

## TIMBERLAND INDEX

### STAGNANT TIMBERLAND RETURNS CONTINUE FOR THE THIRD QUARTER OF 2017

The third quarter Timberland Property Index (TPI) returns were about 10 basis points below the returns posted for the second quarter of this year – coming in at 0.60%. This return was comprised of 74 basis points of EBITDDA return and (15) basis points of appreciation return. This marks the first quarter in 2017 where the appreciation return was negative. Year-to-Date (Y-T-D) returns through three quarters were 2.07% with component returns of 0.06% and 2.01% for appreciation and EBITDDA respectively.

As expected, the Southern region subindex closely tracked the TPI results. The Southern region total return was 0.63% for the third quarter with an appreciation return of (0.02)% and an EBITDDA return of 0.65%. Softwood sawtimber prices, on average, across the south have remained flat thus influencing flat appraisals and appreciation returns for 2017. The Y-T-D southern return is 1.97%.

Northwest region returns have performed marginally better with the Northwest region subindex posting a 0.90% return comprised of (0.07)% and 0.97% returns for appreciation and EBITDDA respectively. The Northwest Y-T-D return for 2017 is 3.03% with 2.43% attributable to EBITDDA. Given the continued strong timber prices experienced in most markets throughout the Northwest, the returns reflect the strong cash generation of these properties.

Northeast region subindex continued its lackluster trend during the third quarter posting (1.45)% return. The EBITDDA return was slightly positive at 0.07% while the appreciation return was (2.15)%. The total Y-T-D return was (0.93)% as valuations continued to retreat in this region.

On the 15 timberland properties that comprise the Lake States region subindex the third quarter return was 1.02% - almost double the second quarter return. EBITDDA return was 0.86% and an appreciation return of 0.16%. Y-T-D return for the Lake States is 1.57%.

In general, these returns continued to be below investor expectations. The Northwest region subindex continues to out-perform the other regions. Over the long-term timberland returns have been shown to be positively correlated with inflation and uncorrelated, or possibly negatively correlated with traditional measures of market performance like the S&P 500. Hence, economic conditions where extended periods of low inflation (low risk-free rates) are coupled with bullish equities market performance suggest below average expected timberland returns – the current economic situation. Asset pricing models that such as CAPM or the Fama – French three factor model currently predict returns in the 2% to 4% range depending on model assumptions and ex ante inputs. It appears that 2017 may be a below average return year for timberland.

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#### TIMBERLAND TOTAL RETURNS

	NPI	Total Timberland	Property Count	South	Northwest	Northeast	Lake States
3rd Qtr 2017	1.70	0.60	476	0.63	0.90	-1.45	1.02
2nd Qtr 2017	1.75	0.70	457	0.48	1.47	-0.32	0.57
One Year	6.89	3.28		2.89	5.18	-3.72	8.43
Three Years	9.83	5.24		5.04	6.87	0.59	5.80
Five Years	10.35	7.13		6.23	10.55	1.71	7.16
Ten Years	6.23	5.21		4.53	7.59	0.53	0.00

#### TIMBERLAND EBITDDA RETURNS

	NPI	Total Timberland	South	Northwest	Northeast	Lake States
3rd Qtr 2017	1.14	0.74	0.65	0.97	0.70	0.86
2nd Qtr 2017	1.16	0.62	0.60	0.76	0.42	0.25
One Year	4.66	2.70	2.58	3.20	2.21	2.29
Three Years	4.86	2.67	2.64	2.85	2.44	2.57
Five Years	5.14	2.71	2.47	3.44	2.28	1.95
Ten Years	5.56	2.51	2.30	3.24	1.75	

#### TIMBERLAND APPRECIATION RETURNS

	NPI	Total Timberland	South	Northwest	Northeast	Lake States
3rd Qtr 2017	0.56	-0.15	-0.02	-0.07	-2.15	0.16
2nd Qtr 2017	0.59	0.08	-0.12	0.72	-0.73	0.32
One Year	2.15	0.56	0.30	1.93	-5.84	6.05
Three Years	4.80	2.51	2.35	3.94	-1.81	3.16
Five Years	5.02	4.33	3.69	6.93	-0.55	5.13
Ten Years	0.64	2.65	2.19	4.25	-1.21	