

Global Performance in the Pulp & Paper Industry: An Overview

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**Presented at: Current Status of Maine's Pulp & Paper Industry
Challenges, Strengths & Opportunities**

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Bangor, Maine

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Game Plan

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Benchmarking

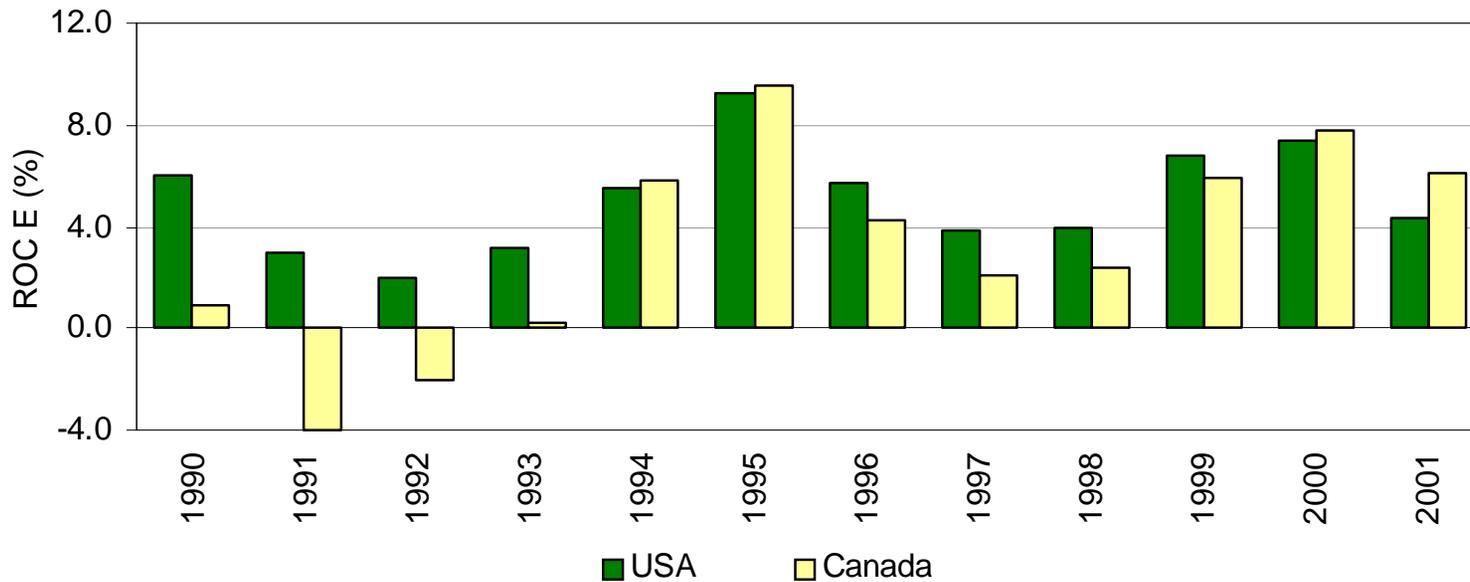
Industry Week magazine survey of manufacturers:

- Where do you rank your company within your industry?
- 98% of respondents placed themselves in the top 50%.
- Most company's don't know their position in their industry.

Given the capital intensity of the paper industry, we focus on Return on Capital Employed as a key financial benchmark.

ROCE Performance

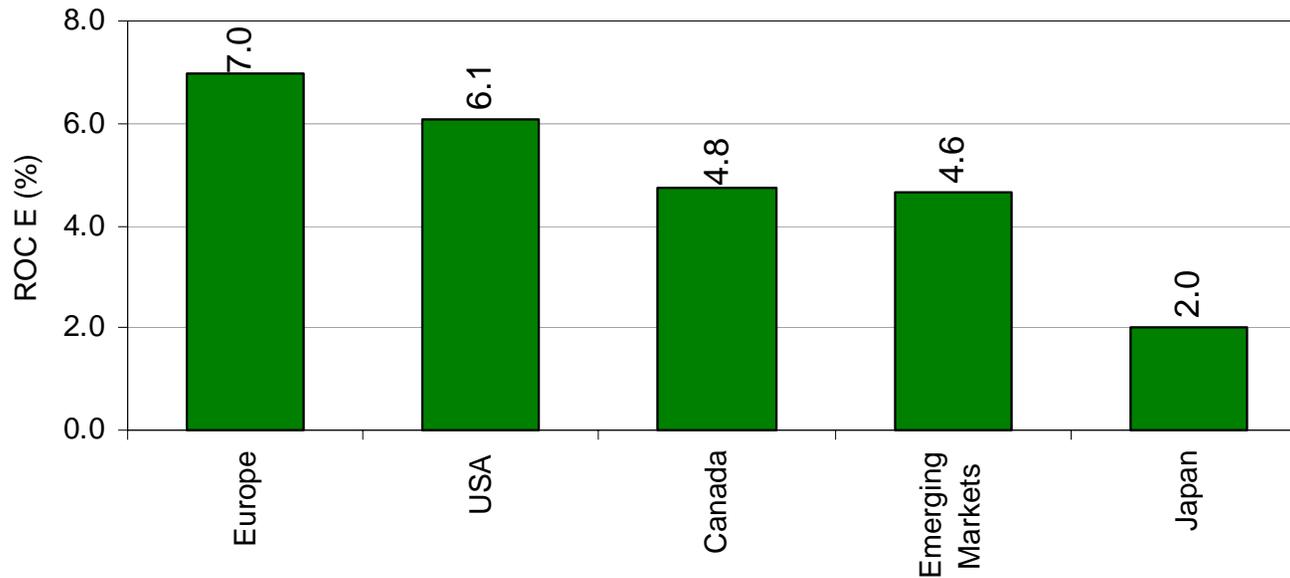
North America, Return on Capital Employed: 1990-2001



- Performance "over-a-cycle" has improved over time.
- Canadian performance was especially dismal in the early 1990s
- 1990-1995: U.S.=4.8%, Canada=1.7%
- 1996-2001: U.S.=5.35%, Canada=4.75%

ROCE Performance

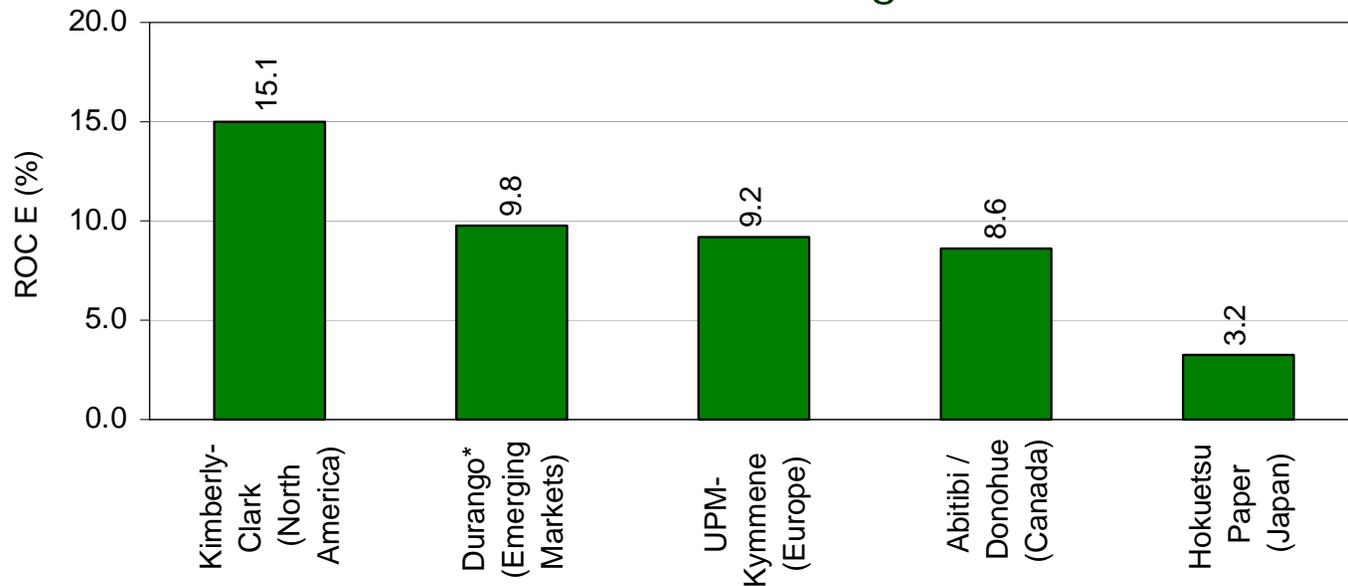
International, Return on Capital Employed: 1996-2001 Average



- Europe has consistently been at the top and Japan at the bottom
- U.S. Canada and “Emerging” regions in the middle.
- Emerging regions include Asia Pacific, Latin America and S. Africa.

ROCE Performance

ROCE – “National Champions”:
1996-2001 Average



*Durango represents 5 year average.

- Tissue is key for K.C., but there is no “magic product”.
- 15% is a reasonable “stretch target”, but historically attained by few
- ROCE is only one measure of financial performance – just ask Durango’s bond holders (must also manage the debt).

ROCE Performance

North American Race:

- K.C. (15.1%) on top.....then a gap.
- Buckeye (11.5%) and Caraustar (9.7%)
- Sonoco (8.7%) and Abitibi/Donohue (8.6%)

Other household names?

- Weyerhaeuser (7.0%) in U.S., Domtar (5.5%) in Canada
- IP (3.1%), but rank is improving – it would be near the top in Japan.

ROCE Performance

European Race:

- Winner depends on the time period, and UPM (9.9%) has longer track record.

“National Champions” over 1998-2001?

- Finland: Myllykoski (10.9%), UPM (9.9%)
- Sweden: Holmen (9.9%), Stora Enso (5.5%)
- Continent: Torraspapel (13.4%)

ROCE Performance

Japanese Race:

- Hokuetsu (3.2%) is the best of a bad lot
- Oji (1.5%) has lagged the most, but Nippon is also poor (2.4%)
- Mitsubishi (0.9%) is the most volatile

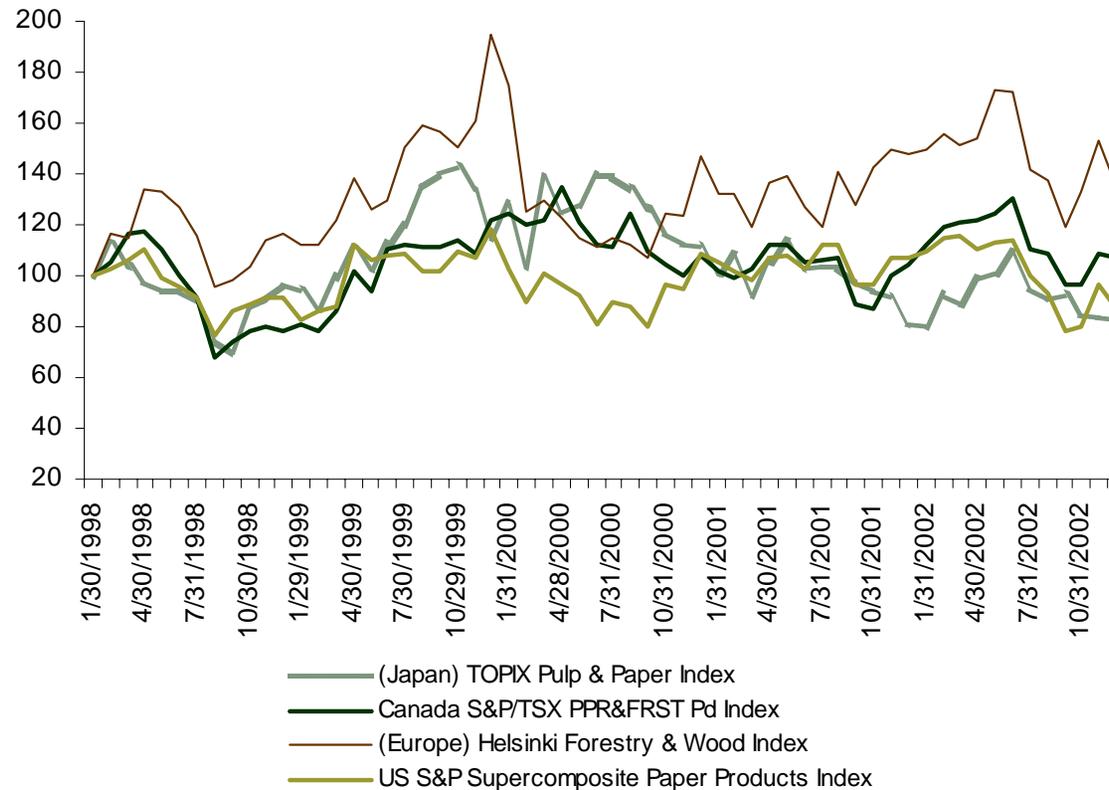
ROCE Performance

Emerging Regions' Race:

- Length of track record makes comparison's difficult.
- Durango (9.8%) in lead, but KC (Mexico) is strong new player.
- Suzano (7.5%) best in S. America, and Siam (7.1%) in Asia.
- As expected, the "green-field growers" are near the bottom: Aracruz (3.1%), APP (1.8%) and APRIL (1.0%).

Share Price Performance

International Comparison of Paper & Forest Product Indices*

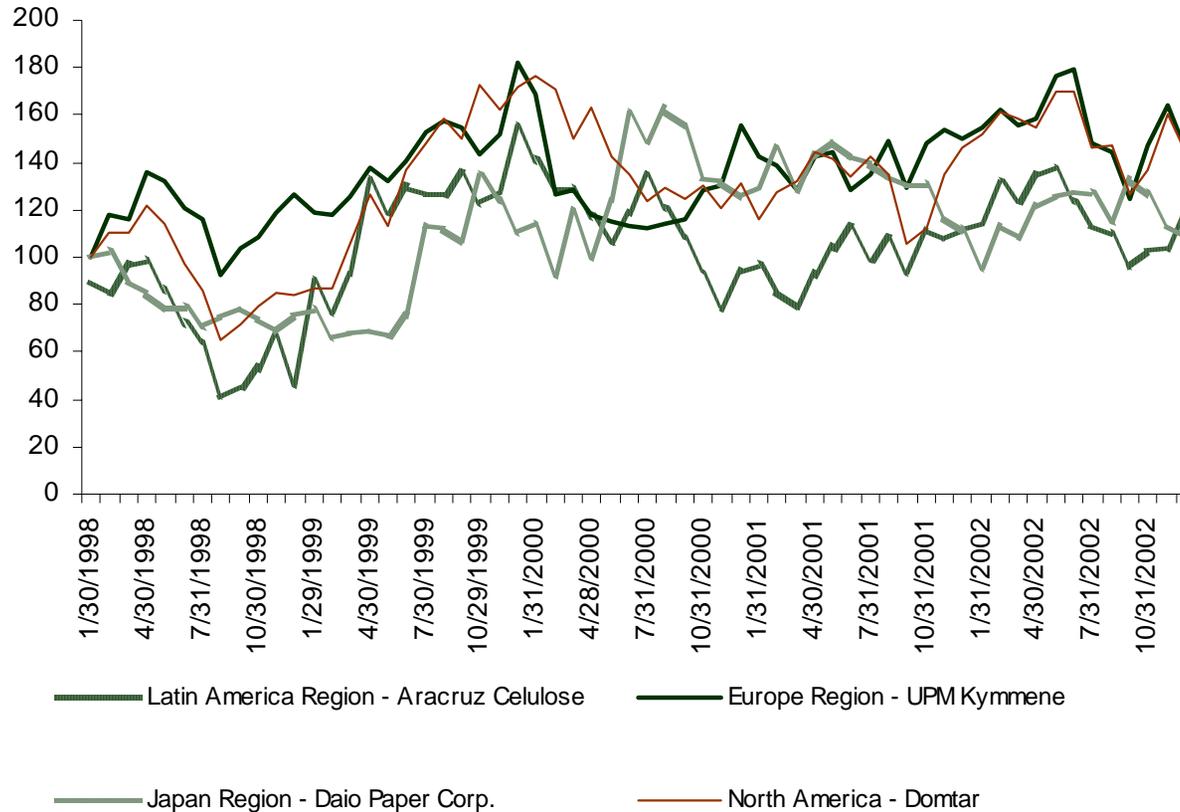


* All Index levels in USD

- Investors are paying attention to ROCE performance.
- European stocks have performed the best, and the Japanese the worst – consistent with expectations

Share Price Performance

Best Performing Companies Within Global Regions*



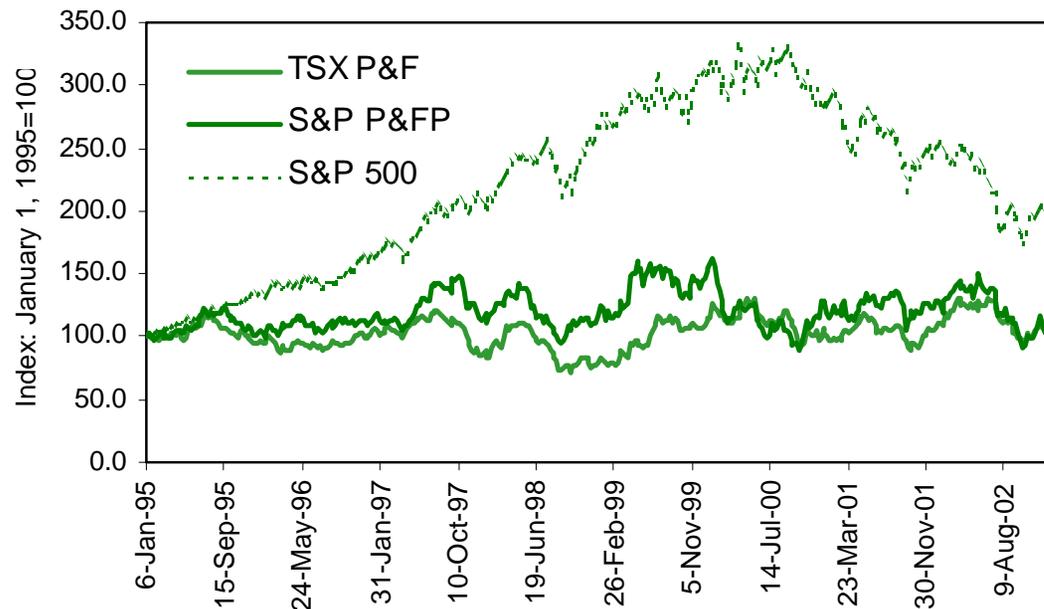
* All Price levels in USD

- The “change in ROCE” should be even more important in driving share price performance than the “level of ROCE” – Domtar’s performance is proof
- Given the cyclical nature of the industry, the results are highly sensitive to the period examined.



Share Price Performance

It's a "Relative Game"



- Over the decade of the 1990's, the 10-year U.S. government bond yielded 8.4%, which is greater than the annualized gains of the S&P Paper Index (+7.4%) and TSX Paper & Forest Index (+3.9%).
- Management has historically had the destruction of shareholder value down to a "fine art".
- Long-term underperformance has many implications, and it forces change.

What Has Changed?

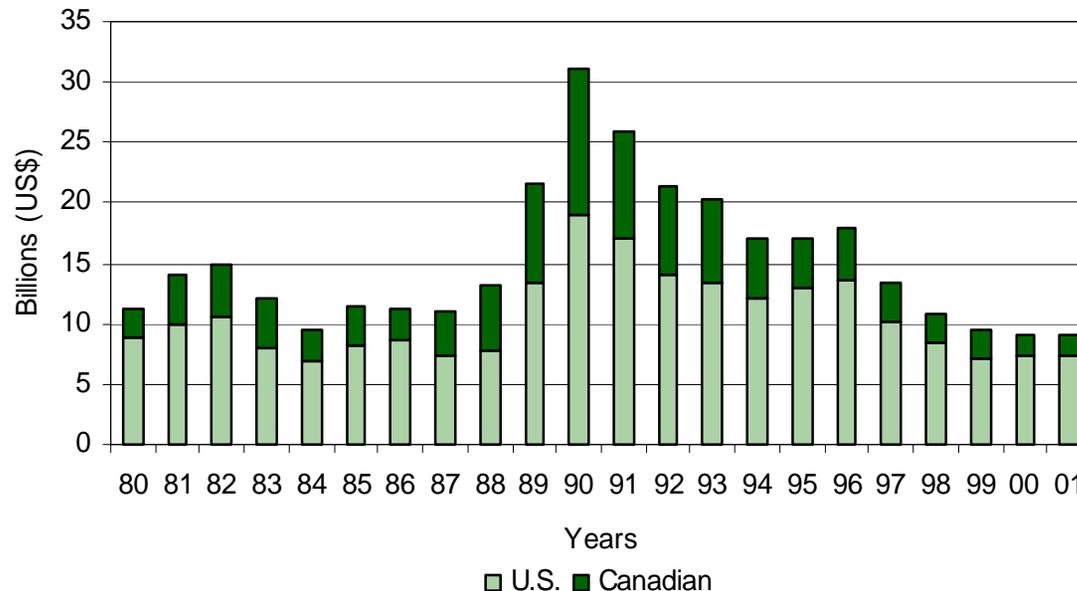
Fundamental changes have been occurring. Consider the following three:

- 1. Due to restructuring, many companies can now make money at the bottom of the cycle - very different than past cycles**
 - Only 6 of 18 North American companies we cover are expected to lose money in 2002

What Has Changed?

2. At least in North America, capital expenditures have been dramatically reduced.

North American Pulp, Paper And Paperboard Capital Spending (US\$ blns.)

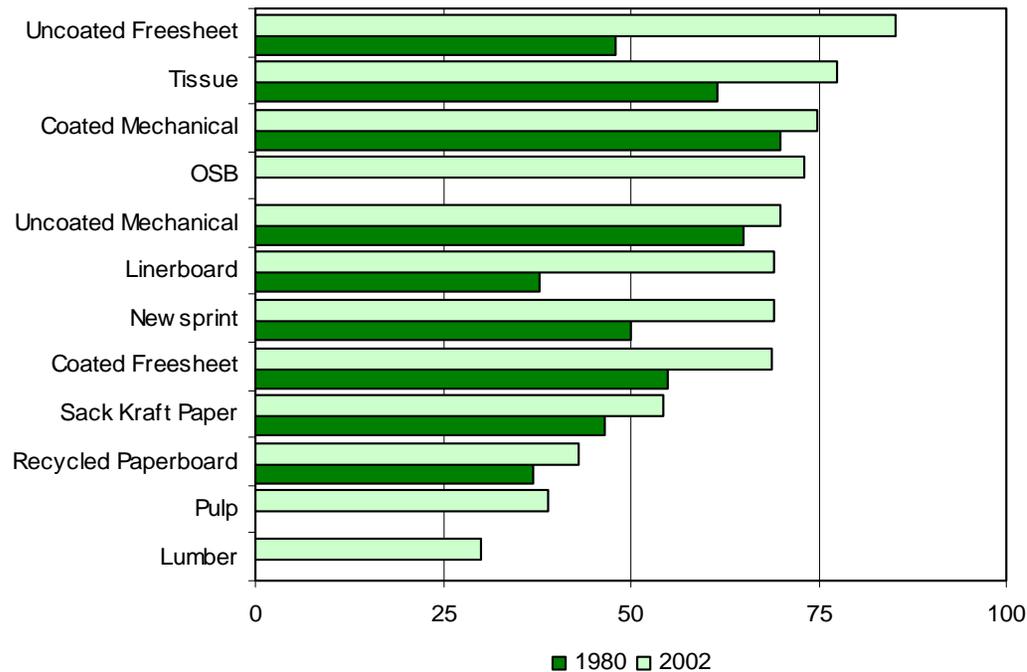


- Capital expenditures almost 70% lower than in the early 1990s.
- Industry wide capex < 80% of depreciation & amortization, which has improved free cash flow (at least in the short term)
- Is mill infrastructure (and long-term viability) threatened?
- Can we reduce cap ex by 30% and not hurt productivity?

What Has Changed?

3. Consolidation is on-going

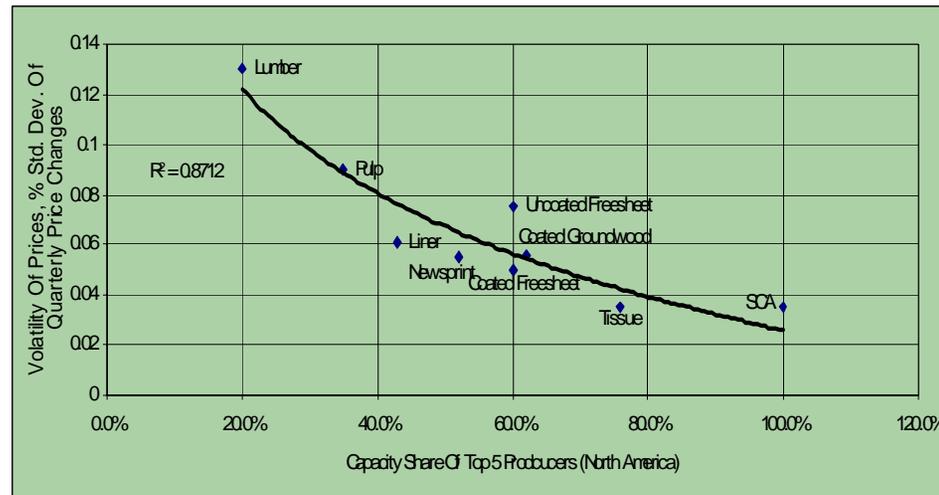
Market Share Of Top Five Producers In North America



- The greatest changes are in UFS, linerboard and newsprint.
- It's no panacea, but in most segments the top five producers have more than 70% of the capacity.

Product Market Issues: Price Expectations

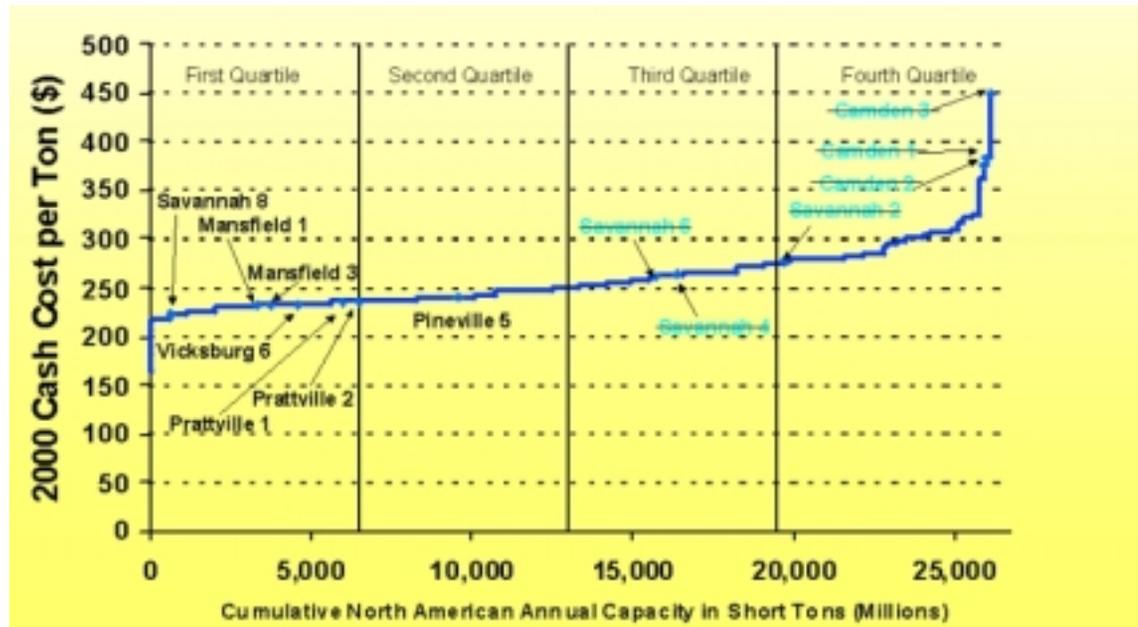
Industry Concentration in North America Versus Commodity Price Volatility, By Product



- The data suggest greater consolidation results in greater price stability (and the UFS & liner markets are confirming it)
- Higher average prices unlikely due to “flatter cost curves” and greater “phantom capacity”

Product Market Issues: Price Expectations

Case Study: N.A. Linerboard Cost Curve and Rationalization by International Paper

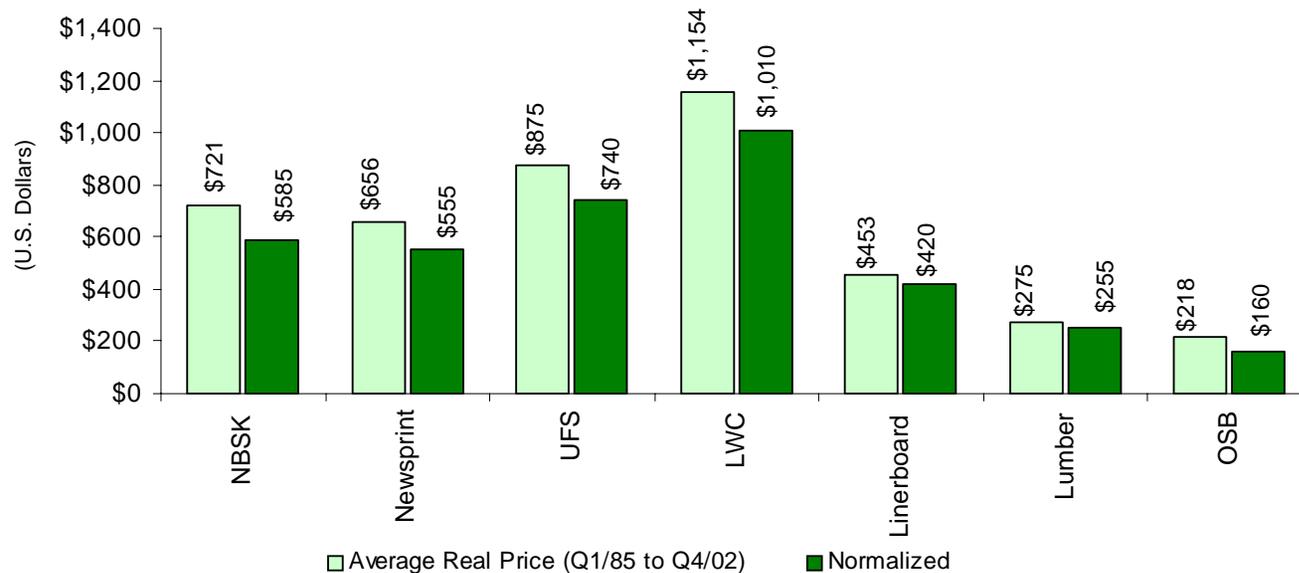


- IP has closed roughly 1 million tons of linerboard capacity at the “upper end” of the North American cost curve.
- Due to grade specialization and leveraging of “best practices” we guesstimate that IP has increased the effective capacity of its remaining lower cost mills by at least 250,000 tons.
- We think this is a common phenomena – Weyco closed 750,000 of containerboard with rationalization, and found 6% more capacity than expected
- Flatter international cost curves mean that exchange rate changes will become even more important in determining relative cost position.

Product Market Issues: Price Expectations

Price Expectations Going Forward?

Normalized And Historical Prices
(Real 2002 Dollars)



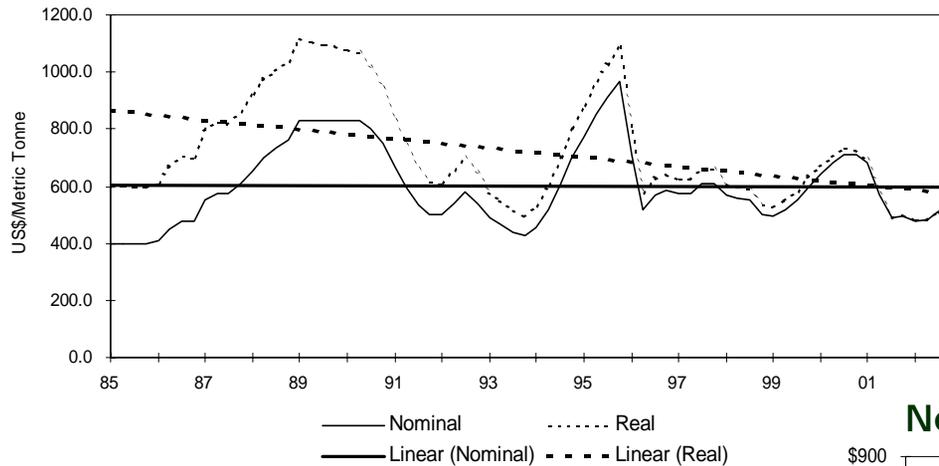
Secular decline in real prices due to:

- Falling “use factors” due to greater availability and acceptability of substitute grades and products;
- Lower production costs resulting from technological improvements.
- Lower marginal cost for the industry due to the closure of the highest cost plants
- Increasing supply from emerging, lower cost producing regions.

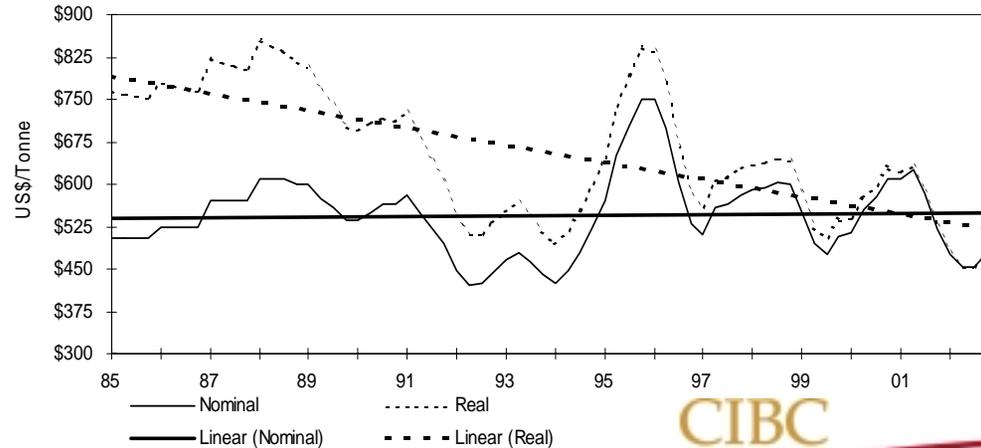
Product Market Issues: Price Expectations

Secular Decline In Real Commodity Prices

Market Pulp Prices (NBSK del. Eastern U.S.)



Newsprint Prices (30-lb Eastern U.S.)



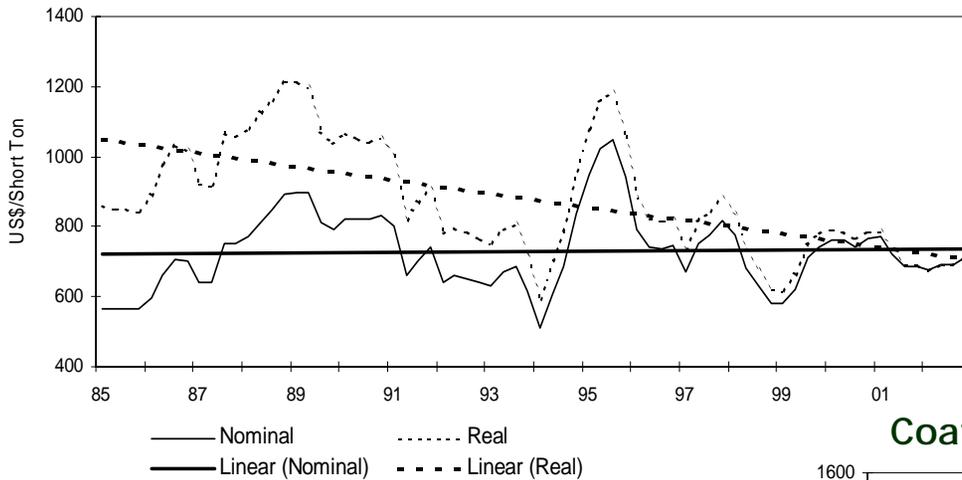
Source: Pulp & Paper Week, CIBC World Markets



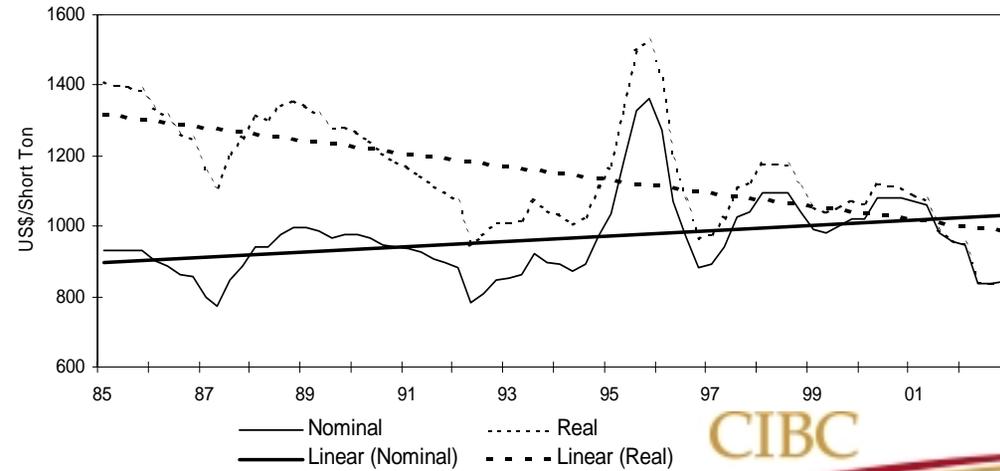
Product Market Issues: Price Expectations

Secular Decline In Real Commodity Prices

Uncoated Free Sheet Prices (50-lb., Offset Rolls)



Coated Groundwood (LWC) Prices (#5, 34-lb.)

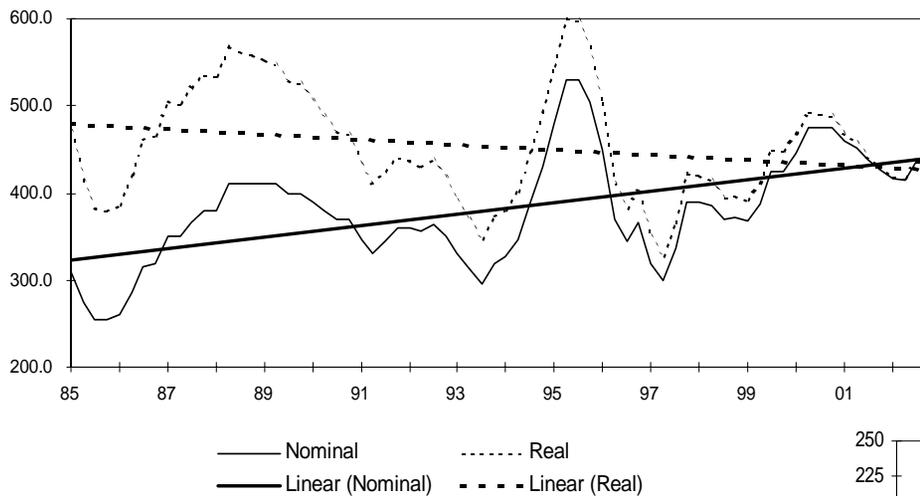


Source: Pulp & Paper Week, CIBC World Markets

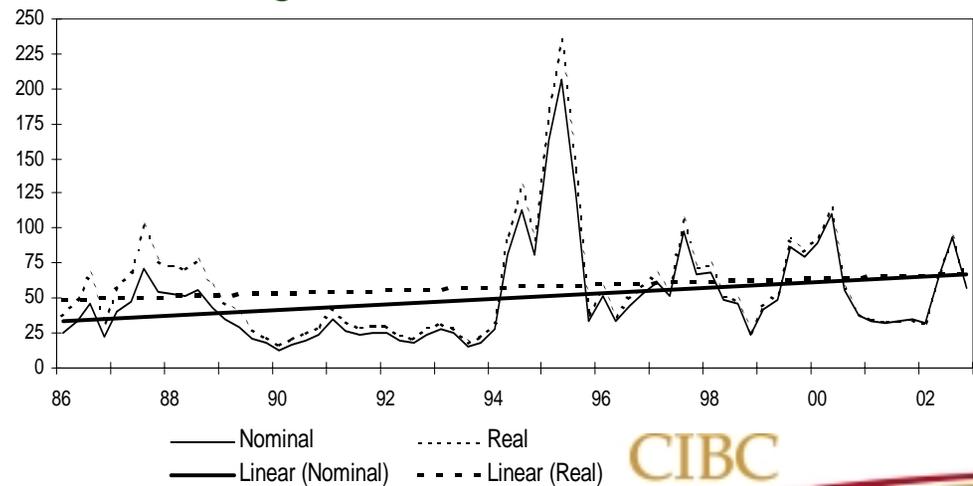
Product Market Issues: Price Expectations

Secular Decline In Real Commodity Prices (Except Recovered Paper)

Linerboard Prices (42-lb Eastern U.S.)

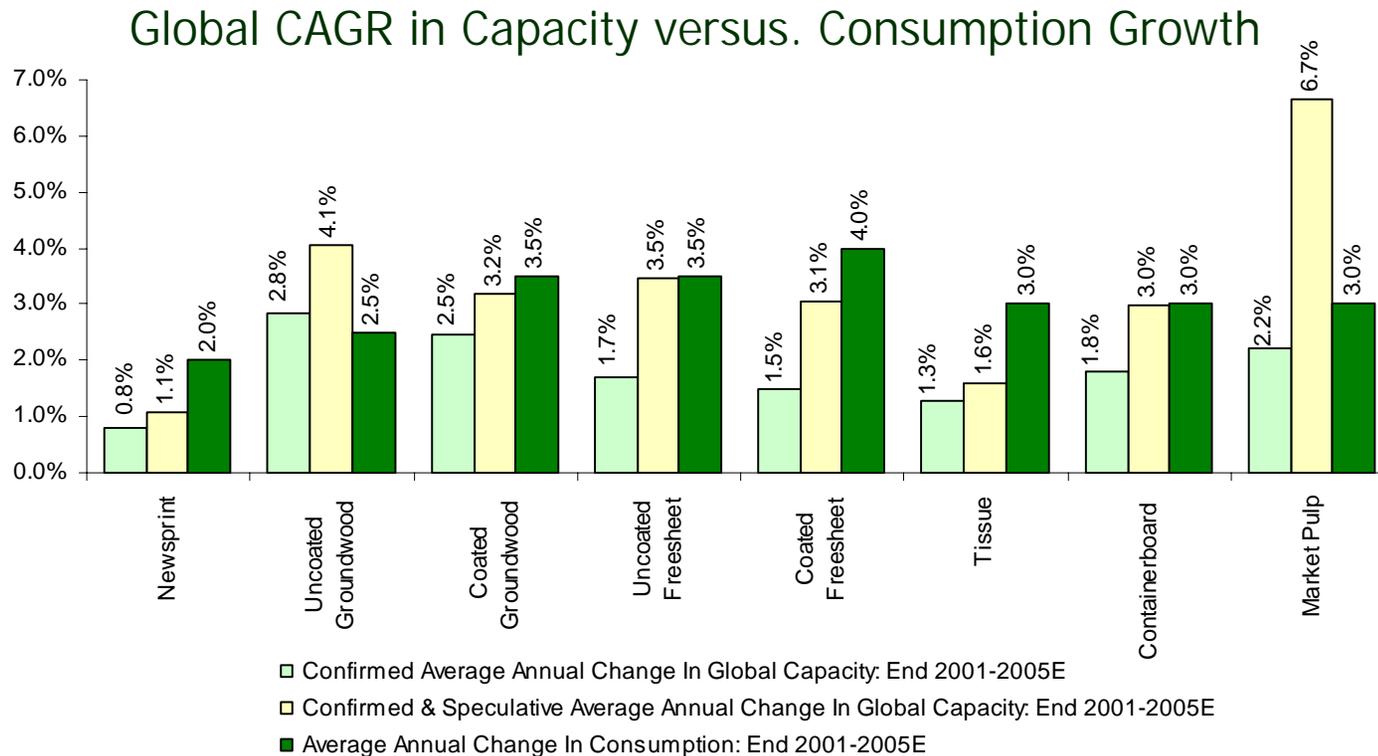


Old Corrugated Containers



Source: Pulp & Paper Week, CIBC World Markets

Product Market Issues: Supply & Demand Outlook



- Given confirmed projects, capacity increasing less than consumption for every commodity except uncoated groundwood - "best" for UFS, CFS and newsprint.
- If speculative projects are included, pulp and UGW are destined for significant overcapacity - LWC, UFS, containerboard are in balance, and newsprint & CFS still look good

Product Market Issues: China

Chinese And Global Confirmed Capacity Changes, By Grade (End 2001-2004)

	China	Global	China as % of Global
Newsprint	490	1,299	38%
Coated P&W	875	2,011	44%
Uncoated P&W	115	3,269	4%
Containerboard	2,725	6,628	41%
Boxboard	1,390	2,928	47%
Tissue	90	1,096	8%
Market Pulp	170	4,797	4%

Source: NLK, RISI, CIBC World Markets Corp.

Chinese And Global Confirmed & Speculative Capacity Changes, By Grade (End 2001-2005)

	China	Global	China as % of Global
Newsprint	1,110	1,764	63%
Coated P&W	2,275	5,847	39%
Uncoated P&W	1,945	10,112	19%
Containerboard	5,405	12,378	44%
Boxboard	3,040	4,528	67%
Tissue	155	1,511	10%
Market Pulp	2,085	15,472	13%

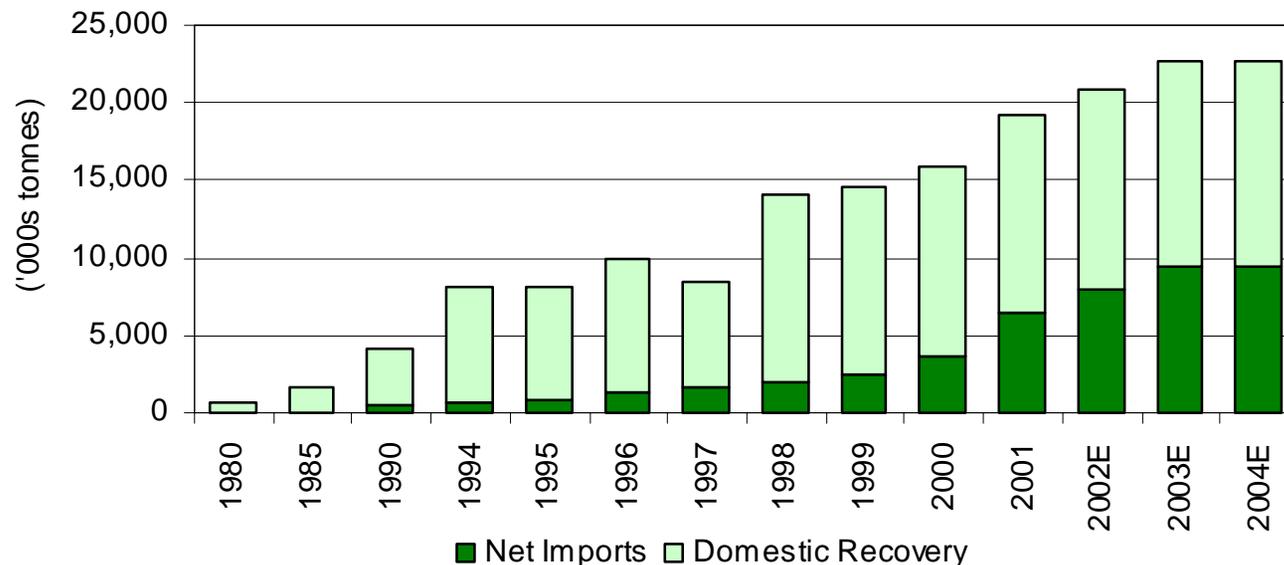
Source: NLK, RISI, CIBC World Markets Corp.

- China dominates changes in global paper & paperboard capacity - it cannot be ignored.
- This is especially true for containerboard, boxboard, newsprint and CFS paper.



Product Market Issues: China

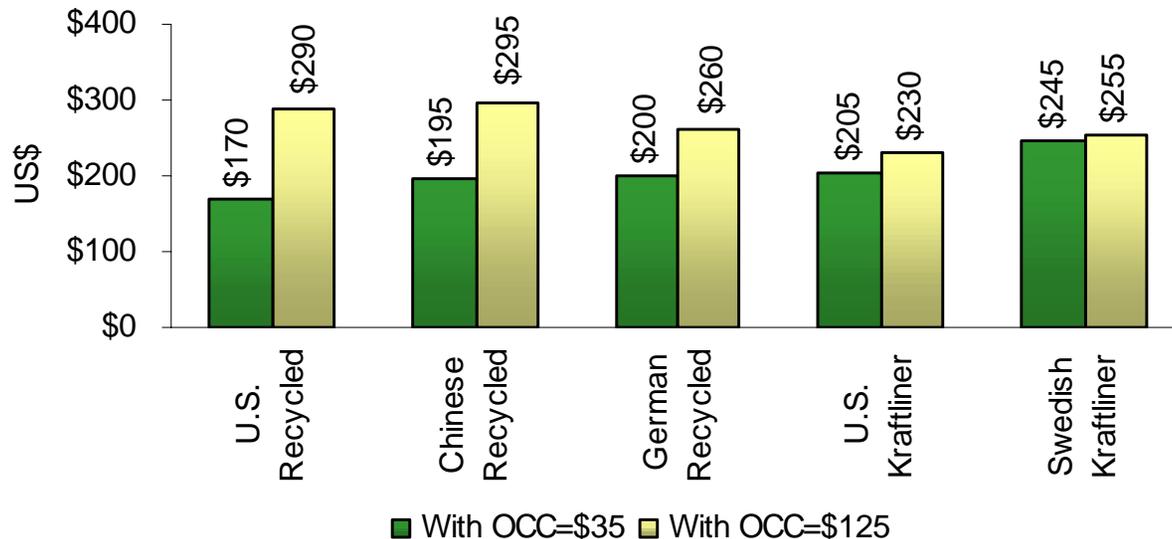
Supply of Recycled Paper from Domestic Recovery and Net Imports (Assuming Confirmed Projects Scenario):
1980-2004



- Prior to 2000, most supply came from domestic Chinese recovery.
- U.S. exports of recovered paper to China are estimated to rise 2-3x from 2002 to 2004/5.
- We expect the normalized price of OCC to rise to the \$80-100/ton range, from an historical real average of \$60

Product Market Issues: Fibre Costs

International Linerboard Mill Operating Costs (With Alternative OCC Prices) – 2002



- In 2002 OCC prices ranged from \$35/ton to \$125/ton, which shifted the recycled-based mills from the bottom to the top of the international cost curve.
- It would not make sense to substitute market pulp for OCC even if OCC reached \$200/ton.

Timber Glut or Timber Famine?

China is short of fibre and there has been an over-allocation of wood in Eastern Canada by governments in Ontario and Quebec. However.....

- Lots of room to increase the "temperate" harvests. Current Harvest/Annual Growth is 80%-94% in North America, 60% in Europe, and less than 20% in Russia.
- New Zealand/Chile is expected to increase annual pine harvest by 50% plus from 2000-2003 (20.5 million m³)....and would need to invest \$10 billion+ in new plants to process it all.
- Improving processing efficiency with new technologies is also decreasing the "effective demand". For example:
 - 40% yield from log in lumber
 - 52% yield from log in LVL
 - 78% yield from log in Timberstrand... and it can use a poorer quality log

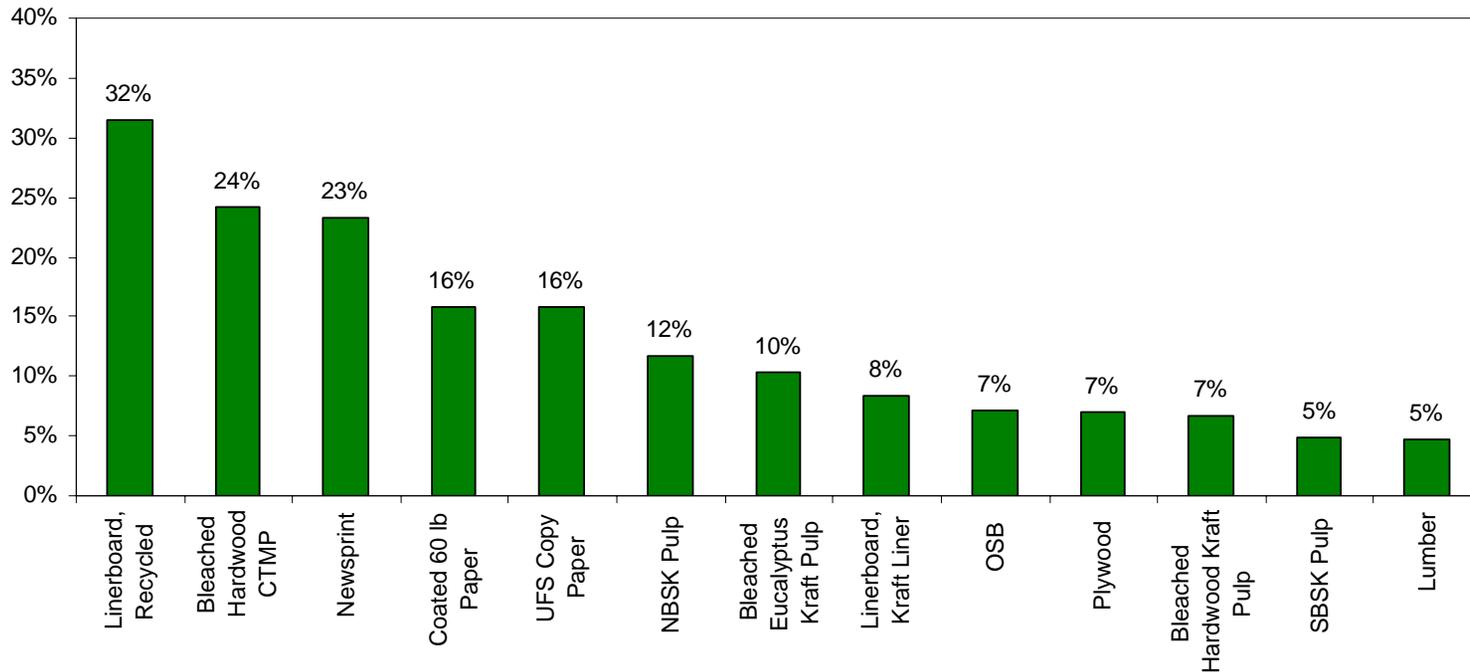
Timber Glut or Timber Famine?

Conclusions?

- While there may be some regional shortages, there is clearly no global shortage of wood fiber.
- Technological innovation could meaningfully decrease the need for harvests from natural forests, either through fast growing plantations or greater efficiency in processing.
- We expect real price deflation in wood fibre, and this has a larger impact at the “extensive margin” than at the “intensive margin”..... sell your timberland?

Product Market Issues: Energy Costs

Energy as a Percentage of Mill Gate Operating Cost, by Product.



- Growing global concern over carbon emissions will likely result in a secular rise in energy prices.
- Recycled linerboard and newsprint are the two major commodities most adversely affected by rising energy prices.

Capital Market: Comparables

Basic Materials Sector is the Comparable Universe

	TSX Index		S&P 500	
	No. Of Companies	% Market Cap	No. Of Companies	% Market Cap
Materials	43	15.1%	33	2.9%
Paper Forest Products	9	2.1%	6	0.5%

* Index Levels as of Feb. 07, 2003

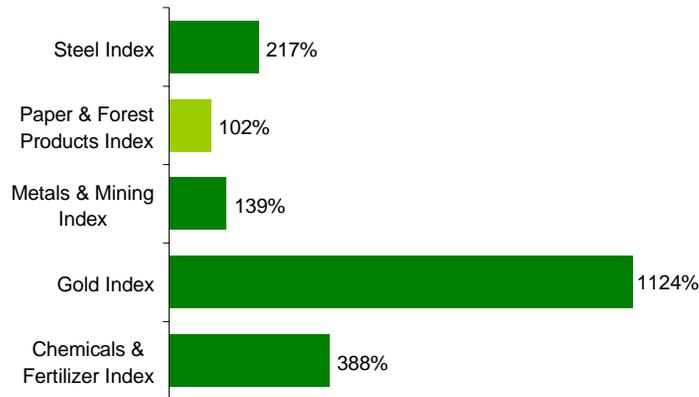
- Due to underperformance, the paper industry has become marginalized by investors – share prices of most companies can move, and investors don't care.
- The relevant comparable group is now the Basic Materials sector as a whole –what has been the relative performance of the paper stocks in this universe?



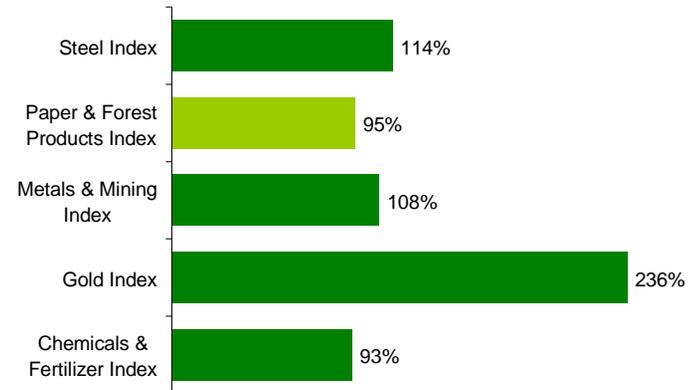
Capital Market Issues: Comparables

Case Study: Canadian Materials Sector Share Price Performance

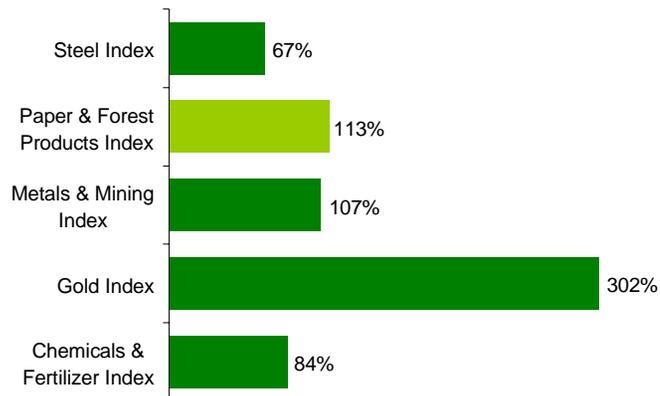
Total Returns Over 10 Years



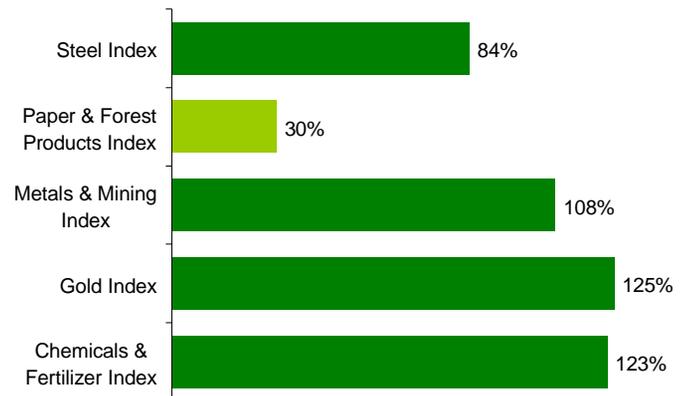
Total Returns Over 2 Years



Total Returns Over 5 Years



Total Returns 2002



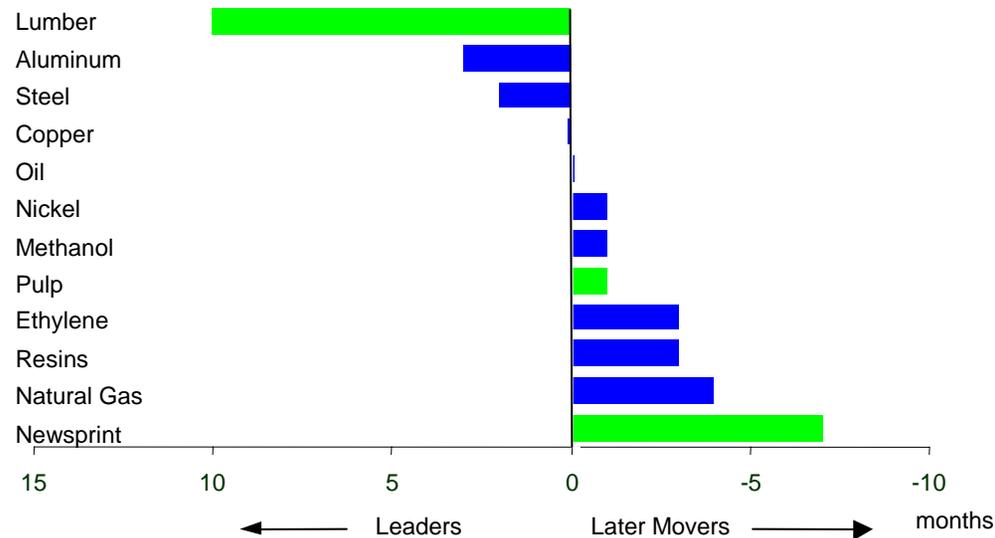
- Although the Gold index is a “different animal”, the Paper stocks have still generally underperformed the other basic material industries.

Capital Market Issues: Comparables

Cash Flow Level And Stability Over A Cycle

Commodity Price Reactions

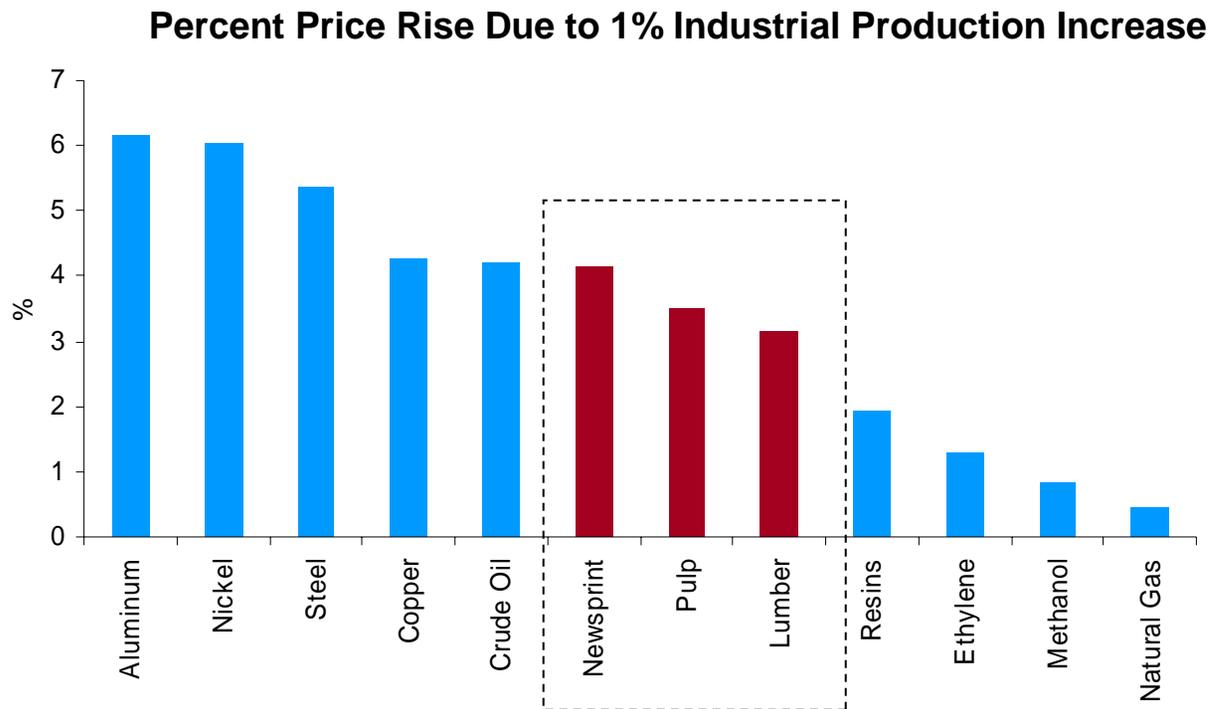
Months by Which Industrial Prices Lead (+) or Lag (-) US Industrial Production



- Commodities vary widely in terms of the degree to which their prices lead or lag the industrial output cycle.
- Paper & forest products are at the extremes of the cycle in the context of the basic materials universe.
- Lumber prices lead the cycle; pulp/liner/UFS/ prices are almost coincidental with the cycle ; and newsprint prices lag

Capital Market Issues: Comparables

Commodity Price Sensitivity To Industrial Growth



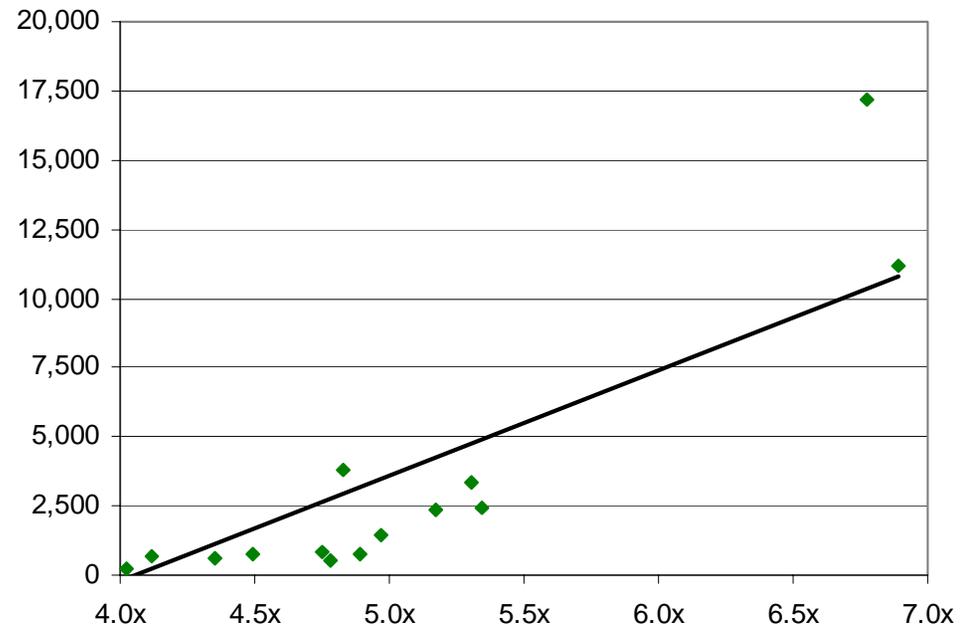
- Beyond timing differences, sectors also vary widely in their overall sensitivity to the industrial sector's activity levels.
- Base metals, steel and crude oil are the most growth levered commodities
- Pulp (containerboard) and newsprint are also strongly positive.
- Plastics and natural gas exhibit a looser correlation with factory production.

Capital Market Issues: Role Of Size

Market Capitalization & Trading Multiple

- The best is to be big, and in the U.S. – it results in a lower cost of equity

Rank	Company	Market Cap (US\$ mlns.)	TEV/Trend EBITDA
1	International Paper	17,218	6.8
2	Weyerhaeuser	11,142	6.9
3	Georgia Pacific	3,823	4.8
4	Abitibi	3,350	5.3
5	Domtar	2,404	5.3
6	Bowater	2,323	5.2
7	Boise	1,468	5.0
8	Louisiana-Pacific	861	4.8
9	West Fraser	795	3.7
10	Cascades	759	4.9
11	Nexfor	723	4.5
12	NorskeCanada	693	4.1
13	Tembec	611	4.4
14	Canfor	503	4.8
15	Slocan	201	4.0
16	Interfor	173	2.9
17	Riverside	73	3.9



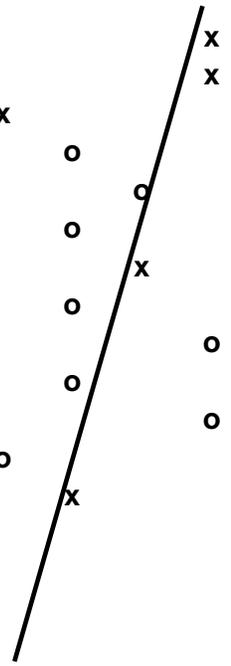
Capital Market Issues: Role Of Size

Market Capitalization & Credit Rating

- Greater size (and diversification) leads to lower cost of debt

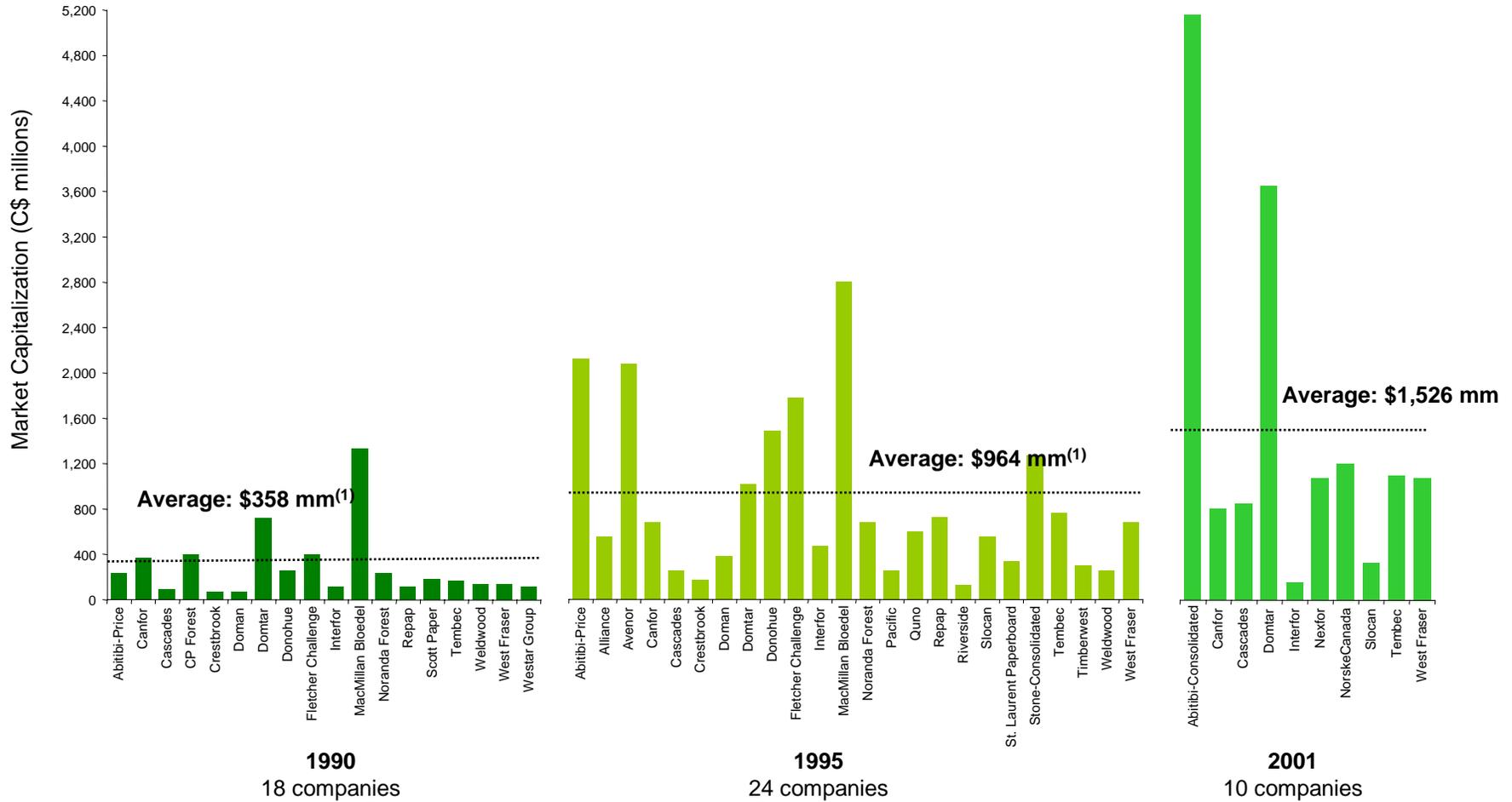
Company	Pure Play/ Div'd	Market Cap US\$mm 2/7/03	Total Debt/ Cap	Credit Rating				Moody's Credit Rating													
				Rating		Outlook		B3	B2	B1	Ba3	Ba2	Ba1	Baa3	Baa2	Baa1	A3				
				S&P	Moody's	S&P	Moody's														
International Paper	X	17,218	53%	BBB	Baa2	stable	stable													X	
Weyerhaeuser	X	11,142	67%	BBB	Baa2	stable	stable														X
Georgia Pacific	X	3,823	69%	BB+	Ba2	negative	negative					X									
Abitibi	O	3,350	61%	BBB-	Ba1	negative	stable						O								
Domtar	O	2,404	49%	BBB-	Baa3	stable	stable														
Bowater	O	2,323	56%	BBB-	Ba1	negative	stable						O								
Boise	X	1,468	48%	BB+	Baa3	stable	negative														X
Louisiana-Pacific	O	861	36%	BB	Ba1	stable	stable						O								
West Fraser	O	795	12%	BBB	Baa2	stable	stable														O
Cascades	O	759	52%	BB+	Ba1	stable	stable						O								
Nexfor	O	723	48%	BBB	Baa2	stable	stable														O
NorskeCanada	O	693	44%	BB+	Ba2	negative	negative						O								
Tembec	X	611	59%	BB+	Ba1	negative	stable														X
Canfor	O	503	48%	na	na	na	na														
Slocan	O	201	48%	na	na	na	na														
Interfor	O	173	14%	na	na	na	na														
Riverside	O	73	29%	na	na	na	na														

X	Diversified
O	Pure Play*



Capital Market Issues: Role Of Size

Case Study: Consolidating Canadian Industry



(1) Average market capitalizations are shown in 2001\$

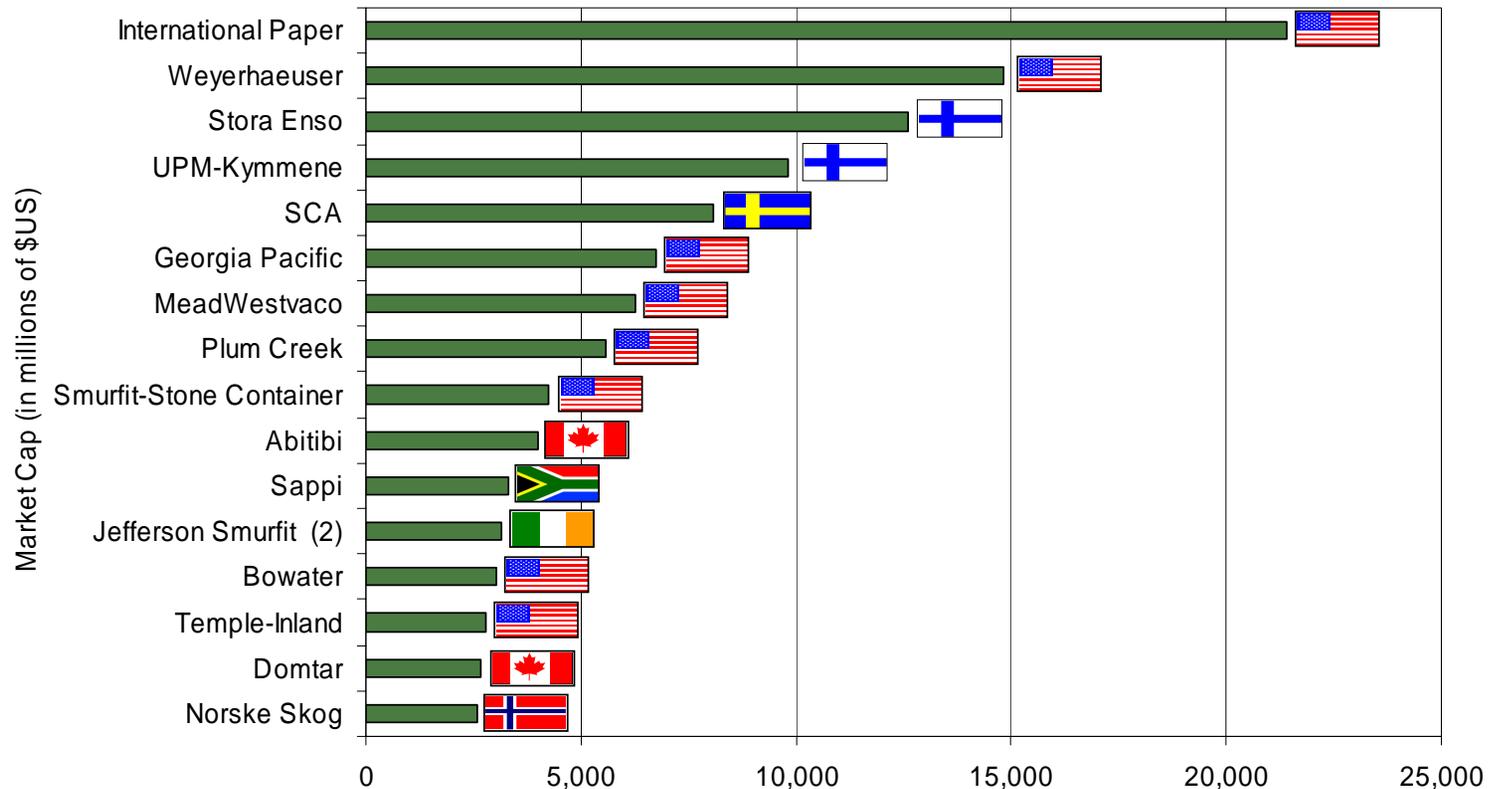
- The number of companies “ebbs-and-flows”, but the trend is down and the average market cap has roughly tripled in a decade.



Capital Market Issues: Role Of Size

Top World Paper & Forest Product Companies

Market Capitalization Analysis of Top World Forest Products Companies

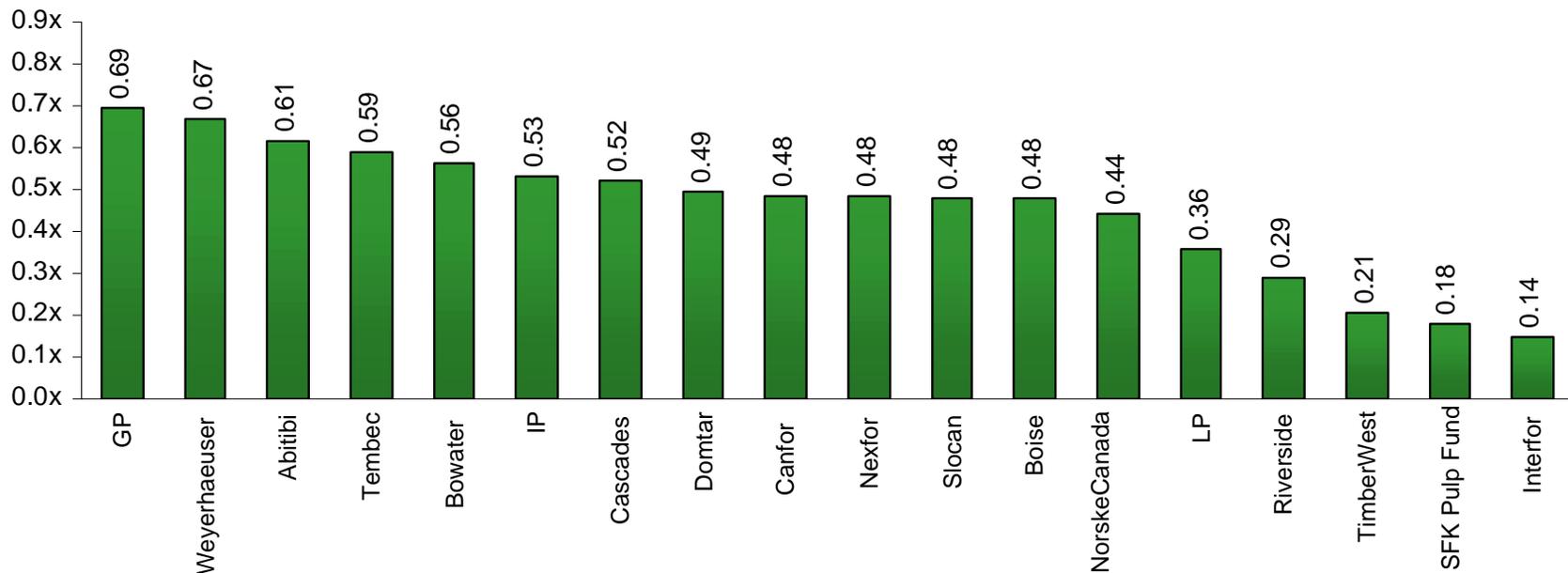


- Within 5 years, paper companies will likely need a market cap of at least US\$5 billion to “get on the radar screen” and \$10 billion to be widely considered.

Capital Market Issues: Financial Strength

Net Debt to Total Capital Ratios - 2002

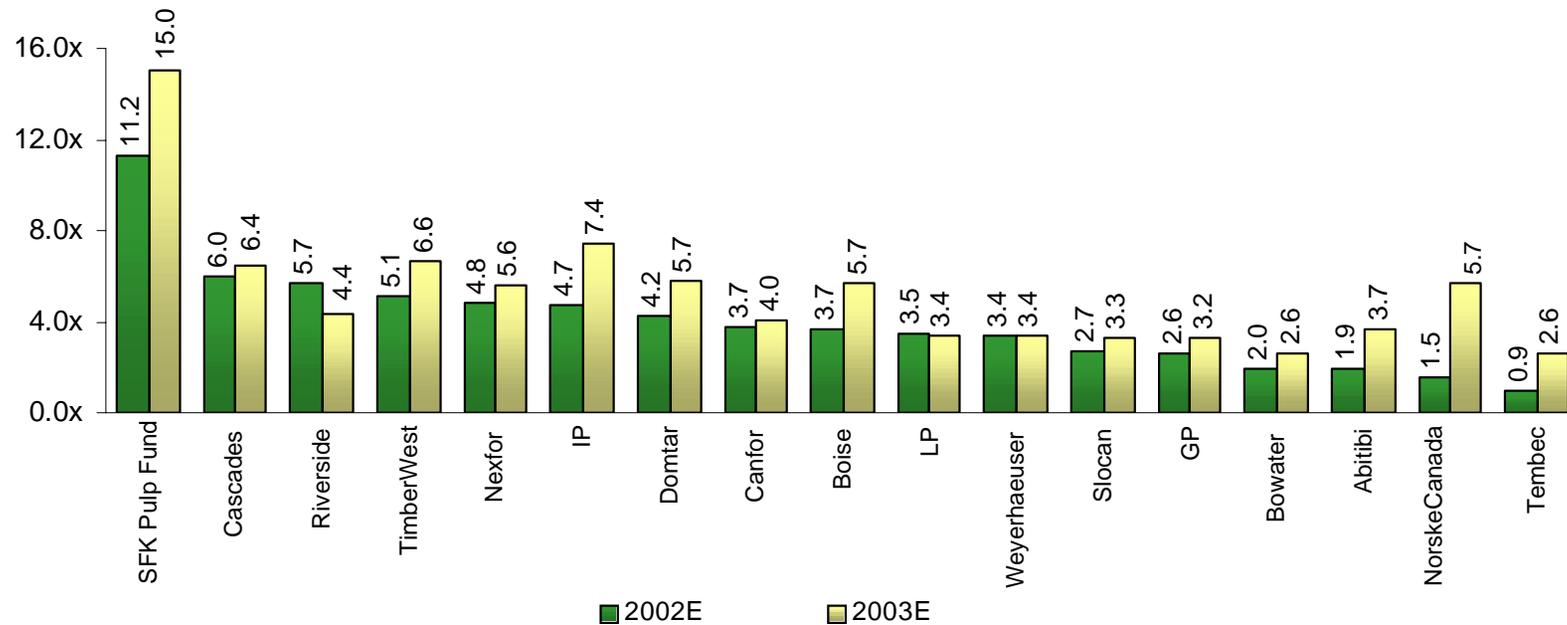
- While not great, debt levels are generally reasonable at this point in the cycle.



Capital Market Issues: Financial Strength

North American Companies - 2002 & 2003 Interest Coverage Ratios

- Despite a mediocre price outlook, the likelihood of financial distress is small.



CONCLUSIONS

1. The best ROCE are generally achieved in Europe, and the worst in Japan.
2. A ROCE “stretch target” of 10% seems reasonable to expect – a ways to go.
3. Investors do respond to a company’s ROCE.
4. Although the historical track record has been dismal, positive changes are occurring in the industry....merits a second “selective” look.

CONCLUSIONS

5. Expect continuation of secular decline in prices for a range of reasons.
6. The changes in China's paper industry are massive even at an international level, but the global impact will be mainly in the recovered paper markets.
7. Rising energy prices will have an uneven impact on the global industry.

CONCLUSIONS

8. The paper industry has been “marginalized” in the stock market and the relevant universe is now the Basic Materials Sector.
9. The capital markets do reward size – the facts are clear.
10. A number of companies have the financial strength to grow through M&A (if they choose).