

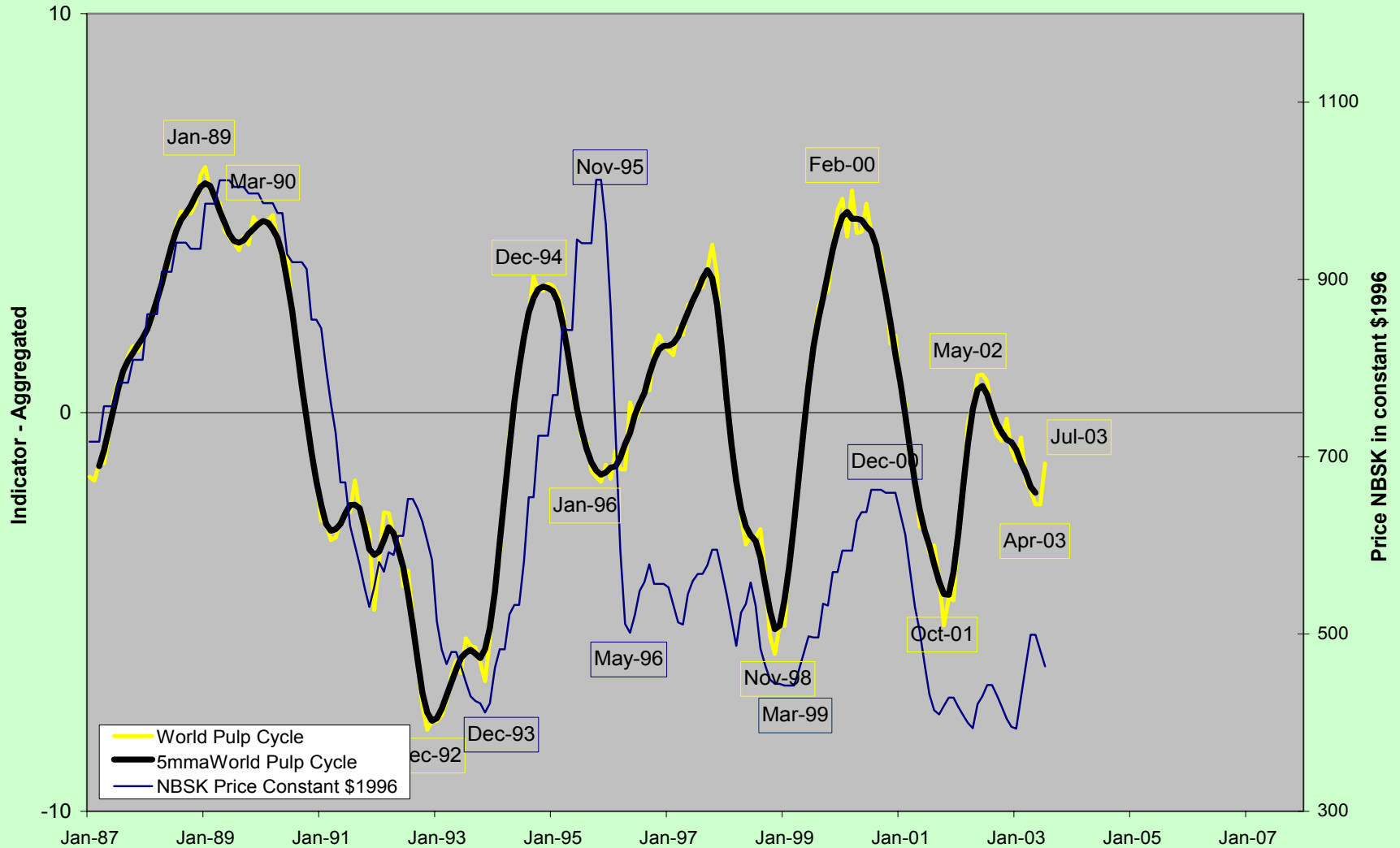


Pulp Trends – Trend Tracking Seminar

September 4, 2006

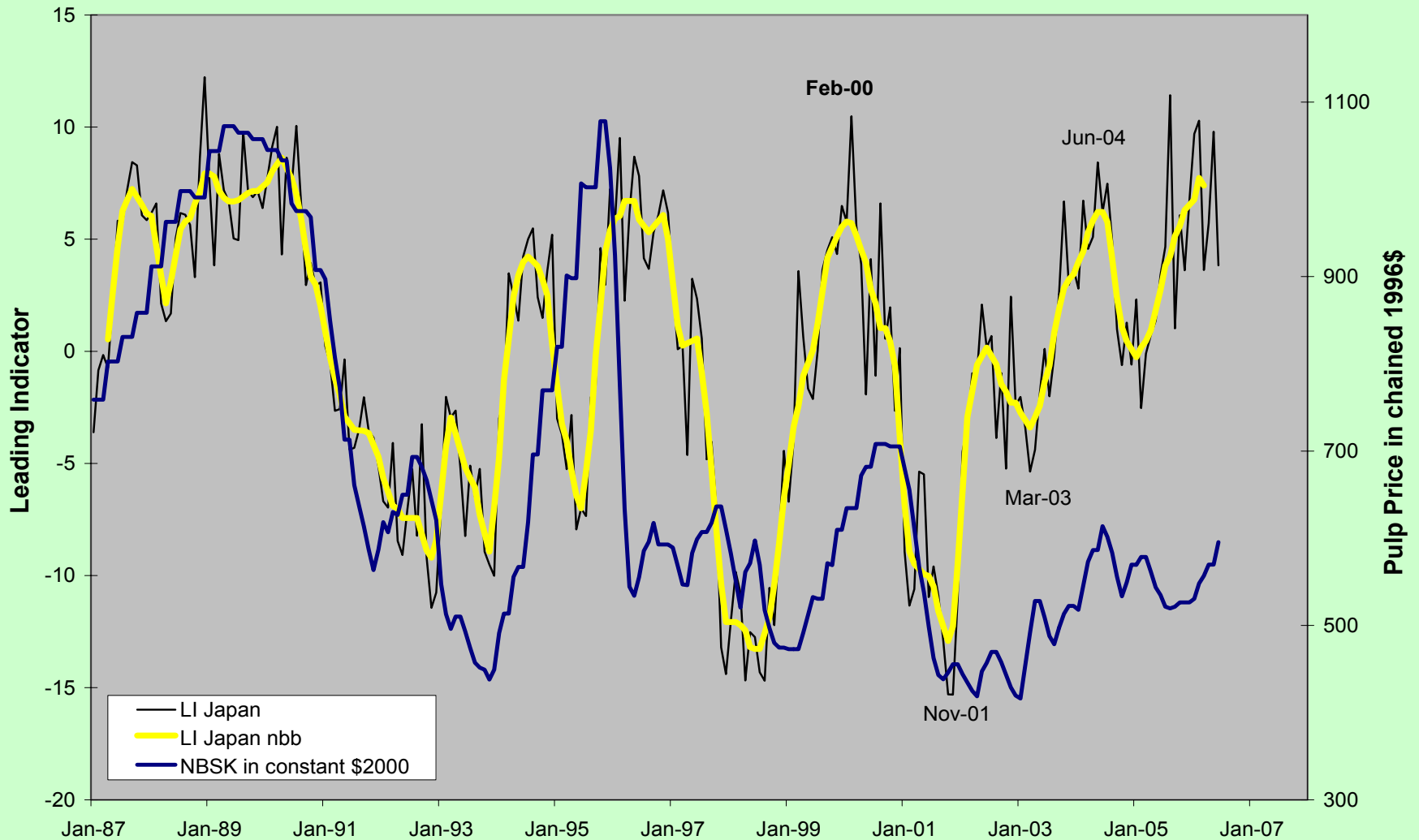
World Pulp Cycle

World Pulp Cycle (Aggregated Indicator) vs Price NBSK (July 2003)



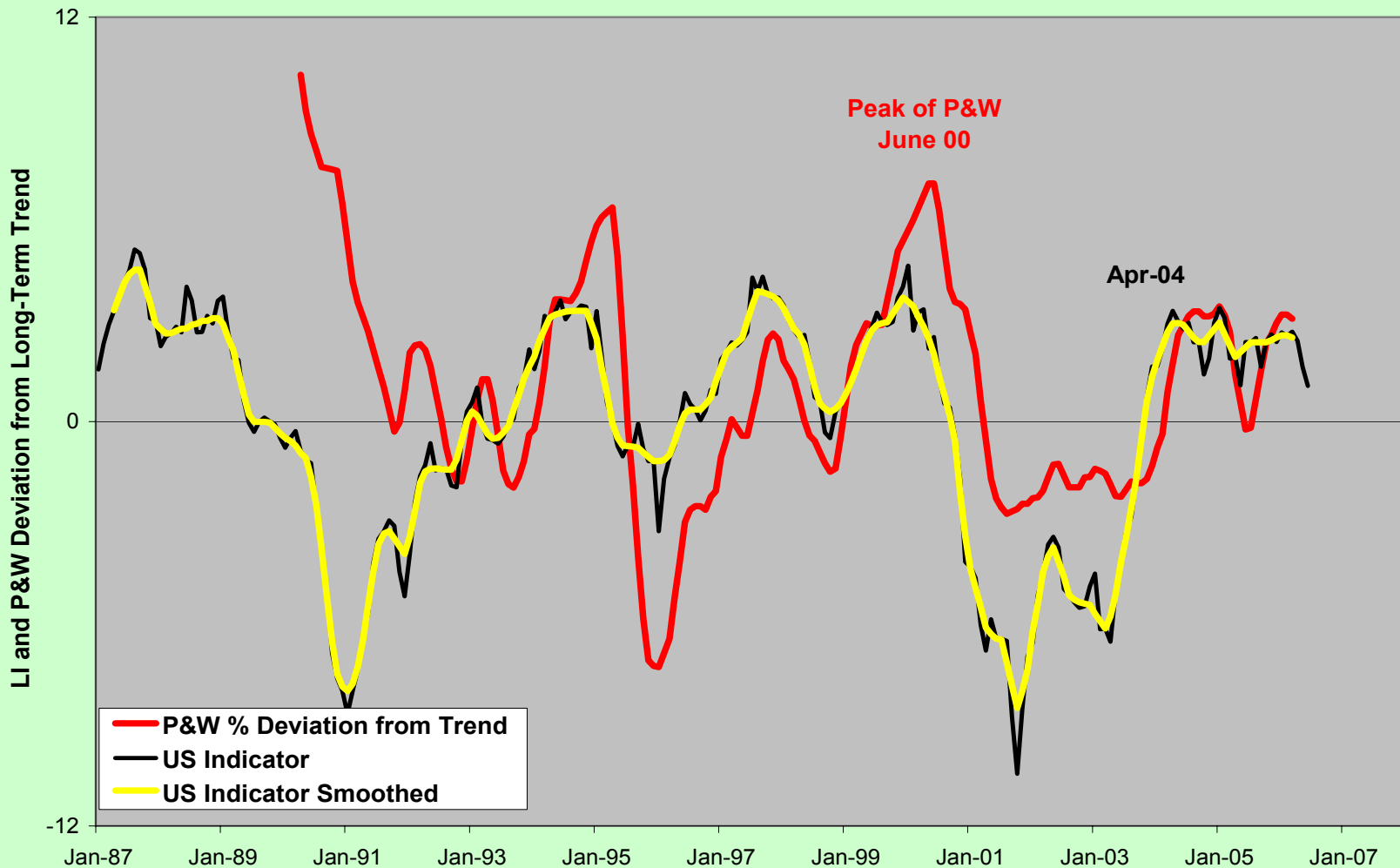
Japan: Leading Indicators vs. U\$ Pulp Price

Japan : Leading Indicator vs U\$ Pulp Price - June 2006

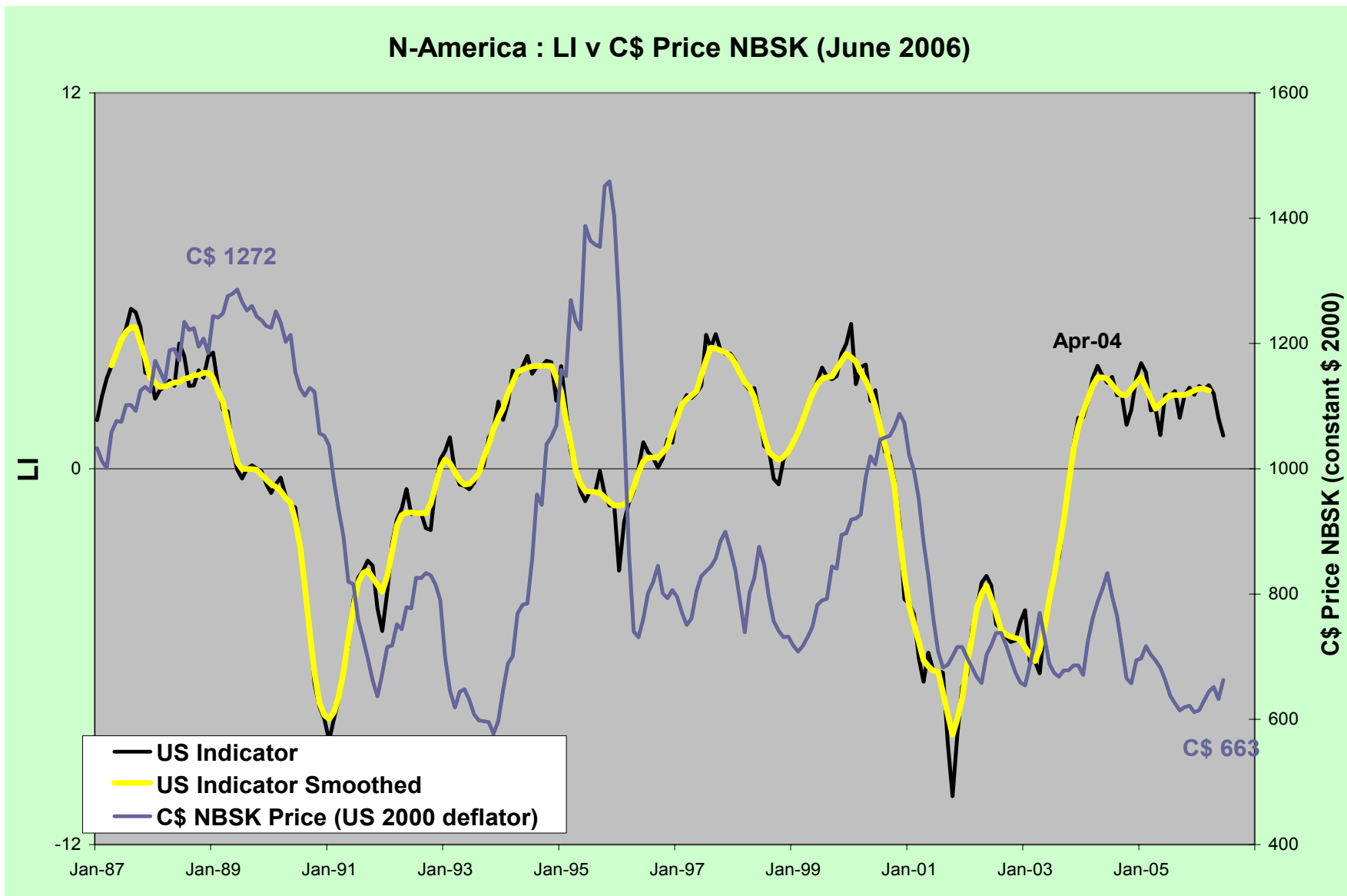


North America: Leading Indicator vs. P&W

N-America : Leading Indicator v P&W - June 2006

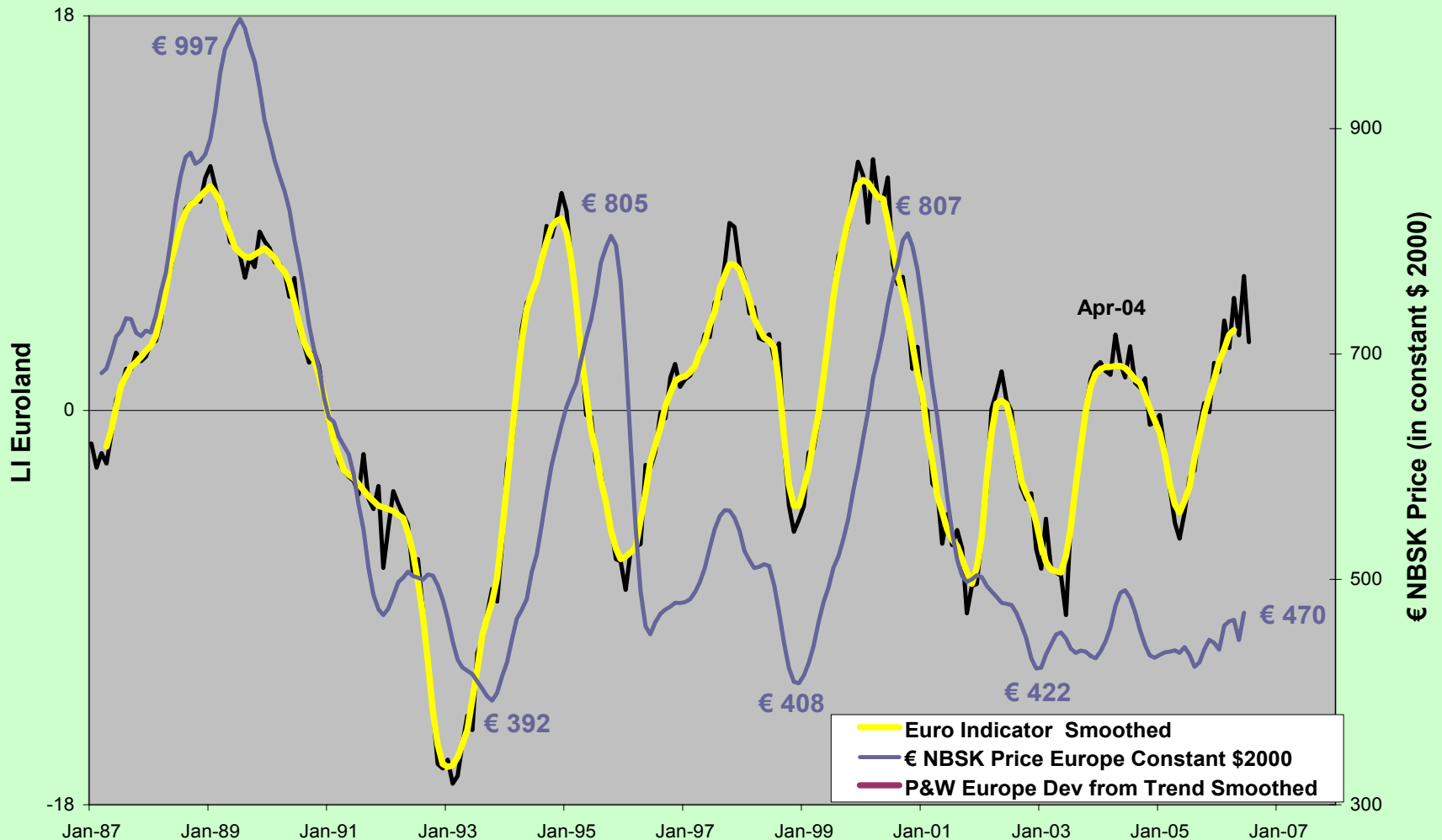


North America: Leading Indicator vs. C\$ Price NBSK



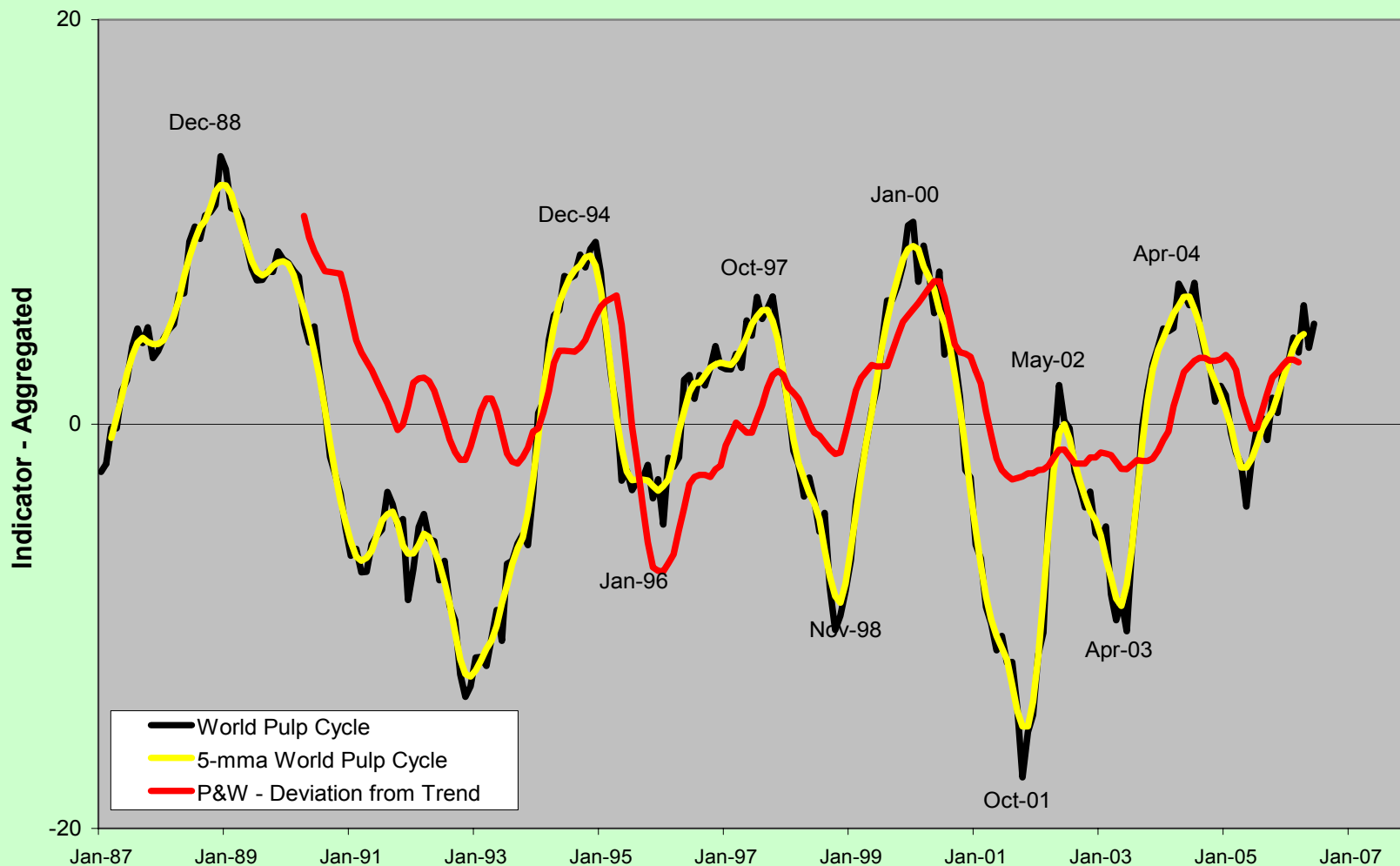
Europe: Leading Indicator vs. € Price NBSK

Europe : Leading Indicator v € Price NBSK (June 2006)



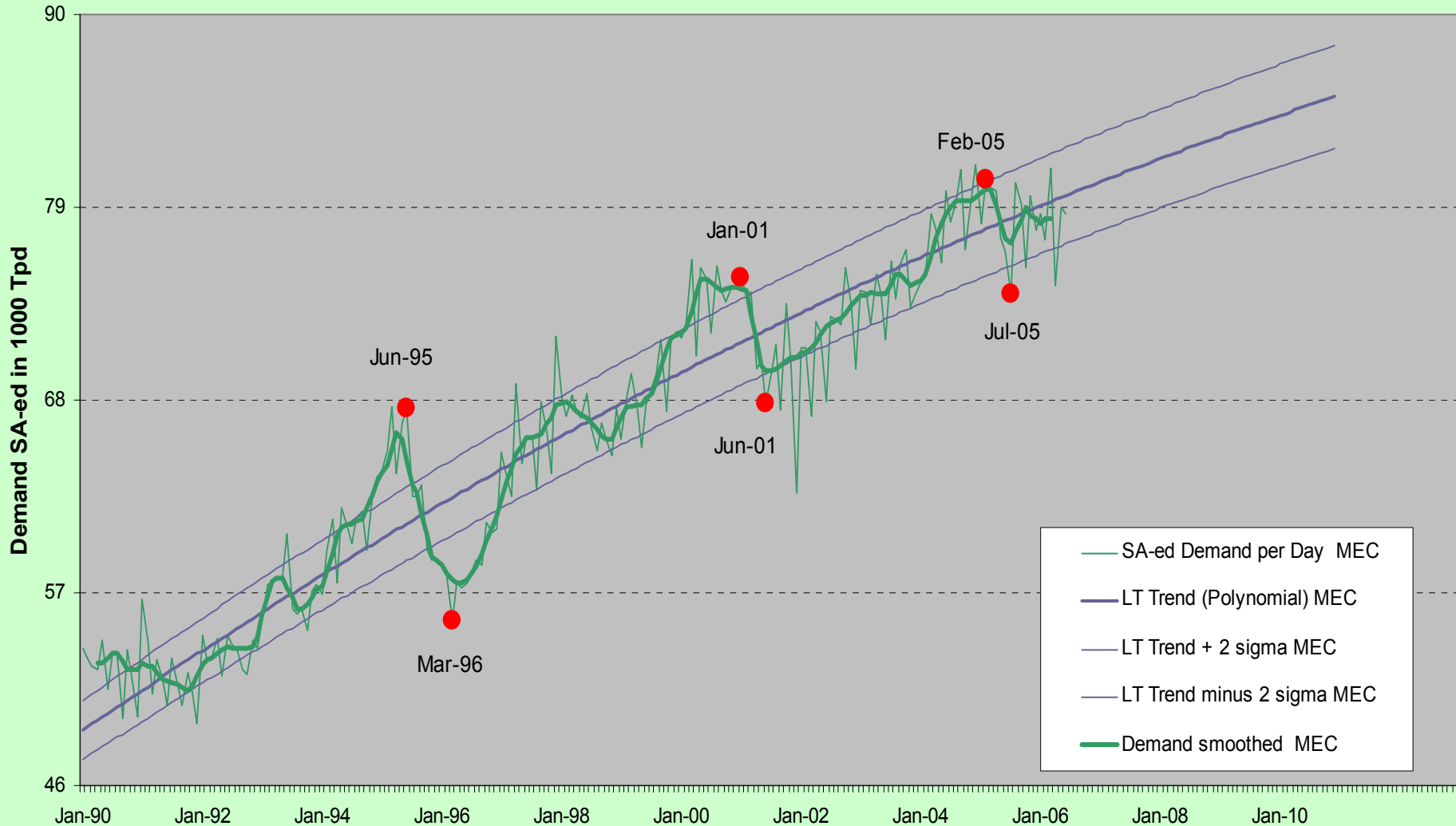
World Pulp Cycle

World Pulp Cycle (Aggregated Indicator) v P & W (% deviation) - June 2006



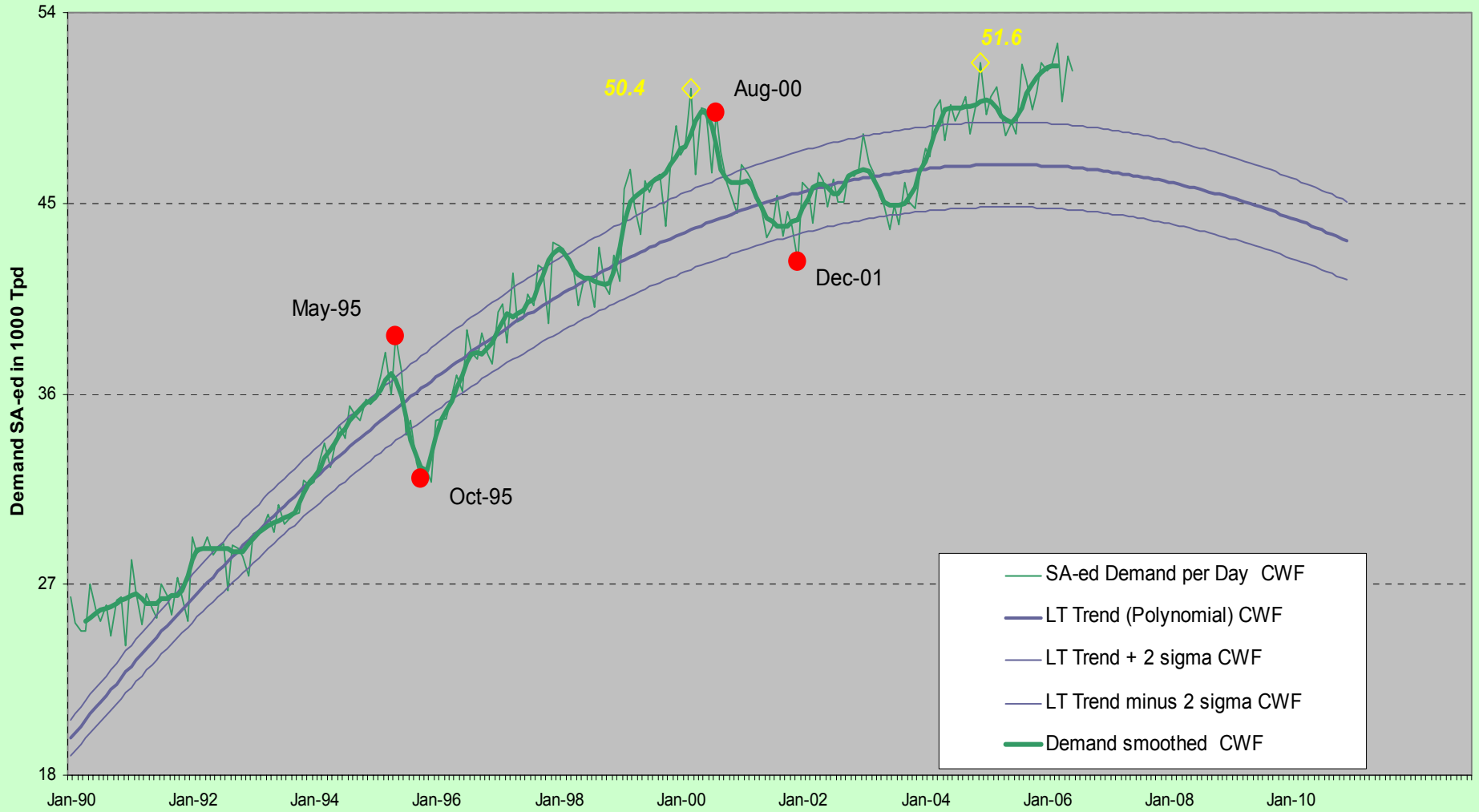
DEMAND Mechanical Grades

Mechanical Grades - Demand SA-ed v Trend - June 2006



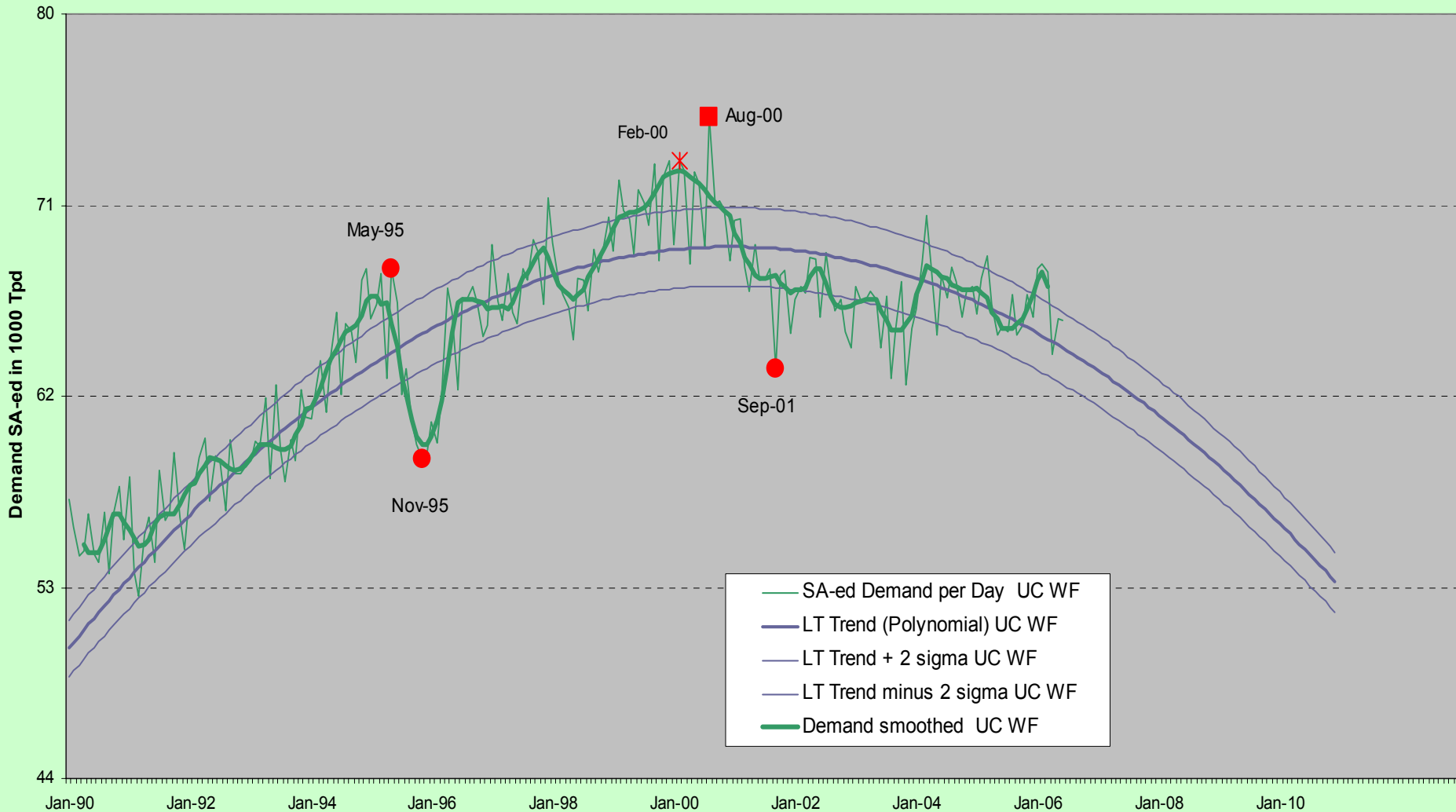
DEMAND Coated Woodfree

Coated Wood Free - Demand SA-ed v Trend - June 2006



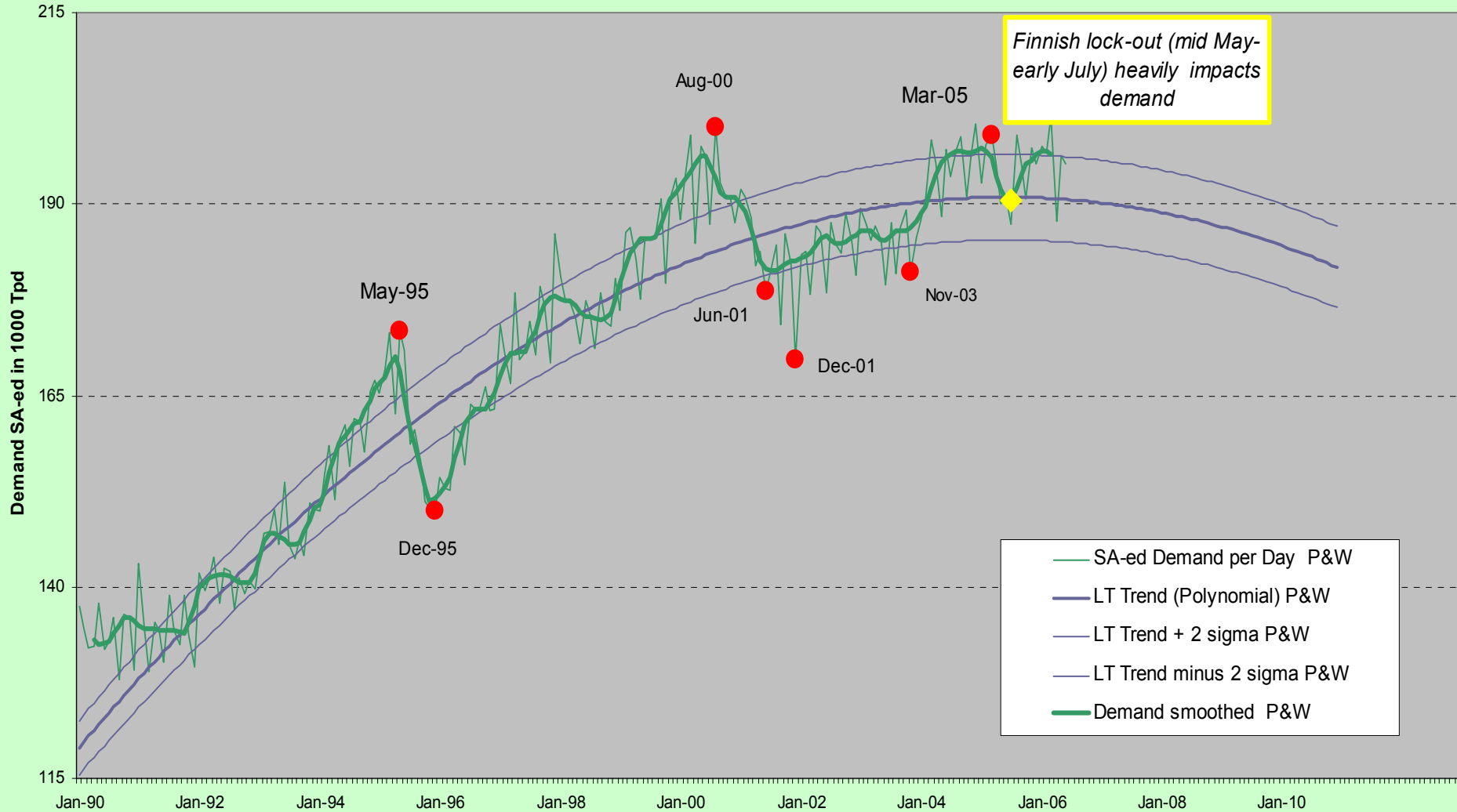
DEMAND Uncoated Woodfree

UC Woodfree - Demand SA-ed v Trend - June 2006



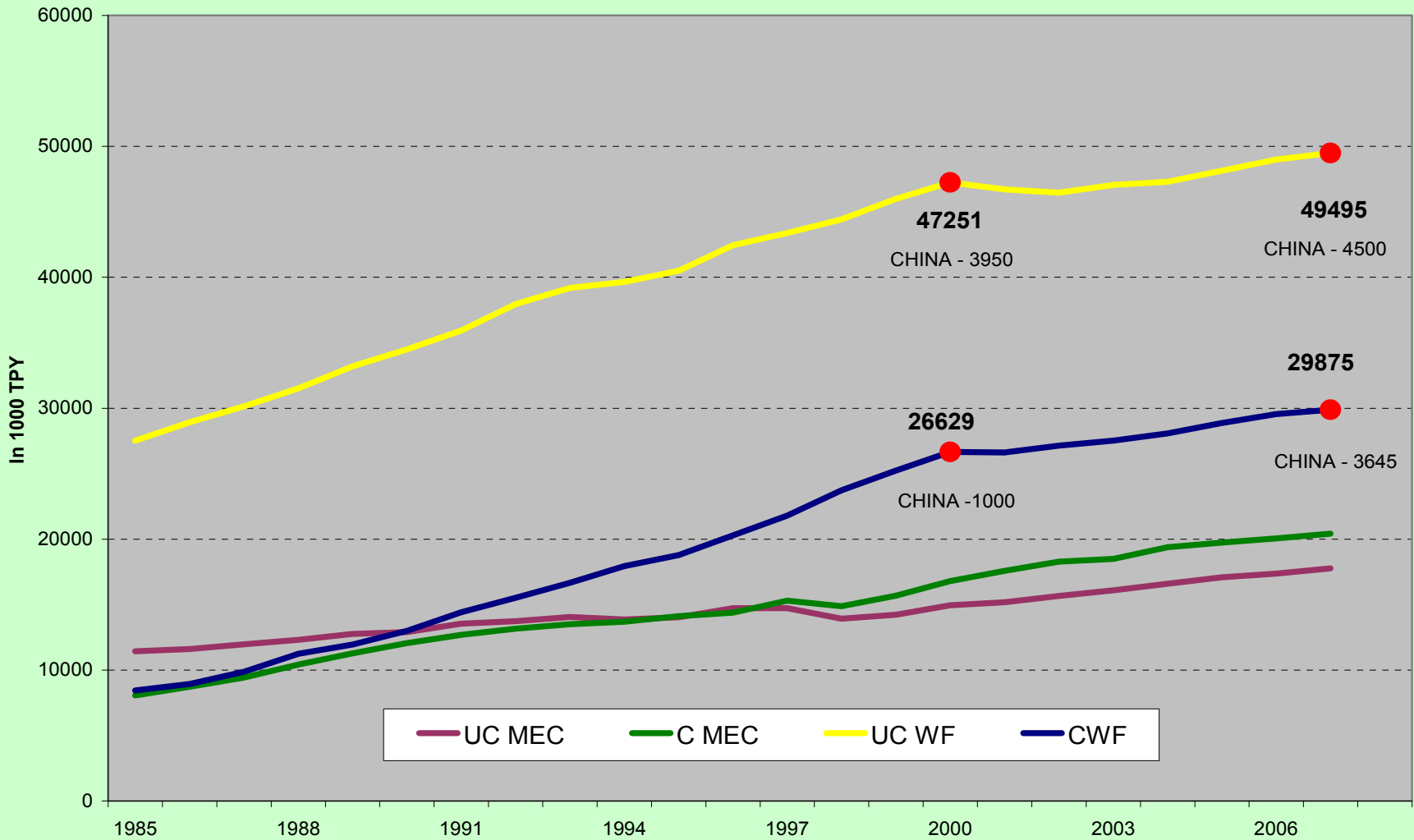
DEMAND All P & W Grades

P & W Demand for the Reporting Countries (PPPC) - SA-ed v Trend - June 2006



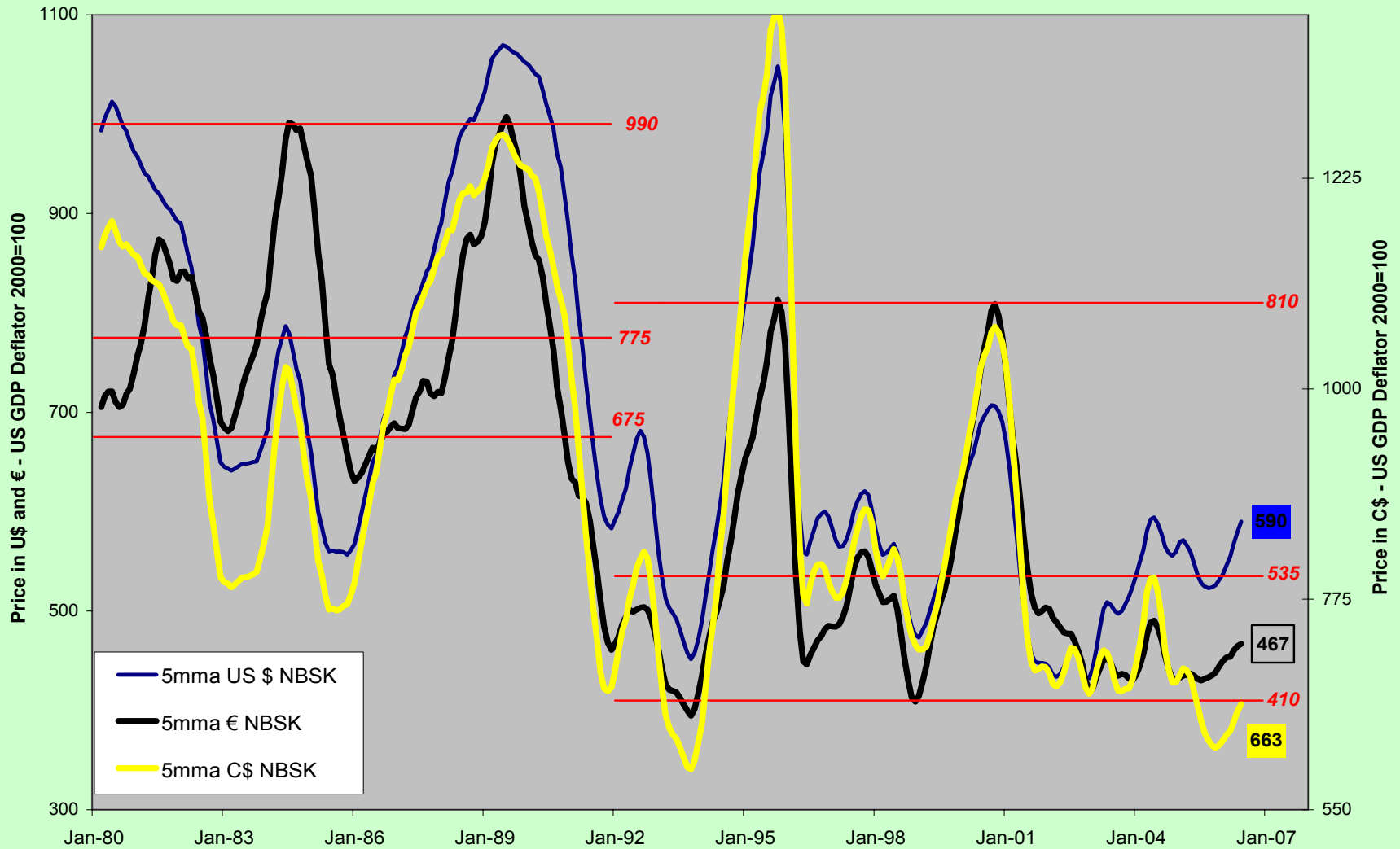
PMC All Grades P & W

World Capacities P&W - PPCC



Price NBSK

Price NBSK CIF W-Europe in US\$ - € - C\$ (constant US\$ 2000)



NBSK Shipments in 2005

2005 Shipments of NBSK in million Admt

From	W-Europe	Canada	Total
To W-Europe	4.6	1.4	6.0
To N-America	0.1	3.2	3.3
To Asia + Japan	0.8	2.2	3.0
To Rest of World	0.3	0.2	0.5
TOTAL	5.8	7.0	12.8
Exports	1.3	3.8	5.0

FACTOR ANALYSIS

- A statistical technique for reducing a complex set of correlated data into a smaller number of independent dimensions or factors
- Each factor is derived from those original variables that are most strongly correlated with each other but least correlated with any others
- Factor Analysis is a way to explore whether there is a simpler structure underlying a complex set of data

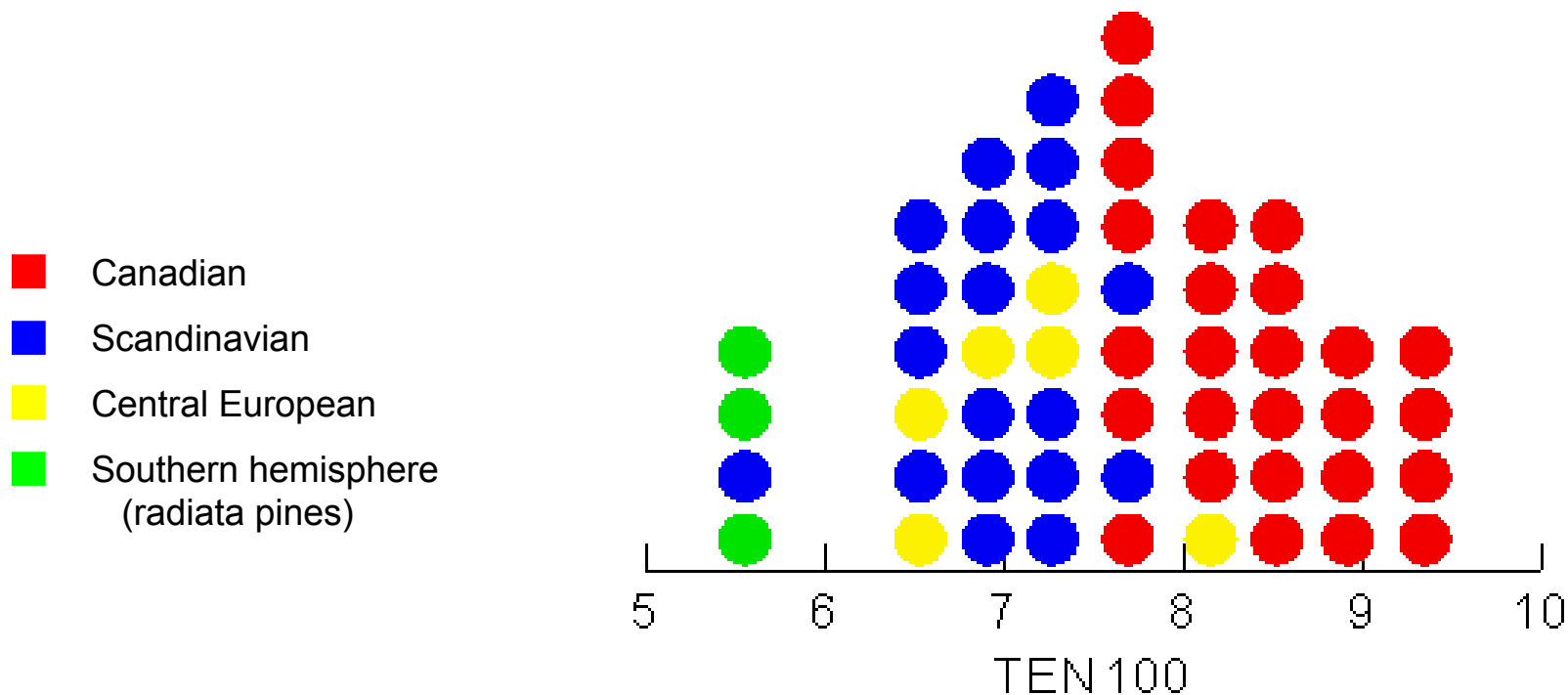
PRP Factor Analysis

- Suppose we have a large data set with body measurements (height, weight, shoe size, leg length, arm length, head circumference, body circumference, chest circumference etc.)
- We expect that these data values would be somewhat correlated with one another, some much more closely than other – a good opportunity to apply Factor Analysis
- After analysis two “factors” emerge, one seems to correlate very strongly with height, limb length, shoe size etc. The other correlates best with circumferences, and weight.
- The first factor explains 62% of the variance, the second one 24%. In FA these two values are independent so together 86% of the total variance in the entire data set is explained by the two factors.
- Based on the nature of the correlations we decide to name the first factor the “Size Factor” and the second one a “Shape Factor”.

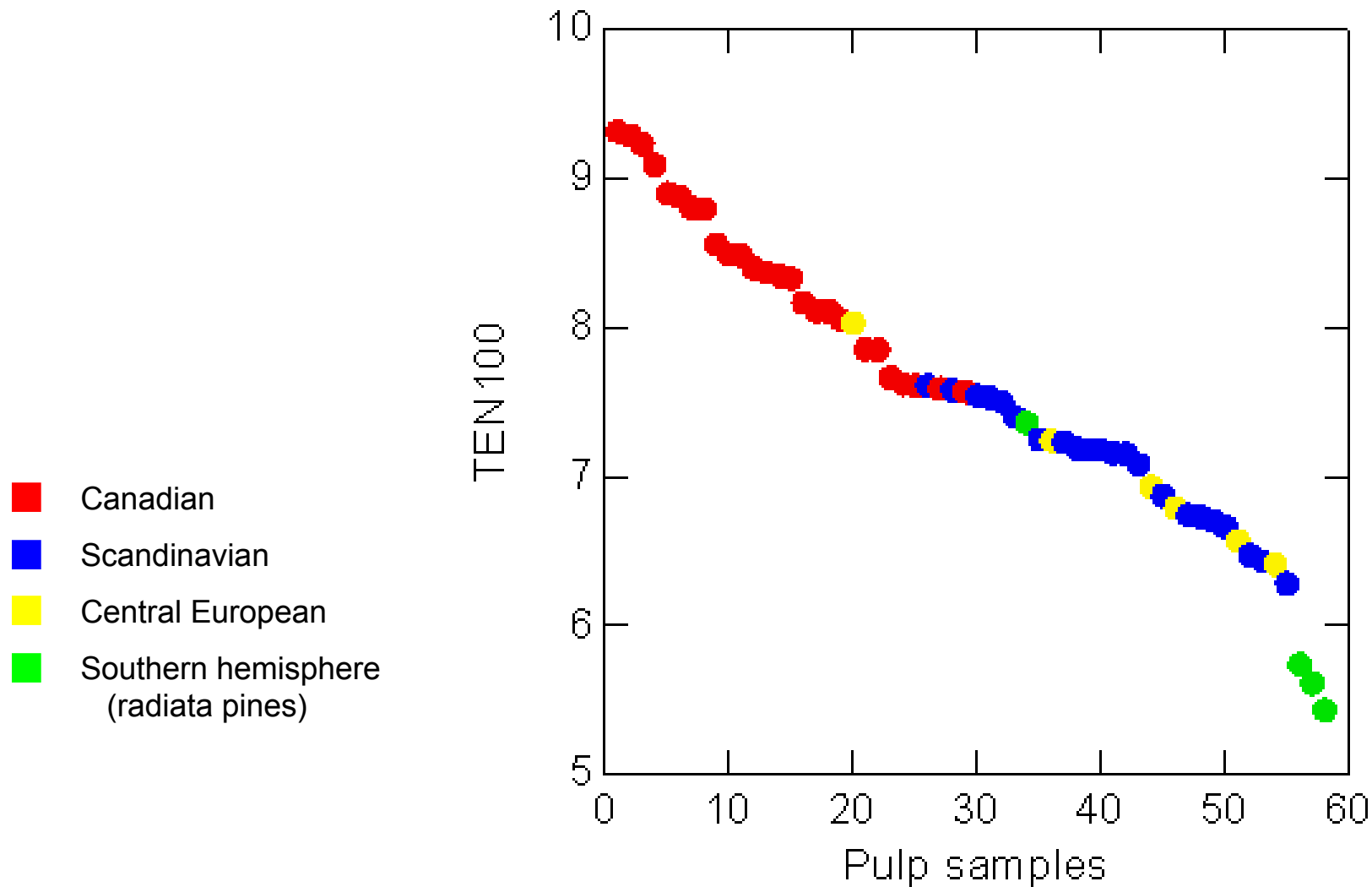
PRP Factor Analysis

- For our data, 2 factors described 68% of the variation when the data was analysed (breaking length, tear index, burst index, porosity, density, refining energy, fracture toughness, fibre length, coarseness)
- The first factor loaded strongly on sheet properties, mostly strength (40%)
- Second factor loaded strongly on morphological properties and initial freeness (28%)

Histogram of NBSK's by region – using Tensile at 100 kW



Breaking length (km) after 100 kWh/t specific energy



De-stocking in 1995 and 2000

P & W Demand for the Reporting Countries (PPPC) - SA-ed v Trend - June 2006

