Brazil and South America: Timberland and Forest Products Investments

Bob Flynn
Director, International Timber

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Future Forestry Finance Conference, March 2010

South America: Agenda

• Brazil’s dominance in the region
• Forest Industry and Exports
  • Foreign investment in South American Timberland

E. Grandis
11 years
Klabin
The forest industry in South America is primarily based on plantations, with Brazil having a dominant position; 95% of plantations are in just 5 countries.

Brazil has about 2/3 of the eucalyptus plantations in South America, and is by far the leader in eucalyptus cloning and afforestation in the world.
Pine plantations are more evenly distributed than eucalyptus, but Brazil again is the leader; Chile has radiata pine, Brazil and Argentina have SYP

**Pine Plantations in South America, 2008**

- Brazil: 1,800
- Chile: 1,600
- Argentina: 800
- Uruguay: 200
- Venezuela: 600
- Colombia: 200

**Change in Eucalyptus and Pine Plantation Area in Brazil, 2000-2008**

New planting in Brazil, as in much of the world, has focused on eucalyptus, not on pine.
Even in Chile, new planting has shifted to more eucalyptus over pine

**Chile: New Planting of Pine and Eucalyptus, 1994-2008**

- **Radiata**
- **Eucalyptus**

Teak plantations are again popular in parts of Brazil, Ecuador, and Central America; there is minor interest in some other high value hardwoods.
Environmental regulations and forest certification have been important for industry development.

FSC is the leader in forest certification; some large companies developed national standards (PEFC), but now even they are pursuing FSC.
Brazil’s accounts for 2/3 of hardwood industrial roundwood harvest in South America --- not including its massive harvest for fuelwood/charcoal

Industrial Roundwood Harvest in South America, Hardwood, 2008

Brazil 68%
Chile 12%
Uruguay 6%
Paraguay 4%
Argentina 3%
Other 7%

Source: FAO

Brazil’s total harvest of eucalyptus dwarfs that of other countries....

Eucalyptus Timber Harvest, 2008

Brazil: 120
Chile: 10
Australia: 10
Uruguay: 5
Argentina: 1

Million Cubic Meters
Brazil is also the leader in softwood timber harvest in South America, but Chile is not far behind.

<table>
<thead>
<tr>
<th>Country</th>
<th>Softwood Harvest, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>54.8%</td>
</tr>
<tr>
<td>Chile</td>
<td>33.9%</td>
</tr>
<tr>
<td>Argentina</td>
<td>7.2%</td>
</tr>
<tr>
<td>Other</td>
<td>0.4%</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.7%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2.2%</td>
</tr>
<tr>
<td>Uruguay</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

The softwood timber harvest in New Zealand and Australia trails both Brazil and Chile.
The Brazilians have not yet poured their efforts into breeding programs for pine as they have for eucalyptus...with a few exceptions.

Uruguay has been the leading log exporter from South America in recent years, primarily pulplogs.
One area where New Zealand and Australia are ahead of South America…

Log Export Volume in 2009

Thousand Cubic Meters

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

South America Australia New Zealand

Uruguay also exports FSC certified eucalyptus sawlogs, primarily to Vietnam

Uruguay Eucalyptus Sawlog Exports, 2003-2009

Volume
Unit Value

US$ per Cubic Meter, FOB

2003 2004 2005 2006 2007 2008 2009

0 20 40 60 80 100 120 140

Thousand Cubic Meters

0 20 40 60 80 100 120
Although log exports are minimal, S. America has become an important source of woodchip exports

Woodchip Exports from South America, 2000-2009

** = NZ + Australia

Brazil and Chile are the dominant exporters of wood products from South America...
...and Brazil and Chile are also the dominant exporters of pulp and paper

**Pulp and Paper Export Value, 2008**

Forest products export value from Brazil, Chile, and Australia was about 22% lower in 2009 than in 2008; in New Zealand, exports were down only 7%
In general, Brazil tends to be much more heavily dependent on the US market for wood products, while Chile maintains more diverse export markets.

Foreign ownership of plantation forests in South America ranges from 4% in Chile to 69% in Uruguay.
South American countries have not done well in recent third party ratings on Corruption and Ease of Doing Business

<table>
<thead>
<tr>
<th>Corruption Perception Index</th>
<th>Ease of Doing Business Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand 1</td>
<td>New Zealand 2</td>
</tr>
<tr>
<td>Australia 8</td>
<td>USA 4</td>
</tr>
<tr>
<td>USA 19</td>
<td>Australia 9</td>
</tr>
<tr>
<td>Chile 25</td>
<td>Colombia 37</td>
</tr>
<tr>
<td>Uruguay 25</td>
<td>Chile 49</td>
</tr>
<tr>
<td>Brazil 75</td>
<td>Peru 56</td>
</tr>
<tr>
<td>Colombia 75</td>
<td>Guyana 101</td>
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<tr>
<td>Peru 75</td>
<td>PNG 102</td>
</tr>
<tr>
<td>Suriname 75</td>
<td>Uruguay 114</td>
</tr>
<tr>
<td>Argentina 106</td>
<td>Argentina 118</td>
</tr>
<tr>
<td>Bolivia 120</td>
<td>Paraguay 124</td>
</tr>
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<td>Guyana 126</td>
<td>Brazil 129</td>
</tr>
<tr>
<td>Ecuador 146</td>
<td>Ecuador 138</td>
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<td>Paraguay 154</td>
<td>Suriname 155</td>
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<tr>
<td>PNG 154</td>
<td>Bolivia 161</td>
</tr>
<tr>
<td>Venezuela 162</td>
<td>Venezuela 177</td>
</tr>
</tbody>
</table>

Source: Transparency International

Source: World Bank

Note: PNG included for reference

Of the foreign-owned forest plantations in South America, about 2/3 are owned by manufacturing companies and 1/3 by financial investors (e.g. TIMOs)

<table>
<thead>
<tr>
<th>Forest Industry</th>
<th>Financial Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thousand hectares</td>
<td>Thousand hectares</td>
</tr>
<tr>
<td>1600</td>
<td>154</td>
</tr>
<tr>
<td>1400</td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td></td>
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<td>400</td>
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<tr>
<td>200</td>
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<td>0</td>
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</tbody>
</table>

Future Forestry Finance 2010
Most (84%) of foreign investment in plantations by the forest industry has been focused in Brazil and Uruguay; about 40% is owned by Chilean companies.

Financial investors have also been primarily attracted to Brazil and Uruguay, with investments in Brazil growing most rapidly in 2009-2010.
Based on planted area under management, GFP is the leader amongst TIMOs in South America, followed by Brookfield, then RMK and GMO.

Major Foreign Financial Investors in South American Plantations, Percent of Planted Forest Area, 2009

- GFP: 44%
- Brookfield: 12%
- RMK: 7%
- Harvard: 6%
- GMO: 7%
- RM: 3%
- Phaunos: 2%
- Other: 15%

Pine sawlog prices have been remarkably stable in Chile for over a decade; Brazil’s have been relatively stable since late 2005.
It isn’t just timber......There has been a lot of recent investment activity with biomass energy in South America

- Chile has a national renewable energy standard, and projects are being developed to use even native forest wood to replace coal. Arauco already is using nearly 6 million tonnes of residues for biomass energy production.
- Uruguay – a number of new biomass energy projects, including some by Weyerhaeuser and Four Winds, replacing expensive, imported, greenhouse gas-emitting fossil fuels.
- Paraguay --- Dedicated biomass (eucalyptus) plantations developed by Copetrol….account for roughly half the plantations in the country!
- But Brazil has more commercial wood energy plantations than the rest of the world combined......

Many new plantation projects are being developed in Brazil, tying timberland investments with bioenergy markets – just a sample:

- COTRENE
- Interagricola
- AgroBrasil Florestal
- Bunge and partners
- Nemus
- Forest Systems
- Phaunos Timber Fund
- Greenwood Management
- Global Forest Partners
- Timber Capital
- Bio Timber Brazil

- Claritas/Corus
- Cambium Global Timberlands
- Ramires Reflorestamentos
- Carovale
- Green Par do Brasil
- Vale Florestar Amazonia
- Berti Florestal
- Agri-Logic
- RMK
- Brookfield Asset Management
- Timber Value
Silvo-pastoral investments.....ranchers swear their cattle gain more weight if plantation (eucalyptus) shade is available

Soybeans + Eucalyptus...some interesting agro-forestry investments developing in Brazil
Conclusions

- Brazil dominates South America’s plantation forest area and forest products production and exports, and has attracted the largest share of foreign investment. Brazil also presents the greatest number of opportunities for new investment, in both the forest industry and plantation development.
- Chile is the second most important country in South America, but the industry is dominated by two domestic companies.
- Uruguay has attracted an unusually large share of foreign investment, given its size and lack of forest industry.
- Other countries have a long way to go to attract foreign investors, and perceptions of corruption and country risk remain strong across much of the continent.

Questions?

- Bob Flynn
- Director, International Timber, RISI
- Phone: 1-253-565-4846
- Email: rflynn@risiinfo.com
- Web site: www.risiinfo.com
For more information on South American plantation forestry, see RISI’s 2009 publication *South American Tree Farm Update: Opportunities for Investment in Forest Industry and Biomass Energy Plantations*, www.risi.com/satreefarm

Photo courtesy of Evan Shield
E. grandis in northern Uruguay
October 2007 : Age 13.6 Years
Mean D.B.H.O.B. ca. 43 cm.