

# Western Forest Economists 2008 Annual Meeting

## “Discount Rates in Forestland Markets”

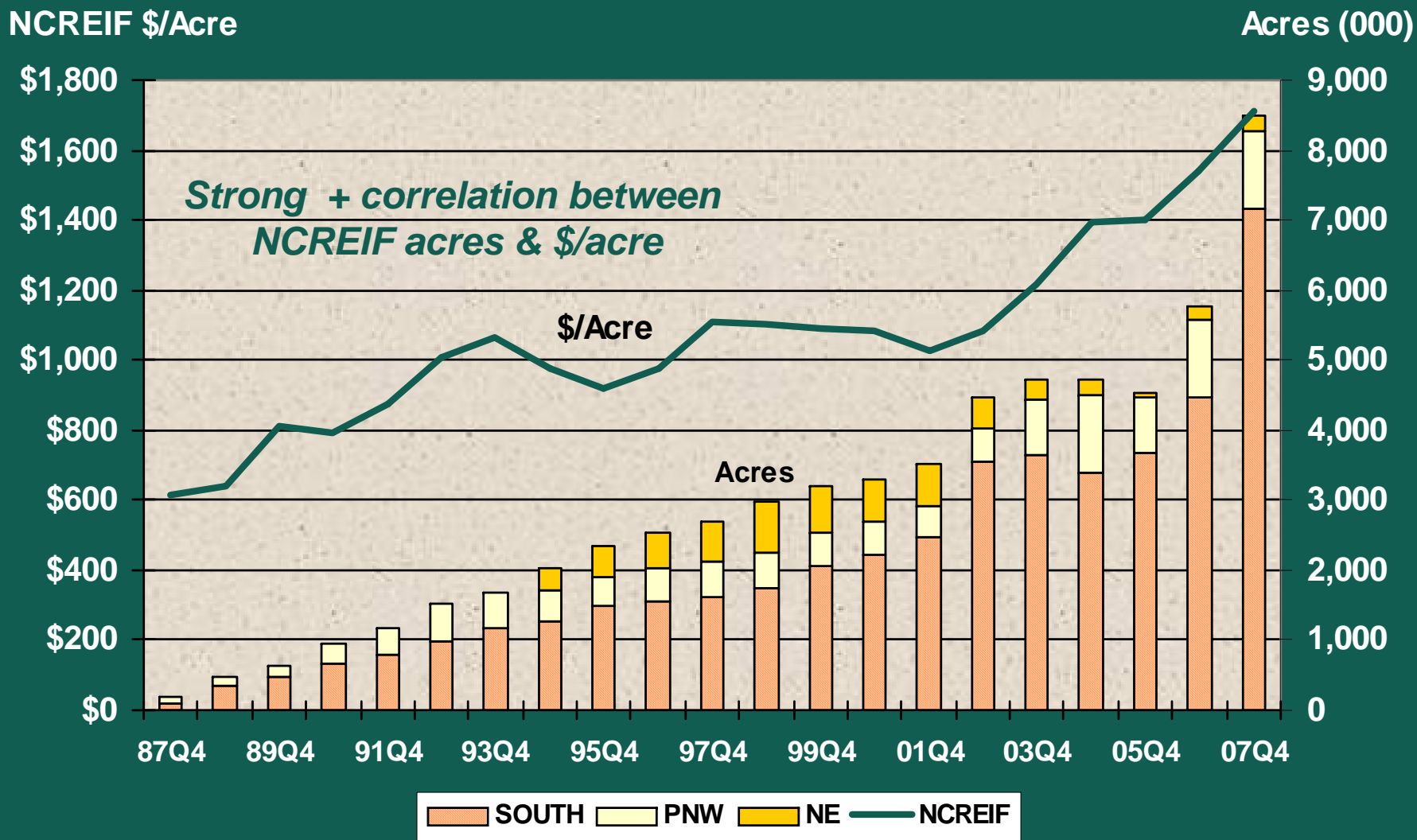
May 6, 2008 – Welches, OR  
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James W. Sewall Company, Old Town, ME  
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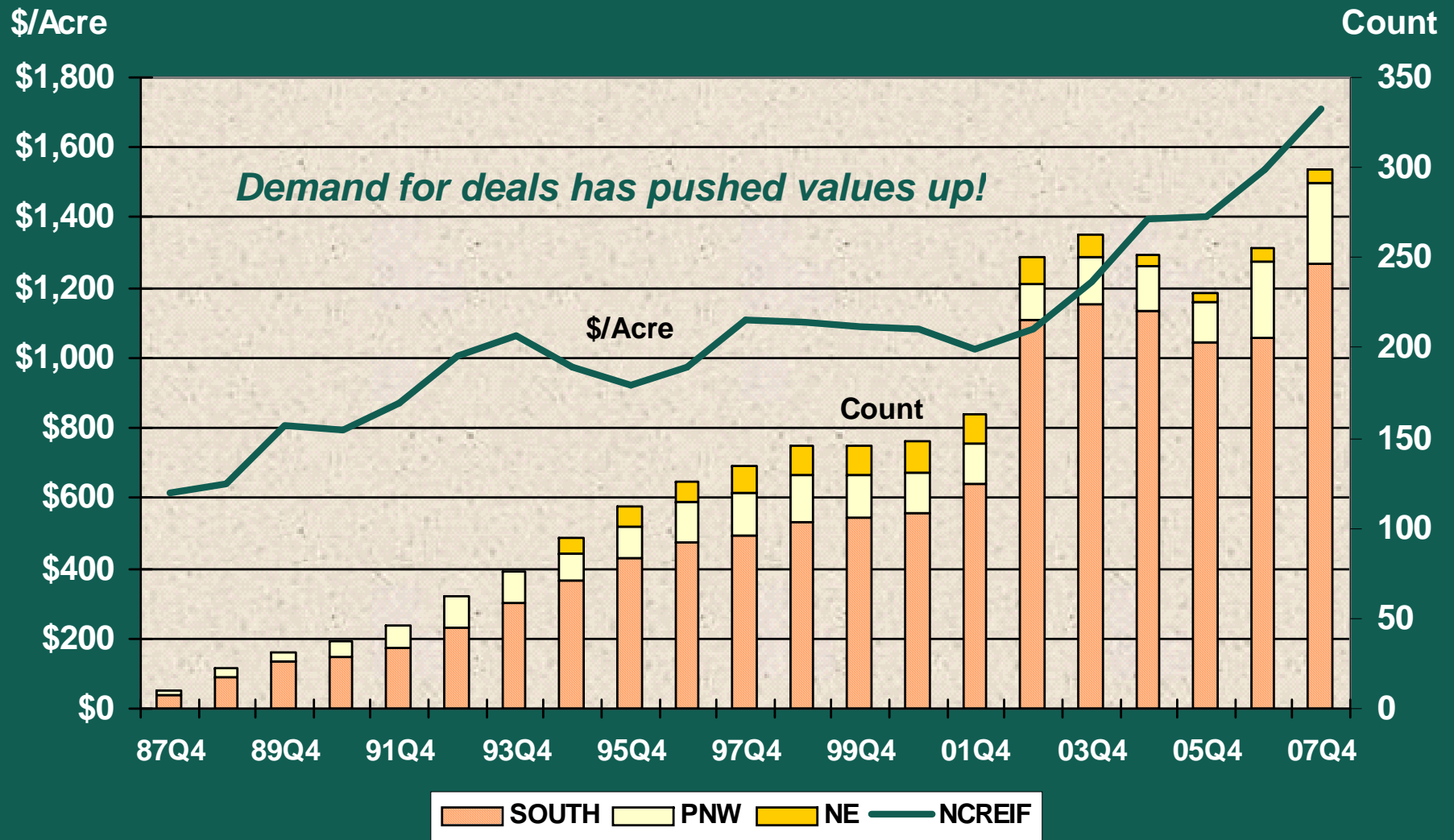


JAMES W. SEWALL COMPANY / *Since 1880*

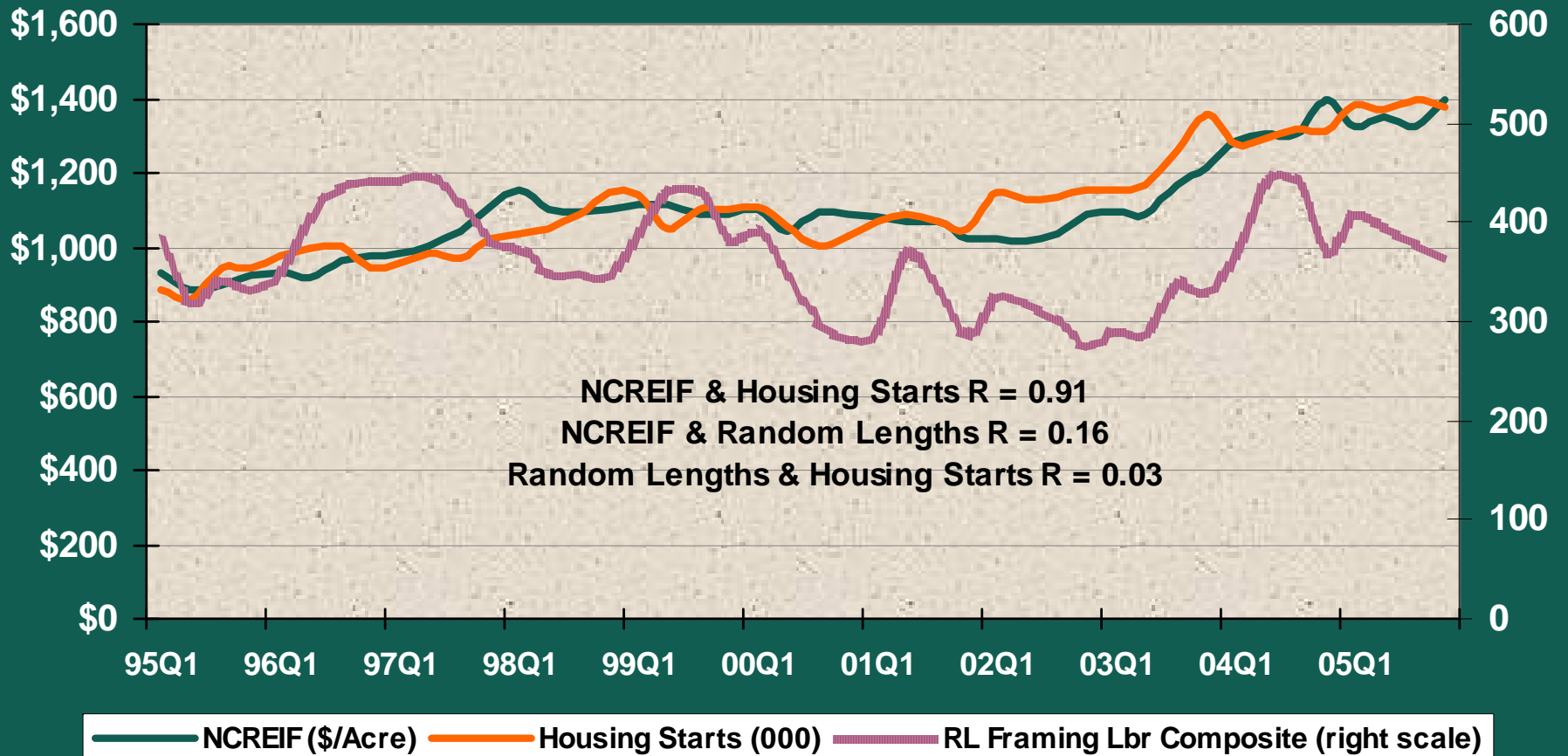
# U.S. Timberland Values & NCREIF Acres By Region



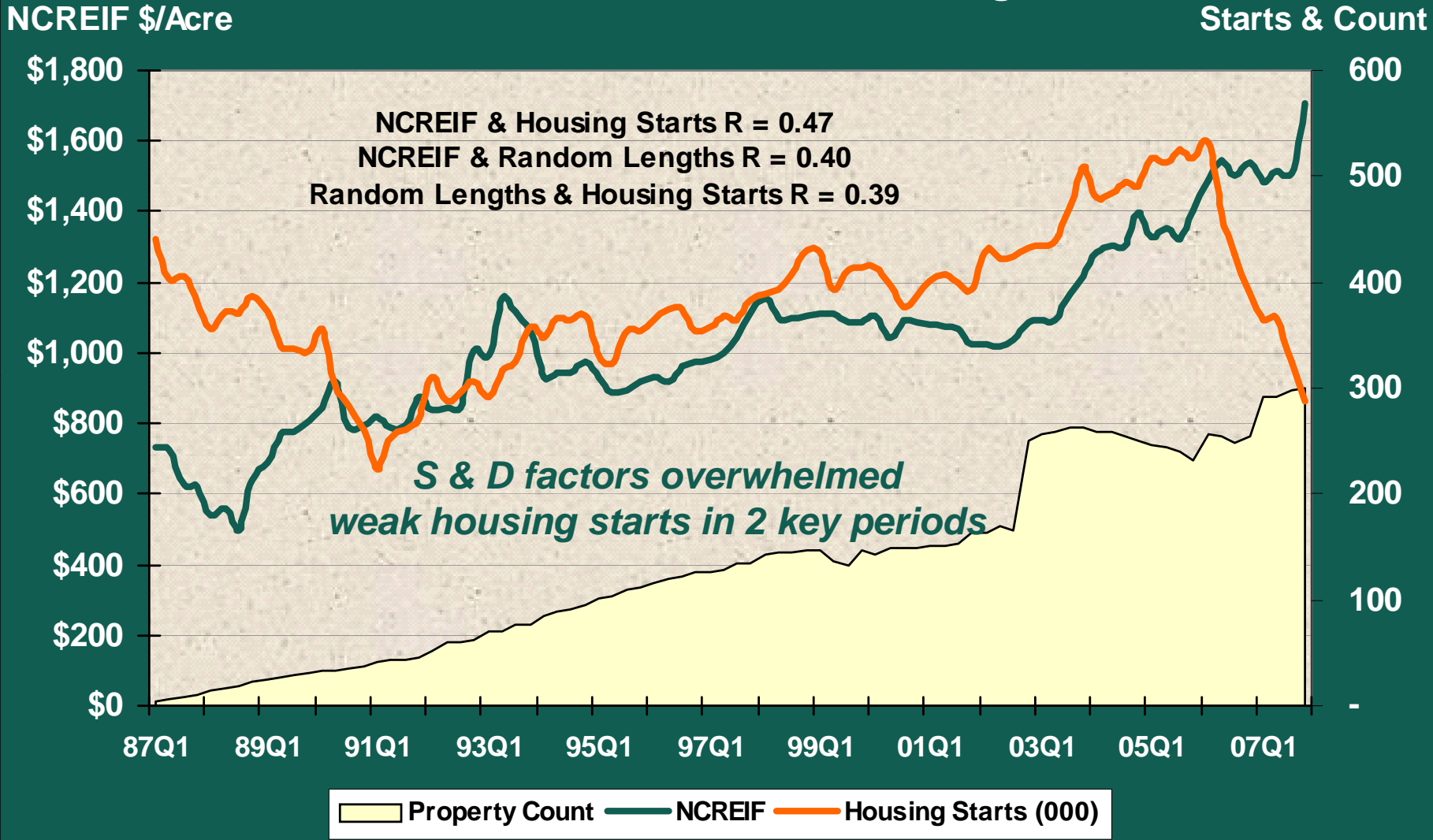
# U.S. Timberland Values & NCREIF Property Count



## U.S. Timberland \$/Acre vs. Wood Product Indicators 1995-2005



# U.S. Timberland Values vs. Housing Starts



# FALL '07 INVESTOR SURVEY ON ACQUISITION MODEL INPUTS

- **16 Active Investors**
- **Preferred Valuation Methods**
- **Discount Rates**
- **Impact of Non-timber Revenues**
- **Starting Timber Prices**
- **Timber Price Forecasts**

## VALUATION METHODS USED BY INVESTORS (U.S. Assets)

- DCF analysis is primary method (15)
- DCF analysis is only method (4)
- Sales comp. approach is primary method (1)
- Sale comp. approach used as a check (11)
- Cost approach sometimes used as a check (7)
- Cost approach never considered (9)

## FALL '07 DISCOUNT RATES – real rates for U.S. timberlands

- ▣ <5% (1)
- ▣ 5% (4)
- ▣ 5-6% (6)
- ▣ 5.0-6.5% (1)
- ▣ 5.75-6.5% (2)
- ▣ 8% (1)



## DISCOUNT RATES – miscellaneous comments\*

- ▣ Rates higher in North & PNW → +50-100 pts
- ▣ Transaction size a factor for some → +50 pts
- ▣ Lots of \$, little time to place it → lower rates
- ▣ No prem. for Australasia; +100 pts for Brazil
- ▣ Offshore rate range 8-15%
- ▣ Varies by investor profile, not by U.S. region

# IMPACT OF NON-TIMBER REVENUES ON DISCOUNT RATE

- Blended rate where HBU exists (most common)
- HBU component drives up rate (more risky)
- HBU component drives down rate (upside, liquidity)
- Don't adjust rate (up) till HBU component  $\geq 40\%$
- Adjust rate (up) only if HBU sales are “aggressive”
- Incremental returns from carbon markets
  - Looking at it but not yet pricing it in (11)
  - Selected projects focus on carbon returns (1)

## INITIAL TIMBER PRICES USED BY BIDDERS

- Start with spot, then project on fundamentals (1)
- Spot, with return to trend line (4)
- Trend line, then flat real (1)
- Spot price (3)
- Prior year average, then project on fundamentals (1)
- 1-2 year rolling quarterly average (2)
- 3-year rolling average (1)
- 4-5 year rolling average (1)

## TIMBER PRICE FORECASTS – real rates for U.S. timberlands

- Almost always flat pricing (4)
- Never project real price decreases; flat or + (2)
- No long-term price increases (1)
- Usually flat; rarely real decreases (1)
- 0-2% real, but always flat after 15 years (1)
- Never project + or – beyond year 10 (1)
- Employ price dec./inc., but not past yr. 10 (1)

## FOLLOW-UP ON DISCOUNT RATES – WINTER/SPRING 2008

▣ Feb. '08 survey of most active bidders

▣ Broad consensus - rates across U.S. are 5%

▣ Broad support for 2-yr drop from 6.5-5.0%

▣ Several investors believe rates have fallen as low as 4.0-4.5%

▣ Compressed rates raised values 20-30% over last 2 years (other factors equal)

▣ Potential for further compression?

# 1980s Return Components

▣ Timber growth

▣ Product class shifts

▣ Product price increases

▣ Manage for optimum utilization

▣ = “Timber Fundamentals” – 95-100% of return

▣ TIMO tax advan. & operating efficiency – free



**Bird's Eye Maple - IPCo Michigan Veneer  
Yard**

# Early 1990s Return Components

➤ **Timber fundamentals – 90%**

➤ **TIMO tax advan. & oper. efficiency – 10%**

➤ **Allowed TIMOs to outbid all other investor classes**

➤ **Break-up values – free**

➤ **Allocate asset among multiple investor accounts**

➤ **Smaller properties more liquid: worth more \$/acre**



# Late 1990s Return Components

➤ **Timber fundamentals – 85%**

➤ **TIMO tax advan. & oper. efficiency – 10%**

➤ **Non-TIMOs sharpen their pencils to stay in the game**

➤ **Break-up values – 5%**

➤ **Investor allocations now priced into deals**

➤ **Smaller properties more liquid: worth more \$/acre**

➤ **HBU premiums - free**

➤ **Small parcel sales, conservation easements**

➤ **IRR still > Discount rate, but gap is shrinking**

# 2000-2003 Return Components

- ▣ Timber fundamentals – 75%
- ▣ TIMO tax advan. & oper. efficiency – 10%
- ▣ Break-up values – 5%
- ▣ HBU premiums – 10%
  - ▣ TIMOs, REITs, NGOs kick it up a notch
- ▣ Strategic premiums – usually non-priced
- ▣ Portfolio benefits – non-priced



**Timber ⇒ Crops ⇒ Homes – US Southeast**





**St. Joe River, Northern Idaho**



**Katahdin Lake, Piscataquis County, ME**

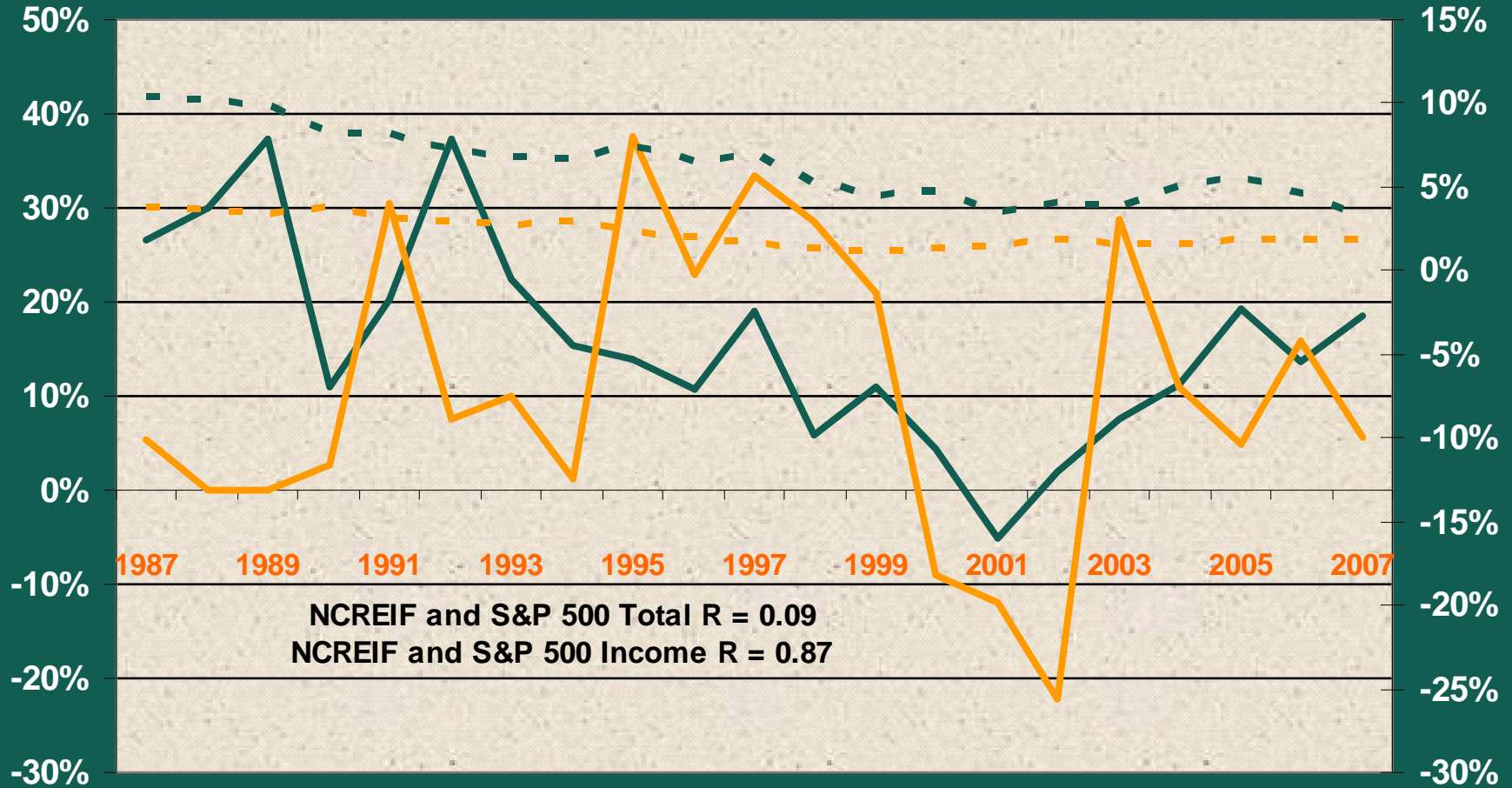
# 2004-2006 Return Components

- ▣ Timber fundamentals – 65%
- ▣ TIMO tax advan. & oper. efficiency – 10%
- ▣ Break-up values – 5%
- ▣ HBU premiums – 10%
- ▣ Strategic premiums – 10%
  - ▣ Extreme competition – new players
  - ▣ Fibre supply plays
- ▣ Portfolio benefits – non-priced??

# NCREIF Timberland and S&P 500 Total and Income Returns

Total Return

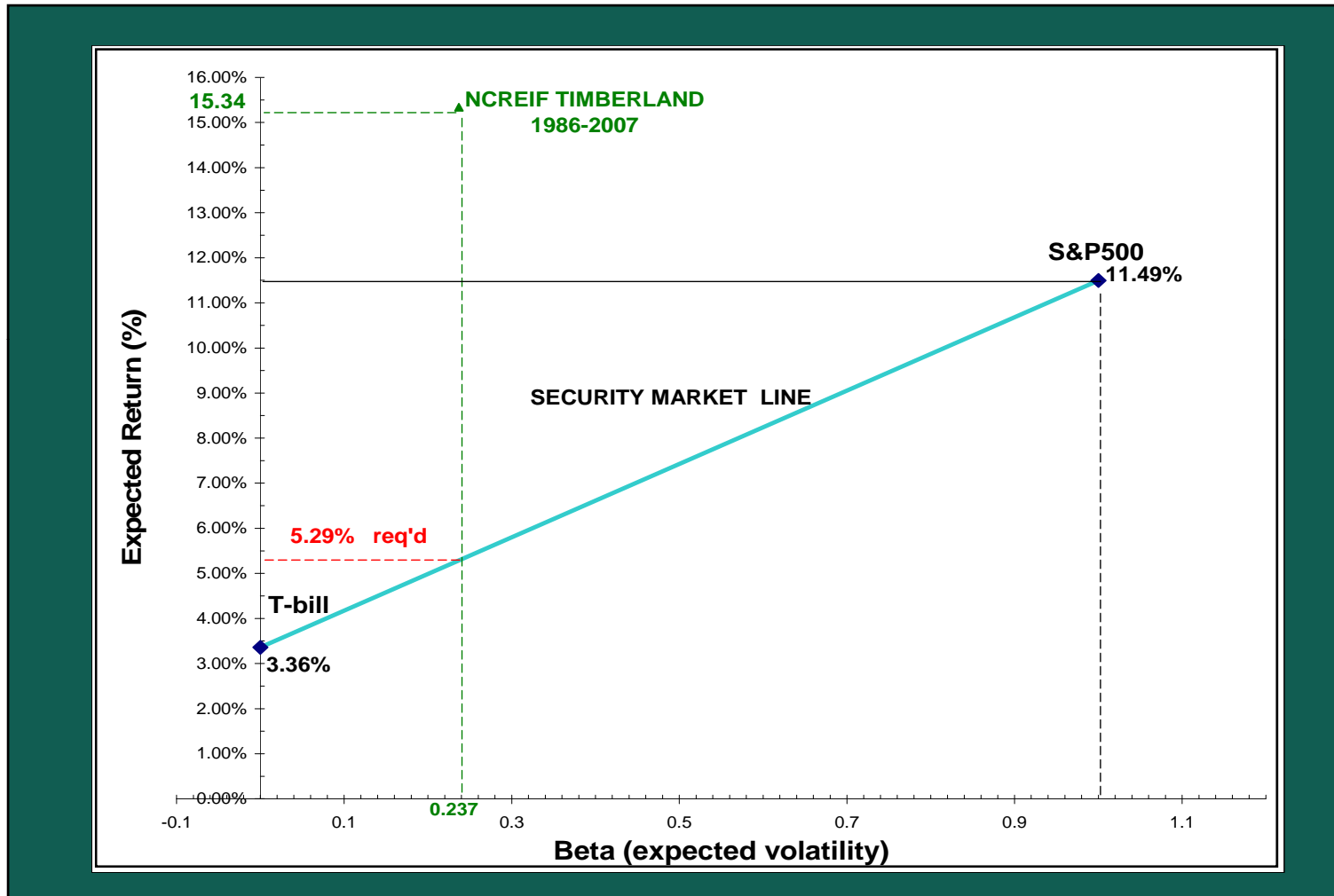
Income Return



NCREIF and S&P 500 Total R = 0.09  
 NCREIF and S&P 500 Income R = 0.87



# CAPM - Is Forestland Still Underpriced?





# 2007-2009 Return Components

➤ (1) Timber fundamentals; (2) TIMO tax advan. & oper. efficiency; (3) Break-up values; (4) HBU premiums

➤ Strategic premiums <10%

➤ How much money is still out there?

➤ Will the number of players continue to increase?

➤ Huge deals will be harder to find.

➤ Are we due for a correction?

➤ Portfolio benefits – priced  $\Rightarrow$  IRR approaches Discount Rate?

➤ Ecosystem services – real, but free

# 2010+ Return Components

➤ (1) Timber fundamentals; (2) TIMO tax advan. & oper. efficiency; (3) Break-up values; (4) HBU premiums

➤ 1- 4 = 85%

➤ Strategic premiums 0-10%

➤ Portfolio benefits 5-10%

➤ Ecosystem services 0-5%

➤ (excluding cons. easements)

# Ecosystem Services

## ➤ Already priced into conservation easements

- Habitat, biodiversity, clean air/water
- Public recreation & open space
- Discourages fragmentation

## ➤ Additional services can be monetized

- Transferable development rights
- Wetlands mitigation credits
- Carbon credit trading
- Renewable energy (methane, wind power)
- Other

# Discount Rate Compression

## Domestic (U.S.)

### Late 1990s:

 Northeast 5.5-7.5%

 Southeast 7.0-8.0%

 West 7.5-9.0%

### 2007-2008:

 Nationwide 5.0-6.0% (reports of <5%)

 Some of lowest rates have been in PNW



**Olympic Tree Farm, WA**

# Discount Rate Compression

## Offshore

### Late 1990s:

 Australasia 9-13%

 South America 12-16%

### 2006 -2008:

 Australasia 7-9%

 South America 7-12%

# COUNTRY RISK – 2007 INVESTOR SURVEY

<u>Country</u>	<i>Investor Ranking</i>						<u>Mean</u>
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	
<b>US</b>	1	0	0	0	0	0	0.17
<b>Canada</b>	2	2	3	2	1	1	1.83
<b>W Europe</b>	0	3	1	1	4	2	1.83
<b>Australia</b>	3	1	2	3	5	3	2.83
<b>New Zealand</b>	4	6	4	4	2	4	4.00
<b>Chile</b>	5	4	4	5	6	5	4.83
<b>Uruguay</b>	7	8	7	6	3	8	6.50
<b>Brasil (southern)</b>	6	5	6	8	10	6	6.83
<b>Brasil (northern)</b>		9			11	7	9.00
<b>Costa Rica/Panama</b>	8	11		10	7	10	9.20
<b>Argentina</b>	10	10	9	9	12	9	9.83
<b>Belize/Honduras</b>	9	12		11	8	11	10.20
<b>S Africa</b>	12	7	11	7	13	13	10.50
<b>Nicaragua/Guatemala</b>	11	13		12	9	12	11.40



**Fire, P. Radiata, Eucalyptus - Hume Forest,  
NSW Australia**





**Euc. grandis, 10 yrs, 1 thinning, 400 TPA, MAI = 30-35  
m<sup>3</sup>/ha  
Entre Rios province, Argentina – fruit boxes or veneer?**



## WHERE ARE DISCOUNT RATES HEADED?

- **Still much more \$ than deals**
- **Increasing interest in U.S. from offshore**
- **Green investors tolerate very low returns**
- **Portfolio benefits will have to be priced in to justify lower rates?**

## FINAL THOUGHTS

➤ **More speculative returns may be priced, but this will not necessarily result in higher rates**

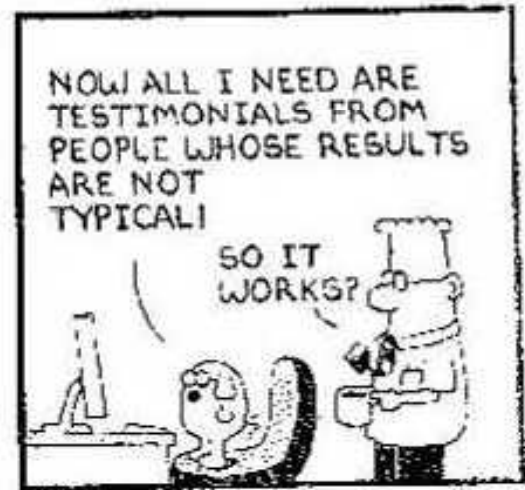
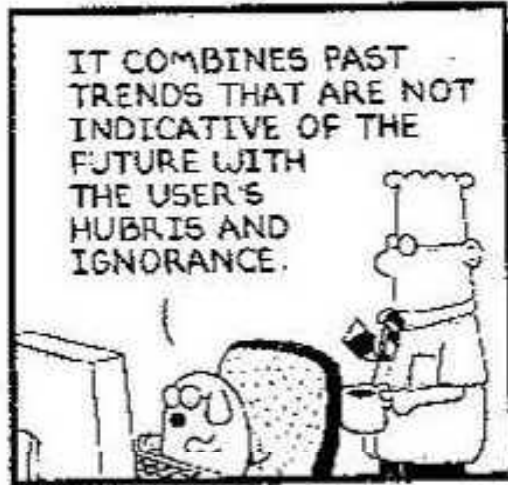
➤ **Just as leverage and supply agreements haven't**

➤ **Rationalization? Requires:**

➤ **Discipline; or**

➤ **A real train wreck (or 2)**

**DILBERT** by Scott Adams





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