

SECURE, SUSTAINABLE WOOD FIBER FROM THE US TO GLOBAL MARKETS



FOREST2MARKET

PETER J. STEWART
OCTOBER 10, 2017

©2017 Forest2Market, Inc.



FOREST2MARKET INTRODUCTION

Forest2Market's Mission

Empower participants in the global forest, wood products, paper products, biochemical and bioenergy industries to make exponentially better decisions through the strategic application of industry expertise and unique datasets.



A HISTORY OF POSITIVE CHANGE

FOREST2MARKET TIMELINE

- 2001: Stumpage Price Database Reports: US South
- 2005: Price Forecasts: US South
- 2006: Wood Raw Material Benchmarks & Supply Chain Analytics: US South
- 2006: Analytics and Advisement Services for Forest Products Companies & Timberland Investors
- 2007: Wood Raw Material Benchmarks and Supply Chain Analytics: Western US & Canada
- 2008: Analytics and Advisement Services for Bioenergy, Biofuels and Biochemical Producers & Investors
- 2009: Southern Yellow Pine Lumber Market Price Report & Benchmarks
- 2012: Benchmarks and Supply Chain Analytics: Great Lakes Region of US & Canada
- 2013: Benchmarks and Supply Chain Analytics: Eastern US & Canada
- 2013: Benchmarks and Supply Chain Analytics: Forest2Market do Brasil
- 2017: Benchmarks and Supply Chain Analytics: Scandinavia, Baltic States, Russia, Uruguay & Chile

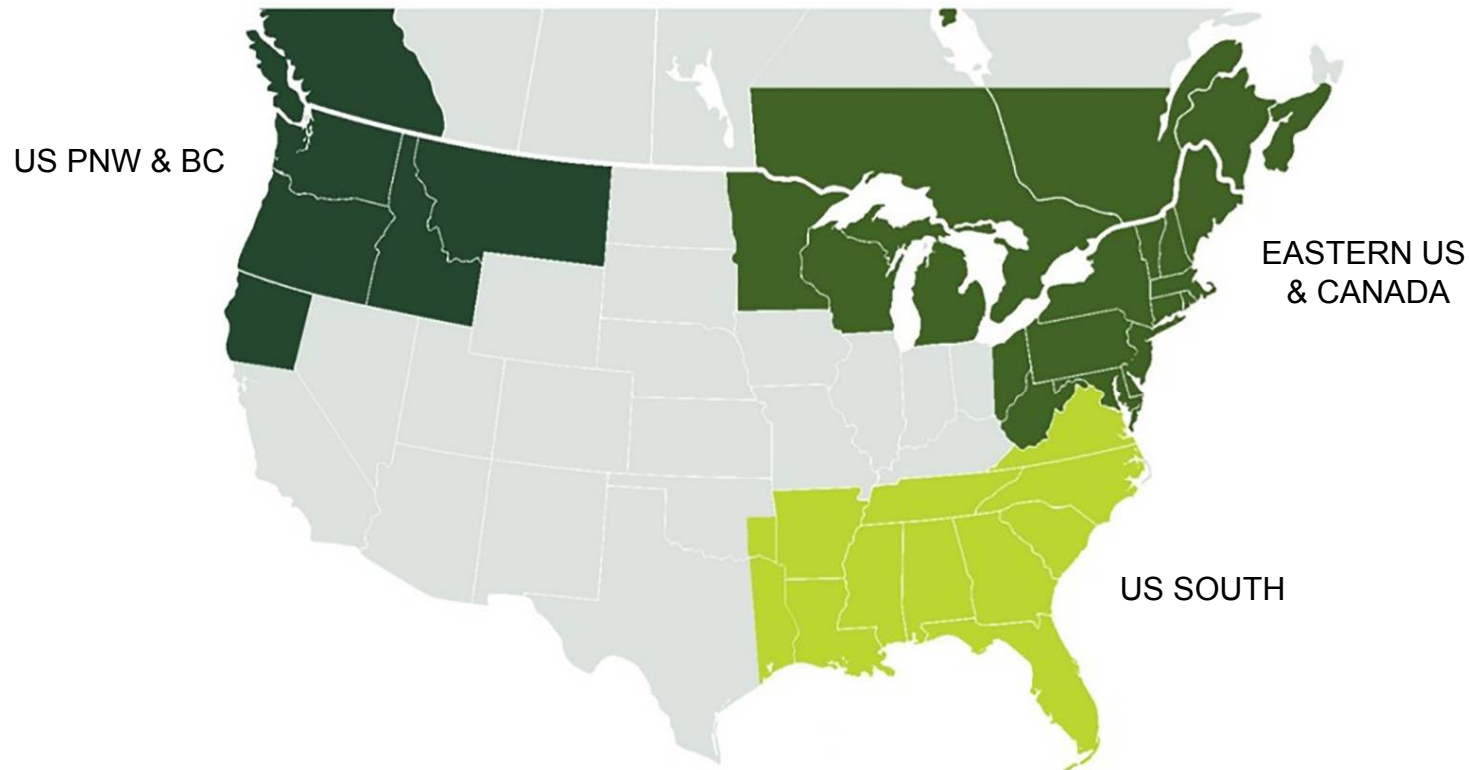


FOREST2MARKET MARKET COVERAGE





FOREST2MARKET MARKET COVERAGE





BETTER BUSINESS MODEL



The **only** way to achieve a true measure and understanding of the market is to collect transactional data.

The foundation of all **Forest2Market** products and services is our unique, current and proprietary database of wood raw material transactions and the underlying extensive data collection infrastructure that enables us to collect millions of market transactions every year.

Forest2Market is a neutral third-party, independent in ownership and structure. While actively involved in the industries we serve, we do not buy or sell timberland, timber, lumber or biomass.



OUR PROMISE

QUALITY

- Results cannot be manipulated.
- Data is rigorously validated.

CONFIDENTIALITY

- Customer data is always secure.
- Data is collected, and results are disseminated, anonymously.

ACCURACY

- Result are volume weighted.
- Every transaction is counted.

COMPLIANCE

- All products are compliant with US and EU laws.
- We are a neutral and independent source of market information.



AGENDA

OVERVIEW OF US FORESTS

- Inventory changes
- Forest Certifications

DEMAND GROWS TREES

- More demand more trees
- Inputs necessary

GLOBAL FIBER COMPETITIVENESS

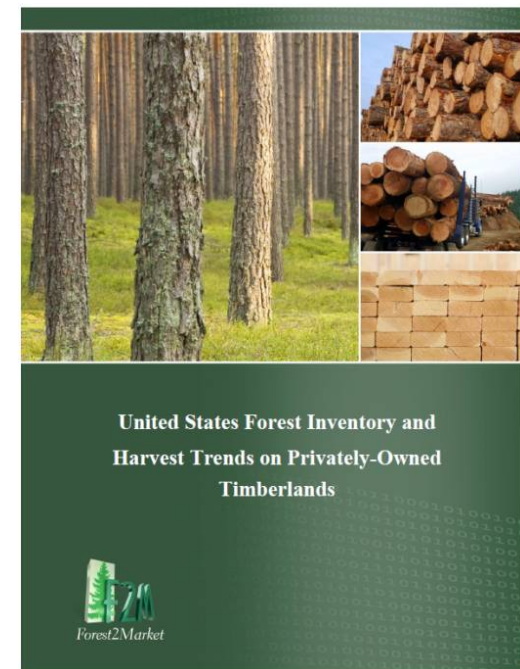
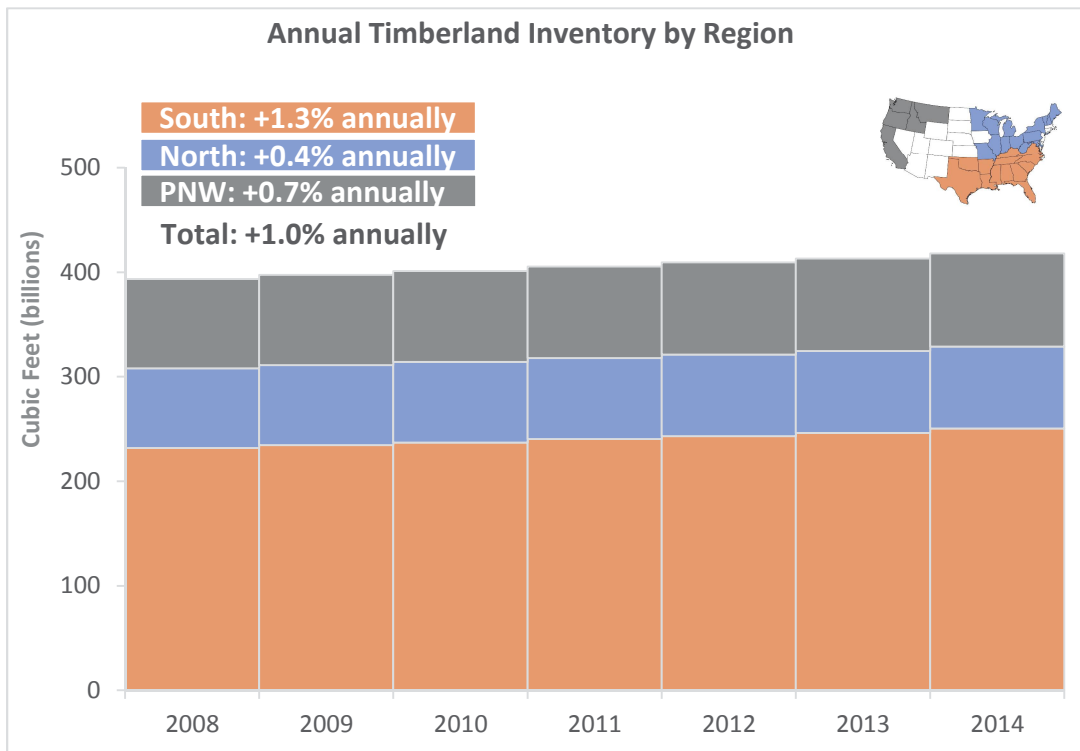
- Low cost fiber at what risk?

ECONOMIC SUSTAINABILITY

- Is timberland ownership profitable and therefore sustainable?



INVENTORIES ARE INCREASING ACROSS THE UNITED STATES

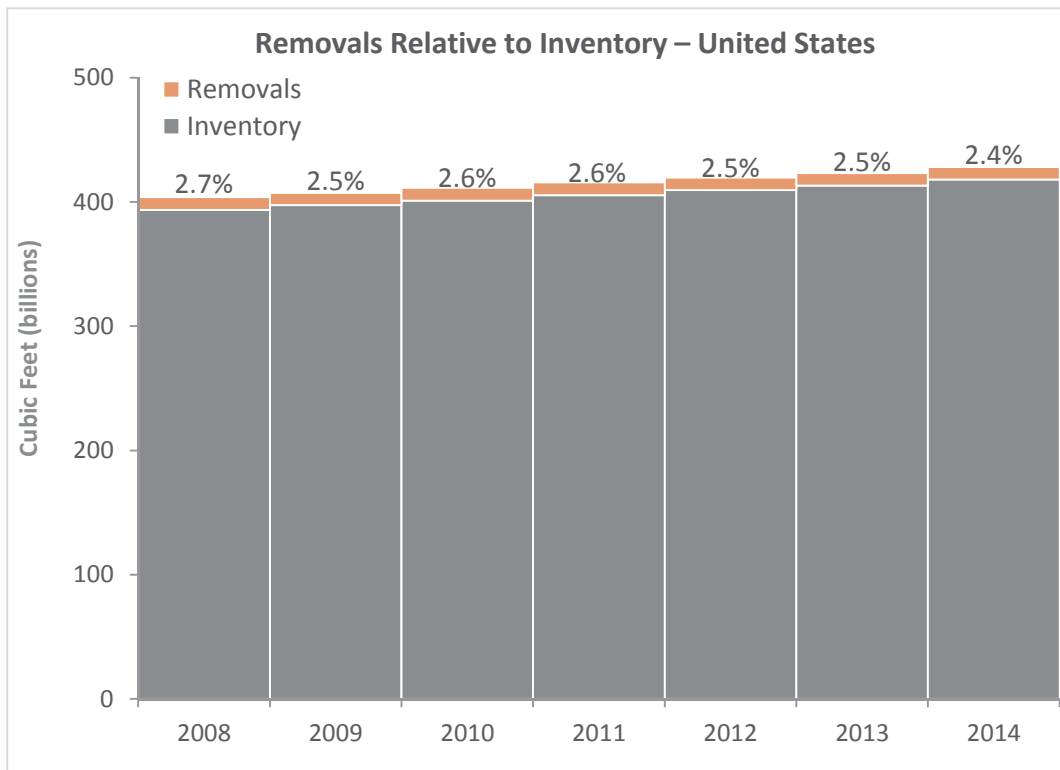




OVERVIEW OF US FORESTS



REMOVALS ARE SMALL COMPARED TO TOTAL INVENTORY



Percentages are removals
divided by inventory

Growth has outpaced
removals by 40% on average
since 2008 (GRR=1.40)



PELLETS ARE A SMALL PART OF THE MARKET

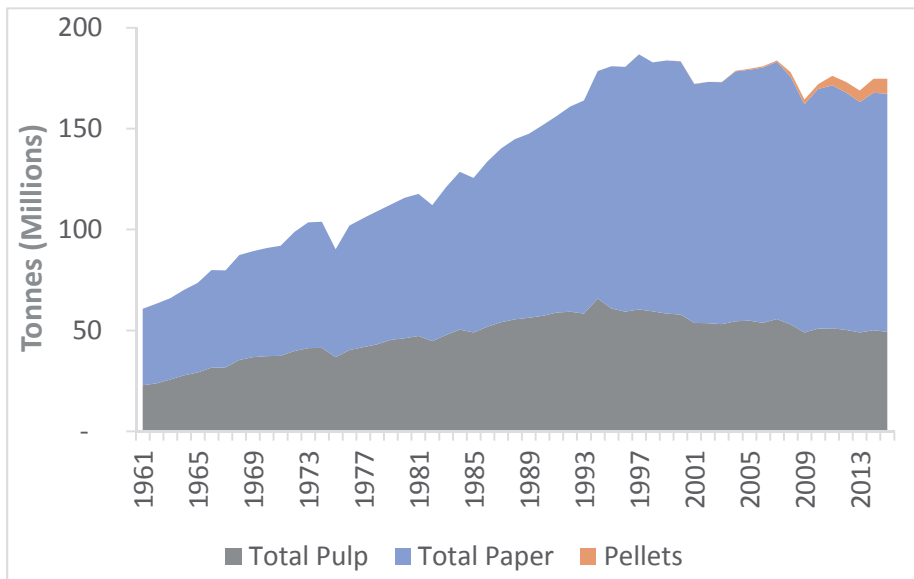
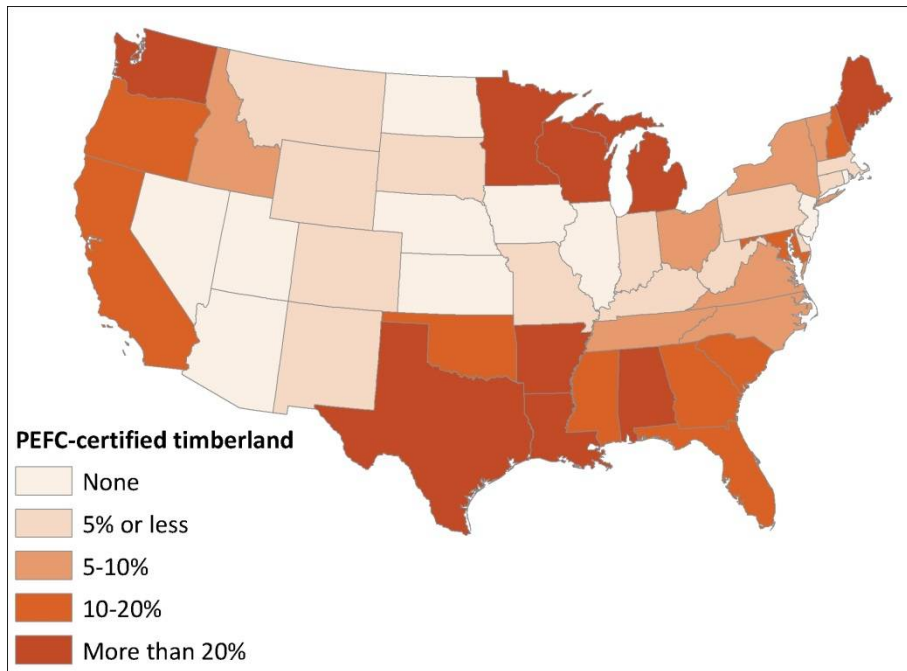


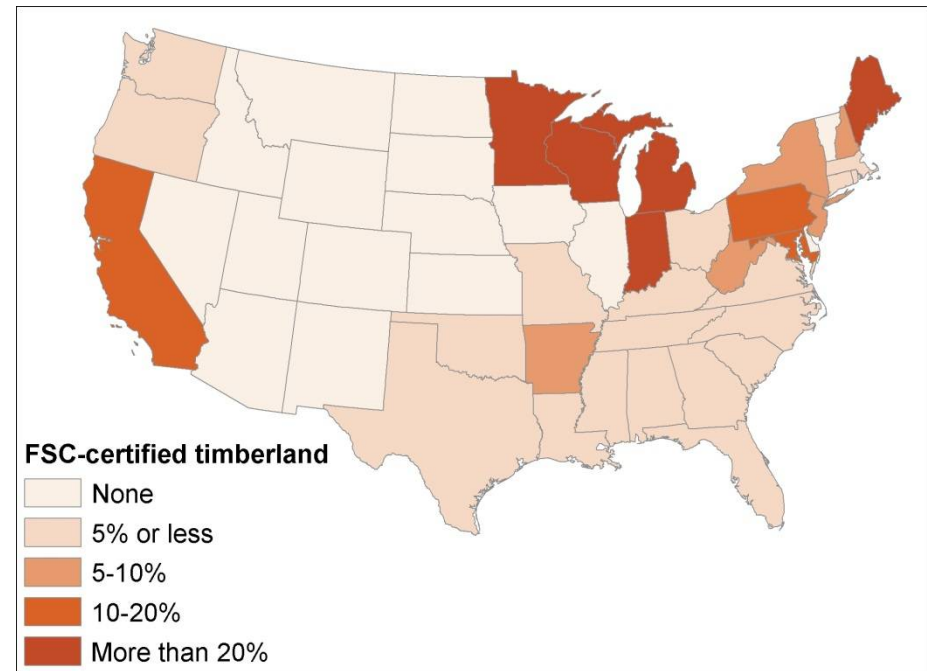
Image: NAFO.



US FORESTS ARE CERTIFIED TO PEFC & FSC STANDARDS



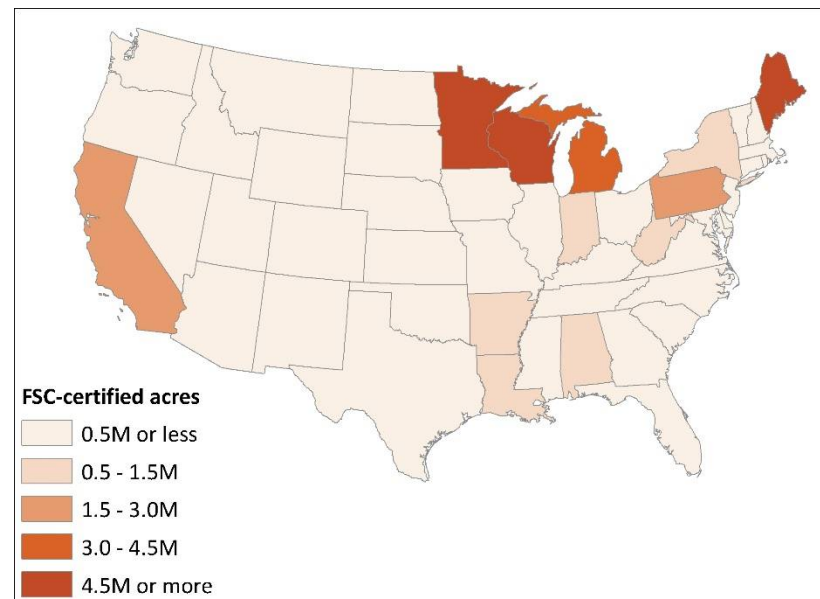
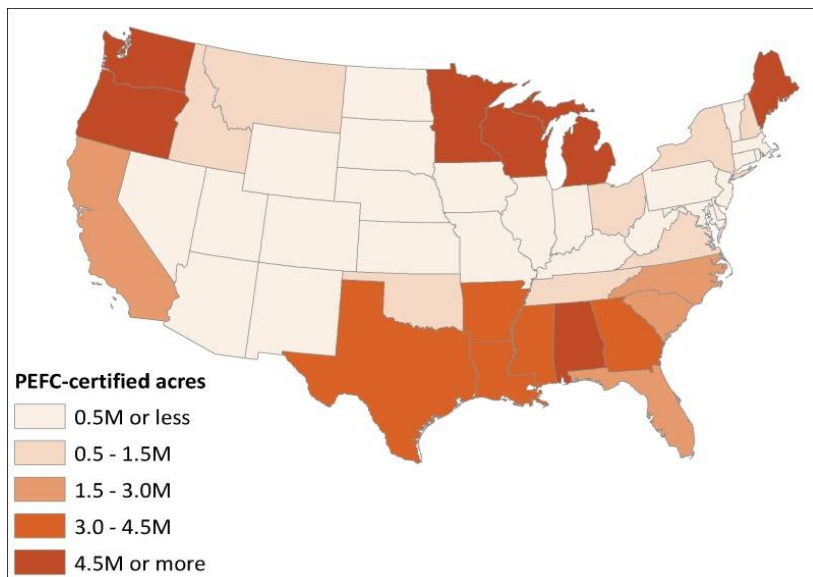
PEFC (SFI) has wider acceptance



FSC more limited



WIDESPREAD ADOPTION OF SUSTAINABILITY CERTIFICATIONS



Widespread adoption but a fraction of the total timberland acres –
70% forest in private ownership – supply chain implications and the
importance of other certification systems



WIDESPREAD ADOPTION OF SUSTAINABILITY CERTIFICATIONS

95 million acres
certified out of 506
million or about
19%

Metric	Acres (millions)
Timberland	506.1
Total PEFC	80.7
-SFI	61.2
-ATFS	19.6
Total FSC	35.8
Both PEFC & FSC	20.7
Total Certified	95.8
% Certified	19%

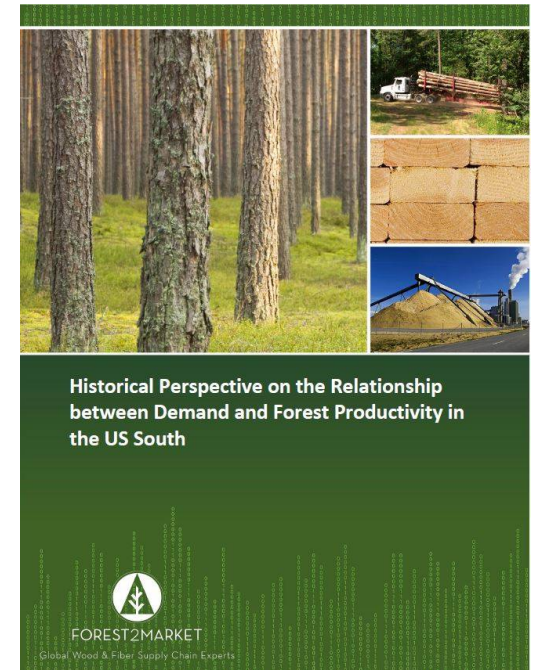


DEMAND GROWS TREES



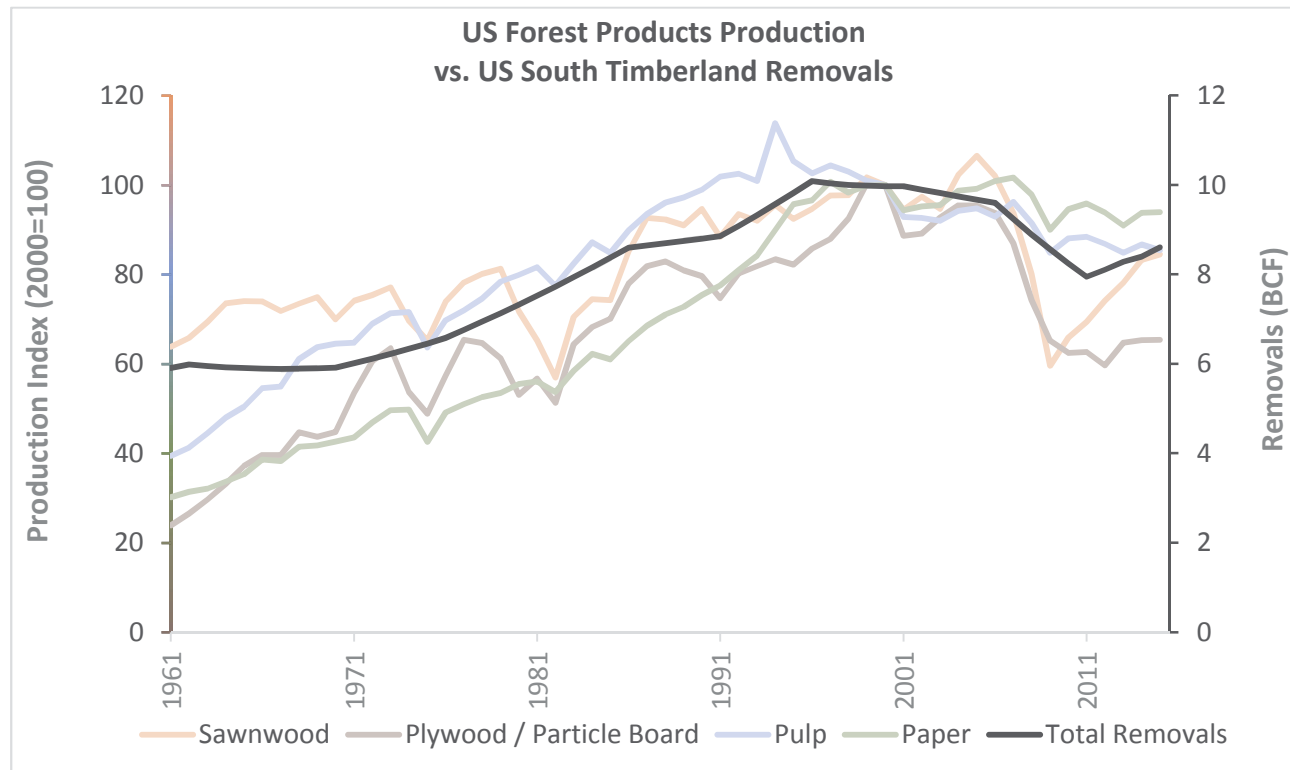
DEMAND DRIVES PRODUCTIVITY

1. As demand for forest products has increased, timberlands in the US South have become increasingly productive.
2. Increased demand for wood has not depleted forests.
3. Landowners responded to greater demand by investing in the future growth of their forests.
4. The evidence is clear: Increases in removals are associated with more timberland acres, better growth and larger inventories.



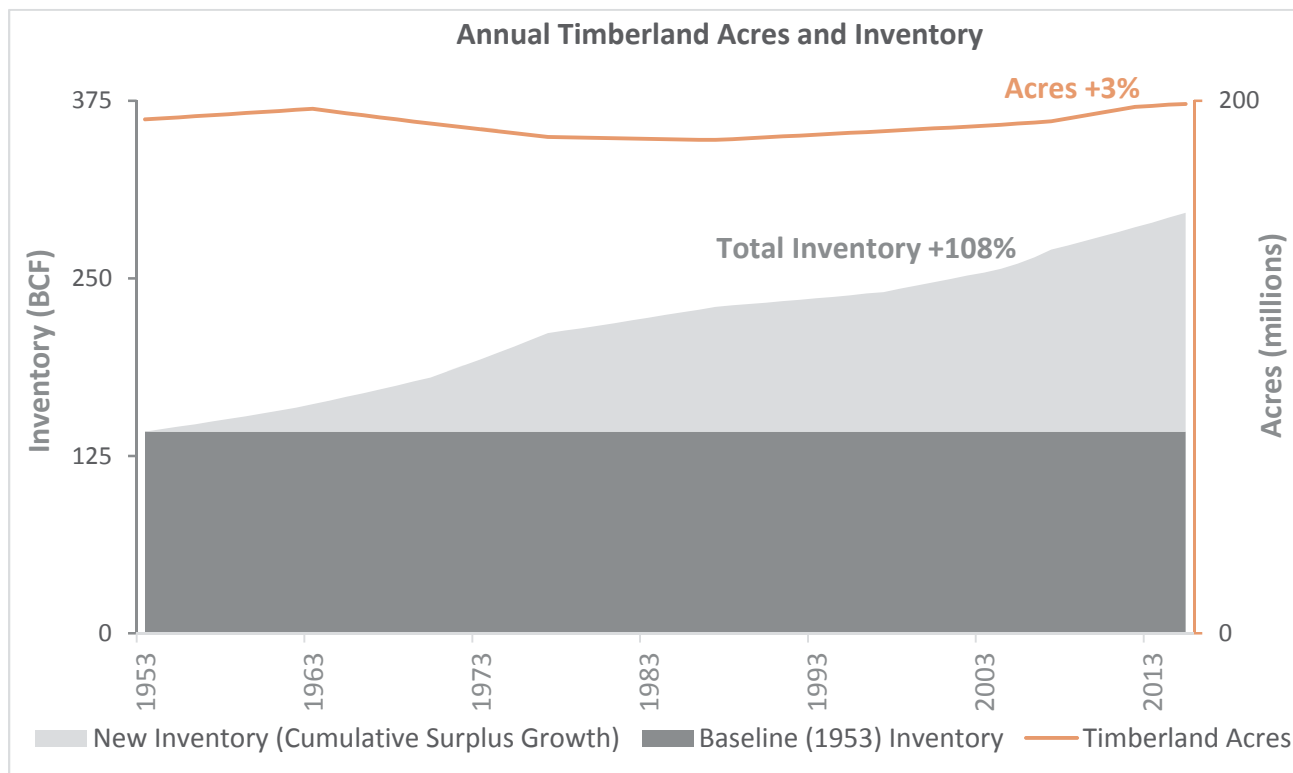


DEMAND FOR FOREST PRODUCTS HAS INCREASED STEADILY



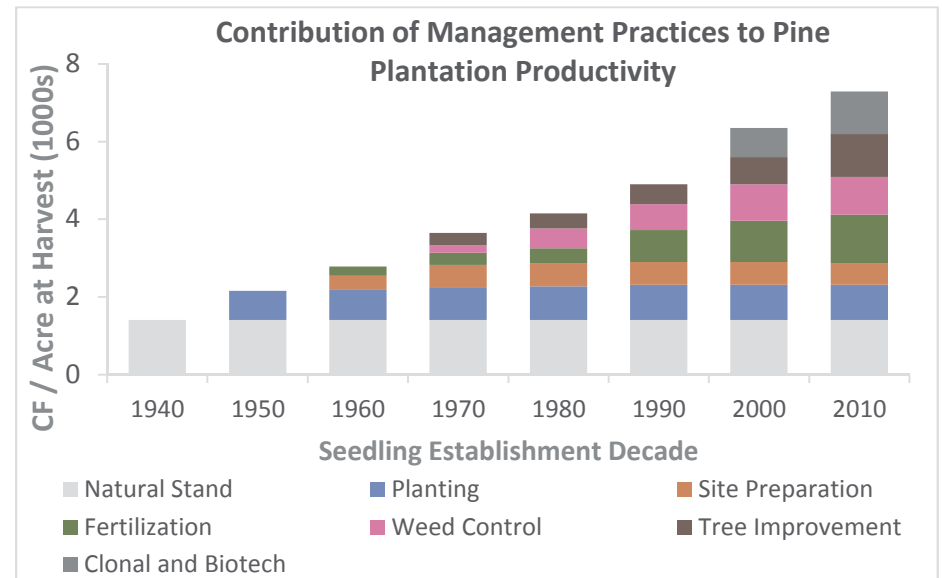
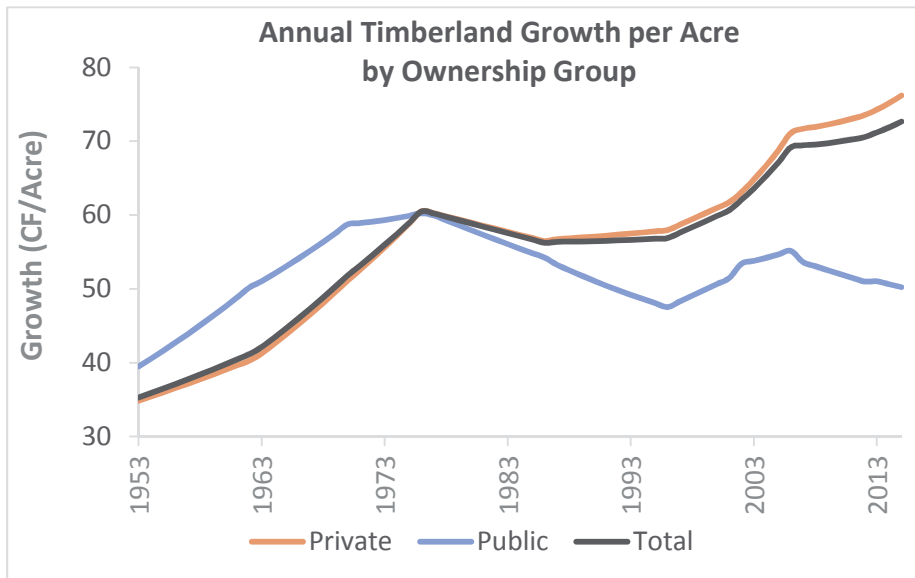


BUT FORESTS HAVE
GROWN



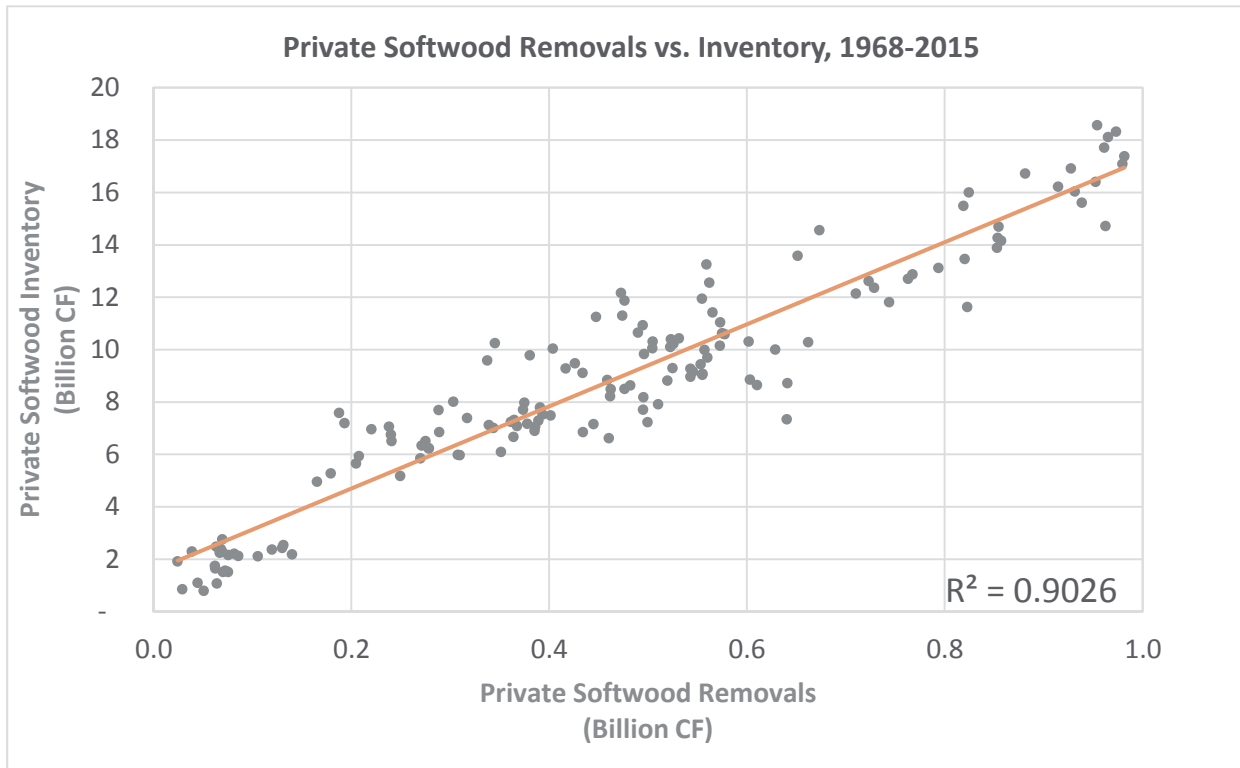


DEMAND ENCOURAGED PRODUCTIVITY





RELATIONSHIPS ARE STATISTICALLY SIGNIFICANT



Pearson Correlations (p-values)	
Softwood Removals	
Softwood Acres	0.93056 (p<.0001)
Softwood Inventory	0.95007 (p<.0001)
Softwood Growth	0.91452 (p<.0001)



PELLETS ARE A SMALL PART OF THE MARKET

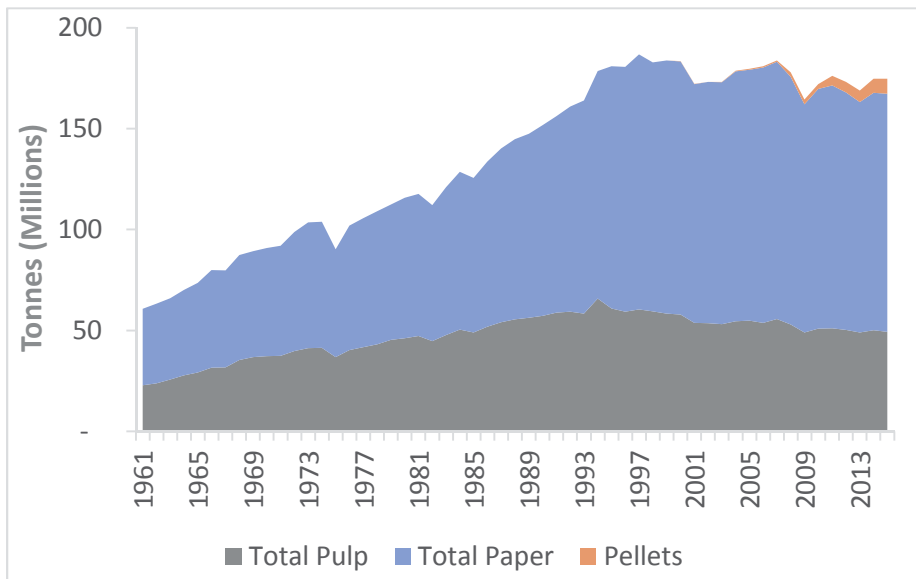


Image: NAFO.

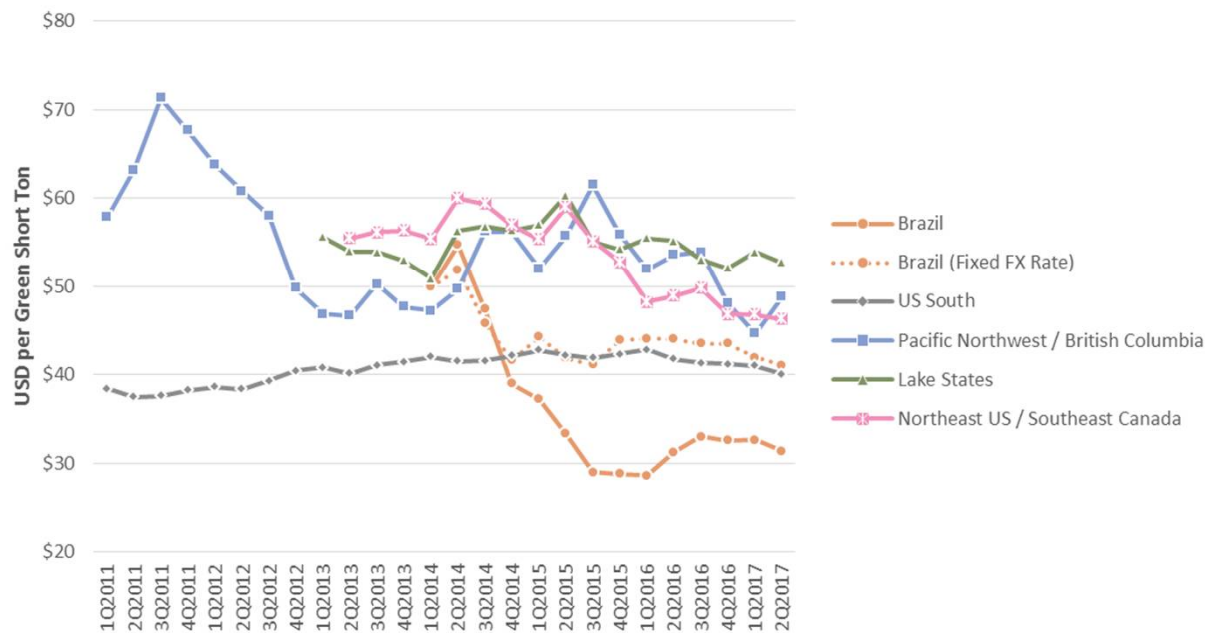


GLOBAL COMPETITIVENESS



GLOBAL CONIFER PRICES

Global Conifer Wood Fiber Prices
Western Hemisphere - Quarterly

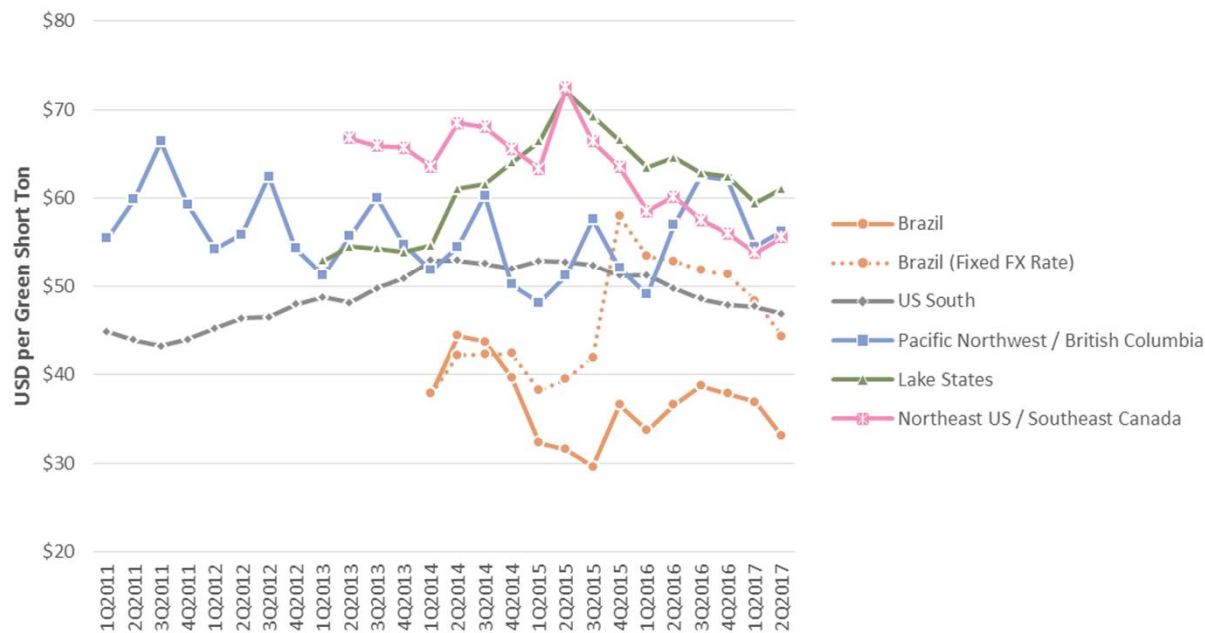


Brazil and US South are lowest cost fiber areas



GLOBAL HARDWOOD & EUCALYPTUS PRICES

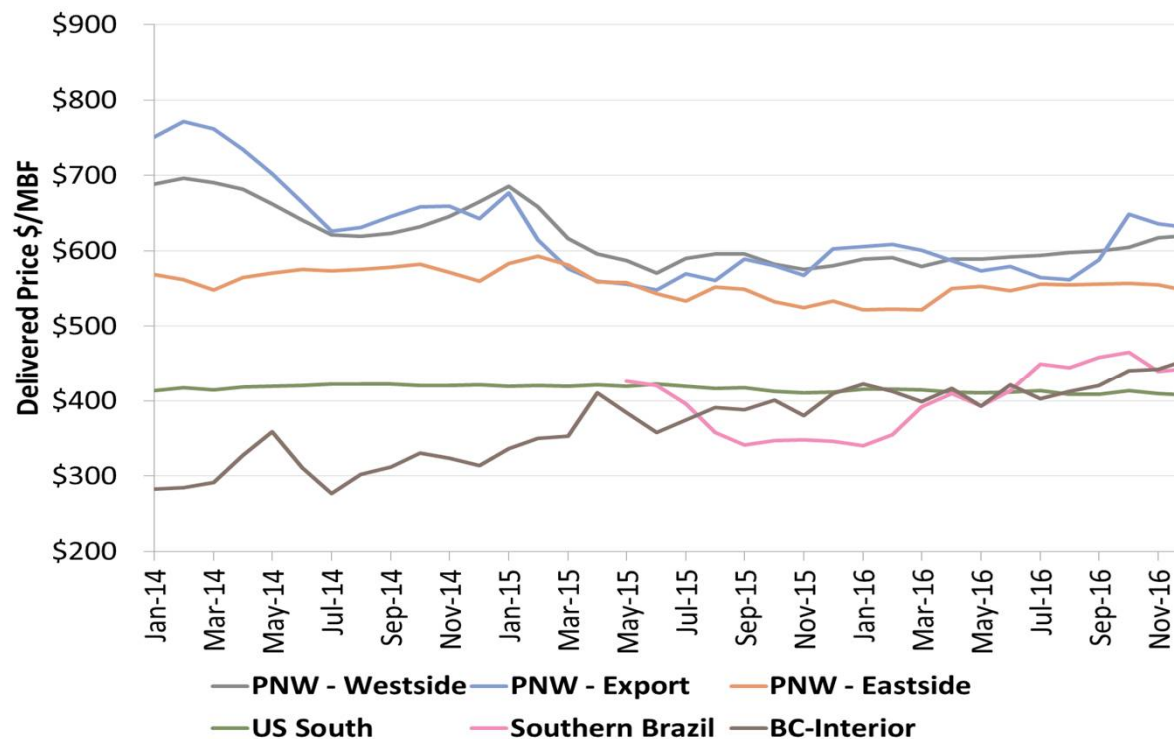
Global Hardwood & Eucalyptus Fiber Prices
Western Hemisphere - Quarterly



Brazil and US
South lowest cost
(ex-fx)



GLOBAL SOFTWOOD SAWTIMBER PRICING



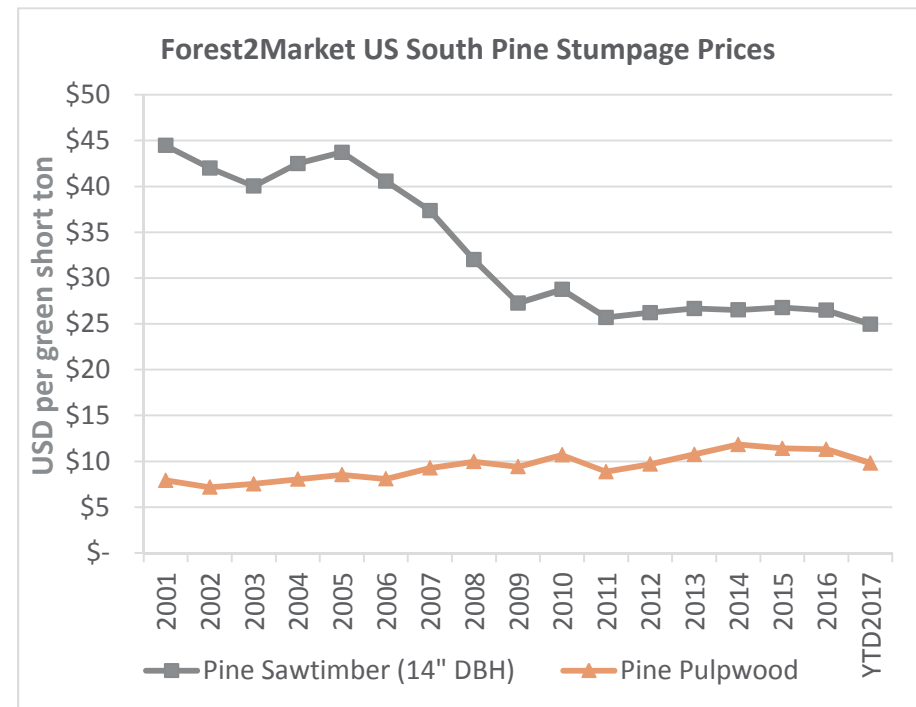
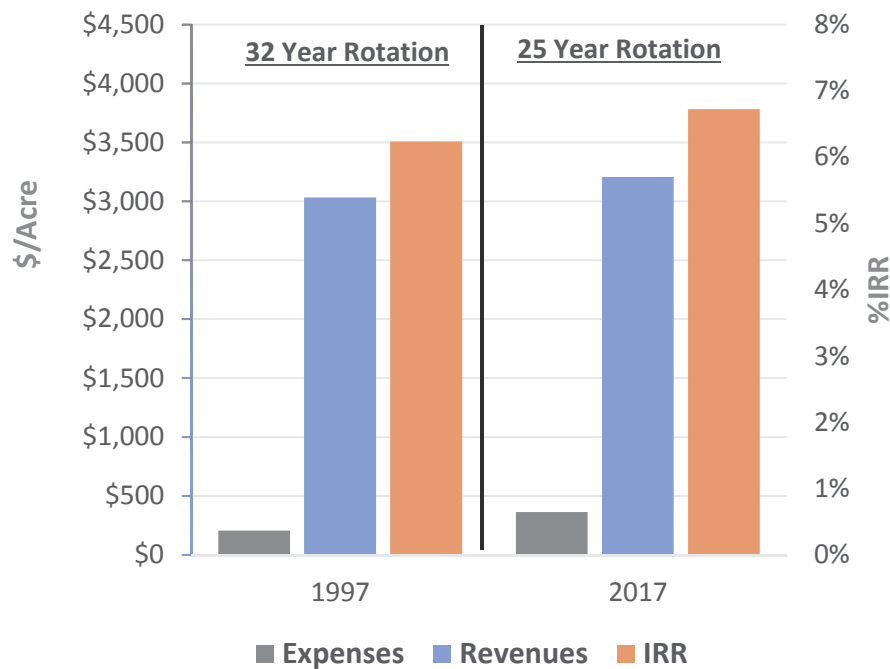
US South is competitive – looks more like developing economies without the risk



**TIMBER PROFITS ENSURE
SUSTAINABILITY**



COSTS OF PLANTING AND RETURNS OVER TIME





CONCLUSIONS

OVERVIEW OF US FORESTS

- Inventory growing
- Certifications adequate but limiting if too restrictive

DEMAND GROWS TREES

- More demand the better
- Market response is positive to increased fiber demand

GLOBAL FIBER COMPETITIVENESS

- Low cost and low risk

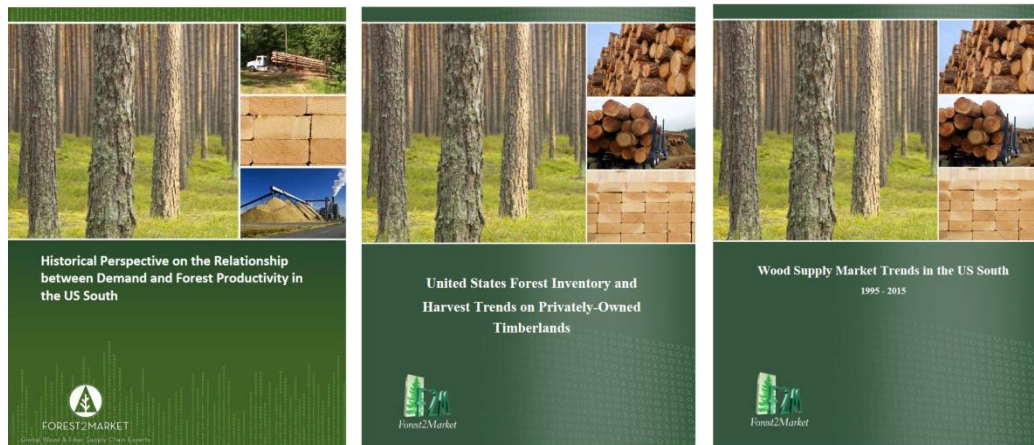
ECONOMIC SUSTAINABILITY

- Timberland ownership continues to be profitable



CONTACT

Peter J. Stewart
President/CEO
+1.980.233.4010
pete.stewart@forest2market.com



Forest2Market
15720 Brixham Hill Ave Suite 550
Charlotte, NC 28277
USA