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Factors Driving Wood Demand and Timberland Markets in the U.S. South

Timberland markets in the US South continue to exhibit strong interest from institutional investors and conservation buyers (Table 1). Over 8 million acres have changed hands in transactions exceeding 100,000 acres each in size since early 2006. The sellers in 2006 and early 2007 were almost exclusively traditional, integrated forest products firms; the buyers were timberland investment management organizations (TIMOs), private real estate investment trusts (REITs) and The Nature Conservancy. As a result, the timberland ownership landscape is now dominated by organizations and owners focused on extracting value from their timber assets rather than consuming timber to manufacture lumber and produce paper. Now these investment organizations are selling to each other as demonstrated by the latest two large transactions. In short, forestry investors have specialized.

Table 1. Recent (2006-Q1 2008) timberland transactions over 100,000 acres in the US South

Seller	State(s)	Acreage	Buyer(s)
International Paper	AL, AR, FL, GA, LA, MS, NC, SC, TN, VA	218,000	The Nature Conservancy & Conservation Forestry
International Paper	Southwide	3,700,000	Resource Management Services & Forest Investment Associates
International Paper	AR, LA, TX	900,000	TimberStar
Temple-Inland	AL, GA, LA, TX	1,550,000	The Campbell Group
Mead-Westvaco	AL, GA	323,000	Wells Timberlands
Forest Systems	AL, AR, FL, MS, TN	340,000	The Campbell Group
Molpus Woodlands	TX	115,000	Regions Morgan Keegan Timberland Group
TimberStar	AR, LA, TX	900,000	Hancock Timber Resource Group

As such, timberland-owning investors and organizations are interested in research and analysis that separate the wheat from the chaff during due diligence and ongoing market analysis and tracking. The relative maturity of timber markets in the US South has focused much analysis on two critical factors directly associated with timberland investment returns: the demand for wood and the supply of investment grade timberlands.

WOOD MARKETS AND DEMAND

The finest stands of timber have little commercial value if they are not proximate to wood using mills. Therefore, the demand for timber depends highly on the number and size of local wood-using facilities. A detailed assessment of local demand and market competitiveness requires an understanding of both the number and geographic distribution of mills consuming each type of forest-derived raw material.

The South features clusters of wood-using mills that consume approximately 200 million tons of roundwood annually while producing the full range of forest industry end products. Of the 193 million tons of pine roundwood consumed in 2007 across nine states,¹ pulpwood represented 46.6 percent, with pine sawtimber and pine chip-n-saw comprising the balance. In addition, pulp mills continued to mix in and substitute with hardwood pulpwood, a trend that increased since pine pulpwood prices began accelerating in the early 1990s.

What is the nature of competition in timber markets? Generally, it is assumed that higher competition for wood, captured by either the number of mills or total wood demand, is associated with higher stumpage prices. While data that captures the number of bidders for individual tracks of timber for open market stumpage sales is limited, economic theory indicates there should be a positive relationship between price and the number of bidders in competitive markets. More buyers equal higher prices.

Recent research explored the hypothesis that higher wood consumption and number of mills are positively associated with stumpage prices in Southern timber markets (Table 2). A correlation analysis was used to test the validity of the hypothesis for three softwood products: sawtimber, chip-n-saw and pulpwood across the 17 Southern markets.

Table 2. Correlation Between Pine Stumpage Prices and Wood Demand in US South, 2006²

	Pine Pulpwood	Pine Chip-N-Saw	Pine Sawtimber
Number of Facilities	0.293	0.214	0.684*
Annual Demand, tons	0.328	-0.319	0.764*
Total Demand, tons	88,722,108	11,309,160	99,120,776

* significant at 1%

Data sources: Wood Demand Report, Forisk Consulting; Timber Mart-South

¹ Forisk Wood Demand Report. The nine states are Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and East Texas.

² Timber Market Profiles & Rankings: US South 2007. Forisk Consulting & Timber Mart-South. 414 pages.

Significant correlations with stumpage prices were not observed for either pulpwood or chip-n-saw usage. These two products accounted for 50% of the total softwood log demand in the South in 2006. Several factors may account for this: (1) the time lag between the bidding and actual harvesting of tracts; (2) the geographic size of each market relative to demand; and (3) weather events and associated price variability. The lack of correlation may also reflect local supply factors including wood inventories and the cost of harvesting. It is also possible that pulpwood and chip-n-saw markets across the South are less influenced by local timber demand than assumed. For instance, it is possible that correlations with mill-delivered prices would be stronger, suggesting considerable price elasticity in profits associated with cut and haul services.

The negative (though insignificant) relationship between chip-n-saw demand and its price should raise eyebrows. One explanation could be the intermediate place of this product between sawtimber and pulpwood logs and differing chip-n-saw mill specifications by market. Wood Demand Report data indicates that one market's chip-n-saw is another market's sawtimber. In addition, variation in utilization exists within the same markets and even at the same mills, particularly as supply-demand dynamics tighten and loosen.

The relationship between demand and stumpage prices for sawtimber logs is positive and strong. This indicates that higher demand for sawlogs, and higher numbers of sawtimber-consuming facilities, is highly associated with higher stumpage prices. Timber buyers tend to "bid up" stumpage prices for preferred characteristics, driving average prices higher in tight markets. Though preliminary, these results suggest that sawtimber prices may be hypothesized to be more elastic (volatile) in response to fluctuations in demand, while pulpwood and chip-n-saw may be less so.

TIMBERLAND MARKETS

The South has been home to major timberland transactions for the 10 years prior to 2007 (Table 3). Prior to 2006, timberland divestitures in the South peaked in 1999 with 2.77 million acres and exceeded 2 million acres again in 2003 and 2005. As with recent deals, most acres were sold by traditional, mill-owning forest industry firms to institutional and timberland-specializing investors and managers.

The recent talk of the timber investment world has been TimberStar's sale to Hancock Timber Resource Group (Table 1). TimberStar acquired 900,000 acres in 2006 from IP and sold them to Hancock Timber Resource Group only 18 months later for a substantial gain that was further enhanced by high leverage. Speculation exists around the forces behind the deal, whether investors are entering a new era, or whether there was simply something strategic about the deal that may not transfer to subsequent transactions.

Timberland ownership changes highlight issues for timber market watchers and participants. Ongoing timberland transactions raise concerns about increased and accelerated fragmentation of large industrial ownerships. For example, the International Paper sale included multi-party investment groups. Each participant evaluated their portion of the transaction with varying objectives, from managing long-term for timber income to maximizing development and higher-and-better-use (HBU) potential. Decreasing ownership size and shorter investment time horizons increase the importance of individual parcel and timber market analysis.

Table 3. Southeastern Timberland Sales, 1996-2007

Year	Notes	Acres sold	Weighted Ave. Price/Ac
1996	6 transactions, all over 100,000 acres	1,949,000	\$781
1997	4 transactions, all under 100,000 acres	255,000	\$1,286
1998	4 transactions, all under 100,000 acres	123,000	N/A
1999	20 transactions, 7 over 100,000 acres	2,768,000	\$859
2000	10 transactions, 2 over 100,000 acres	1,005,000	\$954
2001	20 transactions, 4 over 100,000 acres	1,043,000	\$860
2002	34 transactions, 4 over 100,000 acres	1,201,000	\$811
2003	38 transactions, 5 over 100,000 acres	2,084,000	\$771
2004	26 transactions, 4 over 100,000 acres	1,550,000	\$1,043
2005	23 transactions, 6 over 100,000 acres	2,041,000	\$1,161
2006	20 transactions, 3 over 100,000 acres	5,355,000	\$1,195
2007	14 transactions, 3 over 100,000 acres	2,800,000	\$1,500

Data source: Timber Mart-South

In reality, many of the concerns over fragmentation are over-stated. Dividing huge ownerships among individual investor groups does not necessarily change the use of the forest. But two common scenarios do give rise to changing land use. One scenario is where small parcels associated with large deals are identified as HBU parcels and sold into the recreational and second-home markets. This is common throughout the U.S., but nowhere has this sort of activity affected more parcels and acres than in the South, particularly within easy reach of large and mid-sized urban areas. The other scenario where fragmentation is occurring is with the subdivision and development of individual parcels. This is common near urban and resort areas of the South, Appalachia, and Lake States, all regions where land use regulations are very liberal compared to the Northeast and West.

The growing volume of timberland transactions supports an increasing range of investment vehicles with which to acquire, own and invest in timberlands. Timber REITs have become increasingly important in timberland acquisitions and divestitures. TIMOs and timber-focused real estate investment trusts (REITs) now manage over 12 million acres in the US South. Compared to traditional forest products firms, these owners worry less about wood supplies and more about financial returns. Forestland assets have become, for some investors, a specialized class of real estate that happens to grow trees.

The location of wood using facilities and productive timberlands are primary local factors for assessing timber markets. In addition, one can isolate the position of each timber market with respect to demographics, stumpage prices, timber demand, timber supply, and the saturation of primary wood-using facilities in order to understand the driving factors behind successful timberland investments.

One method for tracking ongoing interest and prices associated with regional timberland markets is to track the volume and prices of available investment-grade timberlands. Four southern markets – Northern Florida, Western portions of South and North Carolina and Northern Georgia – featured the highest weighted-average land prices in mid-2007 based on a regional sampling of available and listed agricultural and timberlands (Table 4). The list is not based on actual closed sales, but on lists of advertised properties available for sale and those having a sale price in various online property databases.

Three markets, Georgia and both Carolinas, include areas with high-development potential in the Appalachian Mountains and those located along the I-85 interstate corridor. The Florida market also captures areas of high-development potential in the Florida panhandle.

An inverse relationship existed for listed tracts between tract size and per-acre prices. In other words, large tracts tended to have lower per-acre prices. Further analysis indicates that the top four markets as measured by per acre land prices also capture the top spots with respect to education levels (North Georgia and North Florida), low unemployment (North Georgia and North Florida), highest average median household income (North Georgia, West North and South Carolina, Florida), highest total population and population density (North Georgia, West North and South Carolina, Florida).³

Table 4. Average Land Prices for Timberland/Agricultural Tracts Available for Purchase in mid- 2007

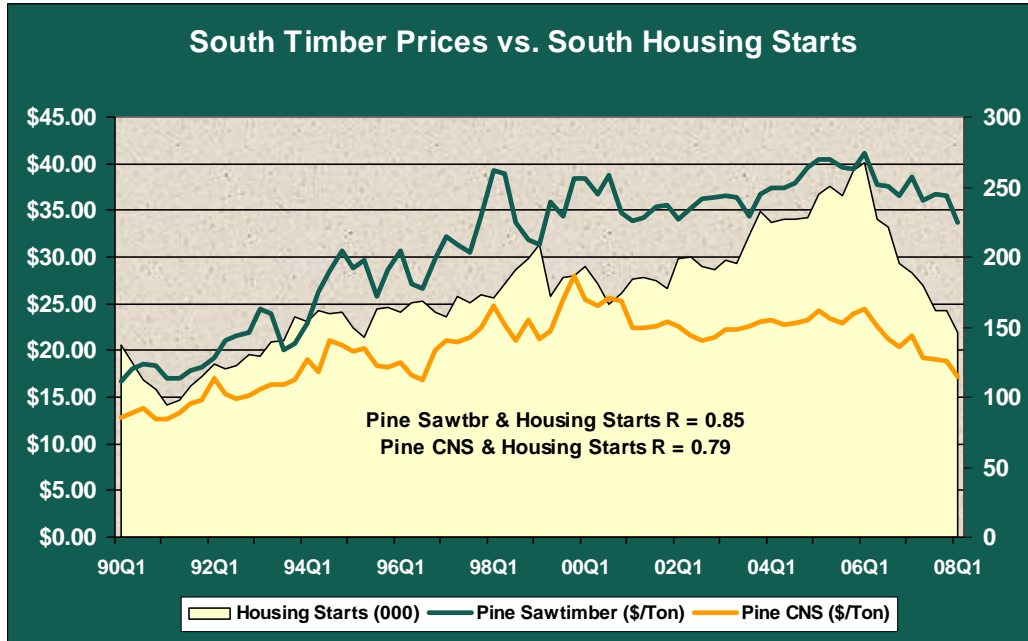
Timber Market	Average Price Per Acre Weighted for Tract Size
West North Carolina	\$16,973
West South Carolina	\$11,667
North Georgia	\$11,482
North Florida	\$11,171
Southeast Texas	\$3,567
East South Carolina	\$3,464
South Georgia	\$3,416
South Alabama	\$3,416
North Alabama	\$3,044
North Mississippi	\$2,758
South Mississippi	\$2,515
Northeast Texas	\$2,426
North Arkansas	\$2,181
South Arkansas	\$2,169
East North Carolina	\$2,047
North Louisiana	\$1,841
South Louisiana	\$1,596

Data sources: www.landwatch.com; Timber Mart-South; Forisk Consulting

³ Timber Market Profiles & Rankings: US South 2007. Forisk Consulting & Timber Mart-South. 414 pages.

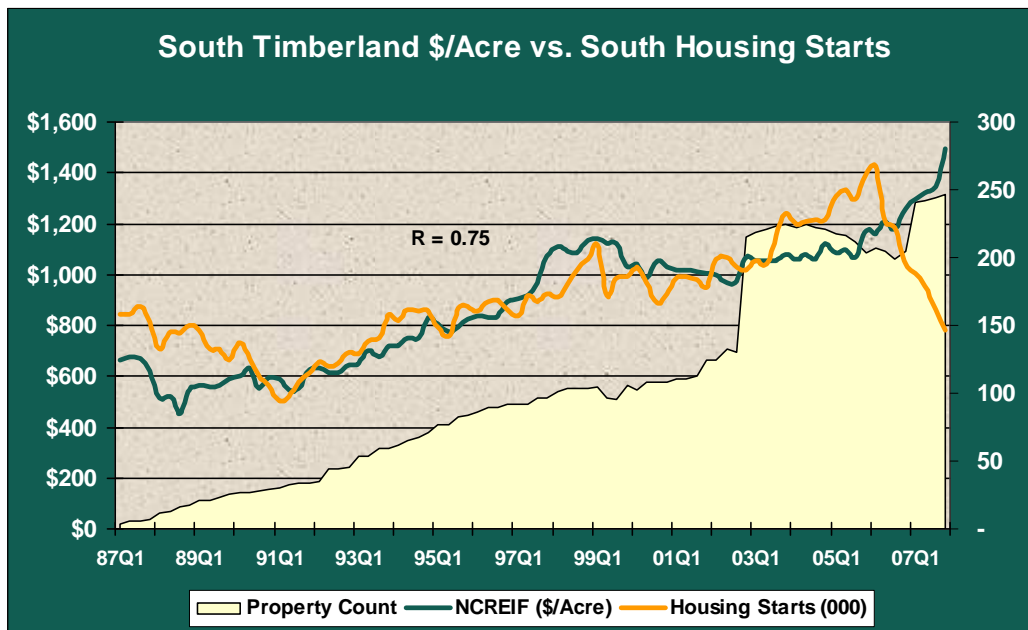
Figures 1 and 2 illustrate strong correlations between timber prices and housing starts, and between timberland prices and housing starts. Correlation coefficients range from 0.75 to 0.85 over the last 20 or so years. We note the dramatic lack of correlation in recent years as falling discount rates have driven timberland prices up in the face of falling timber prices. This story is not unique to the South.

Figure 1. Southern Timber Prices – Correlation with Housing Starts 1990-2008



Sources: U.S. Census Bureau, Timber Mart-South, Sewall Company

Figure 2. Southern Timberland Prices – Correlation with Housing Starts 1987-2007



Sources: U.S. Census Bureau, National Council of Real Estate Investment Fiduciaries, Sewall Company

CONCLUSION

Strong demand for timberlands as alternative investments still drives the ongoing reorganization of vertically-integrated forest product companies. Buyers are represented by private and institutional investors, timber REITs and nature conservation organizations. The primary attention is placed on timberland returns, which depend on healthy timber markets. Strong local timber markets, as was shown above, positively correlate with stumpage prices and, *ceteris paribus*, make for a more attractive bottom line.

The timber sell-off process leaves the last of the large vertically-integrated “Mohicans” in the country – Weyerhaeuser, and, moving forward, all attention will continue to be focused on this prize. The company is under pressure to reorganize - from buyers for its vast timberlands, fueled by a strong demand and its own investors, who would prefer more tax-efficient timberland management. In late 2007 some industry analysts speculated that Weyerhaeuser would be more like to sell of its manufacturing assets and retain its timberland than vice versa. Recent sales of its production facilities in the West and overseas have now left the corporation in essentially this position. No one should doubt that Weyerhaeuser’s venerable motto, “Our business is growing trees”, remains at the core of their mission, although it has reappeared on the company website in phrases such as “Growing ideas” and “We are inspired by trees”. The tax implications of changing ownership structure are quite complex for Weyerhaeuser, and this will likely play an important role in decisions regarding potential reorganization or monetization of its high-quality timberlands.

Several markets in the South exhibit strong timber(land) prices resulting from potential development opportunities. These areas feature positive demographic characteristics with high education and household income levels, low unemployment and high population density, factors that usually drive economic and residential development. This area of timberland investment represents a relatively small portion of the timberland investment universe in terms of acres, but for objective reasons will always attract extra attention for its exuberant returns and occasional bad PR. That said, many forest product companies and all publicly-traded timber REITs have their own real-estate boutiques, and several TIMOs have hired staff to focus on HBU sales. Forestland investors, appraisers, and investment analysis must now pay careful attention to potential non-timber revenues when analyzing market value. The assets now in play can no longer be regarded simply as “timberland”.

Finally, Sewall has continued to see forestland prices to climb while timber fundamentals have weakened, and not only in the South. Forestland discount rates have been driven down to around 5% across most of the U.S., despite weakening in almost every other real estate investment class. Increasing participation by European investors may play a role, as they look to speculate on currency movement and hedge against inflation. These investors may be more tolerant of low rates of return which are common to European timberlands. Also, there remains much more capital than available deals. However, we are seeing more investments come on the market. As the disconnect between forestland prices and timber fundamentals has dramatically widened in the last 18 months, it has become harder to make that case that investors with short- to mid-term holding periods should continue to remain long in their positions.

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Editor: Brooks C Mendell, PhD, Associate of James W. Sewall and Principal of Forisk Consulting, bmendell@forisk.com

Producer: Bret P Vicary, PhD, MAI, Vice President, James W. Sewall Co. (207) 827-4456 bret@jws.com www.jws.com