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# Outlook for Pulp and Paper

Santander Latin American Conference

January 2008

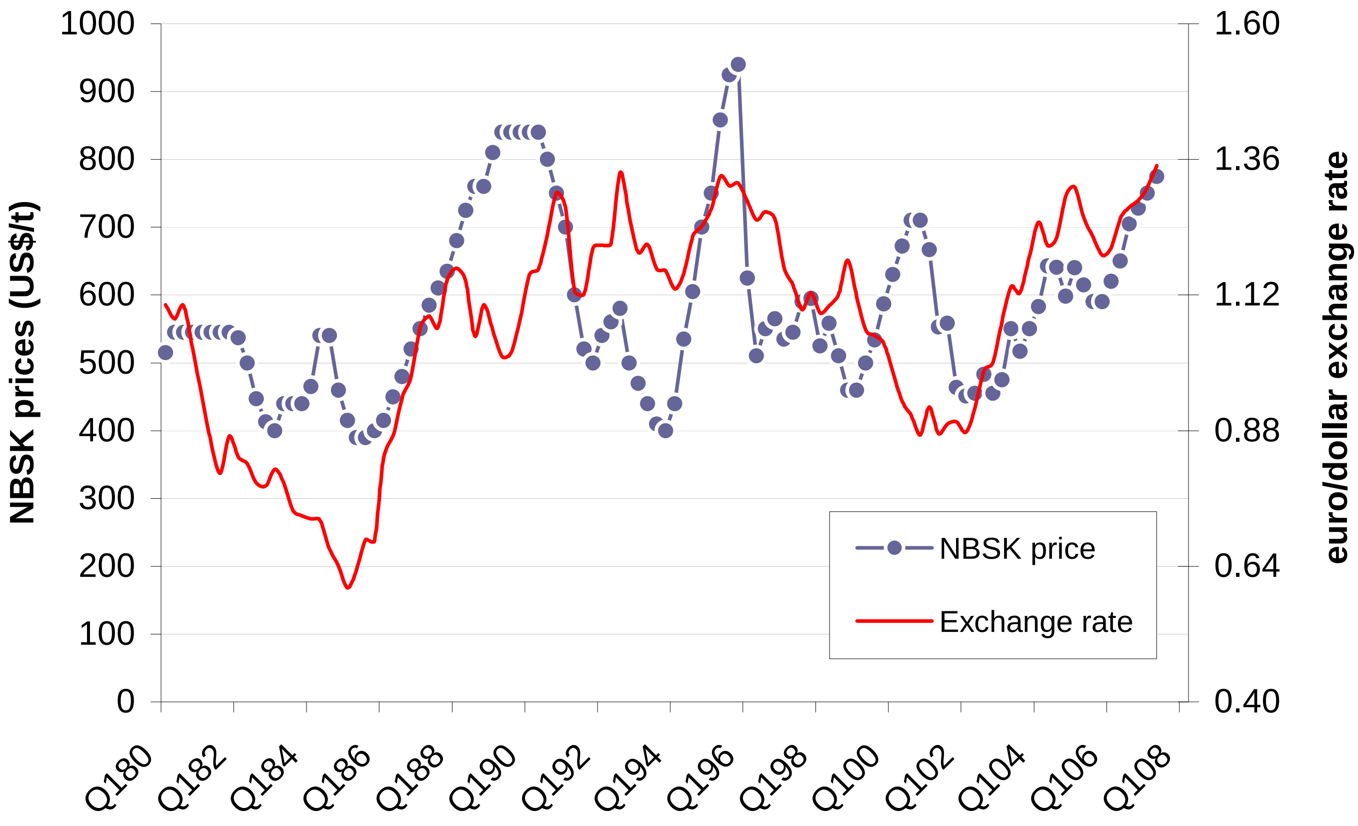
# Forecasts

- Our forecasts are based mainly on market analysis and stated assumptions regarding the economic environment
- In the last 25 years, we have not been able to develop a methodology or model which reliably predicts events such as
  - Exceptional weather (wet, warm, hurricanes..)
  - Industrial disputes (Canada, Korea...)
  - Housing markets (USA)
  - Exchange or interest rates (USA, Canada, Brazil, China, Euro....)
  - International trade policies and legislation (dumping, export taxes etc)
  - Timing of mill closures and start-ups
  - Changes in corporate strategies
  - Legislation, for example regarding illegal logging...
  - Freight rates, Energy costs etc.

# Price Drivers for Market Pulp

- Exchange rates
- Demand
- Supply
- Paper markets and prices
- Pulp production and shipping costs

# Exchange rates

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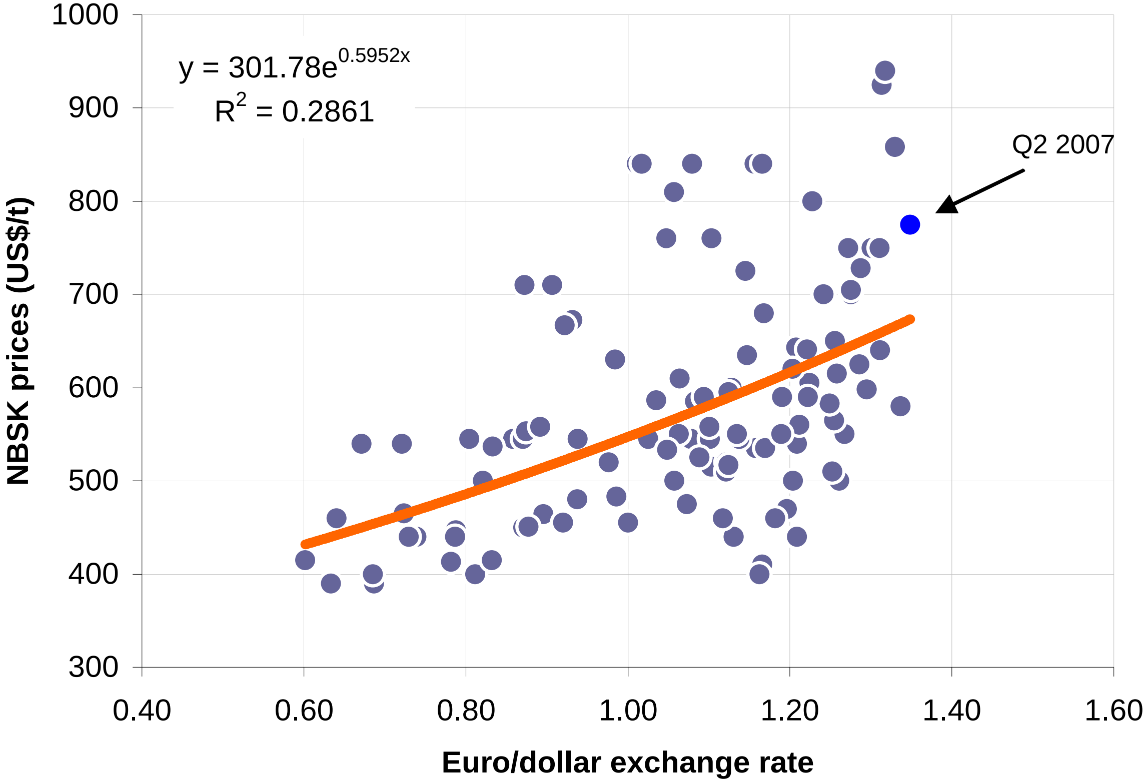
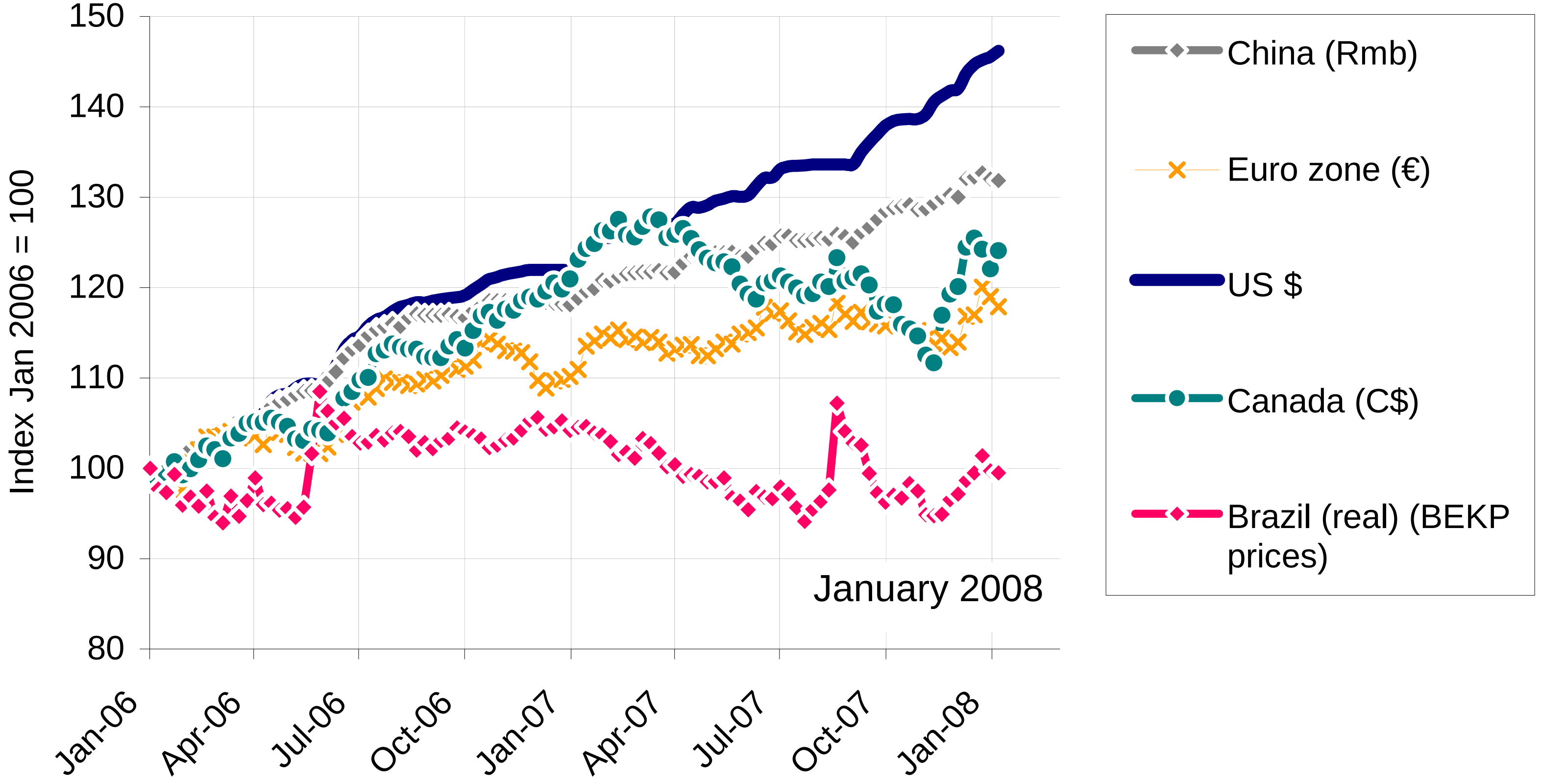
# Exchange rates




- Pulp prices are strongly correlated to the euro-dollar exchange rate
- Weak dollar = high pulp price
- Statistically, 29% of the variation in dollar pulp prices can be explained by changes in the exchange rate
- A 10 cent change in the exchange rate against the euro = $40/t change in the price of pulp

# The impact of exchange rates

## Pulp prices (PIX) in US dollars and other currencies

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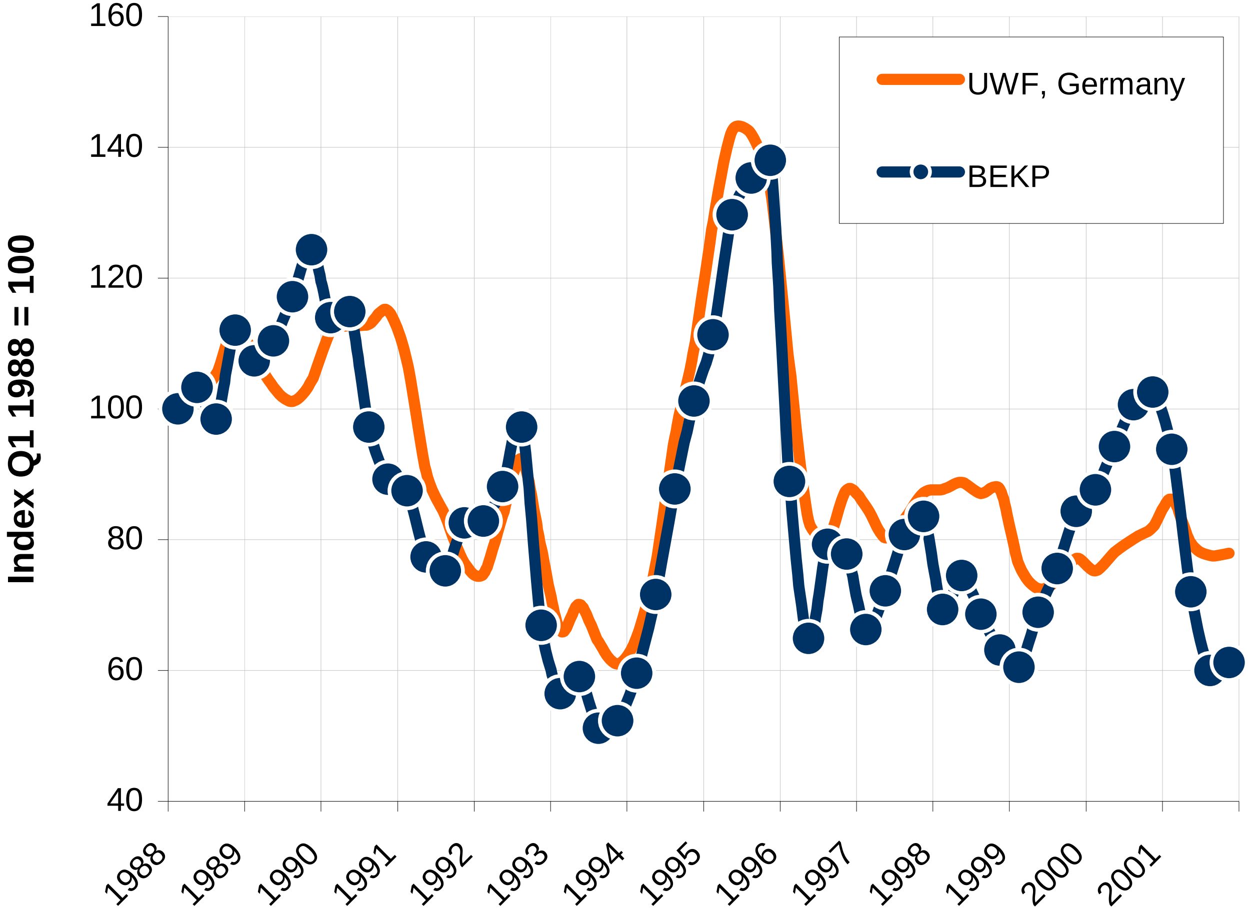
# Pulp v Paper: a strong correlation in 1990s

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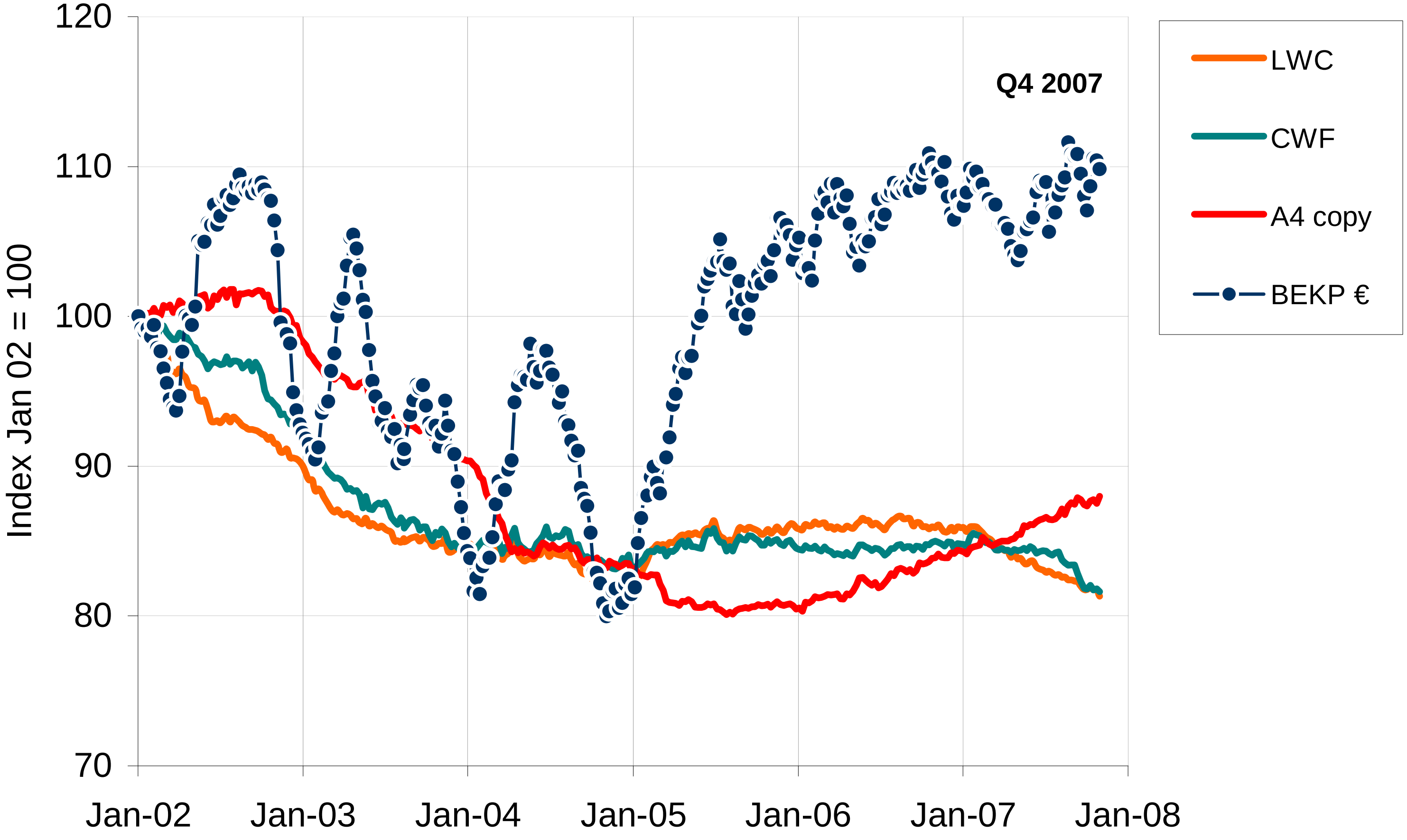
# Has all but disappeared...

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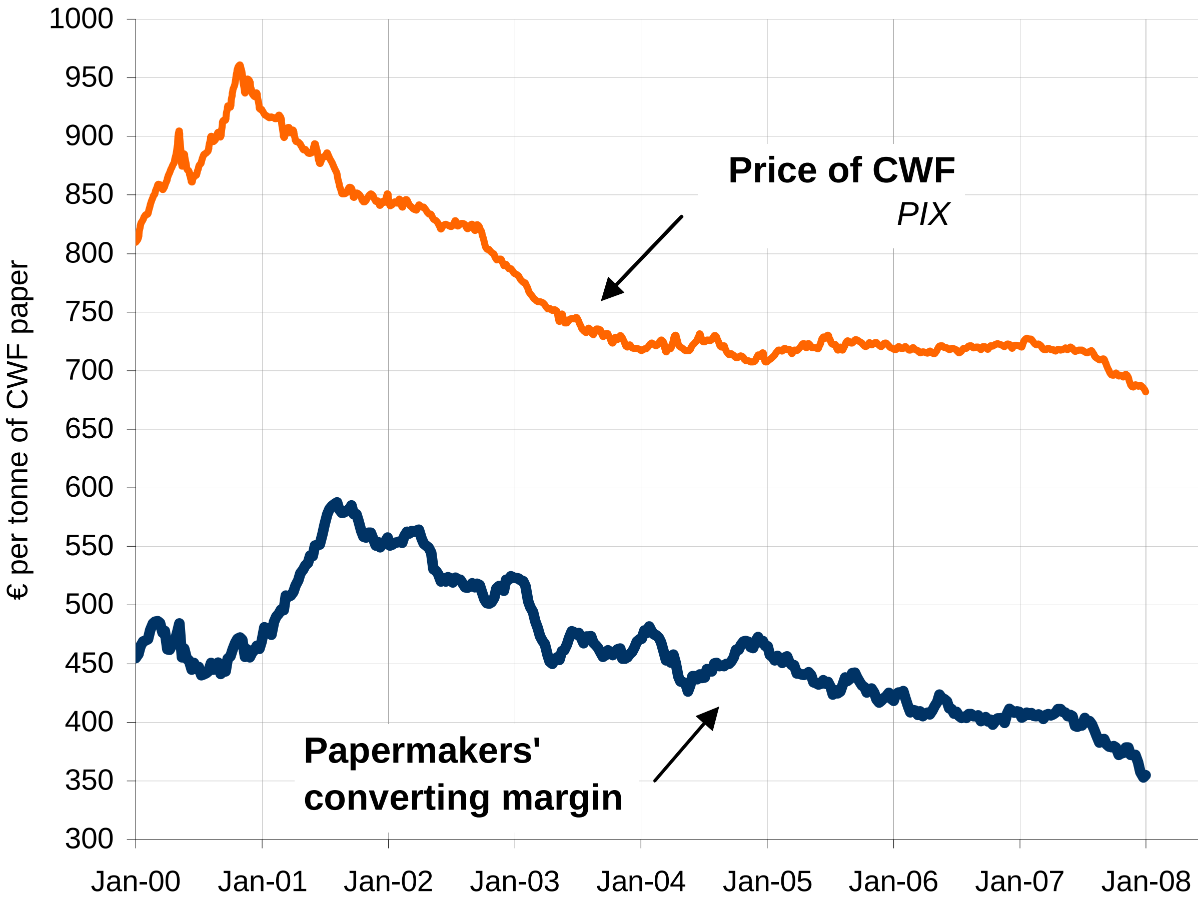
# Papermakers’ converting margins
in West Europe




- Converting margin is the difference between the paper price and the fibre input cost
- CM is money available to pay for all other costs – energy, chemicals, labour, transport etc (profit?!)
- Other costs have increased as much or more than fibre...
- ...margins are now inadequate and 3.3 Mt/y of P&W is closing in Europe
- Crunch time!

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# Printing and Writing Demand

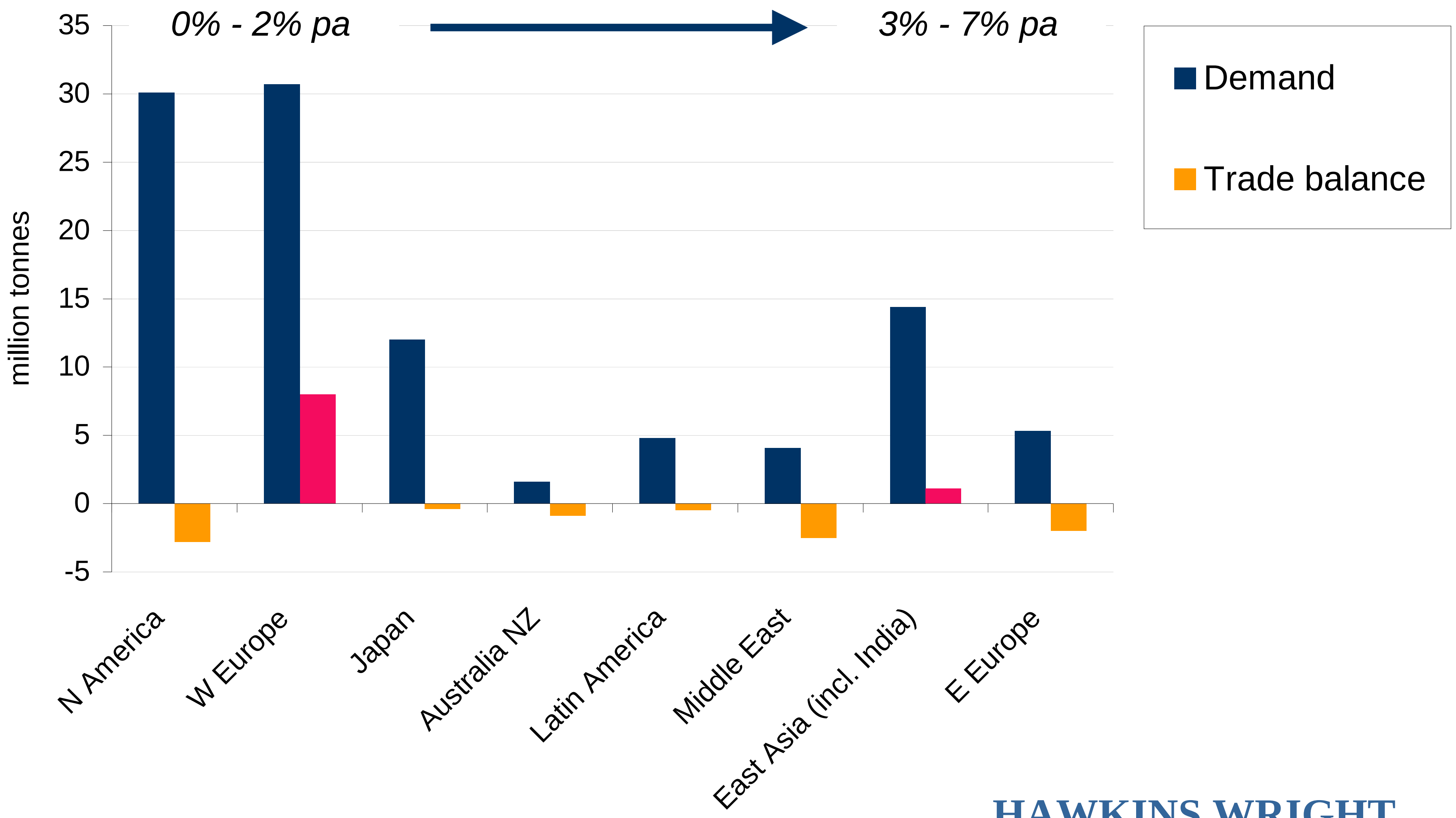
## Demand stagnant in the mature markets

| | 2004 | 2007e | Growth pa 2004-2007 | GDP pa |
|---|---|---|---|---|
| Western Europe | 30,925 | 30,780 | -0.2% | 2.2% |
| North America | 30,740 | 29,800 | -1.0% | 2.9% |
| Japan | 11,840 | 12,120 | 0.8% | 2.2% |
| **Total developed** | **73,505** | **72,700** | **-0.4%** | **n/a** |
| Others | 31,765 | 36,800 | 5.0% | n/a |
| **Total** | **105,270** | **109,500** | **1.3%** | **5.0%** |

***P&W figures: EMGE, World Graphic Papers***

***GDP: IMF***

# Global P&W demand & trade, 2006

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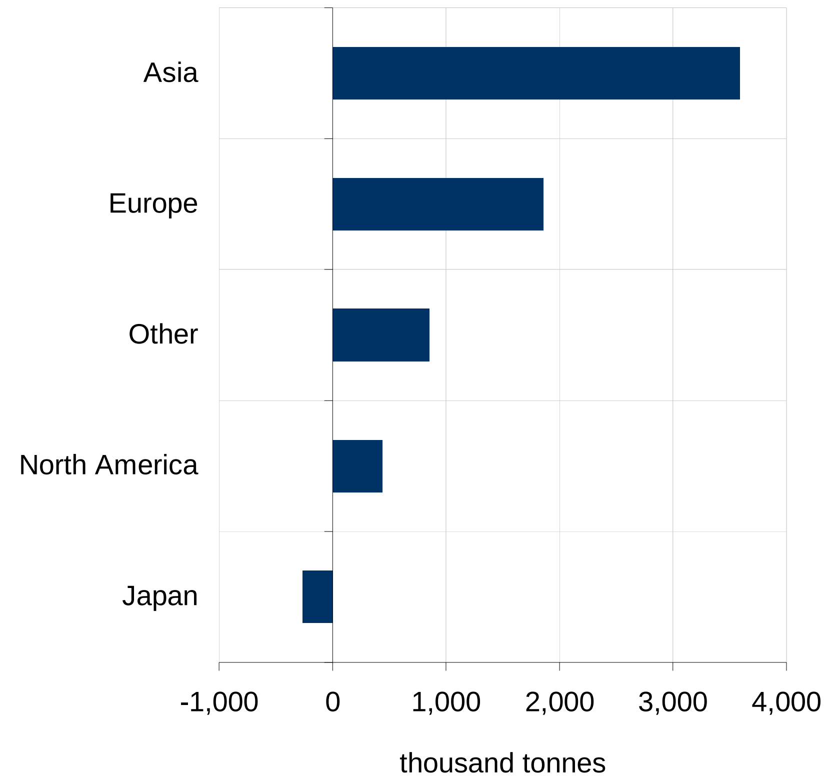
# Paper market restructuring

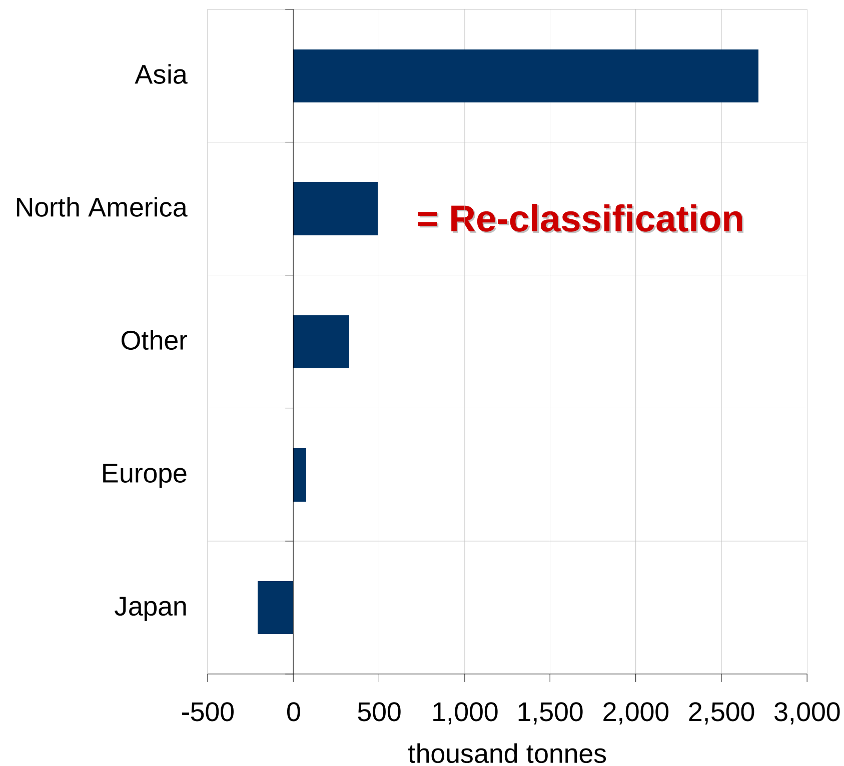
- Flat demand, rising costs, falling prices
- A recognition that this a trend, not part of a cycle
- Smaller non-integrated companies close
- Integrated companies are divesting non-core businesses, rationalising capacity
- 3.8 million t/y European capacity (incl. newsprint & tissue) closes 2005-2007,
- 3.4 million t/y North American P&W capacity closes
- More closures to come

# World market pulp demand growth

Hardwood demand growth: 2000-2007




Softwood demand growth: 2000-2007




**Total BCP demand +9.8 million t, of which Asia 64%**

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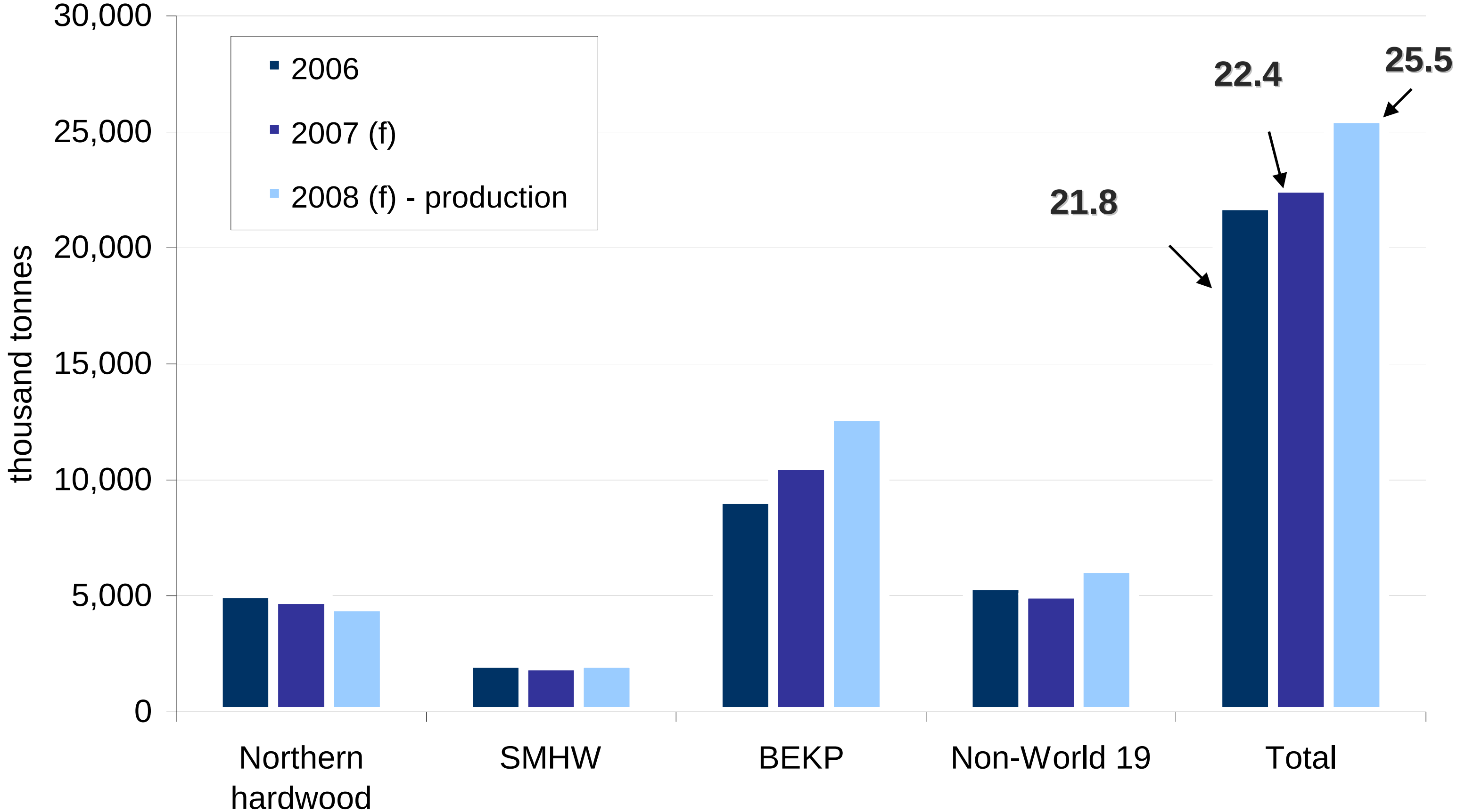
# BHKP shipments: 2006-2008




**World BHKP demand 21,840MT in 2006 to 26,060MT in 2011 (+4.22MT)**

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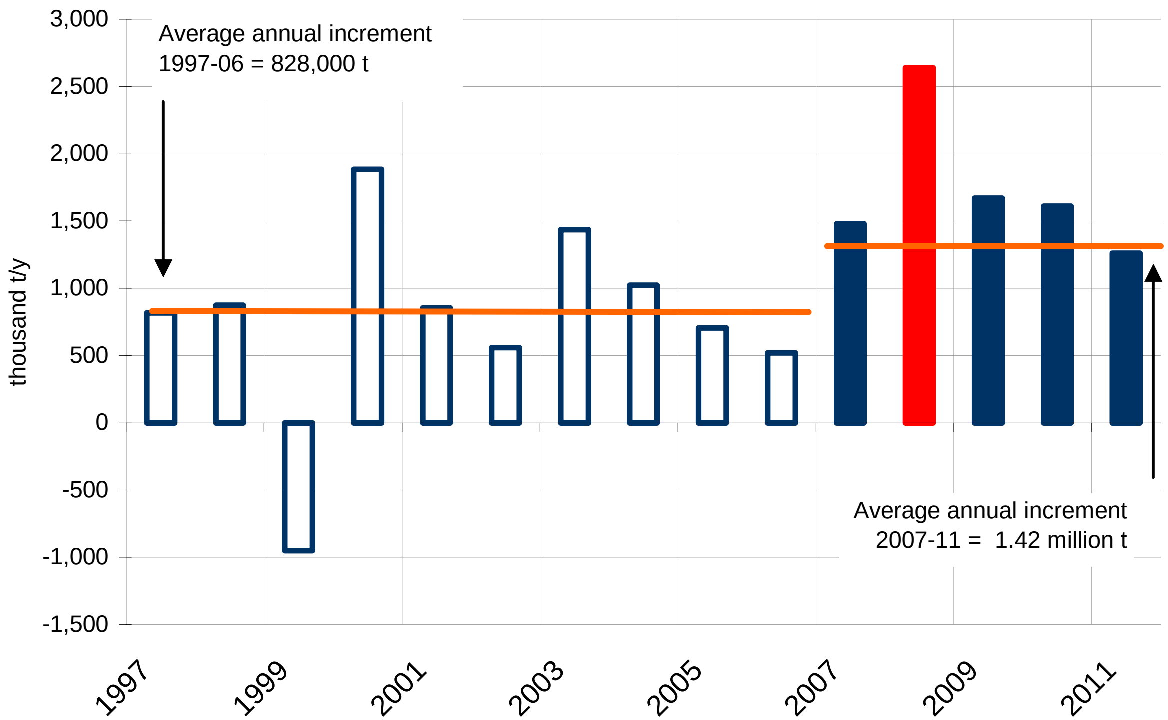
# Hardwood in 2008

## In 2008, BHKP capacity will grow by 2.6 million t/y




- Production estimates assumes operating rates return to “normal” levels, around 95%, mobilizing the currently under-utilized capacity
- But producer and consumer inventories are still low and will take months to replenish
- Maybe bottlenecks become the norm

# BHKP capacity expansions 2007-2011

- **Uruguay – Botnia, 1 Mty**
- **Iberia – ENCE & Altri, 0.7 Mty**
- **Brazil – Aracruz, Suzano, VCP, Lwarcel, Cenibra, Ripasa, Jari total 3.2 Mty**
- **Chile – CMPC and Arauco, 1.1 Mty**
- **Australia (Gunns +0.8 Mty, +0.7 Mty Penola BCTMP)**

- **Indonesia – APRIL and APP, 1.2 Mty (market)**
- **China – Hunan Tiger and Rizhao, 0.7Mty (plus ~1.5 Mty semi-integrated BHKP and BCTMP at APP Hainan & Ningbo, Chenming Zhanjiang Sun, Meili, Xinya etc)**

- **Total 9.4 million t/y**

- Demand 2007 = 22.4 million t

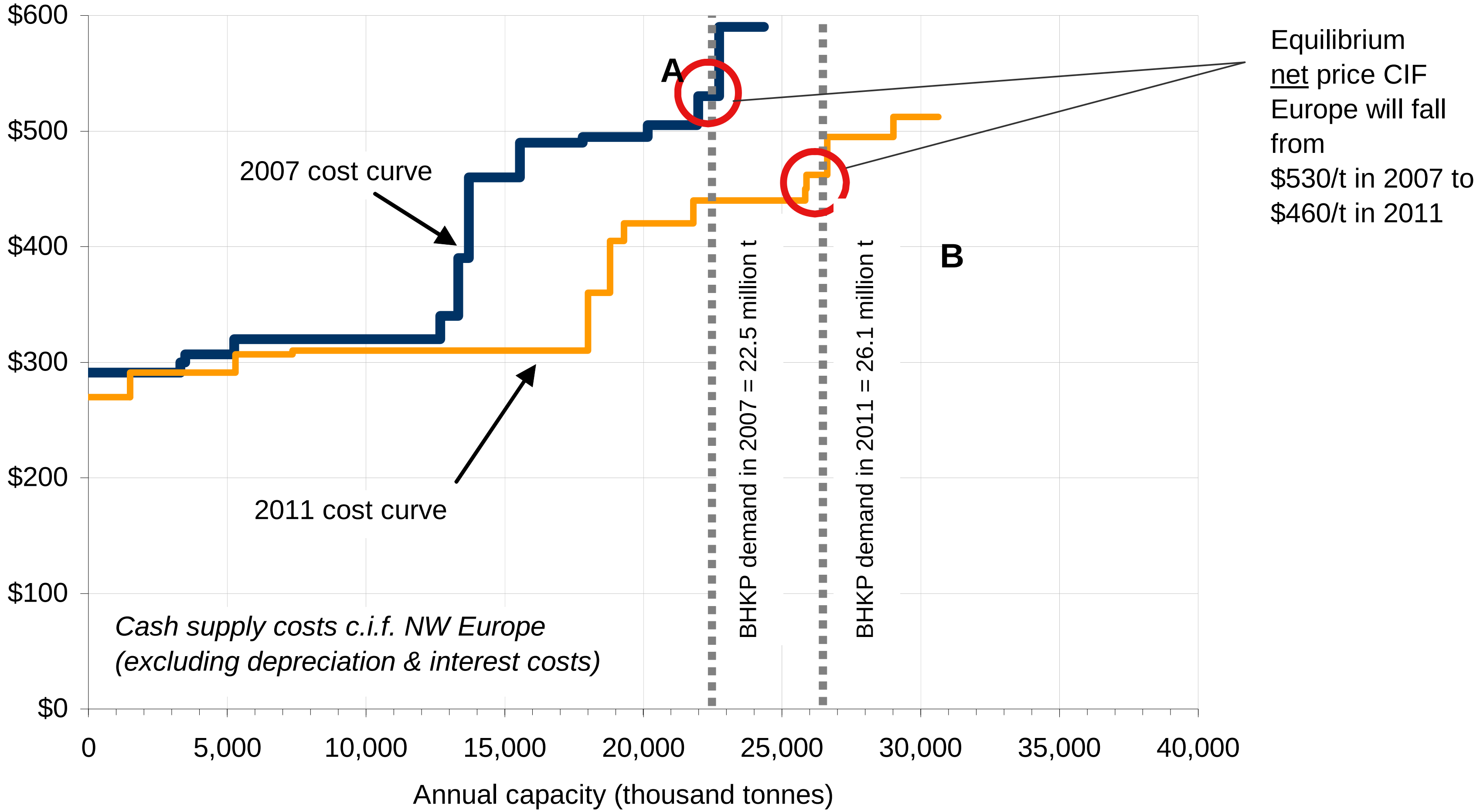
# Unconfirmed or longer term projects

- ENCE +1 Mty in Uruguay
- Cenibra investment allows +0.8 Mty by 2012
- VCP in Rio Grande do sul, + PL#2 at Tres Lagoas
- Aracruz & StoraEnso either jointly (Veracel II) or independently
- Aracruz in RGS
- Stora Enso in Uruguay
- Acacell +0.8 Mty in Malaysia & UFS +0.6 Mty in S. Kalimantan
- Russia – IP/Ilim, StoraEnso, Botnia, Mondi, Pskov
- China – RGM Rizhao, Oji Nantong, Chung Hwa, StoraEnso

- **>10 million t/y capacity planned after 2011**

- But there will also be more closures, as yet unannounced

# Supply cost curve: BHKP



# China – Perceptions

- Pulp and Paper demand growth = GDP x Multiplier
- China share of global market pulp demand to increase from 15% to 25-30% in 5 years
- Paper and board demand 65million t in 2006 rising at 9+% pa to 179MT in 2016
- Per capita c 45kg v 303kg in USA
- High China demand + rising production costs = higher prices
- Higher pulp prices good for paper prices.
- Limited wood and water resources in China so pulp demand to be largely satisfied by imports
- China pulp consumption to rise from 14MT in 2006 to 25MT in 2011 to 41MT in 2016
- China pulp imports to rise from 8MT in 2006 to 15MT in 2011 to 25.5MT in 2016

# China - Perceptions

- All these perceptions are wrong or irrelevant
- Based on inaccurate or misleading official statistics
- Officials make statistics because statistics make officials
- Hawkins Wright estimates based on extensive fieldwork in China

- Even so, other analysts' price forecasts may well be accurate or even conservative !

# China: Official statistics...

| thousand tonnes | Production | | | | % change | 2006 | |
|---|---|---|---|---|---|---|---|
| | **2001** | **2004** | **2005** | **2006e** | 2006/2005 | Net trade | Demand |
| Newsprint | 1,730 | 3,000 | 3,200 | 4,000 | 25.0% | -305 | 3,695 |
| Printings | 8,000 | 10,200 | 10,700 | 11,500 | 7.5% | -100 | 11,400 |
| *Book* | *3,000* | *5,500* | *5,700* | *n/a* | | | |
| *Writing* | *1,400* | *2,800* | *3,000* | *n/a* | | | |
| Coated | 1,300 | 3,000 | 3,650 | 4,800 | 31.5% | -695 | 4,105 |
| *Art* | *1,100* | *2,500* | *3,000* | *3,800* | | | |
| Tissue | 2,700 | 3,840 | 4,360 | 5,000 | 14.7% | 25 | 5,025 |
| Packaging | 4,000 | 4,700 | 4,700 | 5,000 | 6.4% | 385 | 5,385 |
| Cartonboard | 3,000 | 6,700 | 7,900 | 9,800 | 24.1% | 365 | 10,165 |
| *Duplex* | *2,500* | *6,300* | *7,550* | *n/a* | | | |
| Linerboard | 4,600 | 8,300 | 9,800 | 13,000 | 32.7% | 1,065 | 14,065 |
| Medium | 6,000 | 8,100 | 9,500 | 12,000 | 26.3% | 175 | 12,175 |
| Specialities | 670 | 1,660 | 2,000 | 2,500 | 25.0% | 125 | 2,625 |
| **TOTAL** | **32,000** | **49,500** | **55,810** | **67,600** | **21.1%** | **1,040** | **68,640** |

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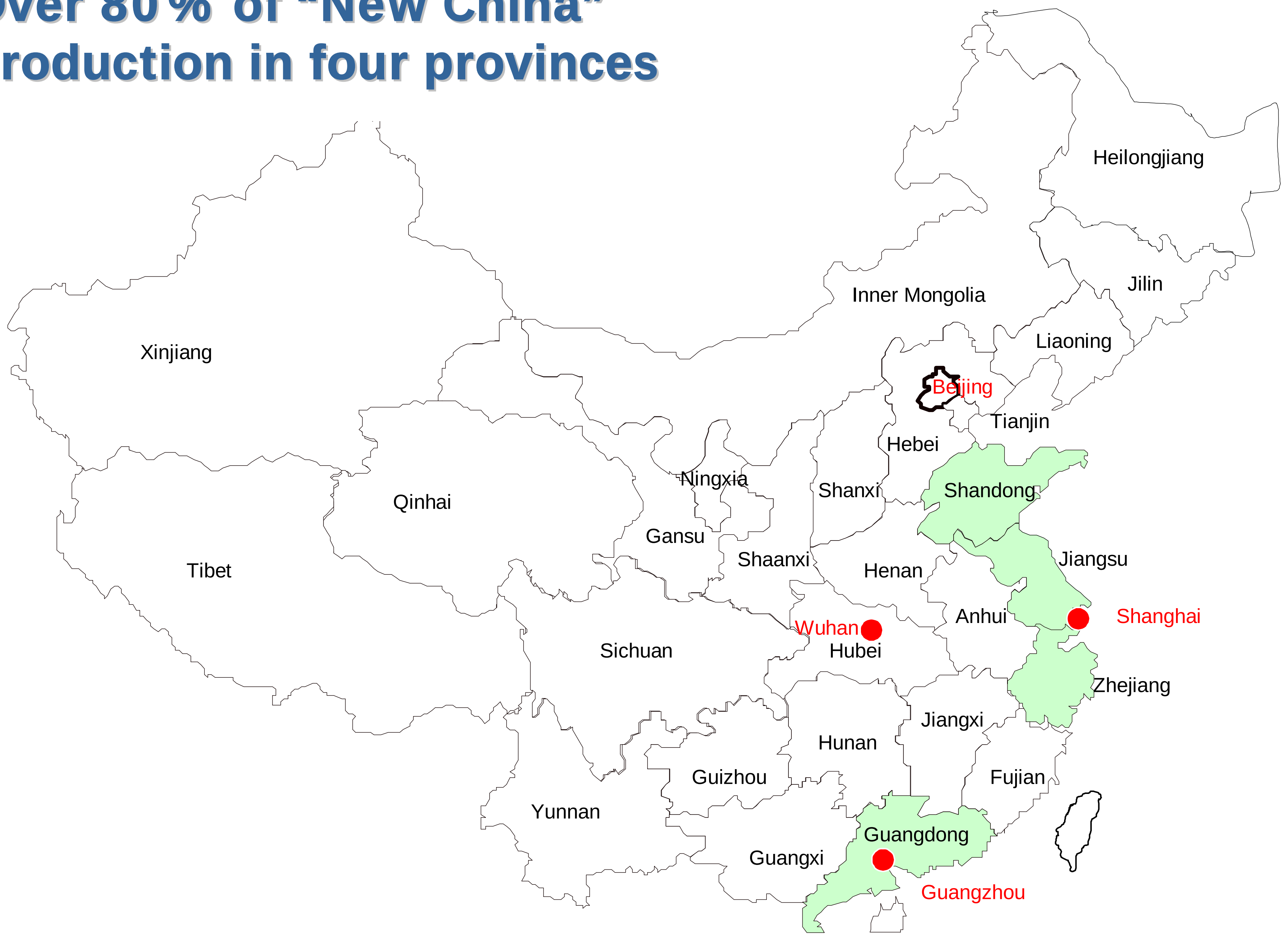
# Over 80 % of "New China" production in four provinces




**Industry is concentrated in the coastal provinces near to the export manufacturing zones**

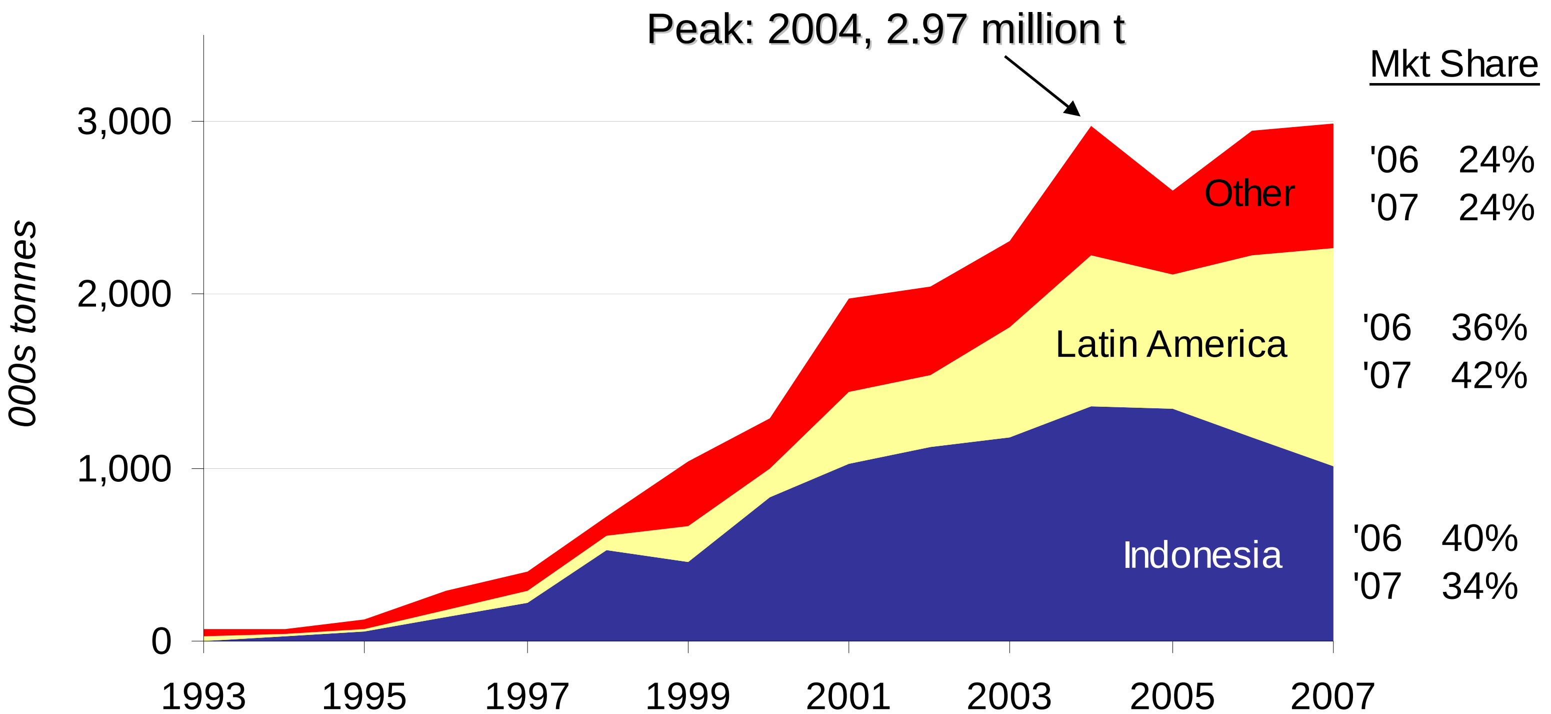
# Paper Industry structure – Hawkins Wright

- **The New China industry**
  - Capacity >50,000 t/y using imported fibre (woodpulp & wastepaper)
  - Some smaller mills producing woodfree papers
  - Mills built since 1996

- **The Old China industry**
  - Mills using predominantly non-wood fibres and domestic wastepaper
  - Mills built before 1996
  - We cannot define ‘Old China’ with any confidence, but it doesn’t matter as grades not comparable to international qualities

# Chinese BHKP imports

## Chinese BHKP Imports, 1993-2007, by country of origin

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# Conclusions

- Current supply demand projections will encourage paper-makers to substitute the use of softwood for hardwood...
- ...and certain pulp producers to switch production from hardwood to softwood
- The limits to both types of substitution are unknown, but have been under-estimated in the past
- Further restructuring in North America and Western Europe will continue to limit the growth opportunities for market pulp in these regions.
  - Growth is largely limited to tissue and hygiene sectors (fluff)
- Further mill closures to take place in strong currency nations
- “Tied” market will continue to expand