EXPERTISE IN TECHNOLOGY AND ECONOMICS

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Value Creation of Global Forest Products Companies – Potential for Emerging Regions

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Global Changes in Forest Industry - Game Global

Forest industry is facing challenges

- Value creation: strategic orientation, investments, supply chain
- Continuing pressure on costs
- Industry structure: new entrants in emerging markets, venture capitalists as catalysts, consolidation process
- Demand growth; maturing Europe and North America, emerging Asia and Russia
- Fibre i.e. raw material sources are shifting to South America

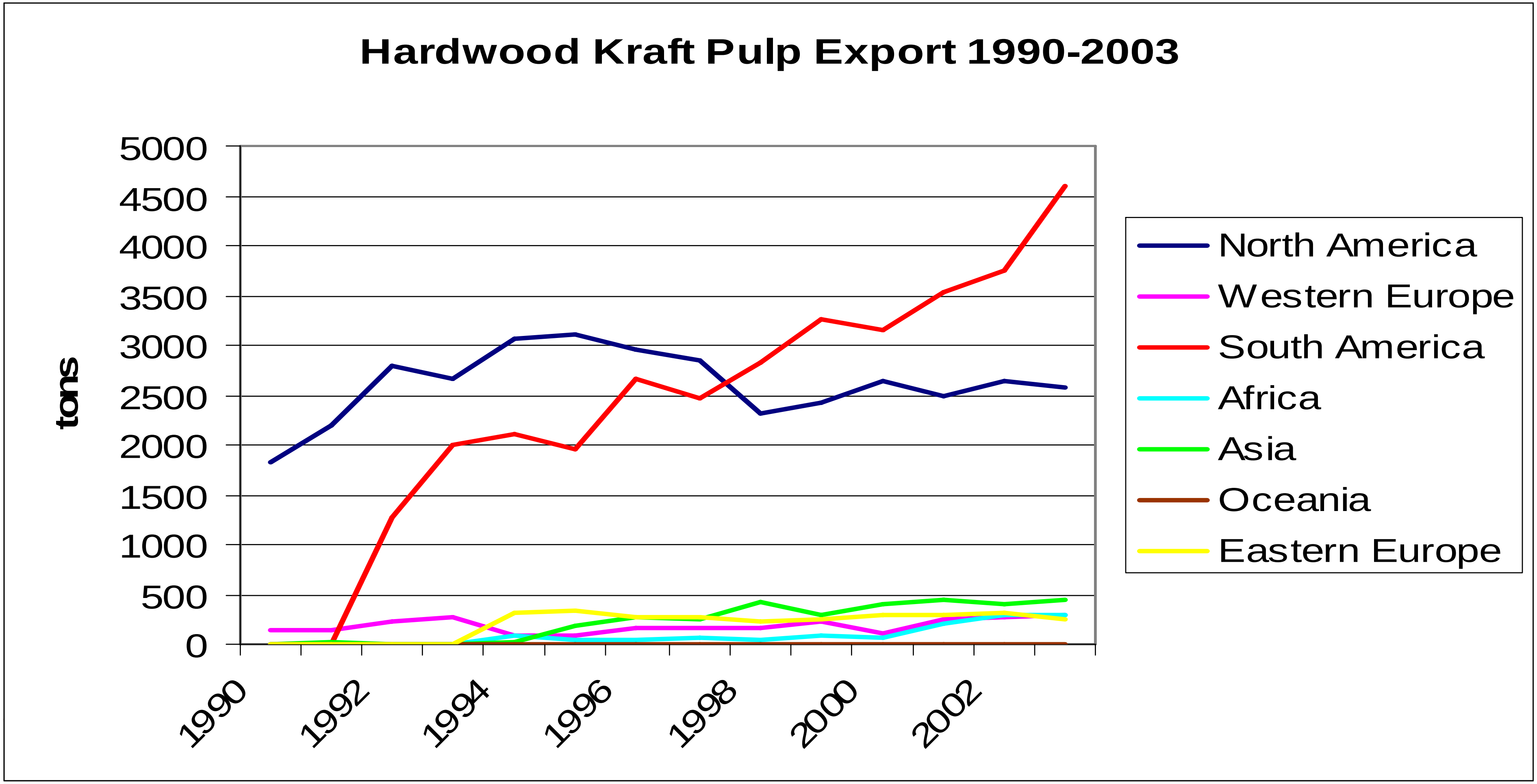
Value creation of forest products companies - the potential for emerging regions

Next slides open up the potential from two viewpoints:

1. What the region can do? Case hardwood pulp and Brazil

2. What the companies can do in order to create value – some examples?
   - production and investments in various regions
   - the effects of global presence on the profitability
   - new business opportunities forests - energy

Case hardwood pulp (birch, eucalyptus, aspen, maple, acacia and mixed hardwoods) and Brazil



Shifting raw material sources – Case hardwood pulp and Brazil

Case Brazil - pattern of Increasing Productvity

Eucalyptus plantations in Brazil in the 1960s (left) yielded only about ¼ the wood produced by current plantations (right)

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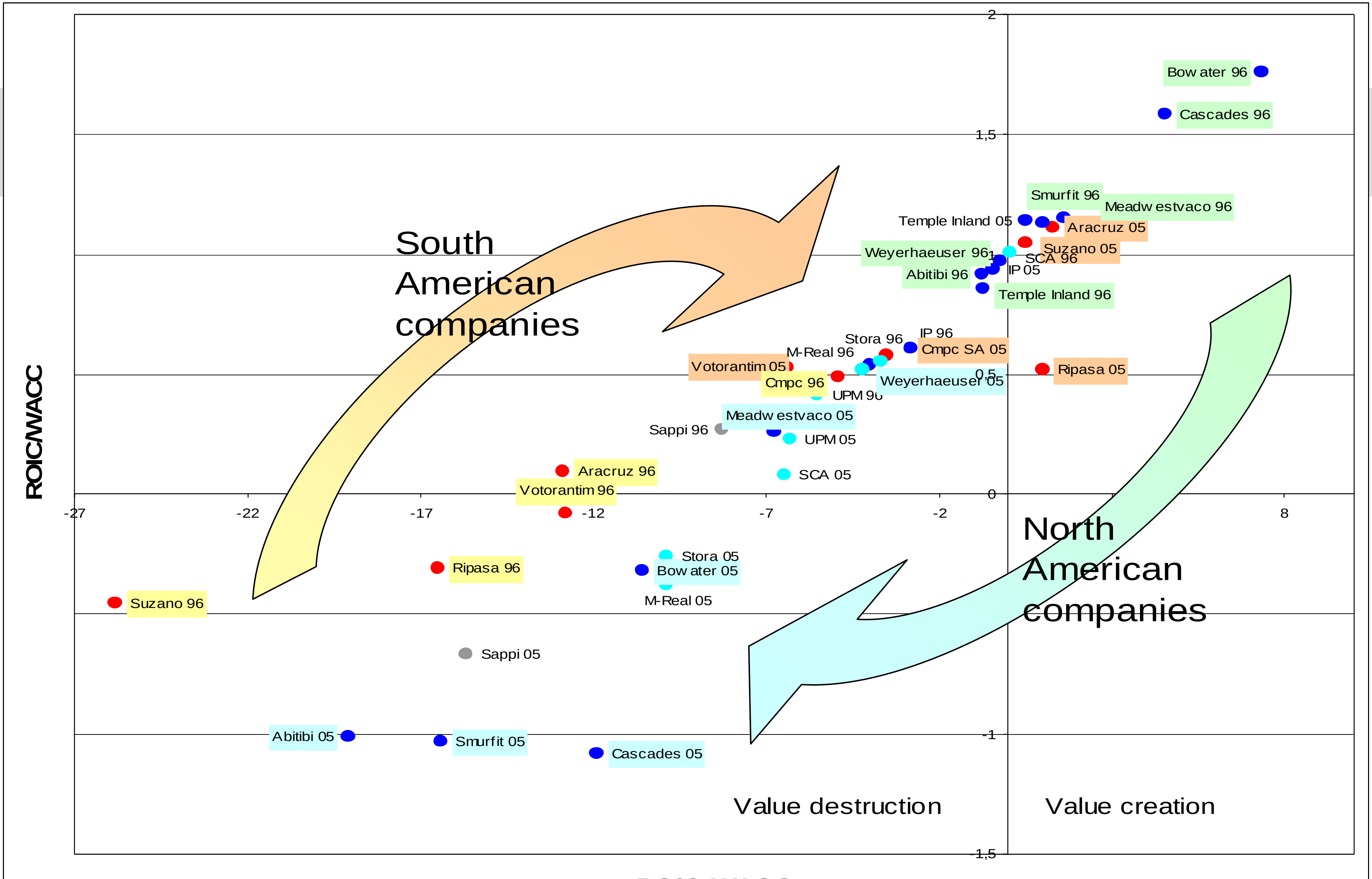
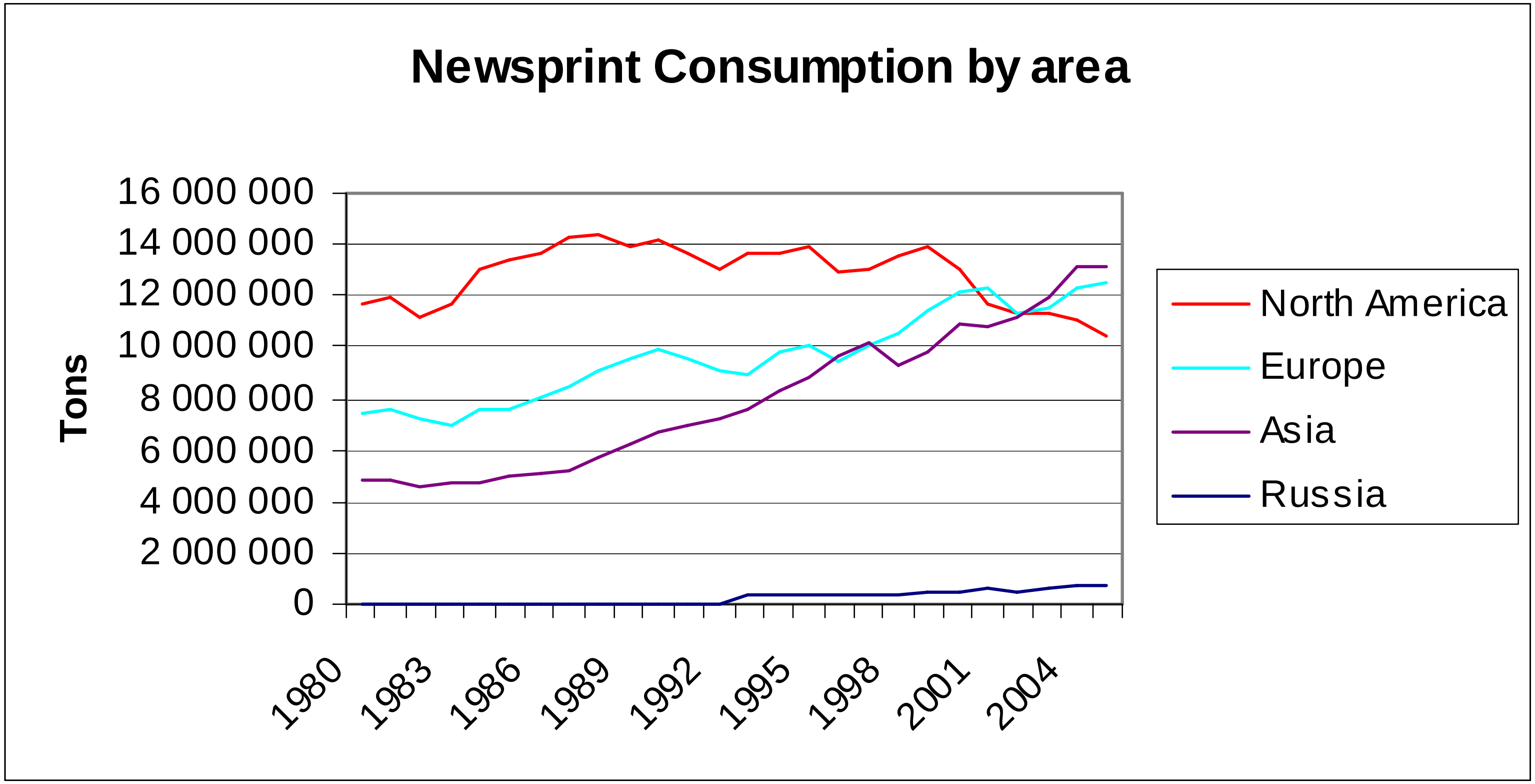
Source: Binkley and Stape (2004)



Source: Tapper, 2006

Demand growth



Source: Paperloop 2006

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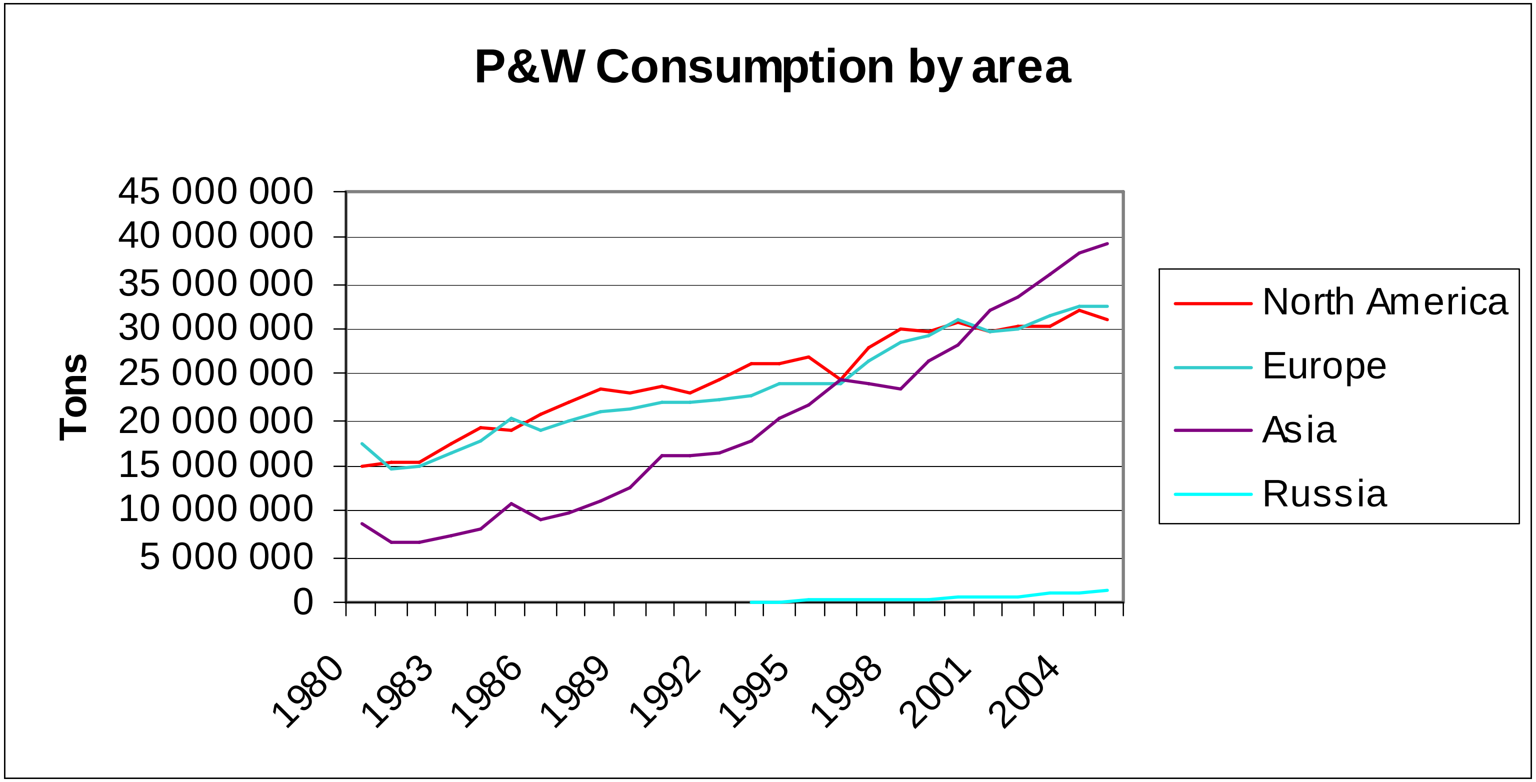
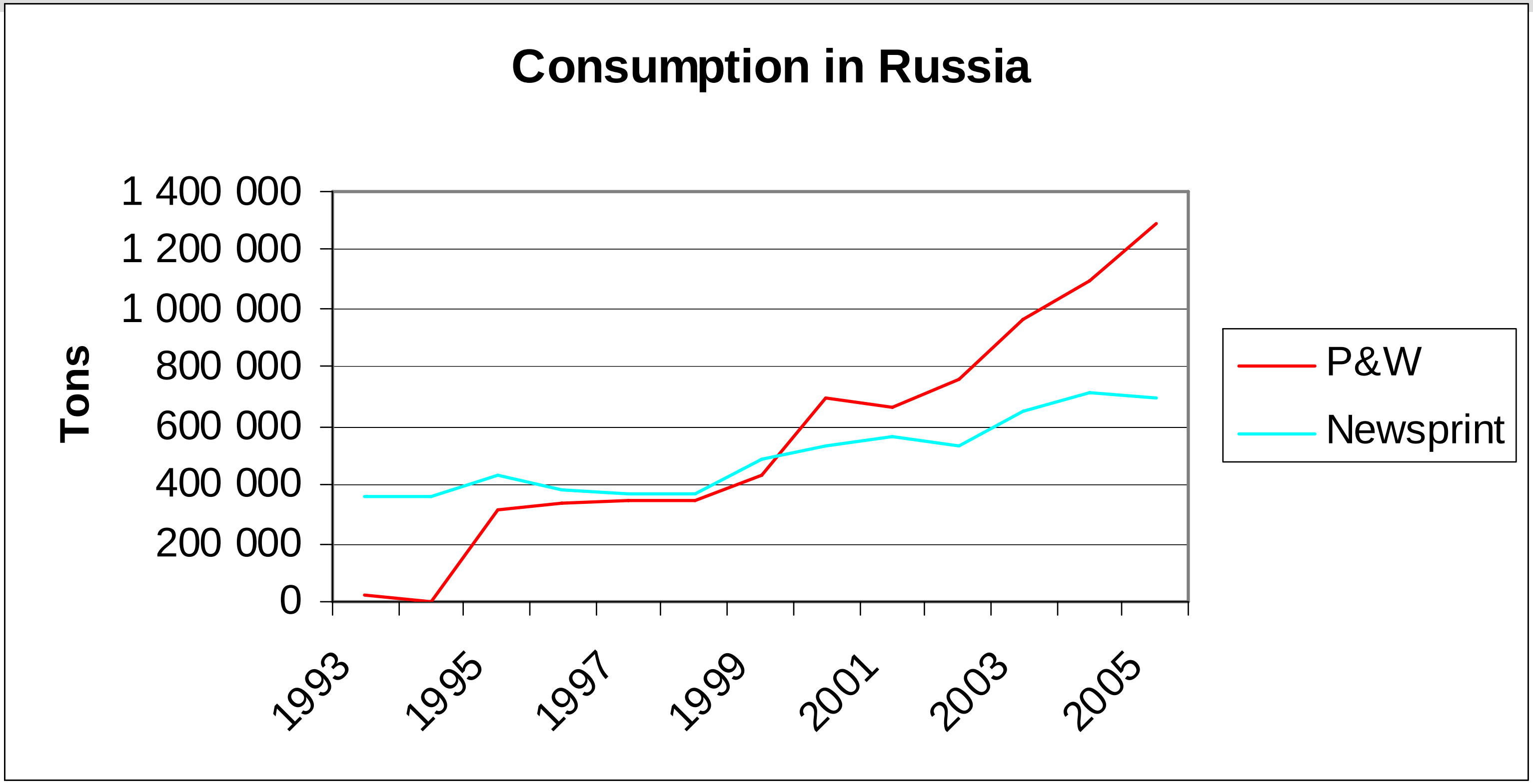
Demand growth



Source: Paperloop 2006

Demand growth



Source: Paperloop 2006

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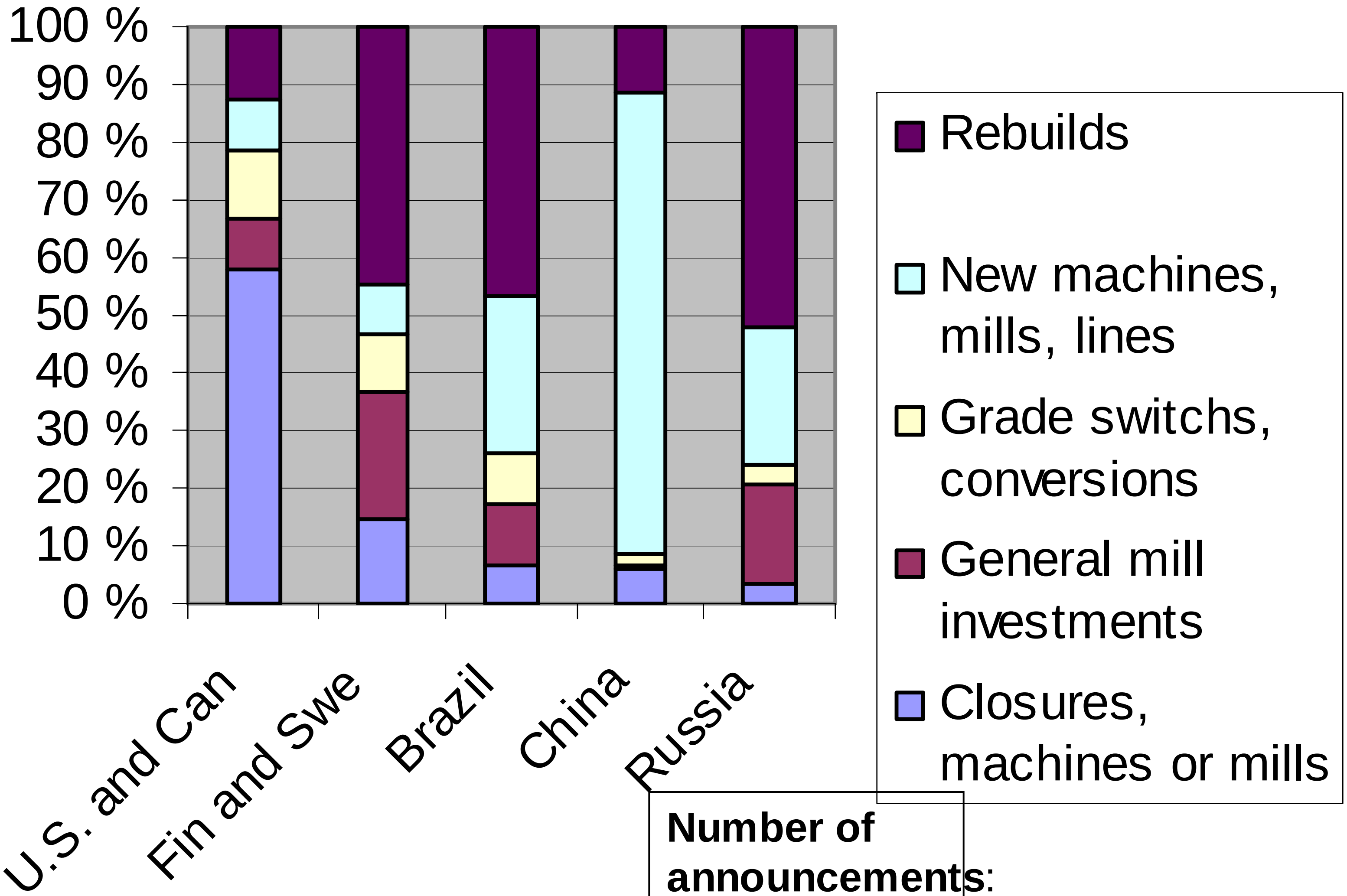
Announcements of mill projects, Pulp and paper industry 2000-2005



Number of announcements:

365	150	95	249	50

Data source: Paperloop

What companies can do for creating value with investments – the potential of emerging regions

Previous slide was about project announcements including all project announcements between 2000-2005.

-North America is leading in shutdowns
-China is leading in new line and mill investments
-Finland and Sweden are not enjoying new line or mill investmen announcements but have numerous rebuilds and general investments
-Russia has still quite few announcements compared with other regions.

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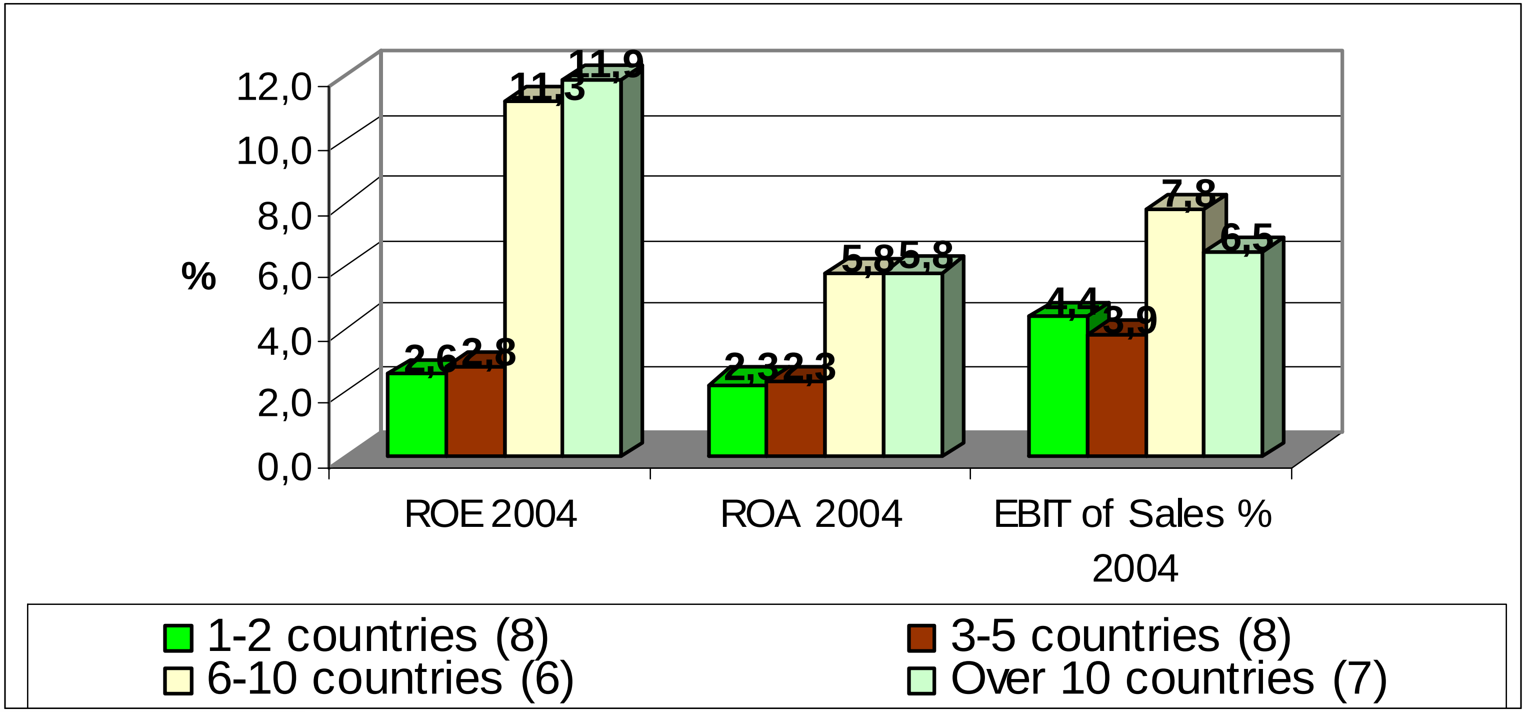
What companies can do for creating value – global capacity

The effect of global capacity on the profitability



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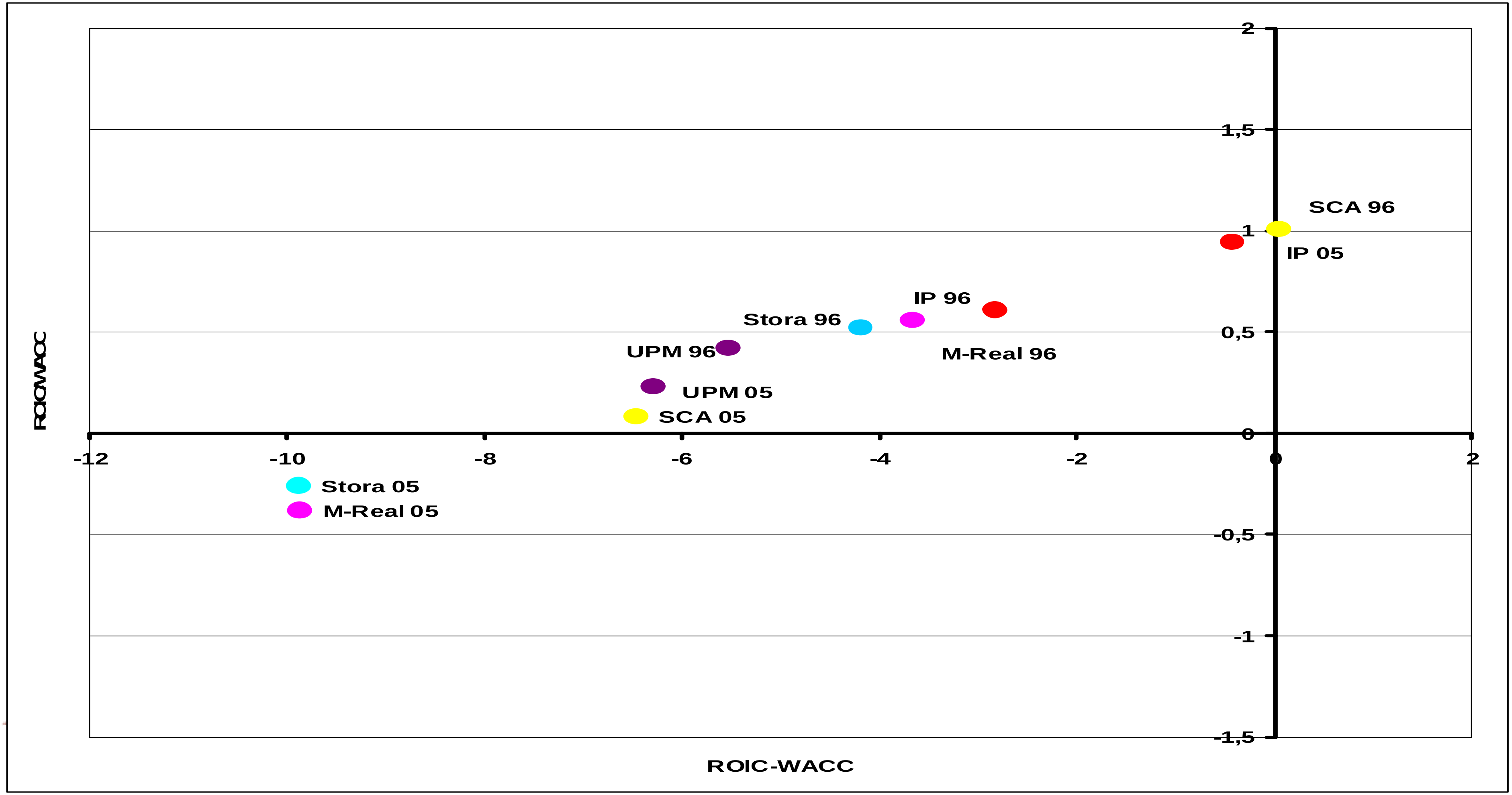
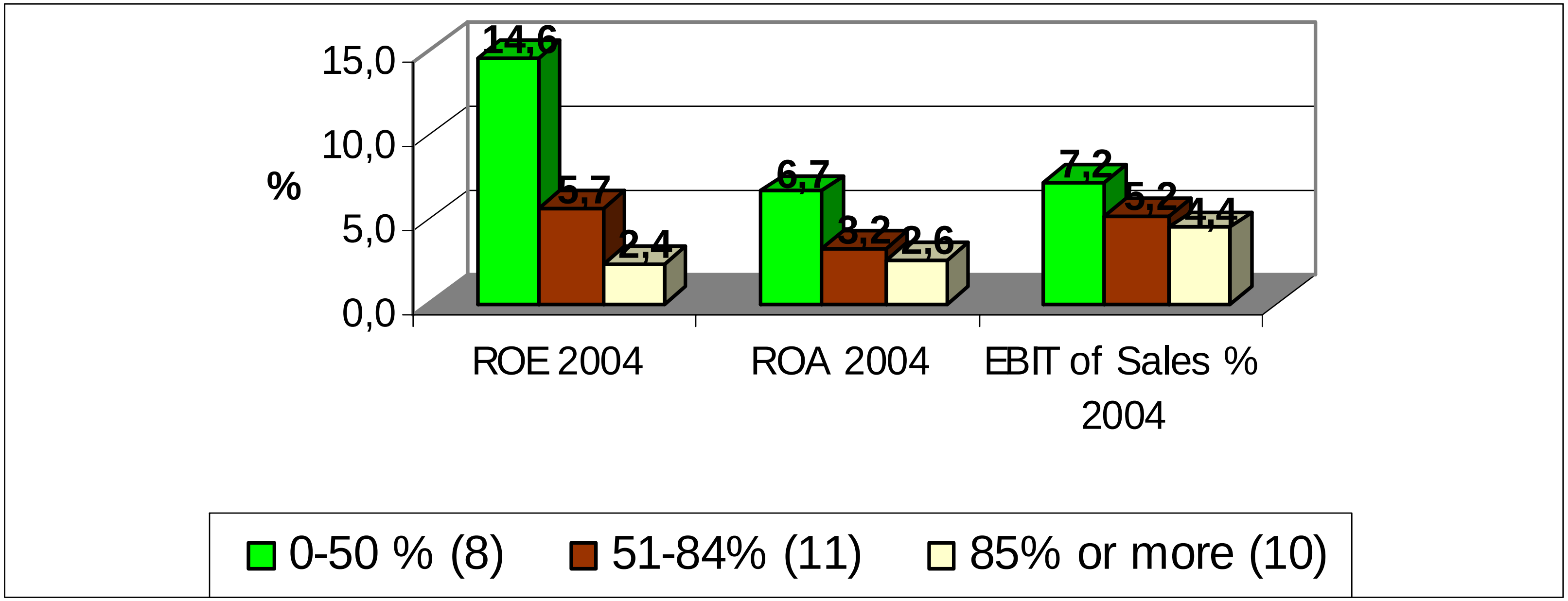
Countries with production capacity (Paperloop & Thomson, 2005)

Value creation? – stuck in the middle companies 1996, 2005



Profitability of PPI companies - Degree of vertical integration



Pulp capacity in relation to paper capacity (Paperloop & Thomson, 2005)

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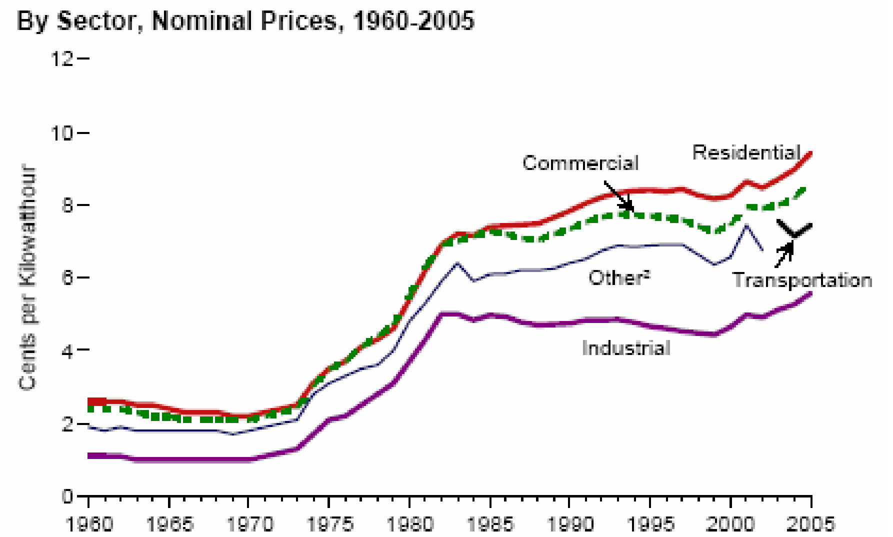
Value creation in PPI

Disintegration of pulp and paper mills

- Geographical location of pulp mills based on cost advantage, paper mills near markets
- New business view: pulp mills as production units where pulp is only one product; others energy, ...

Average retail prices of electricity



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