5. Quarterly NBSK pulp prices derived from daily list prices reported by Pulpex. Southern pine pulp log prices published by Timber Mart-South. Pacific Northwest Douglas-fir pulp log prices published by Log Lines. Pulp log prices expressed in multiples of 10 to accommodate market pulp pricing scale.

References to expected investment performance in this newsletter are based on historical information and are based on management's projections. Potential for profit as well as for loss exists.

Figure 6. Regional NCREIF timberland market value per acre is derived by dividing the total regional market value at quarter end by the number of acres reported in that region. Market values for Northeast timberland were re-estimated for the period 1998Q4 through 1999Q3 to adjust for what we believe to be an anomalous property included in the NCREIF database during those quarters.

Figure 7. EBITDDA multiples are calculated using NCREIF timberland value per acre at quarter end divided by a trailing four-quarter average NCREIF net income per acre.

Figure 8. The Hancock Securitized Timberland Index (HSTI) uses a base-weighted aggregate methodology (similar to that used to construct the S&P 500) to calculate a market capitalization-weighted value for six publicly traded timber-intensive forest products companies. Base weights were readjusted for the emergence of new companies or at the beginning of each year. Dividends are not reinvested. The companies included in the HSTI have no investment relationship with the Hancock Timber Resource Group.

Figure 9. Public equity derived from our Timberland Enterprise Value per Southern Equivalent Acre (TEV/SEA) for five timber-intensive publicly traded companies compared to southern timberland values per acre calculated from the NCREIF database. TEV is a quarterly estimate based on total enterprise value (total market equity + book value debt) less estimated value of processing facilities, other non-timber assets and non-enterprise working capital. SEA uses regional NCREIF \$/acre values to translate a company's timberland holdings in various regions to the area of southern timberland that would have an equivalent market value.