

Hancock Timberland Investor



A Manulife Asset Management Company

Fourth Quarter 2015

2015 Timberland Investment Performance

U.S. private timberland investments in 2015 returned a total of 4.97 percent; income levels held near ten year average, while capital growth slipped to 2.25 percent.

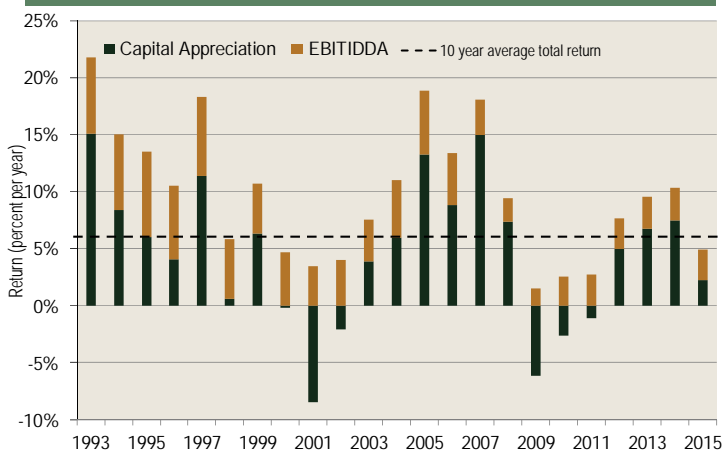
As in prior years, we devote our fourth quarter issue of the *Hancock Timberland Investor* to a review of investment performance of U.S. private timberland properties.

The highest profile measure of timberland performance in the U.S. is the National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Property Index, which reports returns for institutional investments throughout the United States. At year-end 2015, 454 timberland properties were included in the NCREIF database. These properties contained over 13.3 million acres of timberland, with a combined market value of \$24.2 billion. Seventy percent of the NCREIF Timberland Property Index value was located in the South, 22 percent in the Pacific Northwest, 5 percent in the Northeast, and the remaining 2 percent in the Lake States.

Performance Results

The Timberland Property Index total return for 2015 was 4.97 percent, a 551 basis point decrease from 2014's 10.48 percent return and 215 basis points below the 10 year average total return of 7.12 percent. This year's total return reversed a three year run of consecutive gains, during which timberland returns totaled 29.5 percent. 2015 marked the first dip below 5.0 percent since 2011 (*Chart 1*).

Chart 1: NCREIF Timberland Calendar-year Total Returns



Sources: NCREIF and HTRG Research

NCREIF reports both a timberland property-level operating income return, or EBITDDA, and a capital return. Property level operating income in 2015 was 2.67 percent, similar to operating income in 2014 (2.87 percent), and just shy of the ten year average of 2.75 percent. NCREIF's Timberland Property Index capital return in 2015, at 2.25 percent, was 521 basis points below 2014's 7.46 percent, and 200 basis points below the 10 year average.

Regional Timberland Performance

Regional performance varied across the U.S. Timberland investments in the South generated a 4.31 percent total return in 2015, 584 basis points (bps) below 2014. Western timberland performance, at 8.15 percent in 2015, was 384 bps down from the 12.00 percent return in 2014. Timberland in the Lake States returned 2.28 percent in 2015, a 940 bps drop from 11.68 percent in 2014. Northeast timberland properties returned 2.92 percent in 2015, a 591 bps drop from 2014 (*Table 1*).

Table 1: Regional U.S. Timberland Calendar Year Performance, 2015

	South	West	Northeast	Lake States	U.S.
EBITDDA	2.68%	2.64%	3.00%	2.46%	2.67%
bps change from 2014	8	-130	72	95	-20
Capital	1.59%	5.40%	-0.07%	-0.19%	2.25%
bps change from 2014	-581	-241	-651	-1026	-521
Total	4.31%	8.15%	2.92%	2.28%	4.97%
bps change from 2014	-584	-384	-591	-940	-551

Sources: NCREIF and HTRG Research

Across the U.S., timberland investment income from operations in 2015 was just below long-term averages, while capital returns fell in all regions. Timberland investment returns in the U.S. South generated 2.68 percent income returns in 2015, the highest in the South since 2006. Southern timberland investments produced 1.59 percent capital return, a 581 bps fall from 2014. Income returns on western timberland, at 2.64 percent, were 130 bps below last year's 3.94 percent, and 128 bps below the ten year average. The capital component of western timberland returns in 2015, at 5.40 percent, was down

(Continued on page 2)

2015 Timberland Investment Performance (Continued from page 1)

Chart 2: NCREIF U.S. South Annual Timberland Performance

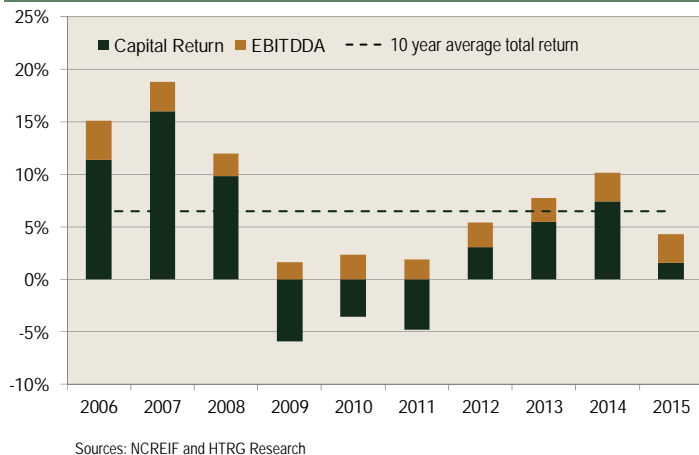
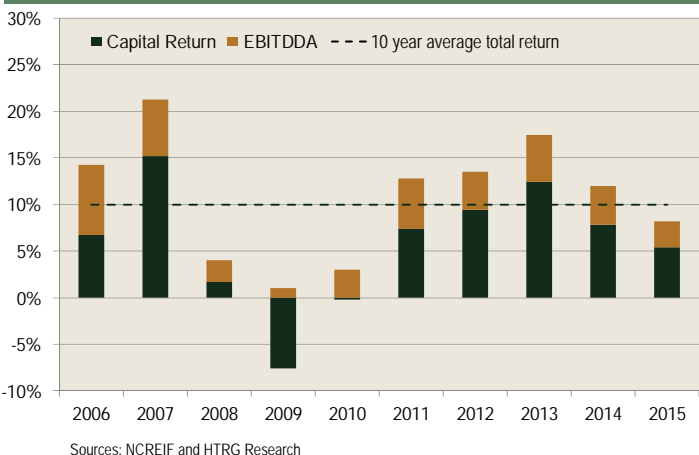


Chart 3: NCREIF U.S. West Annual Timberland Performance



241 bps from 2014's 7.81 percent, and 42 bps below the ten year average (Charts 2 and 3).

Differences in regional timberland performance have been pronounced in the wake of the 2008 financial crisis. For the past five years, investors in the West benefitted from strong Chinese demand for West Coast log exports. Timberland properties in the U.S. South on the other hand, having limited access to log export opportunities and a greater dependence on domestic markets have contended with depressed timber prices and below average income. Yet, in 2015, timberland returns in all regions reported by NCREIF were driven lower. This moderation in timberland performance reflects both a downward revision in prospects for continued growth in China's appetite for U.S. logs and lumber, and a settling down in announced new additions of lumber and plywood capacity in the U.S.

Lower growth in China's residential construction sector in the second half of last year translated into weaker log imports, which not only negatively impacted western income returns but also lowered expectations for future capital appreciation.

Southern timberland managers continued to face only small improvements in pricing for sawtimber, which moderated expectations for capital appreciation.

Annual Performance Across NCREIF Property Indices

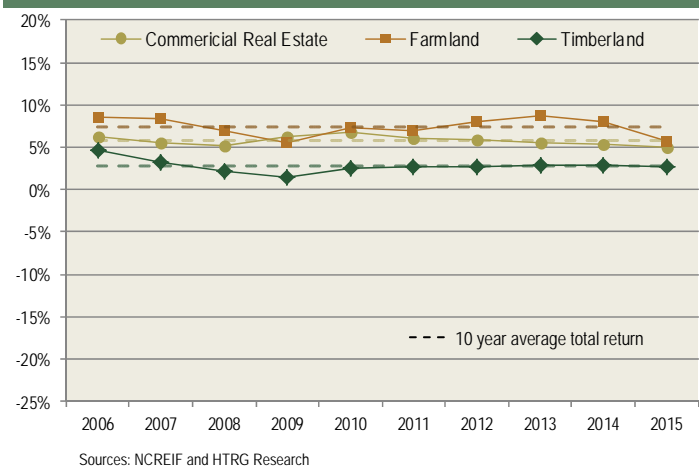
Performance of timberland investments when viewed comparatively with NCREIF's two other reported property-level Indices – NCREIF Farmland Property Index and NCREIF Commercial Real Estate Property Index – show a few interesting observations. Over the past ten years, farmland property income has averaged 7.42 percent annually, outperforming both commercial real estate's ten year average income return of 5.78 percent and timberland's ten year average income return of 2.75 percent.

Income variability among NCREIF's three property level indices over the past ten years shows commercial real estate and timberland income returns to be the most stable, at 0.57 percent and 0.78 percent annual standard deviations. Farmland income has fluctuated over the past ten years to a greater extent than timberland and commercial real estate income returns, with an annual standard deviation of 1.14 percent.

This year's timberland income return is above the ten year average, while farmland and commercial real estate income returns in 2015 were below historical ten year averages. Farmland income in 2015 is 173 bps below the ten year average. Commercial real estate is 77 bps below its ten year average (Chart 4).

Income returns from all three of NCREIF's Property Indices responded to the Global Financial Crisis. Commercial real estate incomes hit a low of 5.10 percent in 2008. Timberland and farmland income reached bottoms one year later in 2009, with timberland income returns at 1.49 percent and farmland income returns at 5.78 percent. Timberland incomes have been fairly flat since 2010, and at the ten year

Chart 4: NCREIF Property Indices Income Return (percent per year)



(Continued on page 6)

Quarterly U.S. Housing Starts (1,000 units) and U.S. Softwood Lumber Composite Price (USD per MBF)

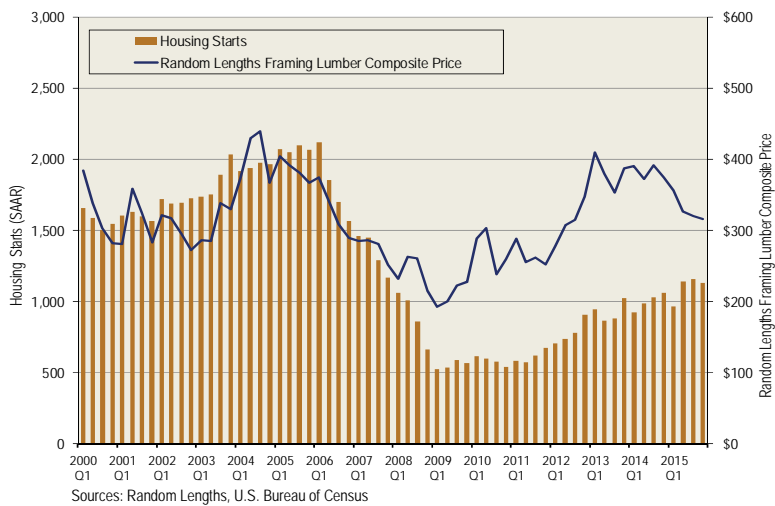


Figure 1. U.S. Softwood Lumber Prices and U.S. Housing Starts

U.S. housing starts continued to trend higher in 2015, reaching a total for the year of 1.1 million units, a 10 percent increase over 2014. Despite the increased residential construction activity, softwood lumber prices moved lower, with the Crow's Framing Lumber Composite Index in the fourth quarter down 16 percent year over year. Throughout the year, softwood lumber prices have contended with the strong U.S. dollar, which has supported increased imports of softwood lumber from Canada and offshore suppliers.

Quarterly Australian Dwelling Unit Approvals (1,000 units), Softwood Lumber Composite Price Index (AUD based) & Softwood Stumpage Price Index (AUD based)

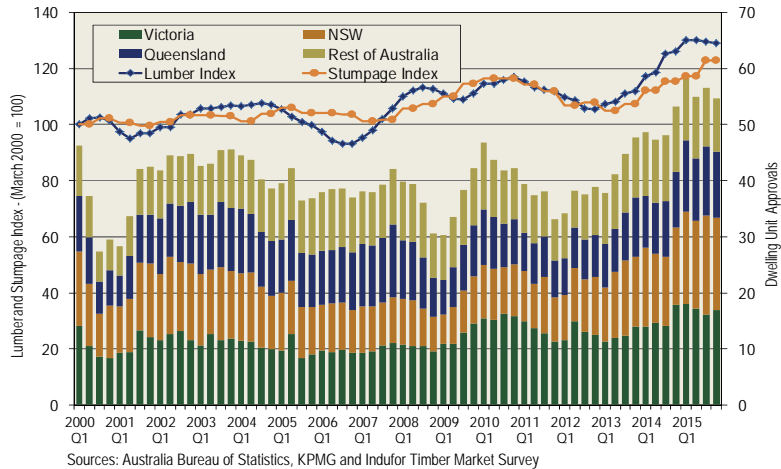


Figure 2. Australian Softwood Lumber Prices, Timber Prices, and Dwelling Unit Approvals

In the fourth quarter of 2015, Australian dwelling approvals (a key indicator of residential construction activity) dropped 3 percent compared to the previous quarter, and were down 6 percent from the peak reached in the first quarter of this year. Australia experienced strong housing activity over the past year, but a downward trend seems to be emerging, reflecting headwinds in the overall Australian economy. Although structural lumber prices in 2015 were up from 2014 they have followed a trajectory similar to housing, peaking in the first quarter of this year and moving incrementally lower over the course of the year.

Quarterly New Zealand Softwood Log Export Volume to China (million m3) and Price to China (USD per m3 CIF)

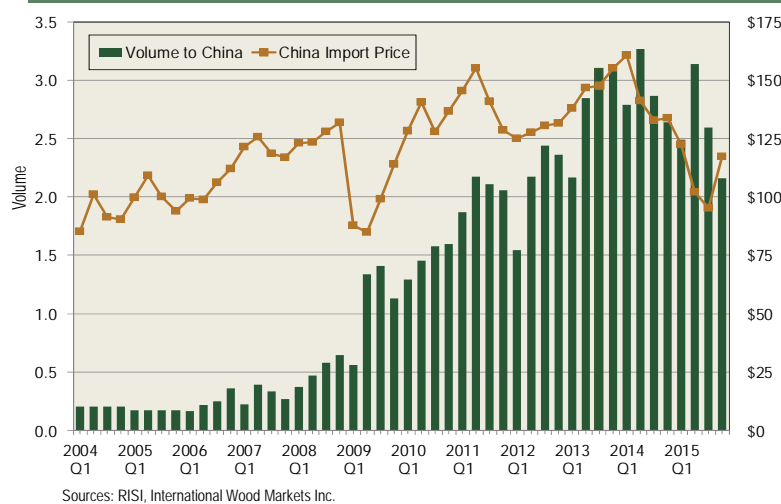


Figure 3. New Zealand Log Exports

New Zealand sawlog exports to China dropped 10 percent in 2015, with exports in the fourth quarter down 18 percent from the same period last year. New Zealand sawlog export markets have been negatively affected by the ongoing slowdown in China's economy and construction activity. After falling 41 percent over the past seven quarters, the Q4 price of USD denominated New Zealand sawlogs in China turned a corner, and increased 23 percent from the third quarter.

Quarterly Exchange Rates Between USD and Commodity Currencies

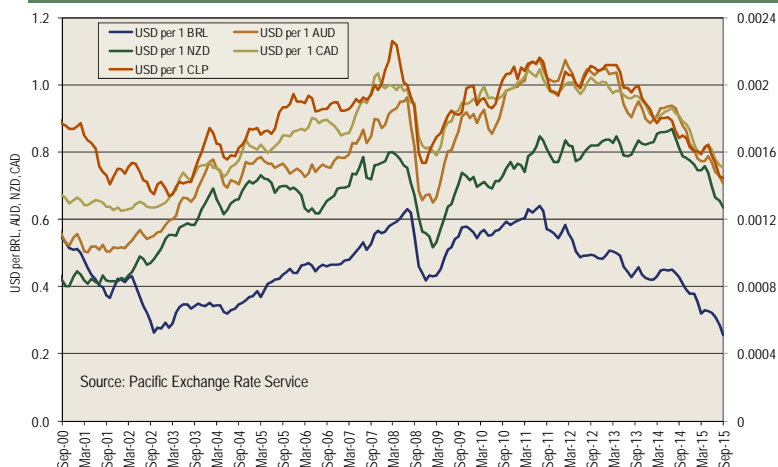


Figure 4. Exchange Rates

The U.S. dollar continued to register gains in the final quarter of 2015 against the currencies of Australia, Brazil, Canada, Chile, and New Zealand. Comparing the final quarter of 2015 to the last quarter of 2014: Australia was down 16 percent; Canada 15 percent; Chile 14 percent; and New Zealand 15 percent. The Brazilian real had the largest decrease compared to the U.S. dollar, falling 34 percent year-over-year in the fourth quarter, reflecting the deep recession of Brazil’s economy and the high degree of political uncertainty there.

Quarterly Average Regional Composite Prices for Softwood Sawtimber Stumpage (USD per m3)

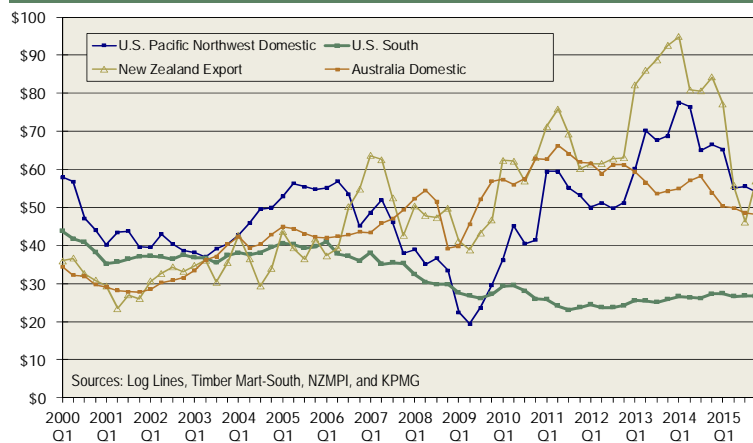


Figure 5. Regional Softwood Sawtimber Stumpage Prices

Softwood sawtimber stumpage prices denominated in U.S. dollars moved lower in the U.S., New Zealand, and Australia over the past year. The most pronounced downward corrections were in New Zealand and the U.S. Pacific Northwest, both negatively impacted by the slow-down in Chinese demand. In the fourth quarter of 2015, the New Zealand export price was down 32 percent from the same period a year earlier, while the U.S. Pacific Northwest price was down 19 percent. With less exposure to export markets, softwood sawtimber prices in the U.S. South were down only marginally (2 percent) year-over-year in the fourth quarter. Similarly, the correction in Australian sawtimber prices has been moderate, reflecting the heavy orientation to domestic markets.

Quarterly Prices for Market Pulp and Delivered Pulpwood (USD per metric ton)

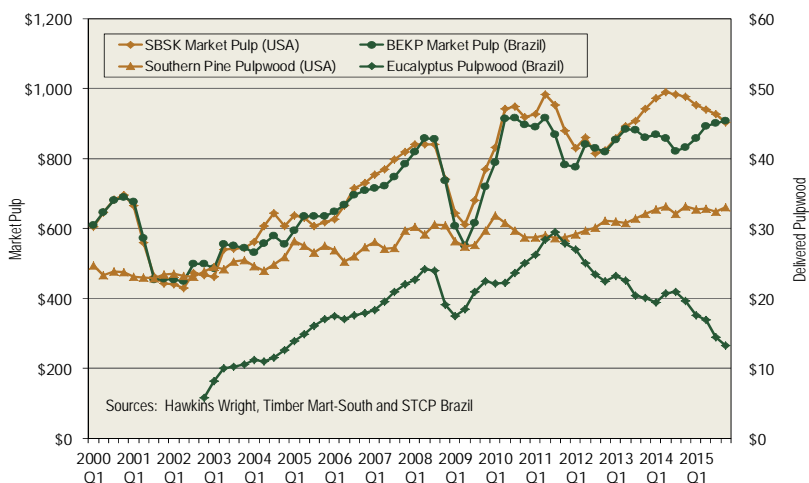


Figure 6. Pulp and Pulpwood Prices, U.S. South and Brazil

In the fourth quarter, Bleached Eucalyptus Kraft Pulp (BEKP) continued to edge higher, and is approaching the previous highs set in 2010-2011. In contrast, Southern Bleached Softwood Kraft (SBSK) pulp prices continued their retreat, and are now back in-line with the BEKP price. The convergence of pulp prices in the U.S. South and Brazil reflects the strength of the USD, the extreme weakness of the Brazilian real, and the impact of exchange rates on these globally traded commodities. Pine pulpwood delivered prices in the U.S. South have been relatively stable over the past year, while Brazilian eucalyptus pulpwood prices continued their pronounced decline, returning Brazilian wood fiber costs to the low levels of the mid-2000s.

U.S. Timberland Annualized Operating Cash Yields (percent per year)

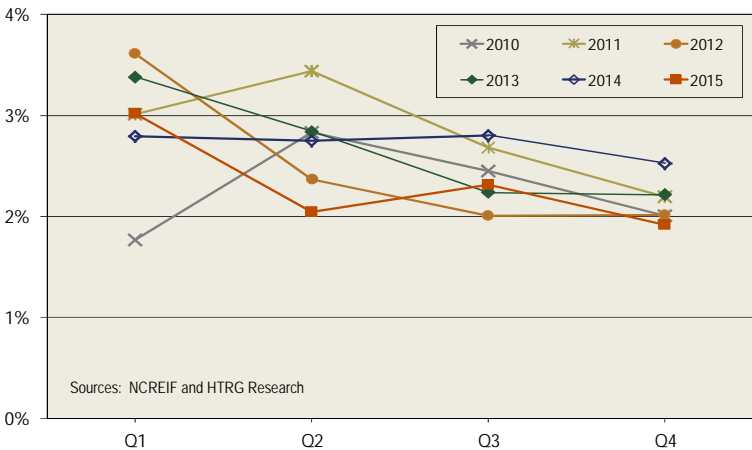


Figure 7. U.S. Timberland Operating Cash Yields
 U.S. cash yields from private timberland operations, as reported by NCREIF, were 1.9 percent in the fourth quarter, which was down from the previous quarter’s 2.3 percent. The decrease in the fourth quarter reflected lower cash returns in the U.S. South and the marginally lower returns in the U.S. West compared to the prior quarter. Fourth quarter timberland cash returns were the lowest reported by NCREIF over the past six years.

Monthly Securitized Timberland Share Value

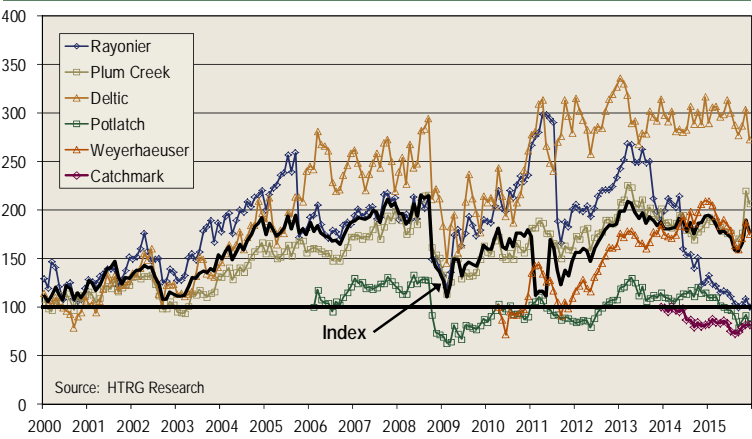


Figure 8. Hancock Securitized Timberland Index
 The Hancock Securitized Timberland Index, a market-capitalized weighted performance Index of timberland held in public market ownership increased 9 percent in the fourth quarter of 2015 from the previous quarter, yet down 6 percent from the fourth quarter of 2014. Contributing to the recent volatility in the Index has been the November merger bid by Weyerhaeuser for Plum Creek. The proposed merger was accepted by shareholders of Plum Creek and Weyerhaeuser on February 12, 2016. Catchmark Timber gained 9.2 percent over the past quarter. Catchmark Timber continues to report strong results and recently increased its credit facility in December to support new acquisitions. The three other REITs in the Index, Potlatch (-2 percent), Rayonier (-1 percent) and Deltic (-0.2 percent), saw their market value drop slightly.

Quarterly U.S. South Timberland Values (USD per acre)

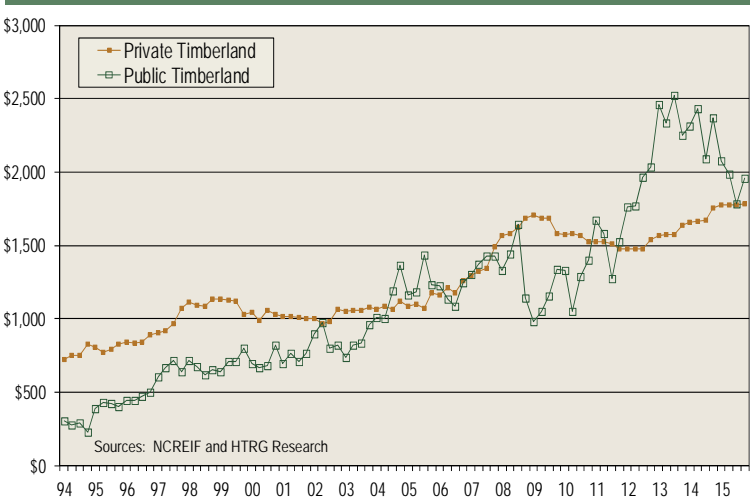


Figure 9. Timberland Enterprise Value
 In the fourth quarter, timberland held in private financial ownership in the U.S. South averaged \$1,781 per acre, which represents a modest \$28 per acre or 1.6 percent year-over-year increase. During 2015, public timberland values, measured by the Timberland Enterprise Value per Southern Equivalent Acre (TEV/SEA), experienced a pronounced correction, dropping \$312 per acre or -14.9 percent between the fourth quarter of 2014 and the final quarter of 2015. At the end of 2015, the spread between public and private timberland valuations was \$177 per acre.

2015 Timberland Investment Performance *(Continued from page 2)*

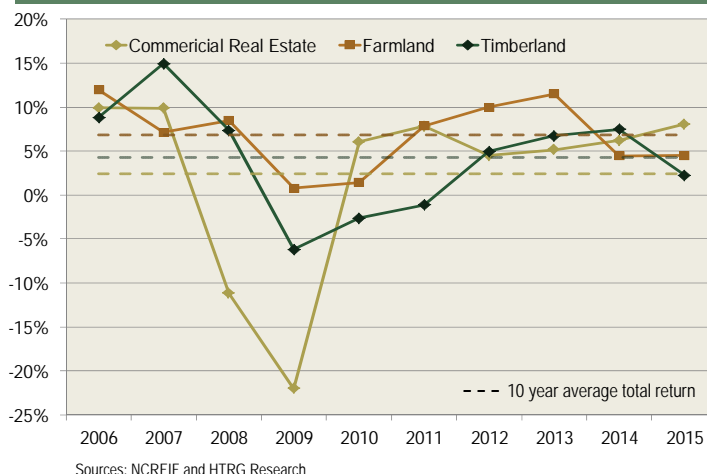
average level for the past five years. Commercial real estate income reached a peak in 2010 at 6.76 percent, 100 bps above the ten year average. Farmland incomes have climbed since 2009, with the most recent peak reached in 2013 at 8.73 percent, 131 bps above the ten year average. Farmland income has fallen 34 percent over the last three years.

Capital returns measured across NCREIF's property indices have differed substantially. Commercial real estate capital returns in 2015, at 8.02 percent, were 181 bps above 2014. Farmland properties returned 4.48 percent of capital appreciation in 2015, a similar level as 2014, and reflected a pause in farmland capital appreciation after the sharp rate reduction in 2014. 2015's farmland capital return was 700 bps below the high point of 2013 (*Chart 5*).

The low point for capital returns across all three property indices was in 2009. Commercial real estate capital return fell the deepest, at -21.98 percent in 2009, and farmland at 0.78 percent that year. Compared to the ten year average capital return, timberland and farmland have found capital returns above the ten year average for three of the past four years. Commercial real estate capital returns have appreciated above its ten year average for the last six years.

Historically, the bulk of the variation in property level returns has been within the capital component of NCREIF's property-

Chart 5 : NCREIF Property Indices Capital Return (percent per year)



level performance results. Capital returns for commercial estate over the past ten years have shown the greatest variability of the three indices, with an annual standard deviation of 10.49 percent. Timberland capital returns have varied by an annual 6.24 percent standard deviation, and farmland capital returns by 3.92 percent. Property level income returns, in comparison has remained within a tighter and more predictable range. 🌲

HNRG Research Team

Court Washburn
Managing Director and
Chief Investment Officer
cwashburn@hnrq.com

Keith Balter
Director of Economic Research
kbalter@hnrq.com

Mary Ellen Aronow
Senior Forest Economist
maronow@hnrq.com

Bill Devens
Senior Agricultural Economist
bdevens@hnrq.com

Elizabeth Shestakova
Economic Research Analyst
eshestakova@hnrq.com

Hancock Timber Resource Group is a division of Hancock Natural Resource Group, Inc., a registered investment advisor and wholly owned subsidiary of Manulife Financial Corporation.

© Hancock Natural Resource Group, Inc.

NOTES:

Figure 1. The source for the U.S. Housing Starts is U.S. Bureau of Census. The Housing Starts data includes Single-family and Multi-family starts. Random Lengths Lumber Composite Index data is used for lumber prices.

Figure 2. Quarterly Australian Dwelling Unit Approvals is published by the Australian Bureau of Statistics. The Lumber Index is published by Indufor Timber Market Survey using Softwood Structural lumber prices (Blended Price - 60 percent MGP 10 90x35x4800, 40 percent MGP 10 70x35x4800). Log Price Index is calculated using the (APLPI) Radiata Pine Domestic Stumpage prices. The log price is an average of Intermediate and Medium sawlog prices

Figure 3. Quarterly New Zealand softwood log export volume to China and China Import prices are published by the RISI International Timber Service.

Figure 4. Monthly average Exchange Rates are published by the Pacific Exchange Rate Service.

Figure 5. Quarterly Softwood Sawtimber Stumpage Prices for the U.S. Pacific Northwest is reported in Loglines published by RISI. The weighted index is made up of 50 percent Domestic Douglas-fir (47 percent #2 and 53 percent #3 Sawmill sorts) and 50 percent Whitewoods (47 percent #2 and 53 percent #3 Sawmill sorts). U.S. South prices are published by Timber Mart-South (60 percent Southern Pine Sawtimber and 40 percent Chip-n-Saw). Australian domestic prices are calculated using the KPMG Australian Pine Log Price Index (APLPI) Radiata Pine Domestic Stumpage prices. The log price is an average of Intermediate and Medium sawlog prices converted to USD/m3. New Zealand radiata pine export log prices are a blend of A,K and J sort logs published by New Zealand Ministry of Primary Industries converted to USD.

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

Figure 6. Quarterly Market Pulp prices are published by Hawkins Wright. U.S. Southern Pine Pulpwood prices are published by Timber Mart-South. Brazil Eucalyptus Pulpwood prices are published by STCP Engenharia de Projetos Ltda.

Figure 7. Annualized Operating Cash Yields are published by National Council of Real Estate Investment Fiduciaries (NCREIF). Yields are calculated using 60 percent U.S. South and 40 percent U.S. West.

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 adjusted 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 Hancock Timber Resource Group.

Figure 9. Public equity values are derived from our Timberland Enterprise Value per Southern Equivalent Acre (TEV/SEA) calculation for five timber-intensive publicly traded companies as 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.