# State of the North American Pulp & Paper Industry

## *– An Update & Outlook –*


***Unstable Times – Problems or Opportunities?***

***-- August 2005 --***


***Value Resolution Group – Dan Cenatempo AVA, CMC***

***Center for Paper Business and Industry Studies (CPBIS) – Jim McNutt***

# Overview

## North America Pulp & Paper Industry -- *Update & Outlook*

- *Where are We?*
- *Industry Performance*
- *Economy*
- *Grade-By-Grade Discussion*
- *Industry Spending*
- *Investment Decisions' Drivers*
- *Wrap-up and Q&A*

# Outlook – Where Are We?

- The North American pulp and paper industry is currently enjoying a cyclical rebound – *helped greatly by the capital constraints and capacity rationalizations of recent years*
- However, the industry remains at risk from:
  - ✓ Slowing -- but improving of late -- *domestic demand growth*
  - ✓ Rising *international competition – but* some changes *evolving*
  - ✓ Substitution *pressure from alternative substrates & medias*
  - ✓ Aging *domestic asset base – requiring investment attention*
  - ✓ Nagging poor -- but improving -- *financial performance*
  - ✓ Lure of pent up expansion plans *in an improving market* – risks of past behavior still overhanging

# Outlook -- Where Are We?

**Rebounding pulp & paper demand, closure of unviable facilities, a weaker US dollar & strong economic growth are driving moderately increased volume, (erratic) prices and profitability in the NA industry.**

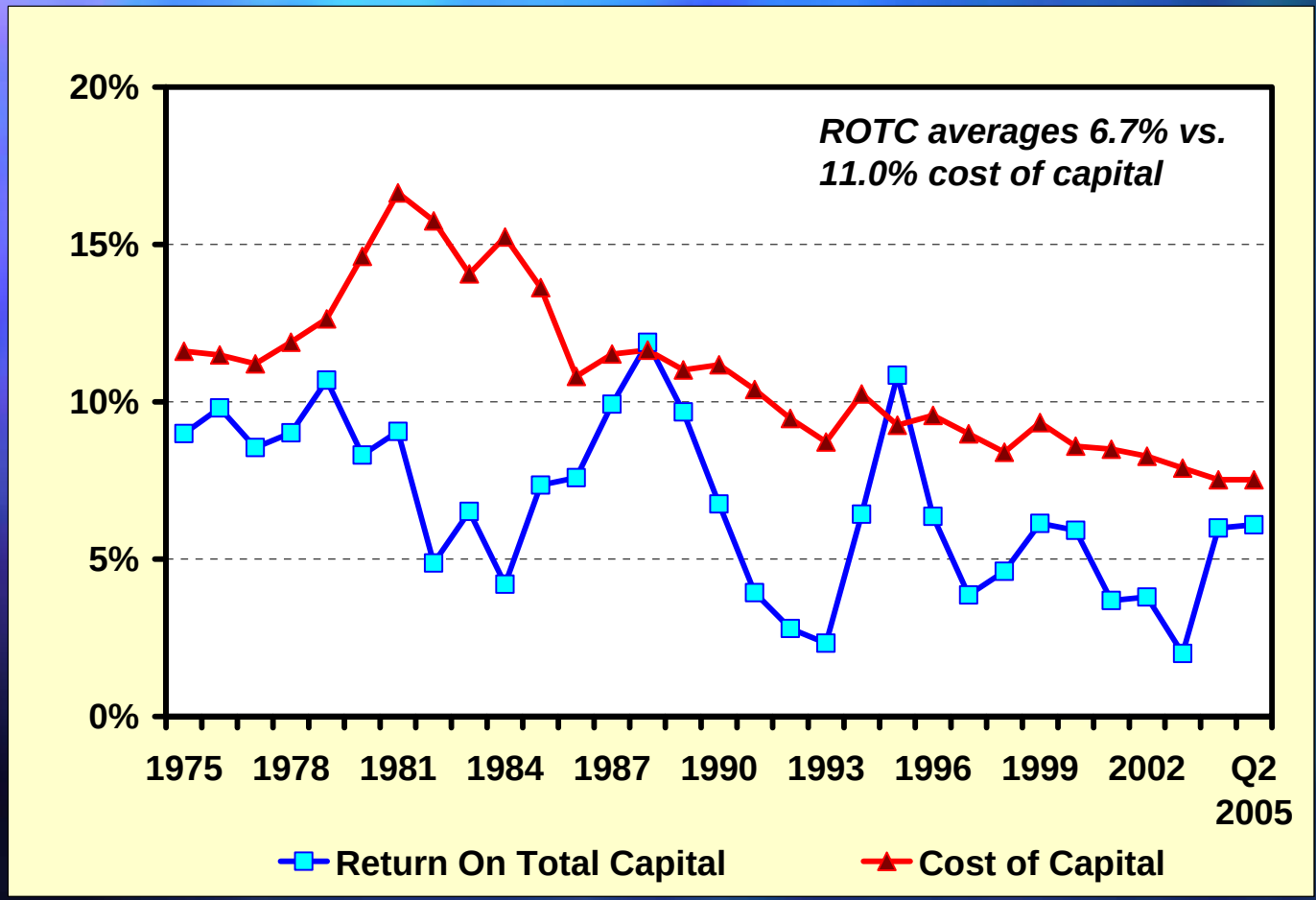
- **The rebounding demand growth has been modest and *could take years to reach peak 1999 to 2000 levels***
- **The returning supply and demand balance currently favor producers *but could shift back to customers circa 2007* as higher prices dissuade consumption *and capacity could again begin to expand***
- **Yet – *the improved fundamentals* do create opportunities to stabilize the NA Industry platform looking out . . .**

# Outlook – Industry Performance

- Creating shareholder value *is the goal of the firm*
- Successful companies continuously identify and successfully execute investments *with returns greater than cost of capital*
- The industry has not made target returns and, therefore *not attracted necessary capital investment* – but this could be turning . . .
- Performance *has traditionally followed* excess capacity and pricing – yet – as noted – *we may be entering a new era here*
- And note that – *total shareholder returns have held up better* than some standard industry benchmarks

**Industry performance and shareholder returns are improving but still below the level required by investors to make a fair return at this time . . .**

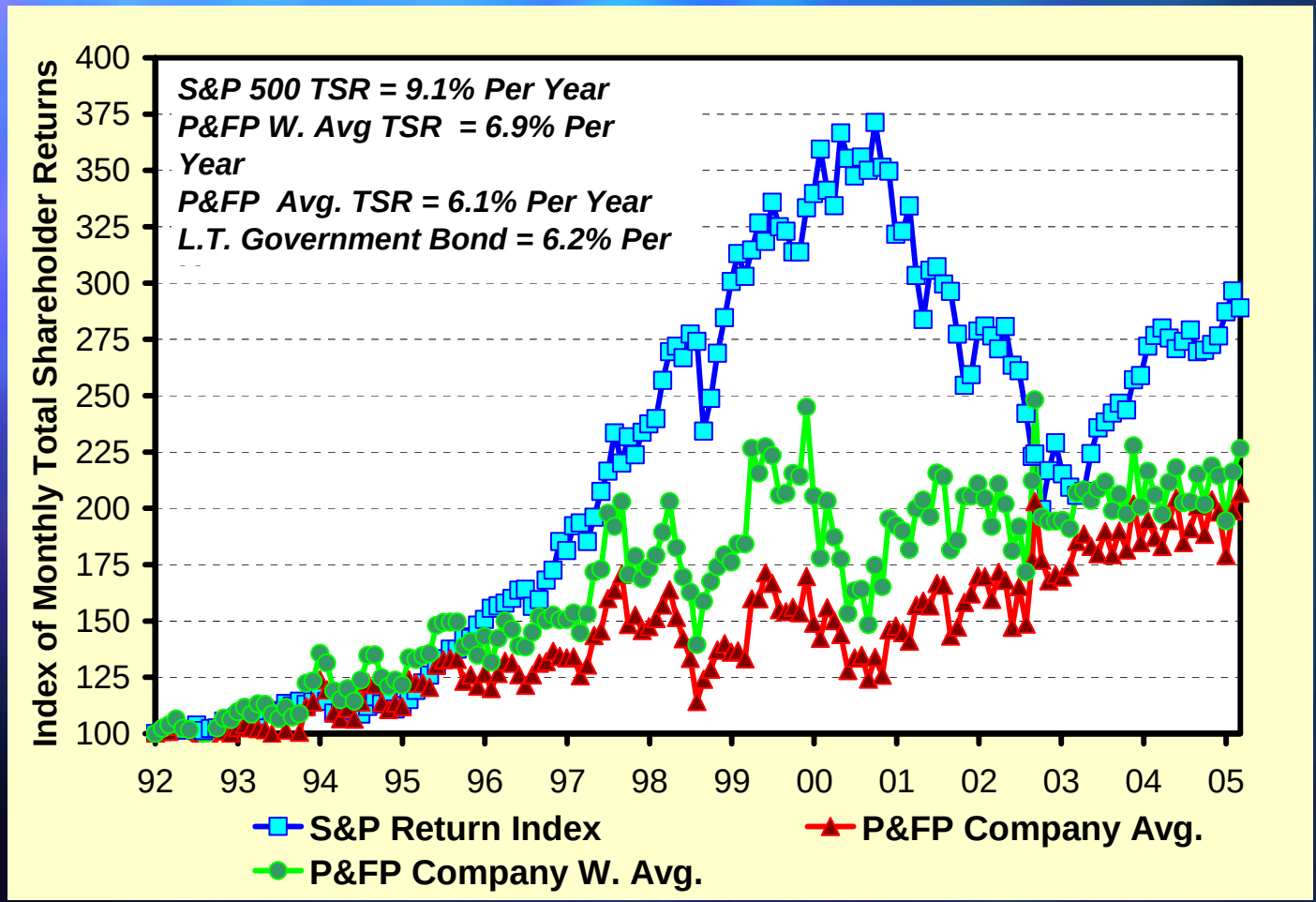
# Outlook – Industry Performance




**2005 Returns Are *Improving* – But Still 4 Points Below Target – *Rational Investors Will Not Allocate* Capital To A Poorly Performing Industry – *Key Question = Is The Industry Situation Changing?***

# Outlook – Industry Performance

## *Total Shareholders' Returns Still Trail S&P 500*




**The S&P 500 Rebound Still Leaves Pulp & Paper Industry Shareholders Wanting – *Underperforming The Index By 2-3 Points Per Year Since 1992***

# Outlook – Industry Performance

## Overall:

- US industry financial performance *has been poor on an absolute basis and persistently weak* from the late 90's through today – *But we are seeing improvements*
- These short-term performance improvements are a welcome relief for the industry *but could be transient* if industry management is again tempted to significantly increase *major capacity oriented* [instead of performance enhancing] capital investments
- The quality of *pending investment decisions, basic economic and demand factors, and the industry's motivation to pursue innovative structural change* will drive industry performance in the mid-to long-term . . .

# Outlook -- The Economy

| Real GDP Growth By Region | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| Advanced Economies | | | | |
| US | 1.9% | 3.0% | 4.4% | 3.4% |
| Euro Area | 0.8% | 0.5% | 2.2% | 2.2% |
| Japan | -0.3% | 2.5% | 4.4% | 2.3% |
| UK | 1.8% | 2.2% | 3.4% | 2.5% |
| Canada | 3.4% | 2.0% | 2.9% | 3.1% |
| Other Advanced Economies | 3.6% | 2.4% | 4.3% | 3.5% |
| Newly Industrialized Asian Economies | 5.0% | 3.0% | 5.5% | 4.0% |
| Other Emerging Markets | 4.8% | 6.1% | 6.6% | 5.9% |
| Africa | 3.5% | 4.3% | 4.5% | 5.4% |
| Central and Eastern Europe | 4.4% | 4.5% | 5.5% | 4.8% |
| Commonwealth of Independent States | 5.4% | 7.8% | 8.0% | 6.6% |
| Developing Asia | 6.6% | 7.7% | 7.6% | 6.9% |
| Middle East | 4.3% | 6.0% | 5.1% | 4.8% |
| Latin America | -0.1% | 1.8% | 4.6% | 3.6% |

**Overall Economic Growth Projections *Do Favor Continued Demand Growth* In The Industry**

# Outlook -- The Economy

***NA Sectors That Directly Drive Pulp & Paper Demand Are Projected To Be Weaker Than Overall GDP*** – But Remain Positive

| Economic Indicator | Industry Segment Impacted | 1990-1995 | 1995-2000 | 2000-2004 | 2005 | 2006-2010 |
|---|---|---|---|---|---|---|
| Real GDP | All | 2.5% | 4.1% | 2.5% | 3.4% | 3.0% |
| Implicit Price Deflator | All | 2.4% | 1.6% | 1.9% | 3.6% | 2.2% |
| Personal Consumption Expenditures | All | 2.6% | 4.4% | 3.2% | 3.1% | 2.8% |
| Industrial Production | All | 3.5% | 6.0% | 0.1% | 3.7% | 2.5% |
| Indust. Prod. - Non-Durables | Containerboard | 1.8% | 1.3% | -0.6% | 2.2% | 0.9% |
| Indust. Prod. - Durables | Packaging | 4.9% | 9.5% | 0.7% | 5.7% | 5.3% |
| Food & Beverage Sales | Boxboard | 1.9% | 3.2% | 3.6% | 5.0% | 3.1% |
| Food services and drinking places | Tissue | 4.8% | 5.5% | 6.3% | 7.4% | 2.9% |
| Computer & Peripheral Sales | P&W Papers | 21.6% | 5.2% | 2.0% | 15.0% | 4.6% |
| Professional Employment & Business Services | P&W Papers, Tissue | 3.4% | 5.3% | -0.4% | 3.4% | 2.7% |
| US Households | Tissue, Building Products | 1.2% | 1.1% | 0.2% | 1.0% | 1.0% |
| Housing Starts | Tissue, Building Products | 2.5% | 2.9% | 5.5% | 1.0% | -2.0% |

# Outlook -- Grade-by-Grade Discussion

- North American Market
- NA Boxboard
- NA Containerboard
- NA Newsprint
- NA Printing & Writing Papers
- NA Market Pulp
- NA Tissue
- NA Recovered Fiber & Energy

# Outlook -- NA Market Overview

- The weakness in primary pulp and paper demand in the 2000s *has as noted corrected* -- due in part to improving domestic economic conditions
- This -- combined with the closure of significant capacity within the industry -- *has put supply relatively in balance with demand*
- Producers have been *generally successful* implementing price increases -- *so far* -- in this environment

***The net result is a cyclical upturn in the US pulp and paper industry that could reverse circa 2006 / 2007***

# Outlook -- NA Market Overview

- **The North American Pulp and Paper industry is *a mature web of businesses* generally characterized by:**
  - ✓ ***Highest per capita consumption in world across all grades***
  - ✓ ***Slower growth than real GDP***
  - ✓ ***High capital intensity***
  - ✓ ***Cost and price based competition***
  - ✓ ***Below cost of capital returns***
  - ✓ ***An aging asset base***
  - ✓ ***Cyclical pricing and profitability. . . . .***

**Historically, the North American industry expanded after each cyclical peak. Excess capacity was then been pushed onto international markets – *This pattern has finally changed.***

# Outlook -- NA Market Overview

- Today the NA Industry business environment *has stabilized due to a combination of factors:*
  - ✓ *A weakening US dollar*
  - ✓ *Rebounding domestic demand*
  - ✓ *Improving returns*
  - ✓ *Weakening competitiveness of European producers*
  - ✓ *Moderating industry growth in developing regions*
  - ✓ *Better understanding by industry leaders of the role of capacity and spending management*
- This represents *a substantive change from the past five years* of persistent weakening overall market place and industry performance

# Outlook -- NA Market Overview

**This has generated *a much needed breath of fresh air* for the NA Industry to take stock, and determine its path forward under more stable and positive circumstances . . .**

**Accordingly -- the North American industry *does have a window of opportunity to further restructure and innovate* to better compete in the changing global market looking out – but the business environment for such enhancement moves is transient – and time is likely essential.**

# Outlook – NA Market Overview

| Grade Segment | Change in Capacity (Tons/Tonnes) 2000-2004 | Change in Capacity (Tons/Tonnes) 2005-2010 | Compound Annual Growth Rate 1990-2004 | Compound Annual Growth Rate 2005-2010 |
|---|---|---|---|---|
| NA Boxboard | -74 | 609 | 1.4% | 1.0% |
| U.S. Containerboard | -1,292 | 1,516 | 1.7% | 0.8% |
| NA Newsprint | -2,057 | -2,328 | -0.5% | -2.9% |
| NA Printing & Writing | -1,221 | -51 | 1.7% | 0.0% |
| NA Tissue | 800 | 131 | 2.1% | 0.2% |
| NA Market Pulp | -352 | 532 | 1.5% | 0.5% |

**Industry Surveys And Projections Both Indicate That *Capacity Could Begin To Grow Again* Between 2005 And 2010 – *But At A Much Lower Than Historic Rate* And From A Reduced Base**

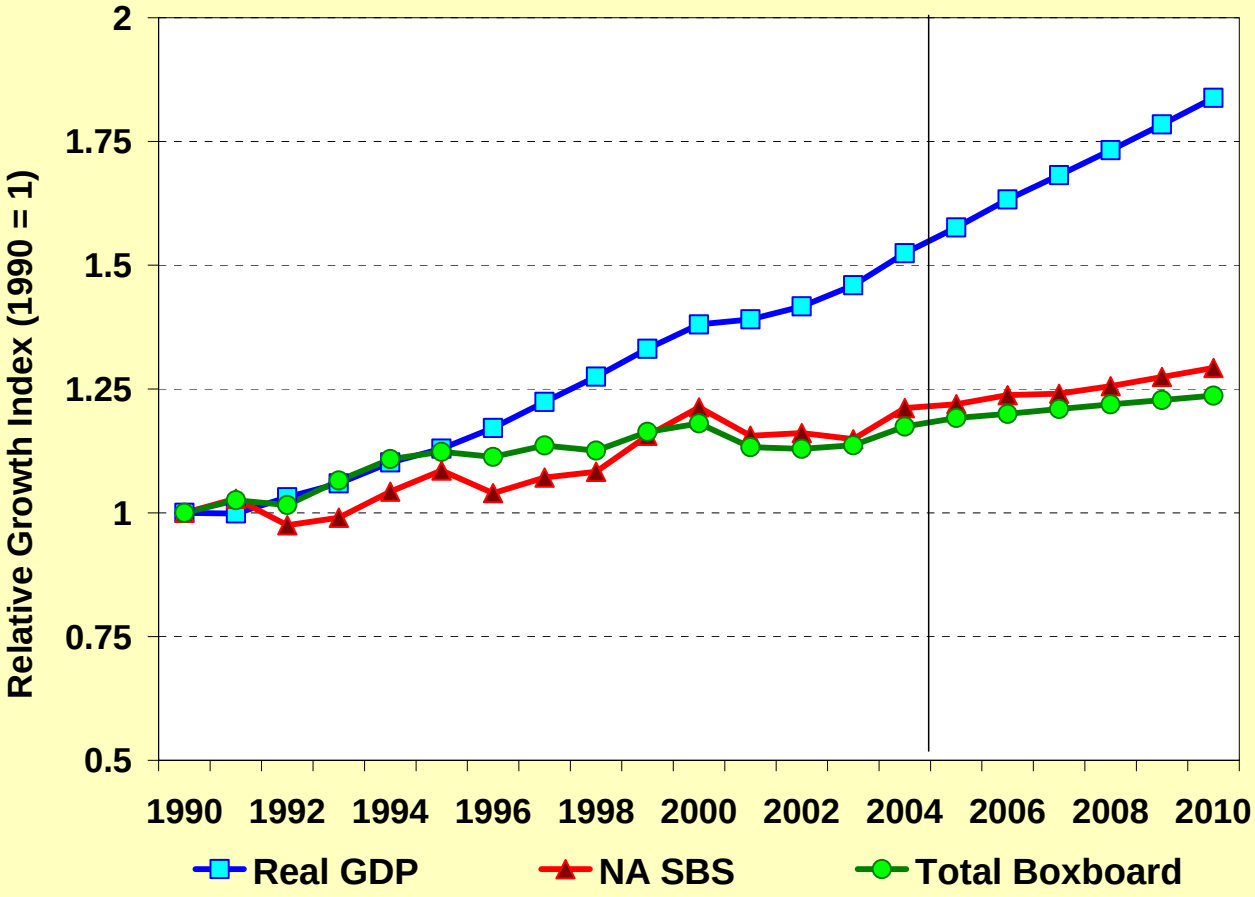
# Outlook – NA Boxboard

**Boxboard is *a weak but stabilizing NA segment* --**

- ***Slow growth in industries that consume boxboard*, increased competition from overseas producers and *widespread substitution* by plastics and alternative packaging materials have hurt producers**
- **Profitability/returns *are better than industry average* despite these poor fundamentals due to a relatively concentrated supply base**
- **Facility closures have brought *supply and demand in line***

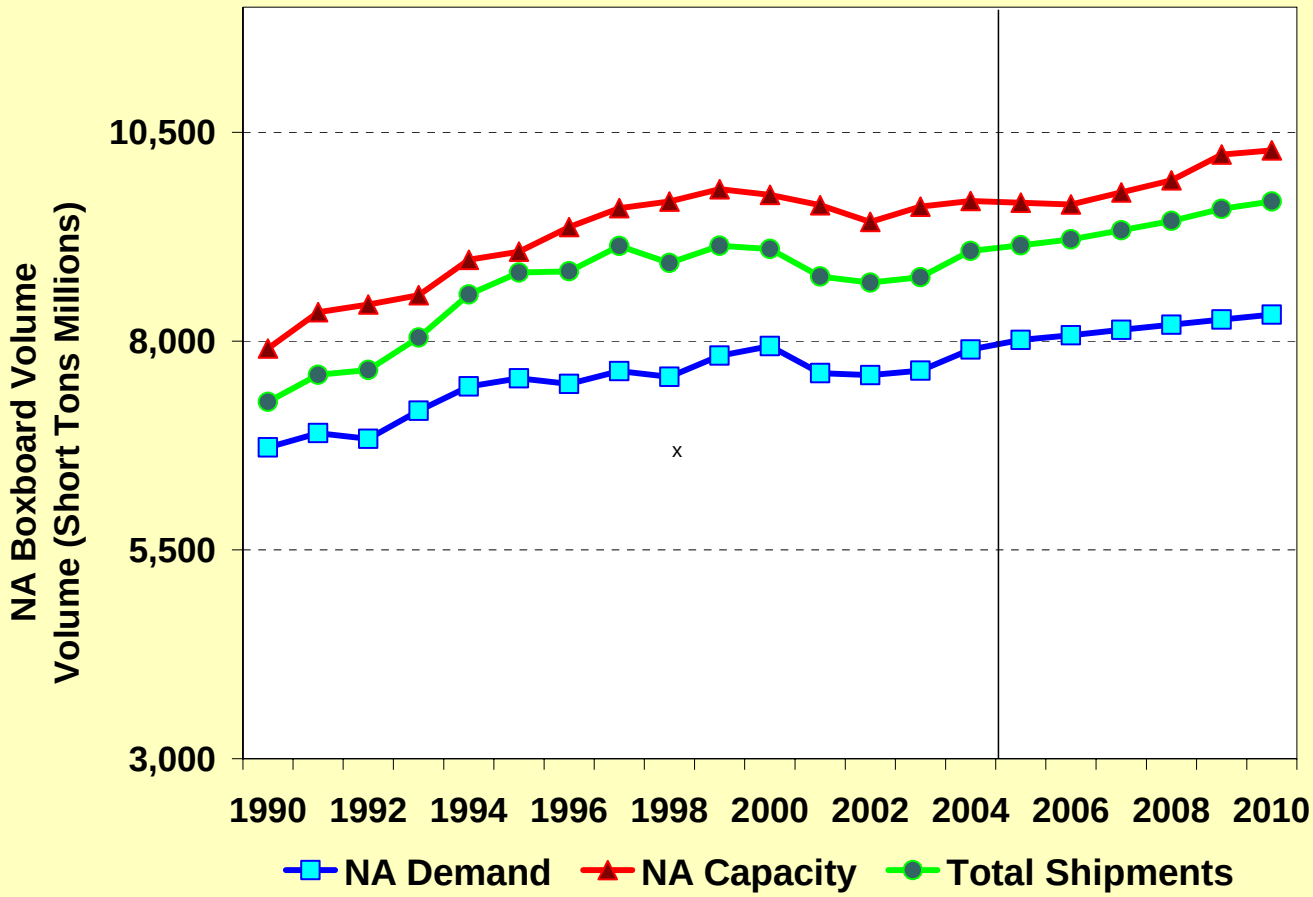
***Implications*: Slow capacity growth projected but relatively high risk of falling demand and additional facility closures.**

# Outlook – NA Boxboard



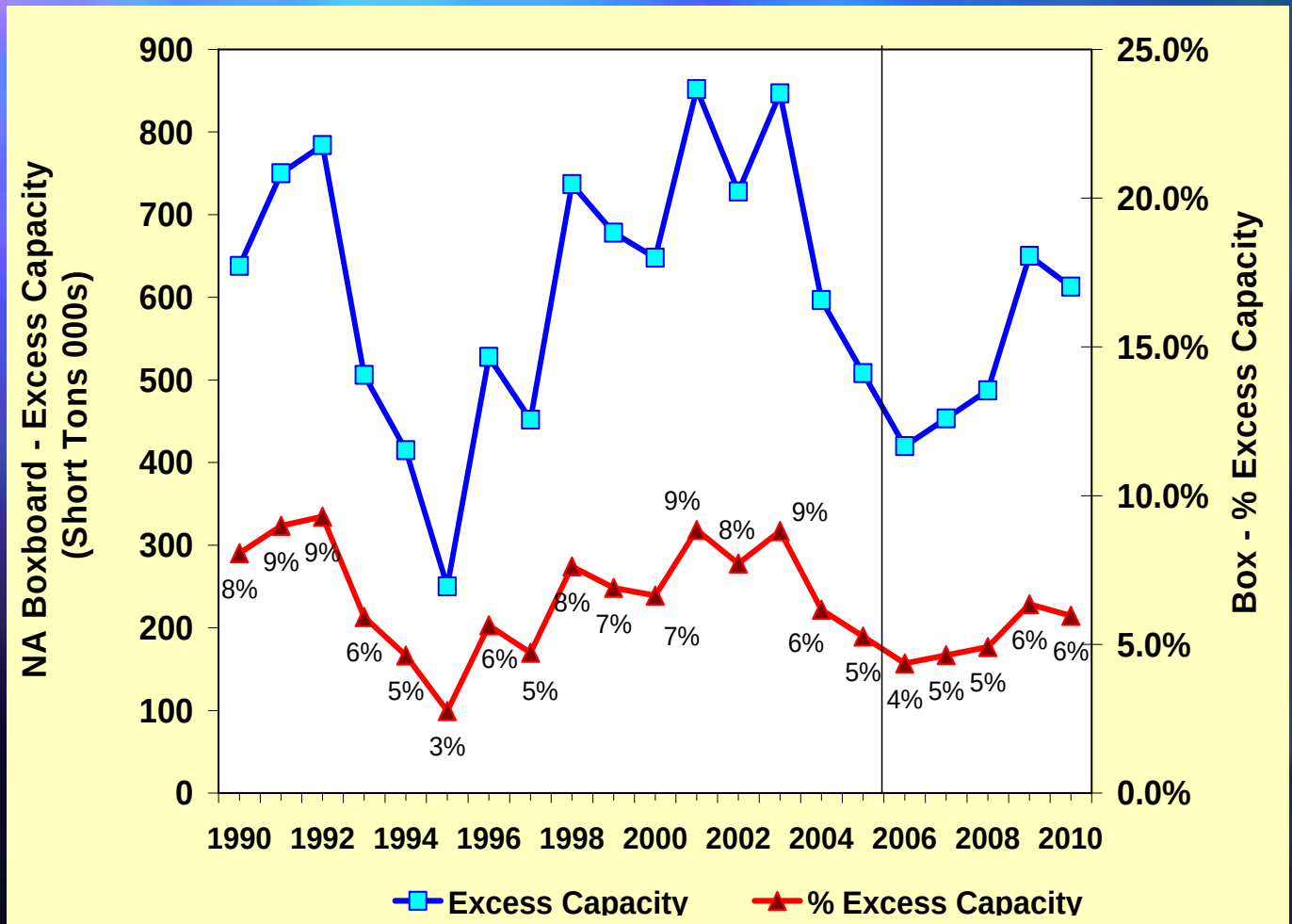

**NA Boxboard Demand Growth Now *Significantly Lags GDP* – Bleached Board Growth Slightly Outpaces Recycled**

# Outlook – NA Boxboard



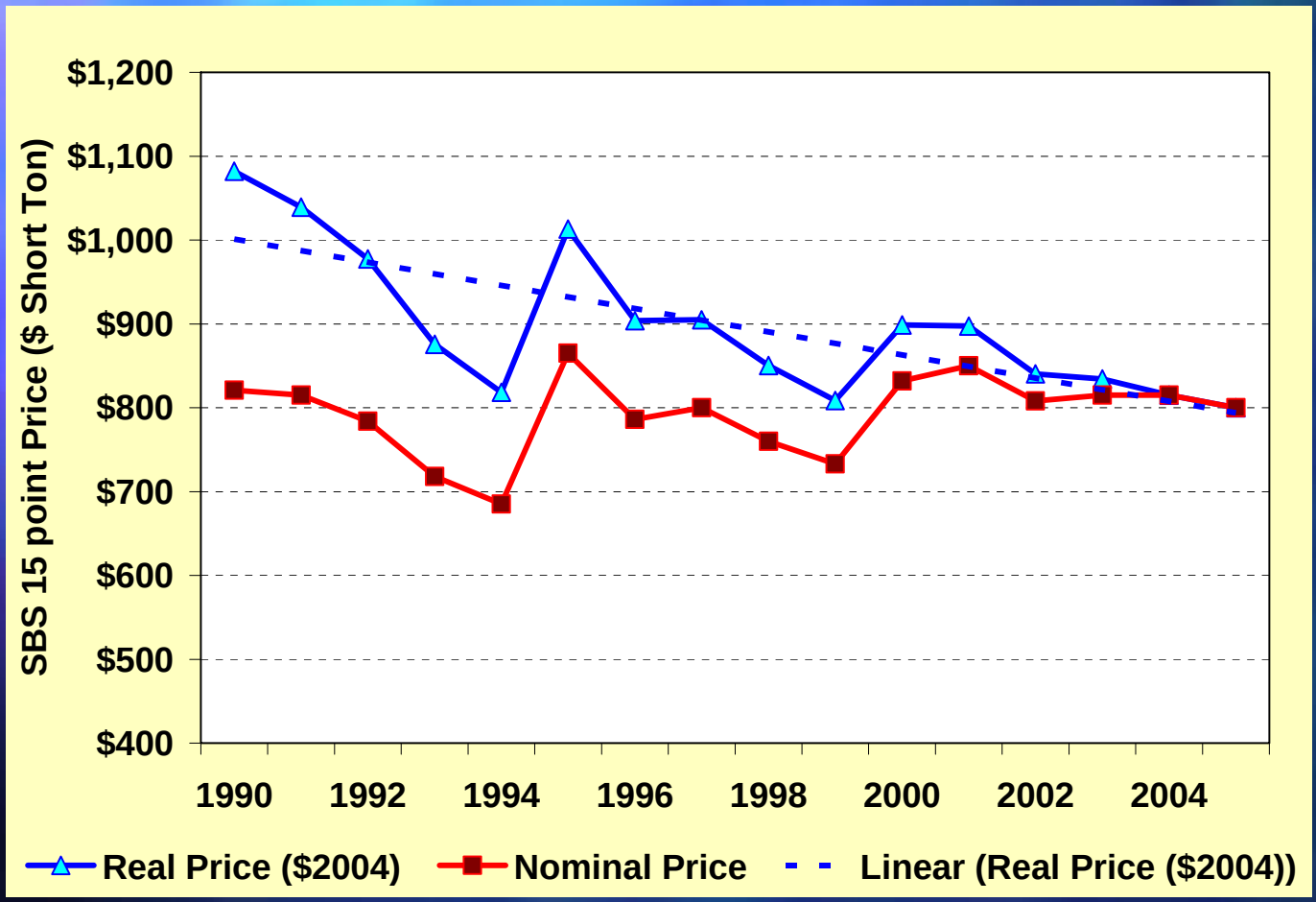

**Both Demand And Supply *Have Resumed Growth* But Will Take Several Years To Reach Historic Levels**

# Outlook – NA Boxboard




**NA Boxboard *Has Consolidated & Reduced Excess Capacity* – But Will Be Tempted To *Add Capacity* In The Out-years If Demand Continues To Grow**

# Outlook – NA Boxboard




**The Recent Rebound In NA Prices Is Faltering – *Long-term Prices Continue To Trend Downwards***

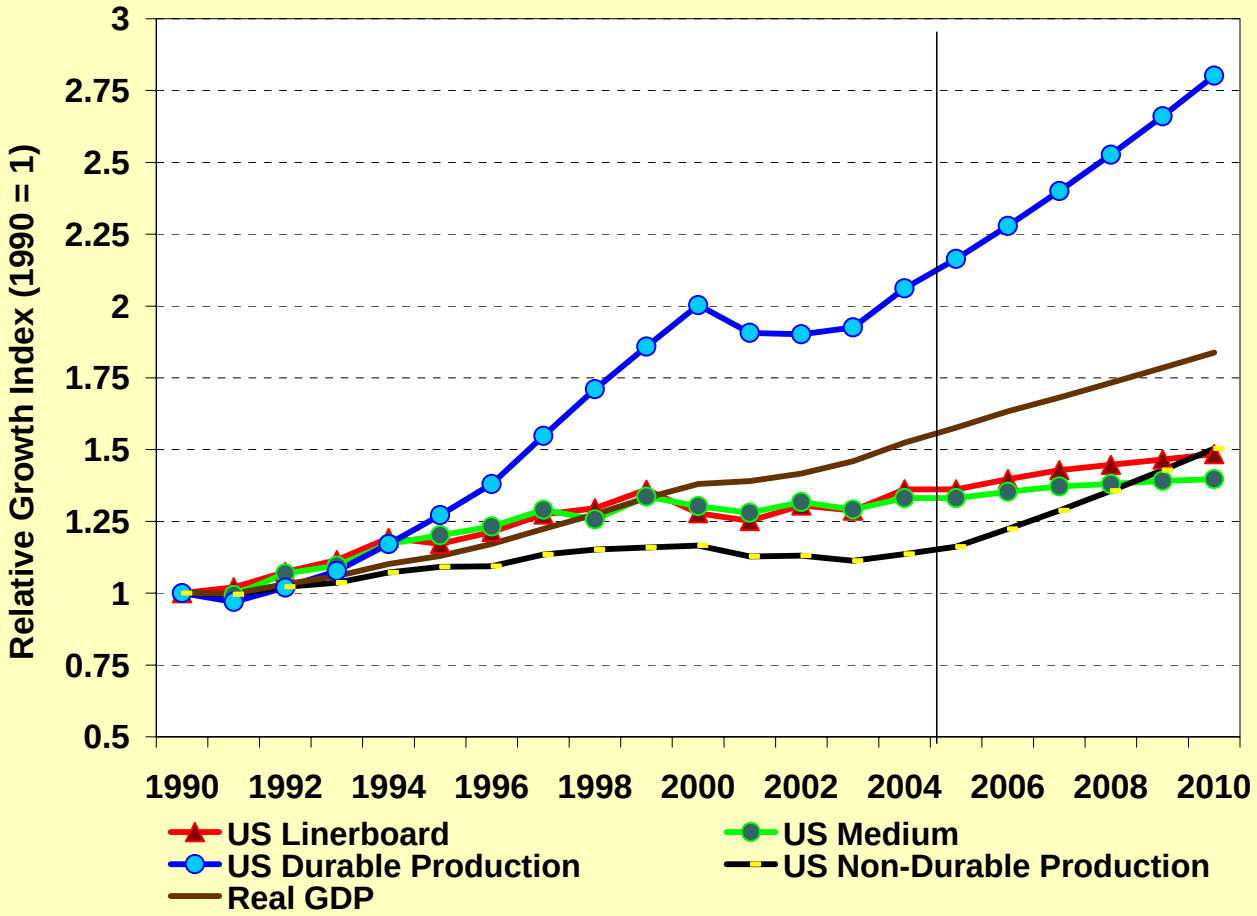
# Outlook – NA Containerboard

**This NA Containerboard segment has undergone one of the most extensive restructurings within the industry --**

- **Concentration of top producers *has gone from one of the lowest to highest in the industry* – improved capacity utilization and expansion discipline has followed**
- **Further acquisitions by large players *will be difficult***
- **However, *NA producers have lost export market* to new overseas capacity, especially in China and Germany**
- **Profitability and returns are *lower than industry average***
- **Slack capacity *absorbed quickly* with improved economy**

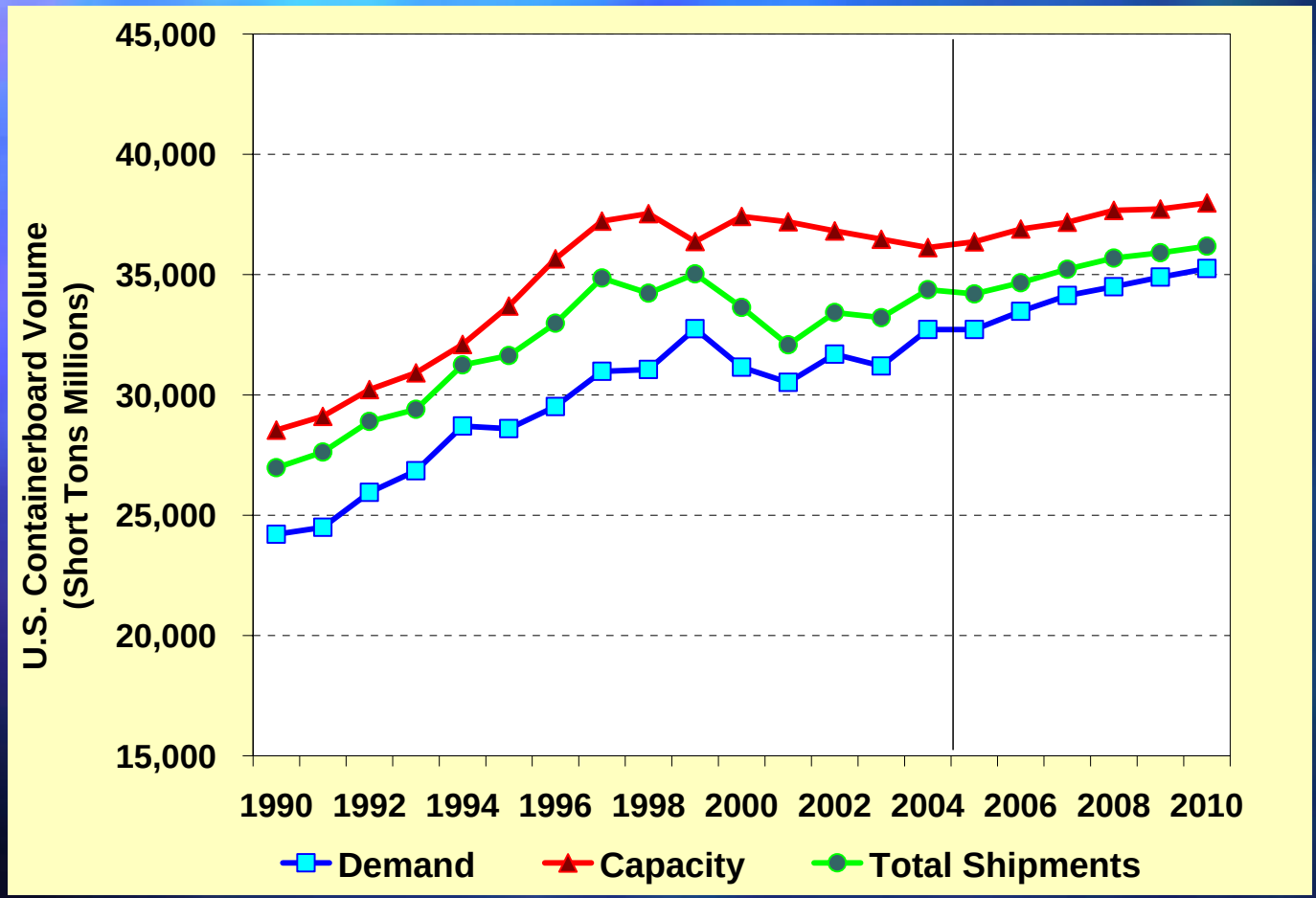
***Implications:*** **Producers are expected to grow capacity slowly with demand – risks of further closures persist from loss of volume in export markets and to substitutes.**

# Outlook – NA Containerboard



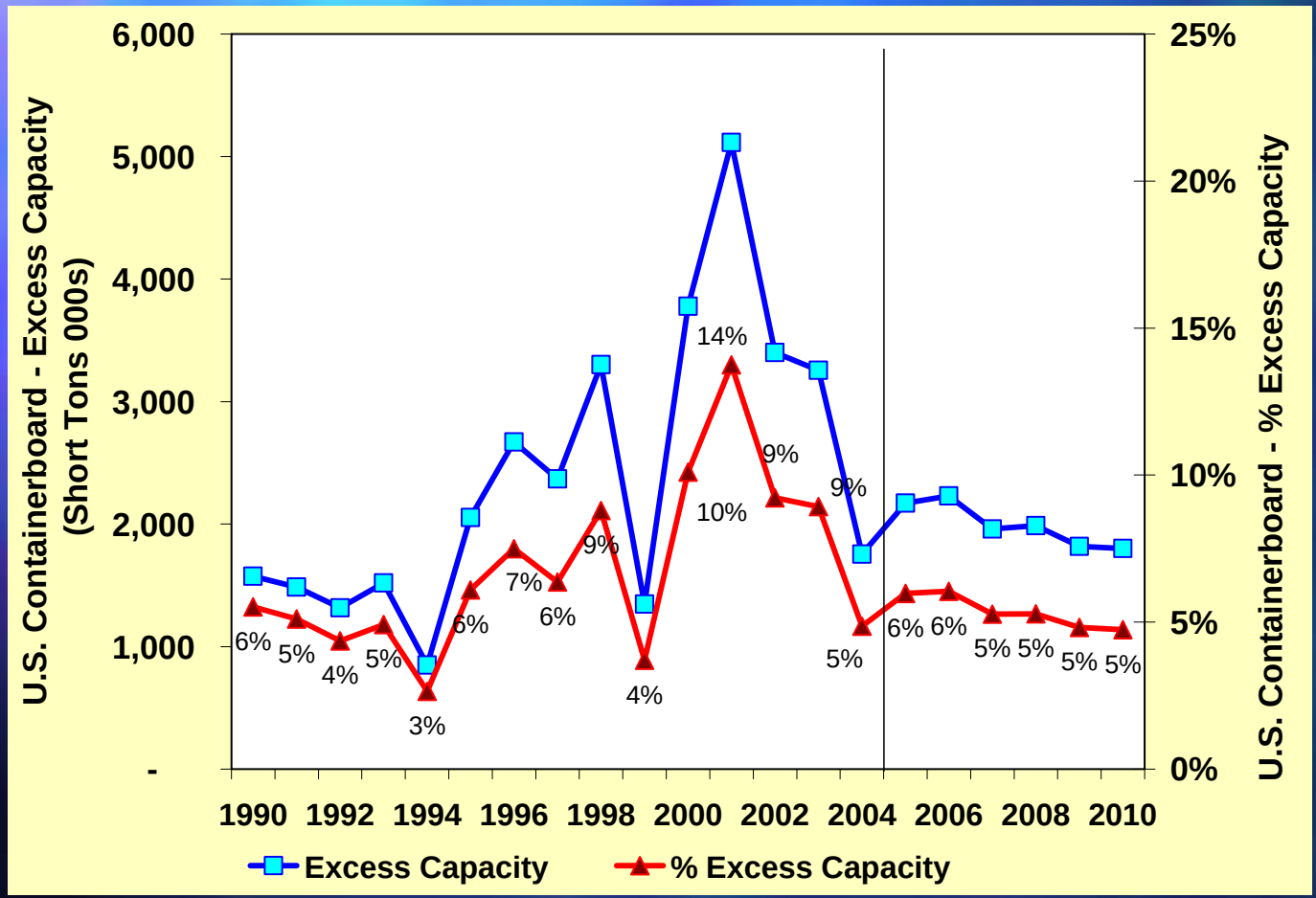

NA Container-board Demand *Continues To Grow* At A Rate Closely Tied To Domestic *Non-Durables and Durables* Production

# Outlook – NA Containerboard



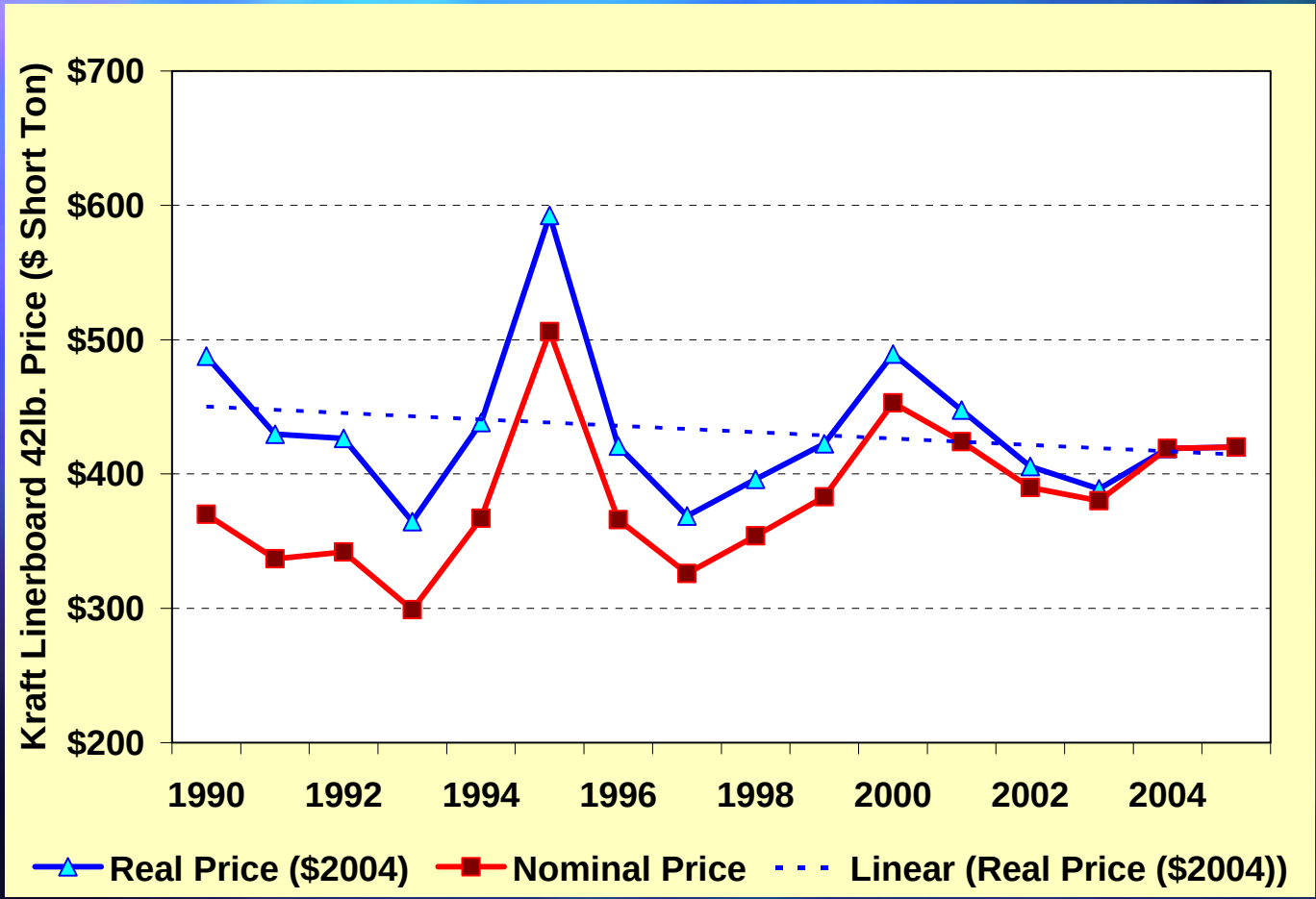

**NA Capacity Is Expected *To Be Well Controlled* Relative To Demand**

# Outlook – NA Containerboard




**NA Container-board's *Excess Capacity Is Now Relatively In Balance***

# Outlook – NA Containerboard




**NA Capacity Reductions Helped Containerboard Producers Maintain & Prices – *But Normal Profits Are Not Yet Being Generated***

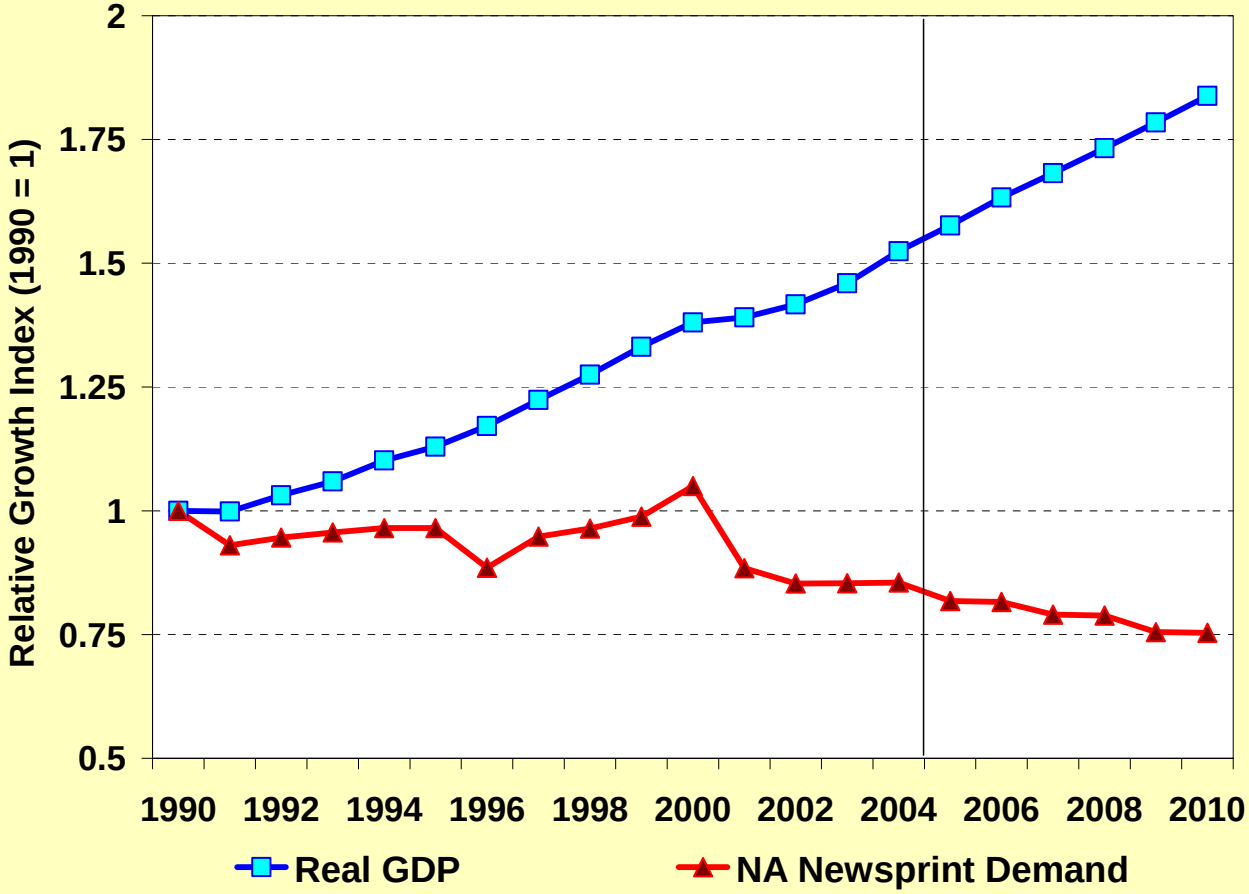
# Outlook – NA Newsprint

**Newsprint is the *weakest overall industry NA segment* --**

- **Short-term publishing and printing declines have been exacerbated *by substitution to alternative media***
- **National and local papers continue to *reduce page size***
- **Newsprint *is in decline* in the long-term**
- **Opportunities for further consolidation exist and *significant capacity reductions and grade conversions will continue . . .***

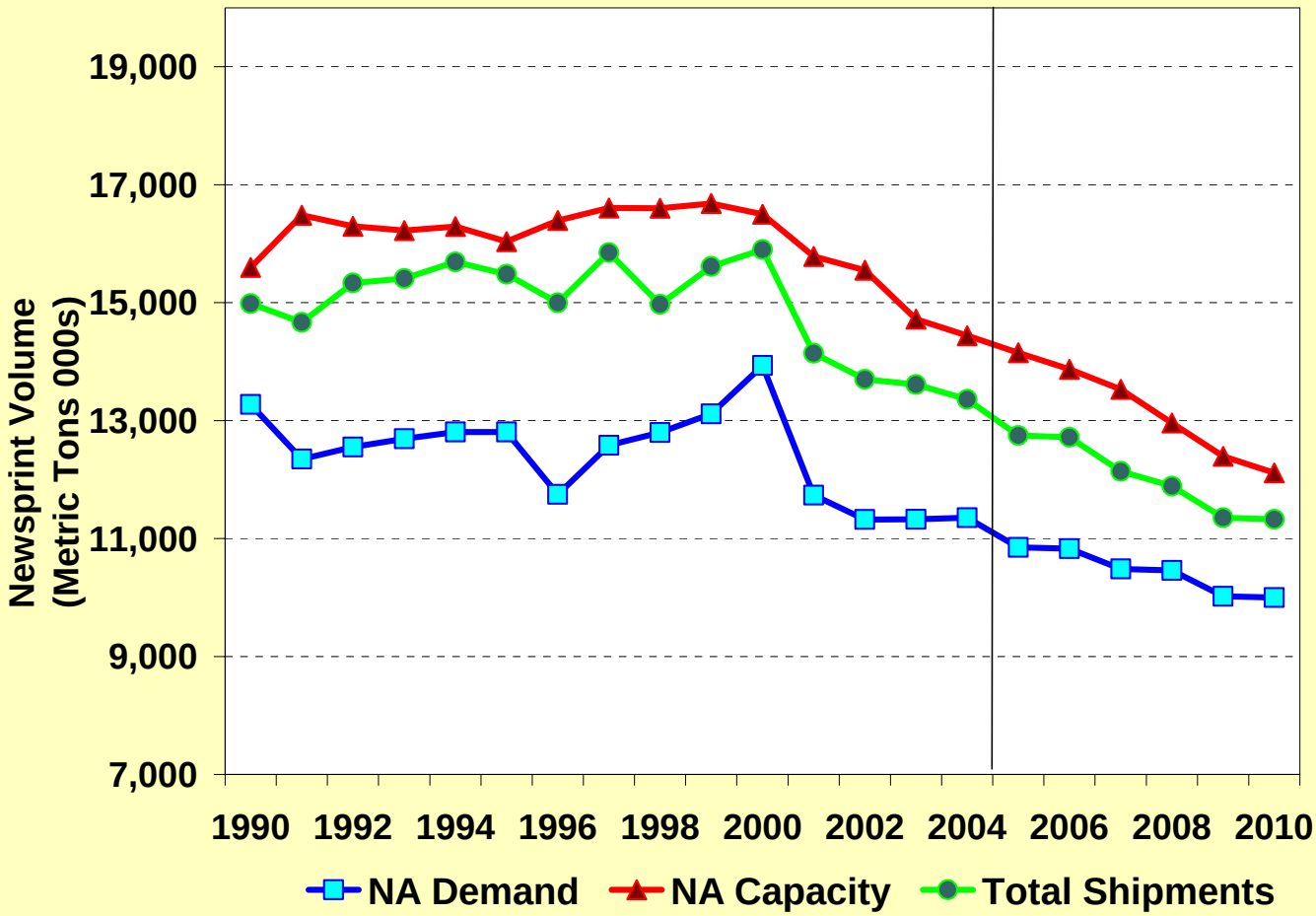
***Implications:*** **Rational players will spend a minimum of capital and seek value added grade conversions. *No new NA Newsprint mills are likely to be built* -- at least by rational sector players . . .**

# Outlook – NA Newsprint



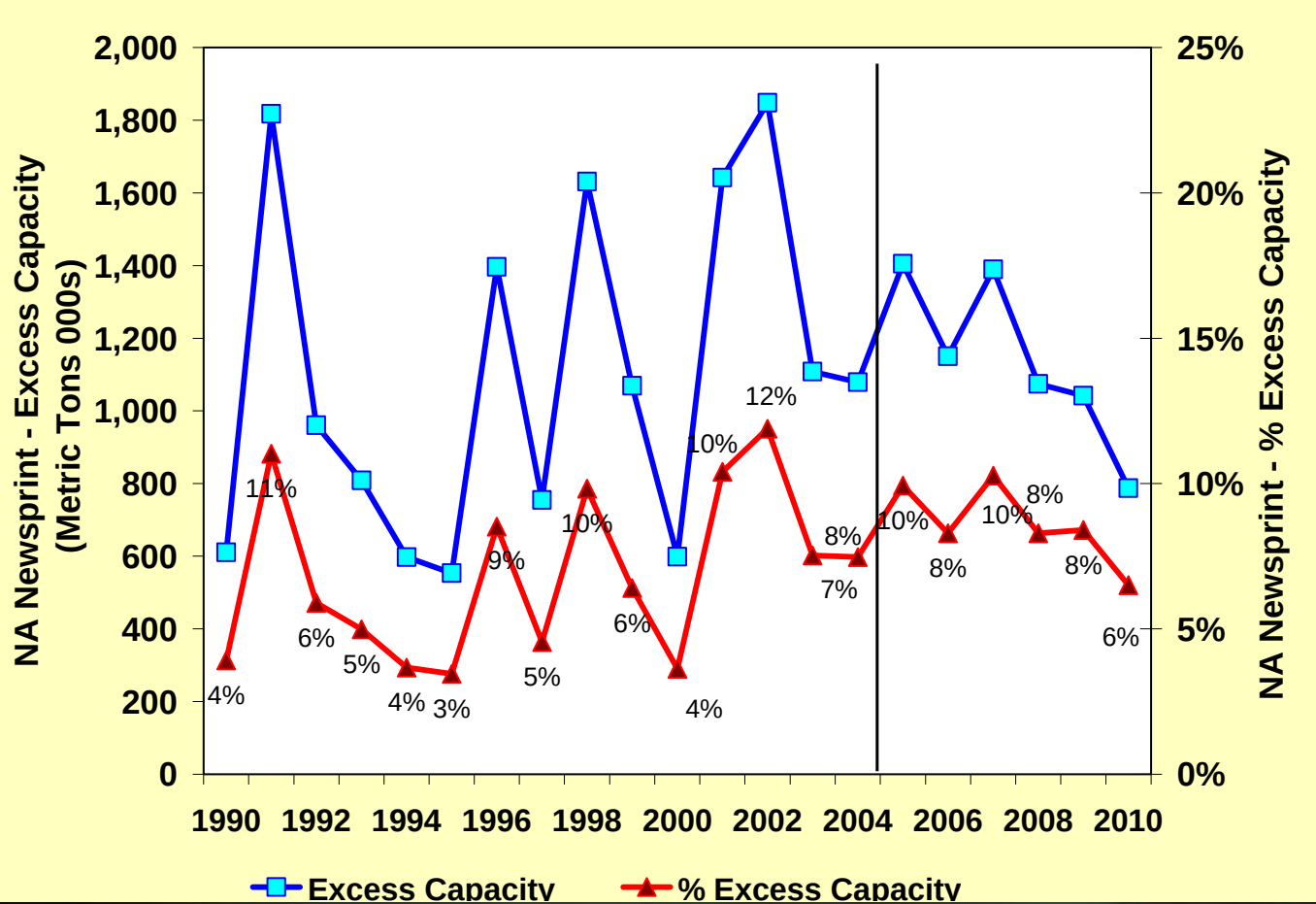

**NA Newsprint Is *A Declining Segment* In *Long-Term* – A Short- to Mid- Term Improvement *May Occur* But Is Not Projected**

# Outlook – NA Newsprint



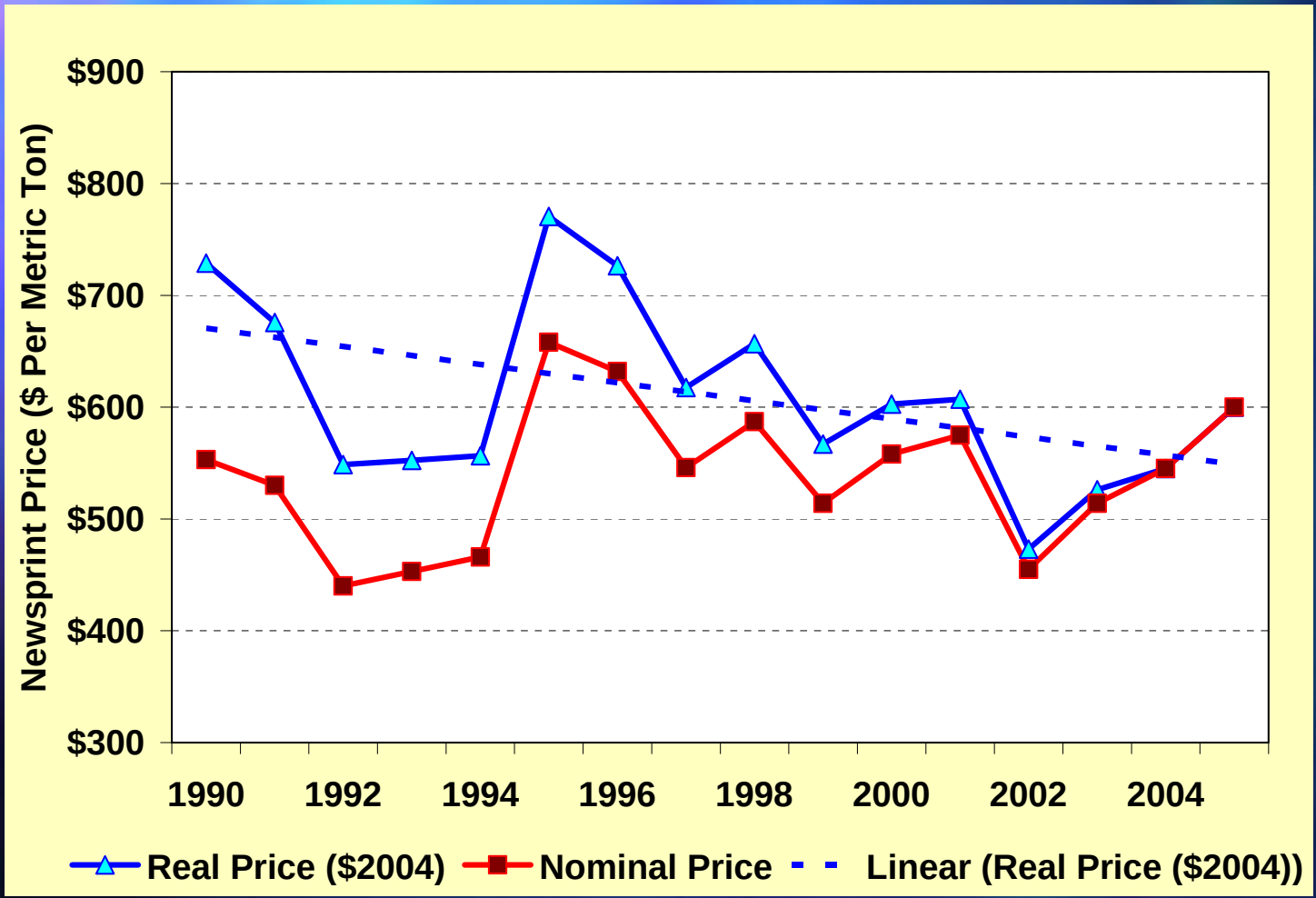

**Demand, Capacity, Exports, & Shipments *Are All Sliding Downward* At A Relatively *Quick Rate***

# Outlook – NA Newsprint




**The Supply And Demand Situation *Has Improved But Excess Capacity Remains***

# Outlook – NA Newsprint




**Capacity Reductions Have Helped Boost Prices -- *But A Strong Downward Trend Persists***

# Outlook – NA P&W Papers

**Recent *economic slowdown & alternative media substitution* have impacted P&W demand negatively --**

- **Uncompetitive *capacity being closed* & modest demand increases will tend to reign in excess capacity**
- **CF, CGW, UCF & GW Grades *have seemingly collapsed* into one relatively inter-changeable/somewhat flexible grade structure *from consumers' perspectives***
- **In this context -- CF quickly became commoditized -- displaced by improved CGW grades – *changes still expected***

***Implications:*** **Significant repositioning / redeployment of assets – continued M&A & financial constraints.**

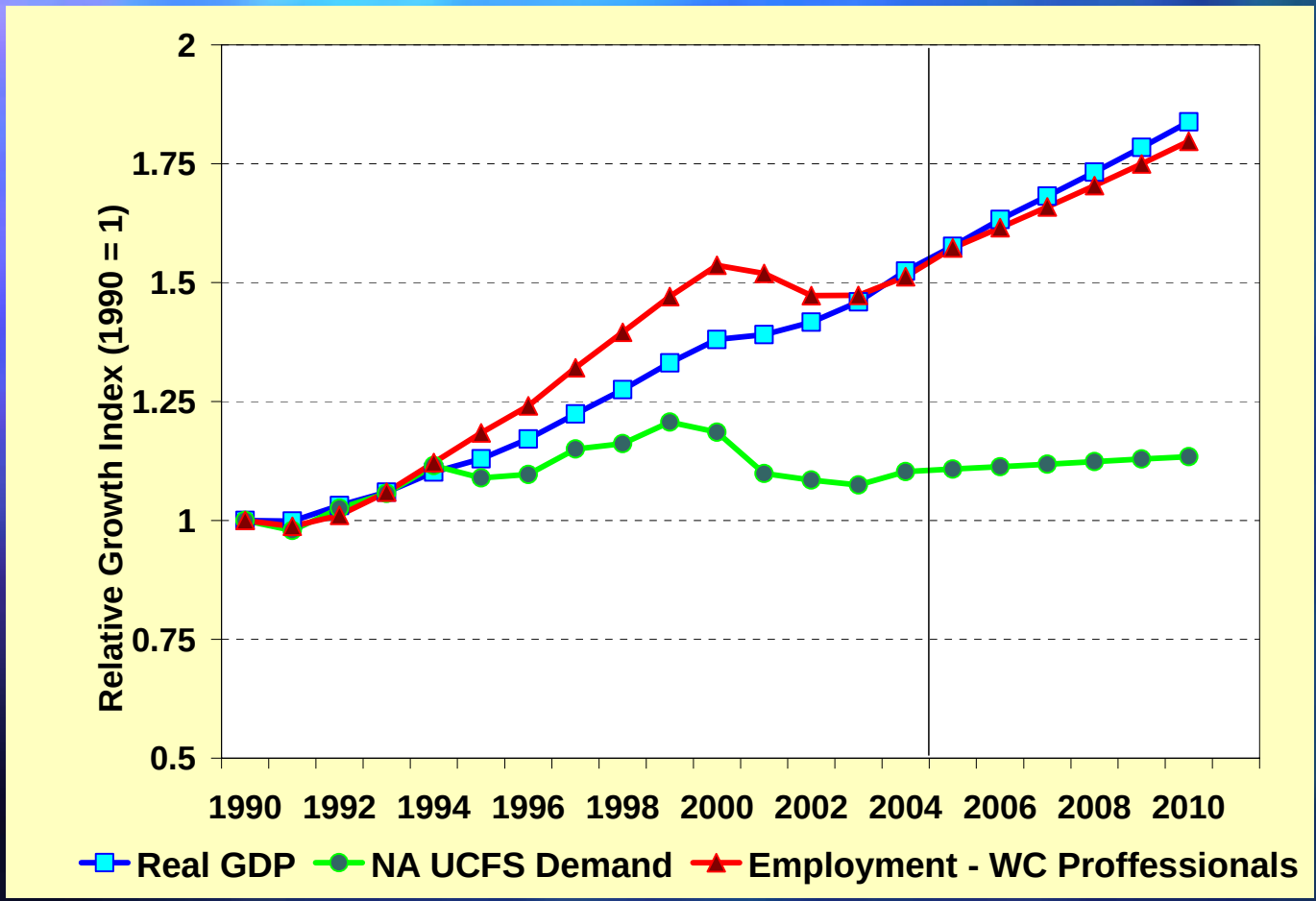
# Outlook – NA P&W Papers (cont.)

**In addition -- high end uses -- auto brochures/annual reports -- *are being replaced by website versions***

- **High volume UCF under pressure from overseas competitors, and Newsprint producers *are converting capacity to UC and CGW grades* creating serious downstream pressures for UCF across time**
- **Financial returns & growth prospects *are similar to industry average* & room exists *for continued M&A activity***

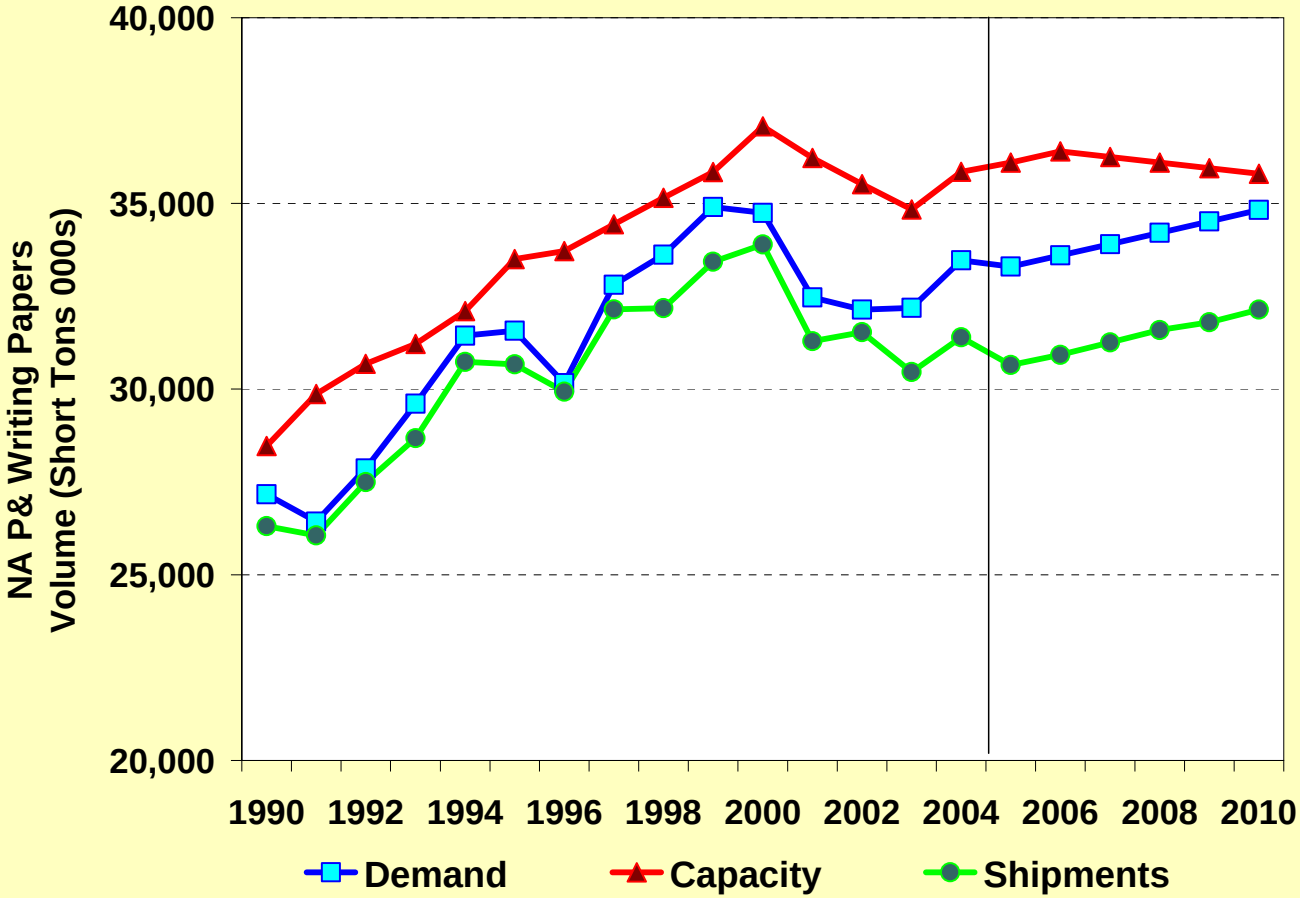
***Implications:*** **Certain segments will suffer net capacity reductions and the grade turmoil will continue to create an unstable overall grade-to-grade business environment.**

# Outlook – NA P&W Papers



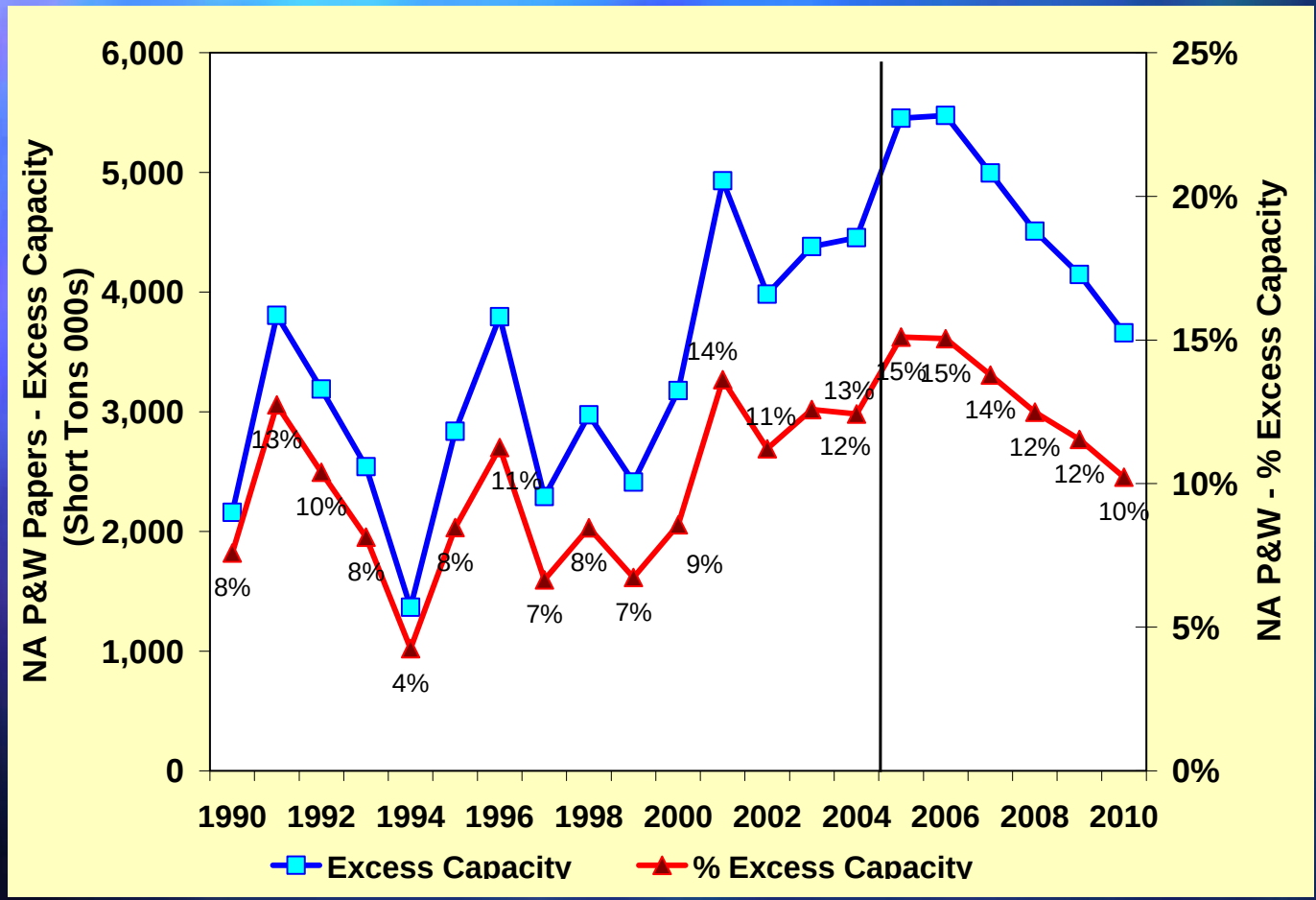

**P&W Paper *Demand Fundamentals* Began To Change In The Mid-1990s – *Minimal And Risky Growth Is Expected* Going Forward**

# Outlook – NA P&W Papers



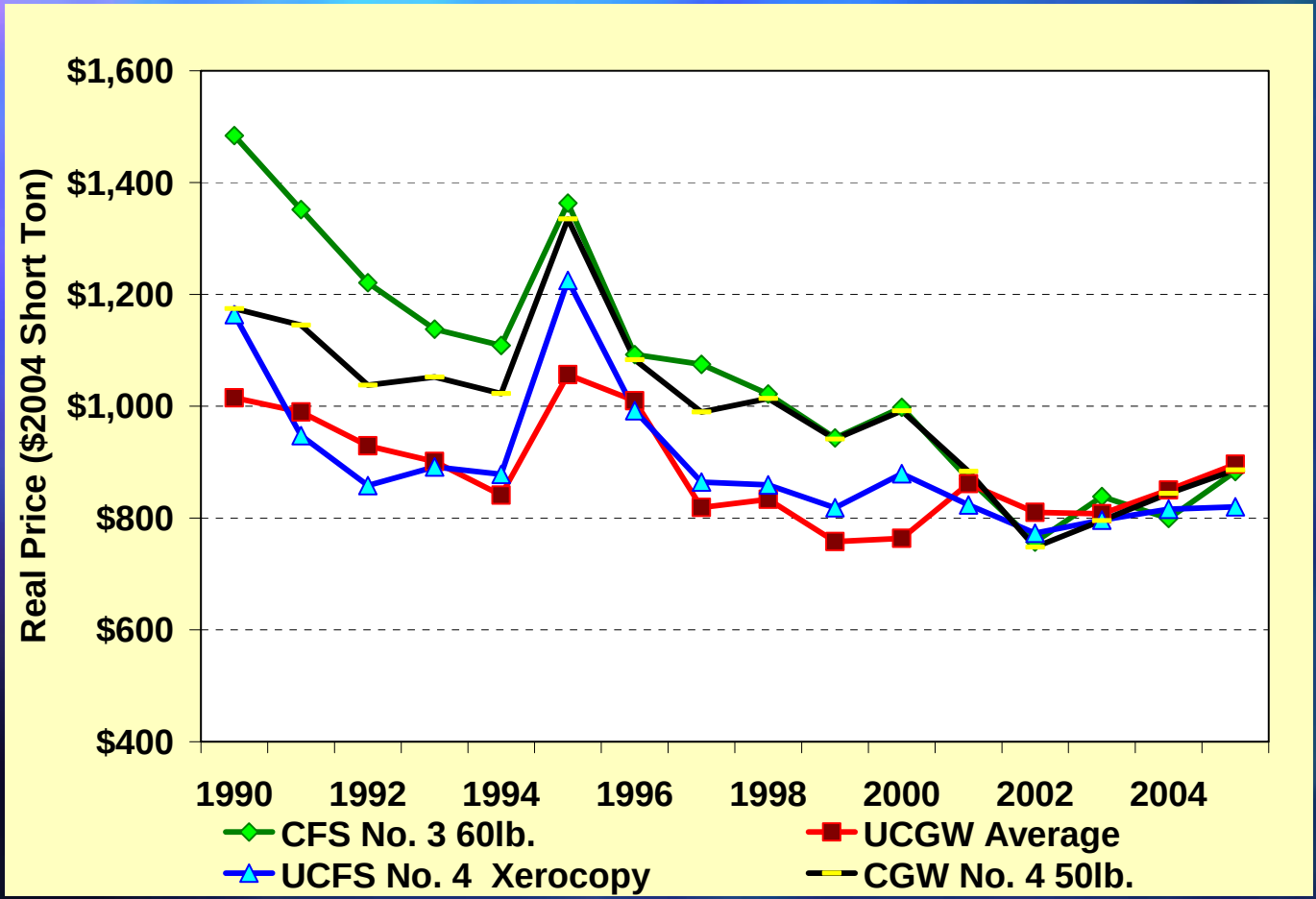

**Rising Imports Have *Slowed Shipments* Relative To Domestic Demand And *Further Capacity Rationalization* Is Likely**

# Outlook – NA P&W Papers




**Significant NA P&W *Over-Capacity Persists – Sustaining A Difficult Market Condition***

# Outlook – NA P&W Papers




**Collapsed Real Price Trends *Continue Downward* And Recent Pricing Improvements *Have Been Disappointing***

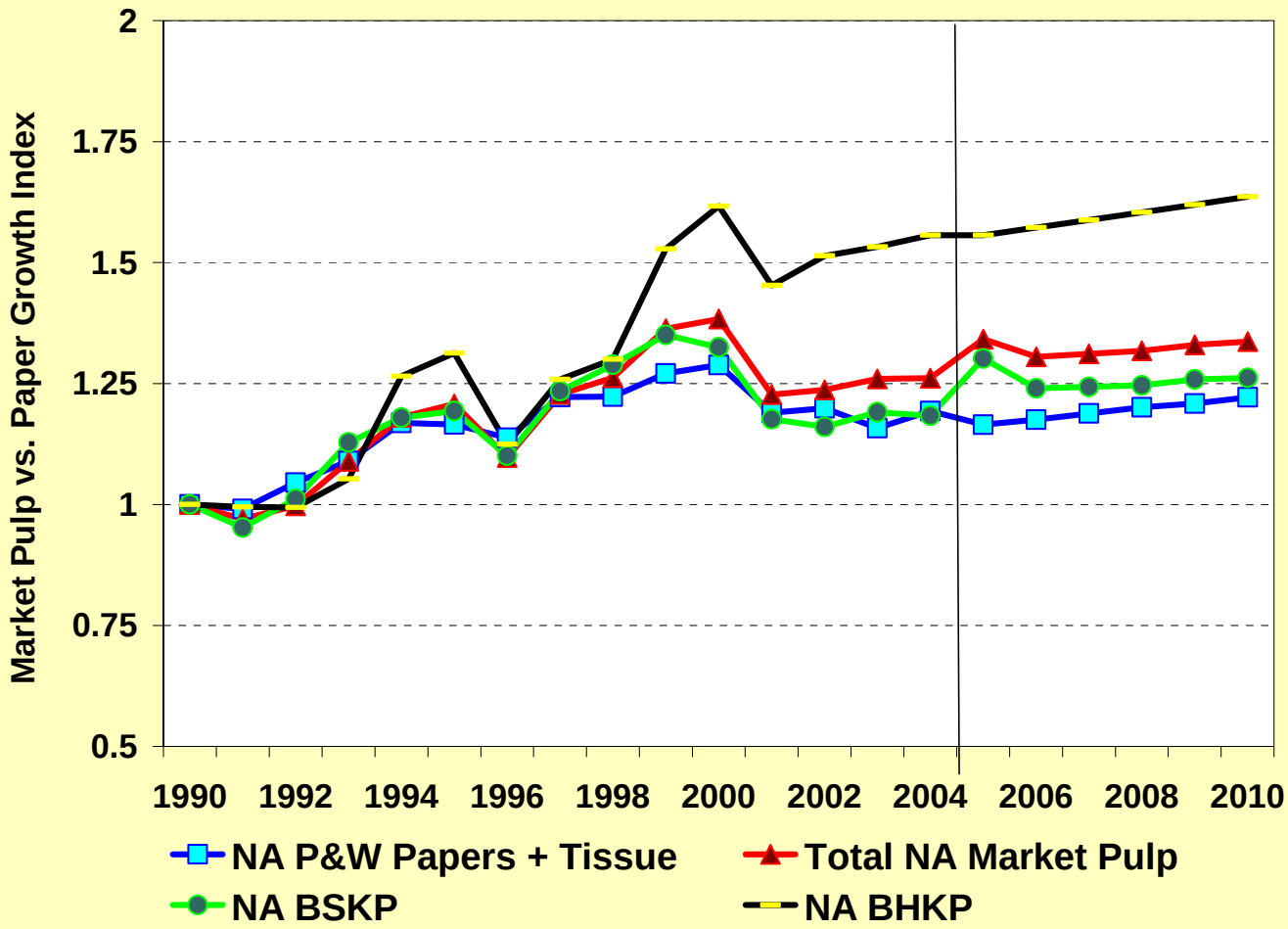
# Outlook – NA Market Pulp

**Market Pulp is an intermediate good in the production of the other paper and paperboard grades --**

- **Pulp Investment returns – *among the poorest* in the industry – *which in some circles is baffling . . .***
- **Environmental restrictions – *new capacity additions difficult***
- **International producers – *continue to import pulp competitively to US***
- **DIP pulps presently *relatively more financially attractive* than virgin pulps**

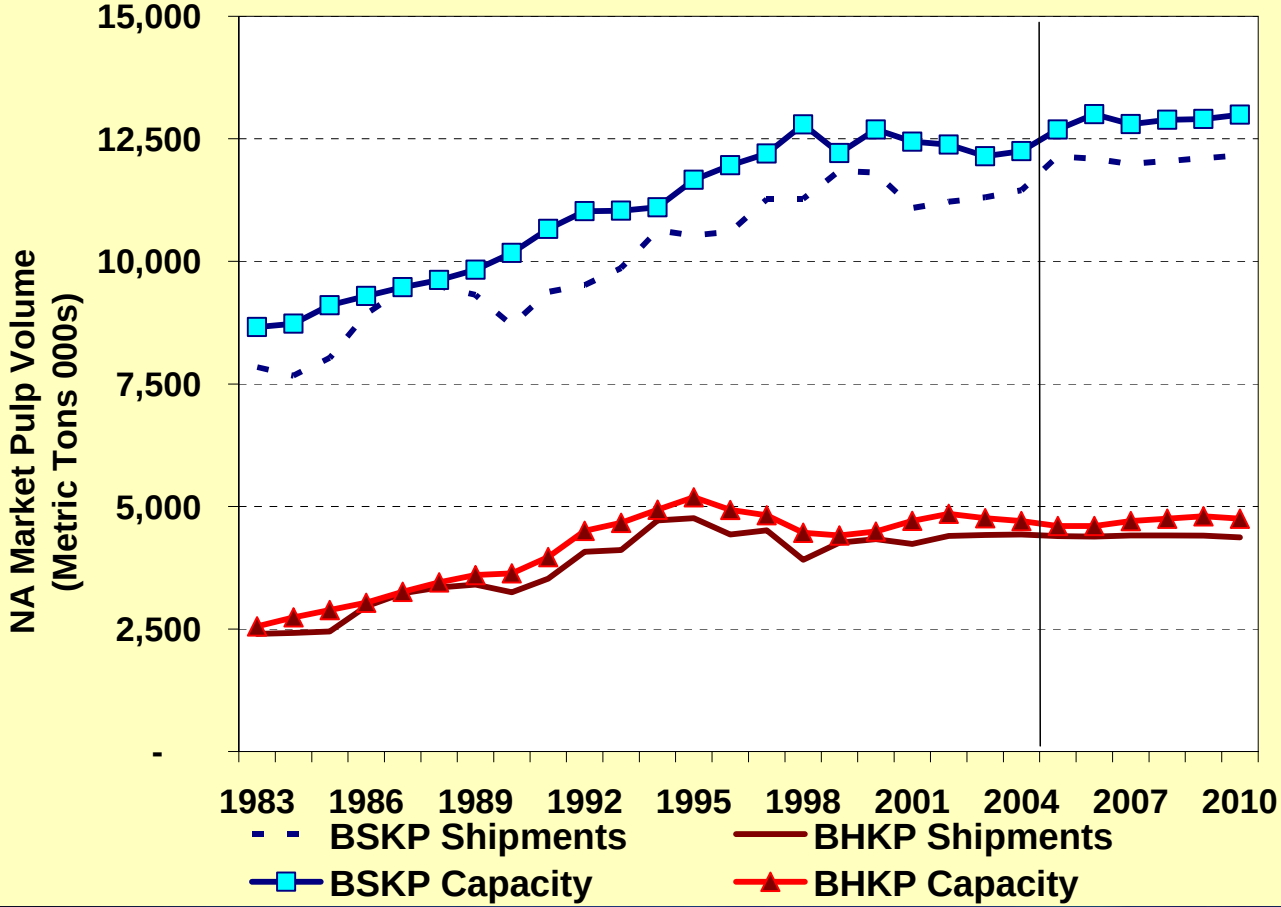
***Implications:*** **Some capital to be spent on integrated DIP facilities. Capacity will creep up with incremental improvement projects – *Wild card here is China's fiber demand . . .***

# Outlook – NA Pulp



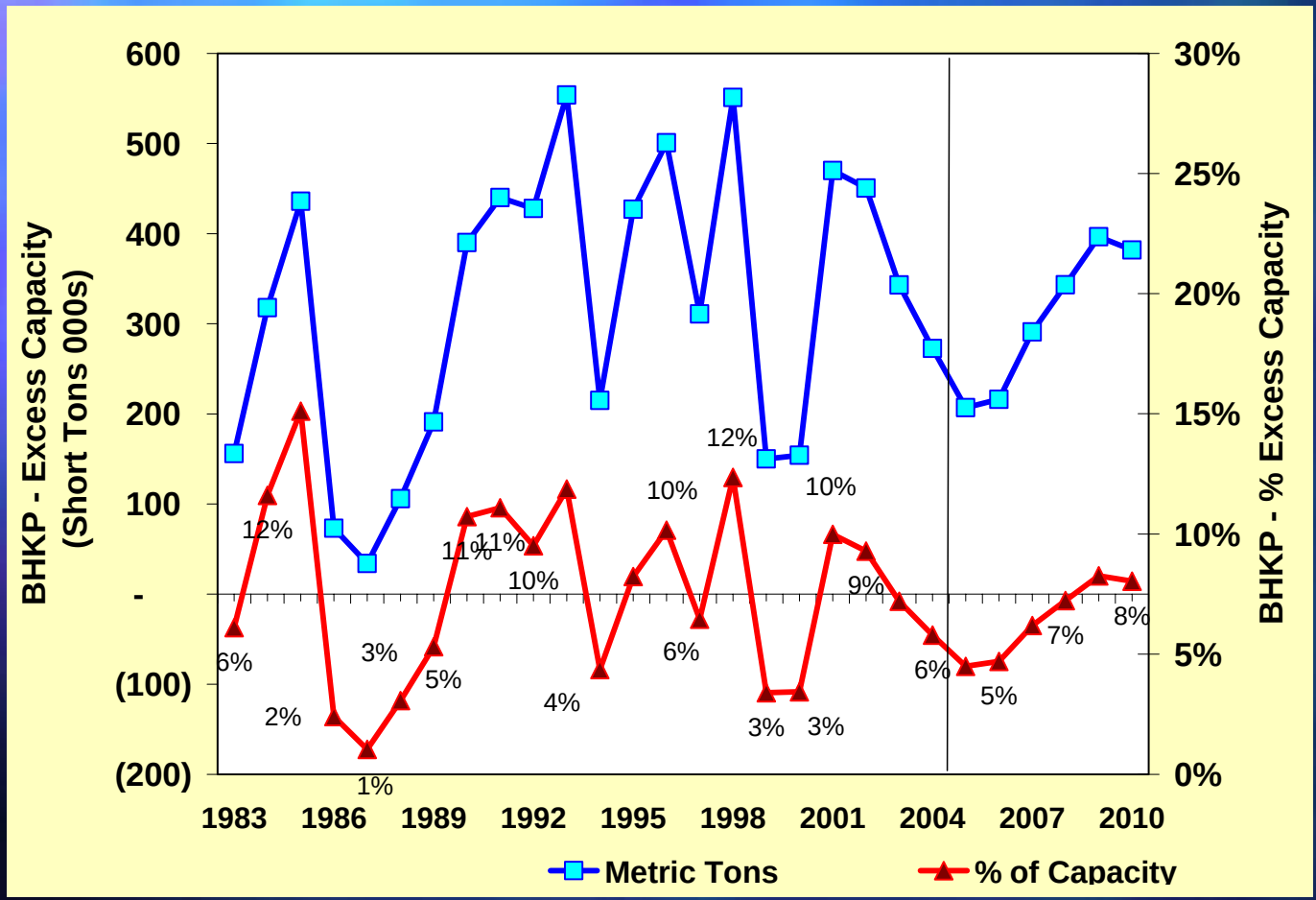

**Demand For Market Pulp *Follows Other Grades* – But Watch *China's Needs and Demands* Looking Out**

# Outlook – NA Pulp



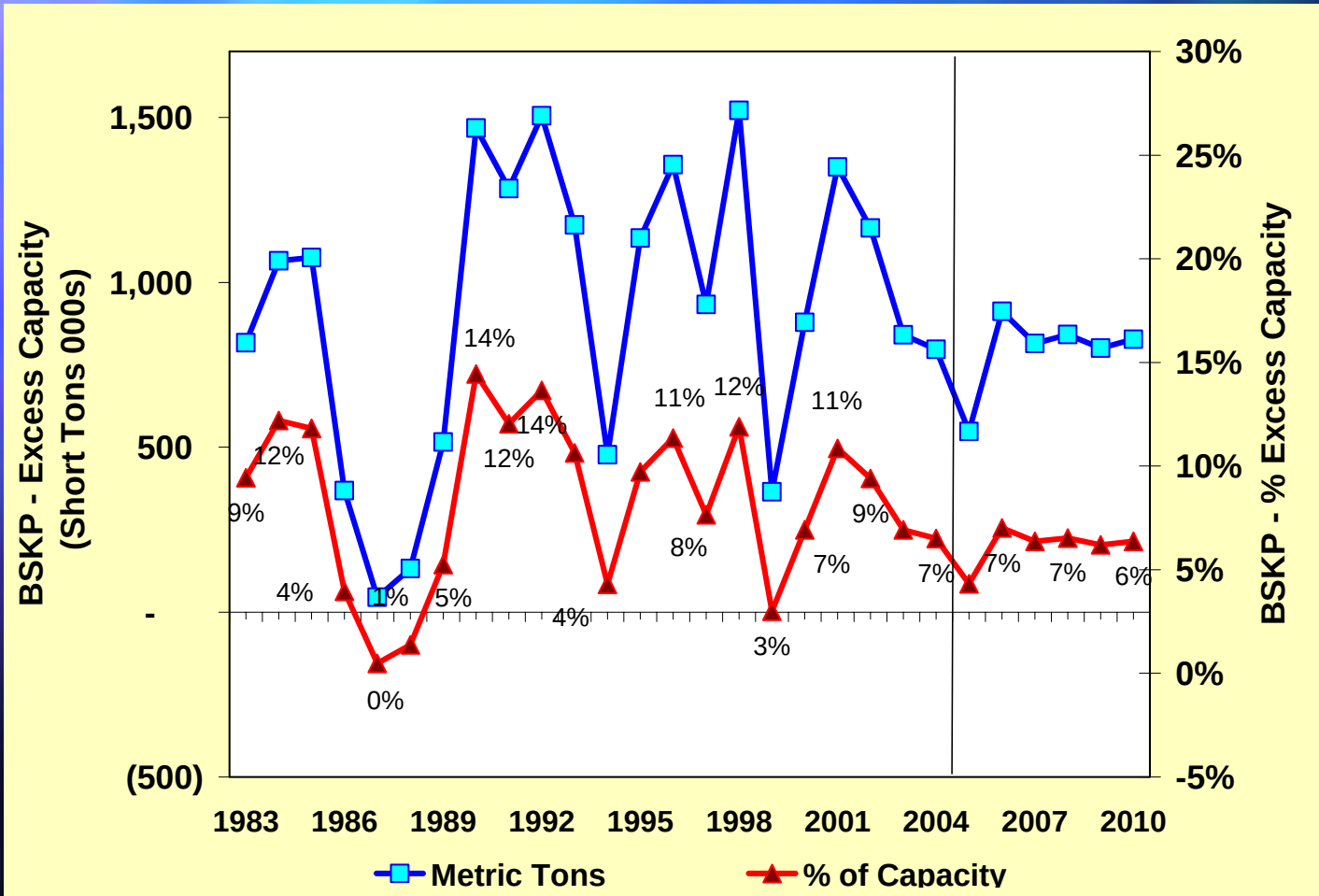

**Supply And Demand For Chemical Market Pulp Is Expected To Be Relatively Flat – But Again – *Watch China's Needs Evolve . . .***

# Outlook – NA BHKP



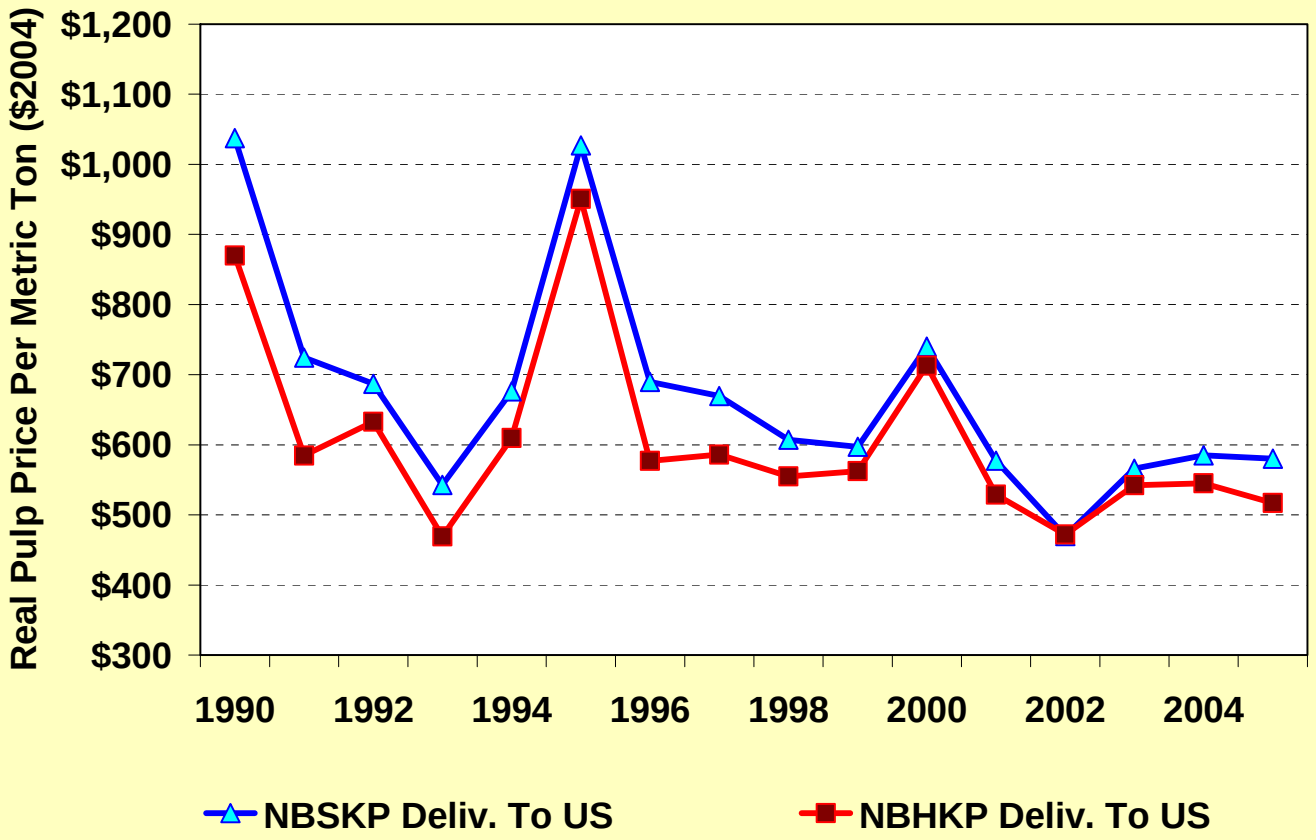

**NA *BHKP Capacity Is In Check* But Is Expected To Creep Up Over Time – *Increasing The Risk Of Capacity Closures***

# Outlook – NA BSKP




**NA *BSKP Is Carrying Relatively More* Capacity Than BHKP – *Making It More Sensitive To Swings* In Demand**

# Outlook – NA Market Pulp




**Market Pulp Prices Have *Once Again Flattened & Long-term Fundamentals Still Not Strong* Going Forward**

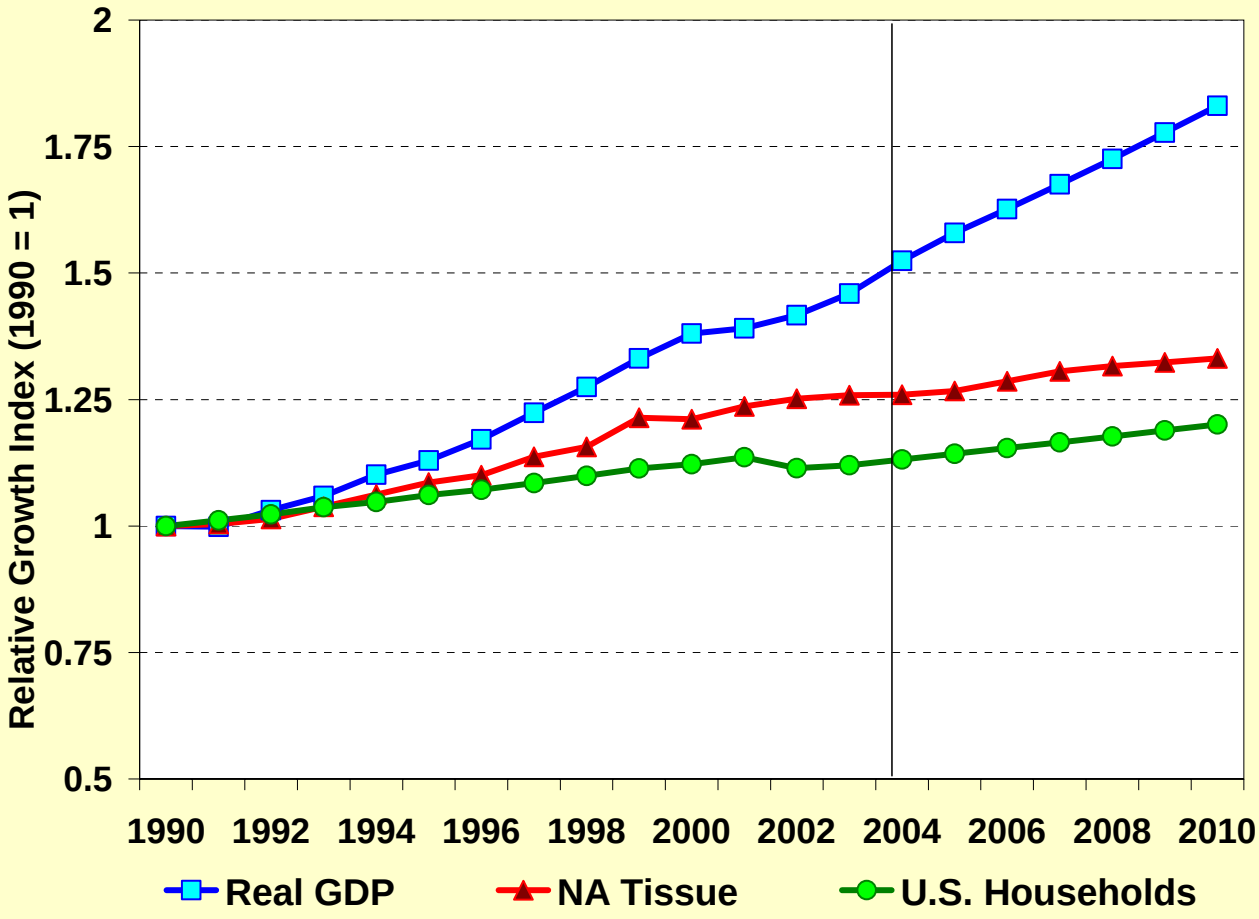
# Outlook – NA Tissue

**Tissue is *strongest overall segment* in North America --**

- End-product demand is mature – Americans highest per-capita consumers in world & *incremental demand is slow*
- Demand growth is slowing – *but still expanding per capita*
- However – overall company financial returns *less sensitive to supply / demand dynamics* at mill level than other grades
- Regulatory considerations *will limit large M&A activity*
- Both technology changes and *new entrepreneurial entrants* will drive spending
- Excess capacity is building – *but likely to be absorbed*

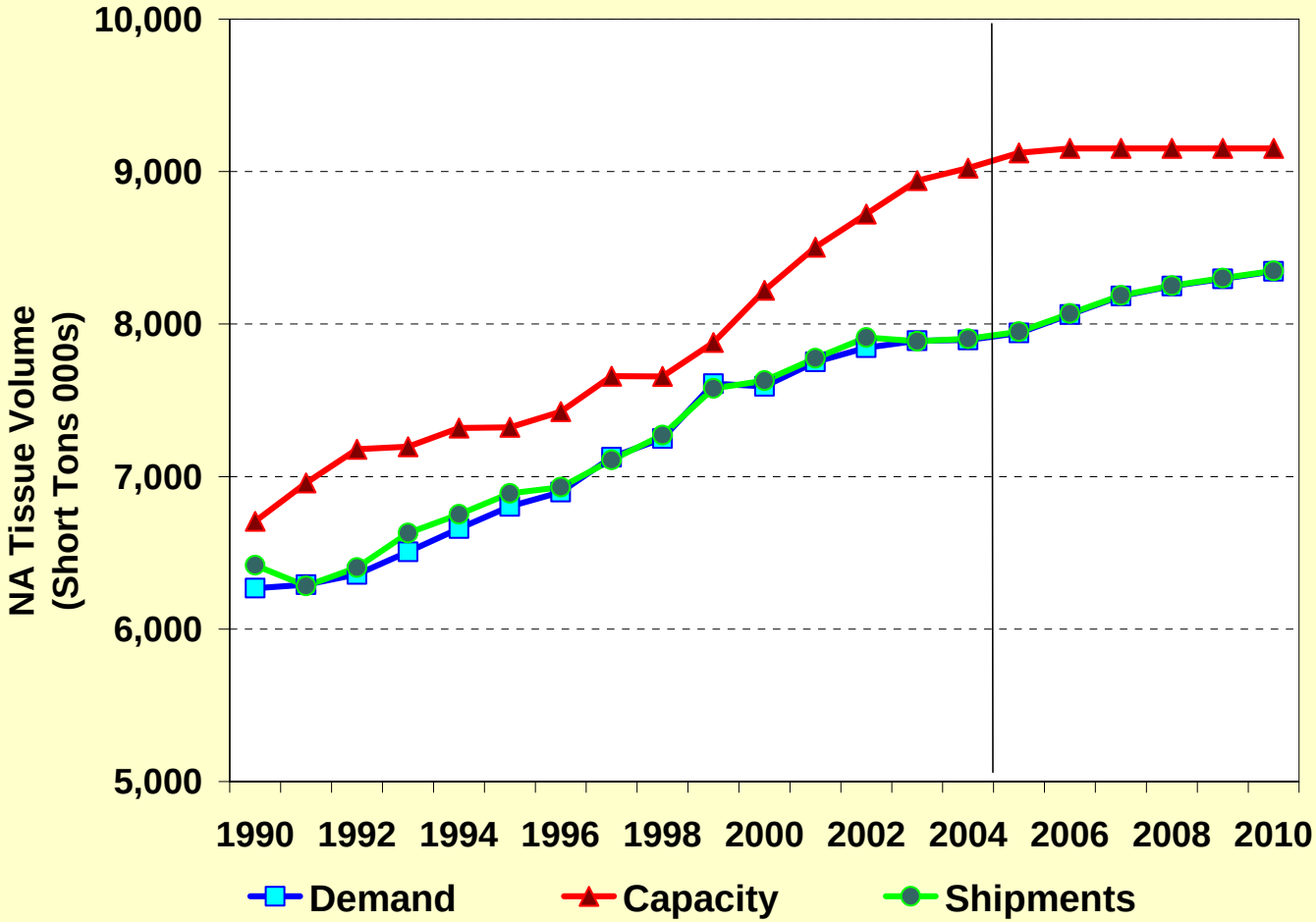
***Implications:*** **Segment may be losing some luster – is a day of reckoning coming or will historical market dynamics win out?**

# Outlook – NA Tissue



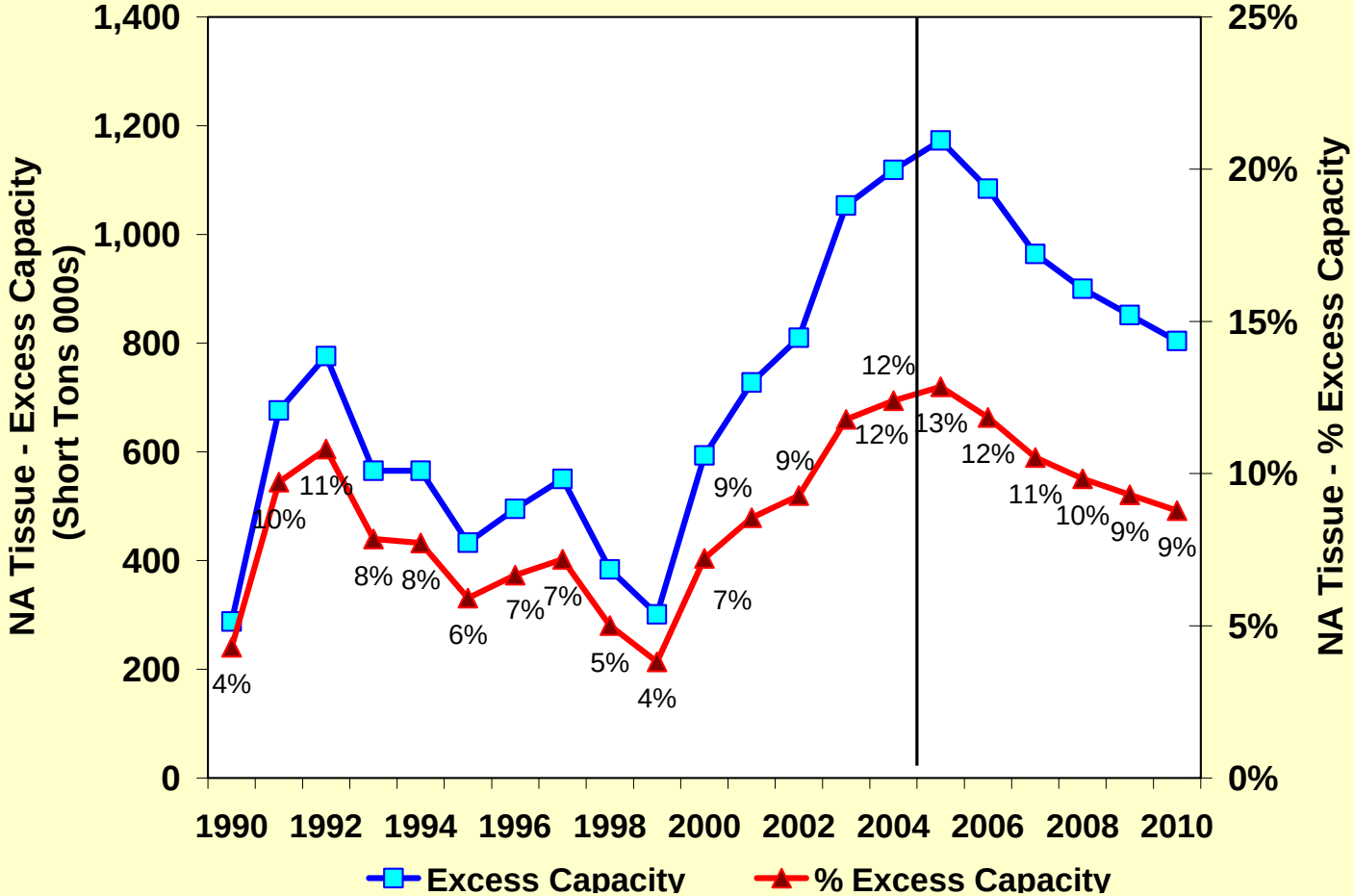

**NA Tissue Has Innovated To Keep *Demand Ahead Of Household Formation***

# Outlook – NA Tissue



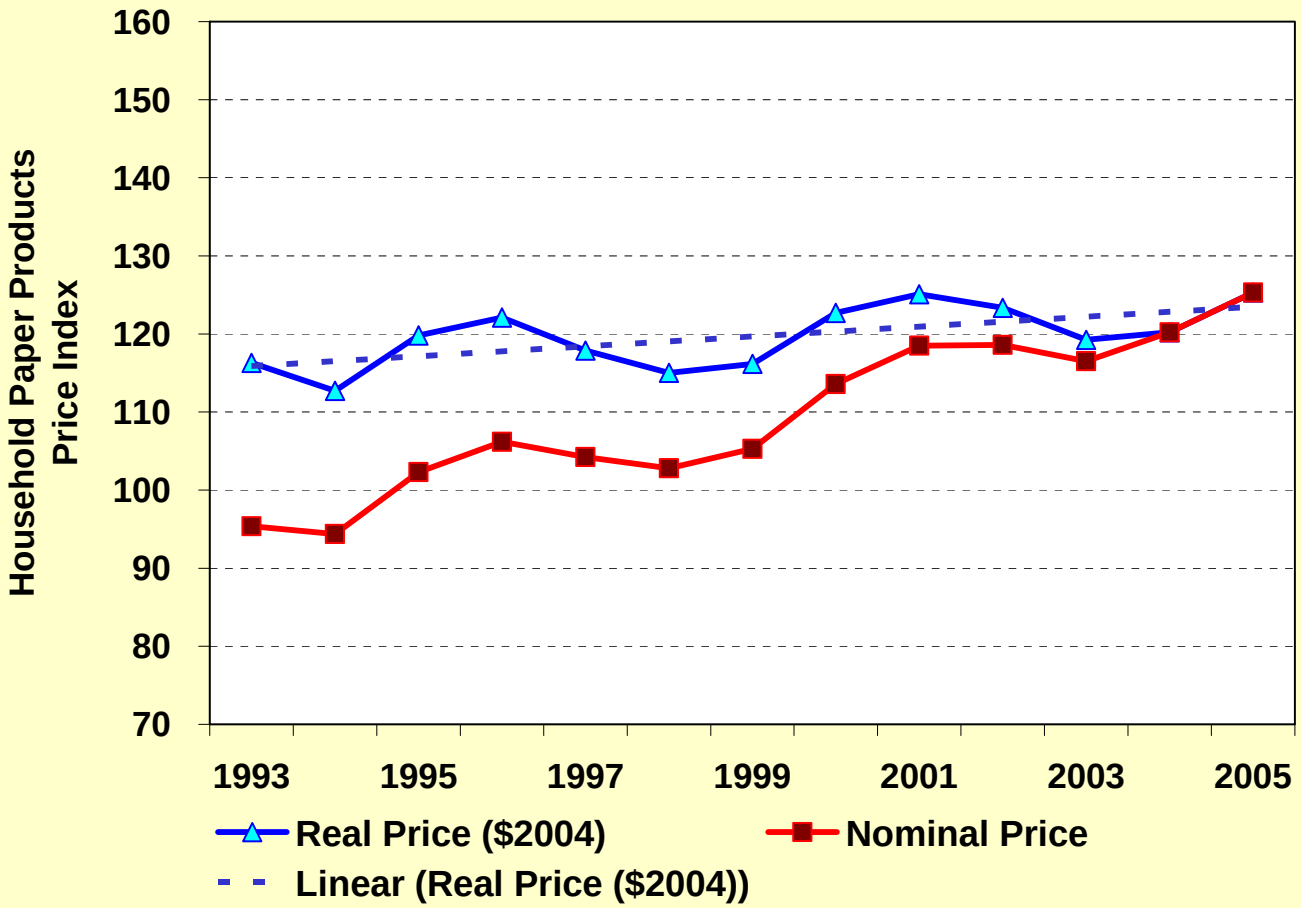

**Constraint Is Needed As *Capacity Growth Has Recently Outpacing Demand* – But Some Structural Protections Remain**

# Outlook – NA Tissue



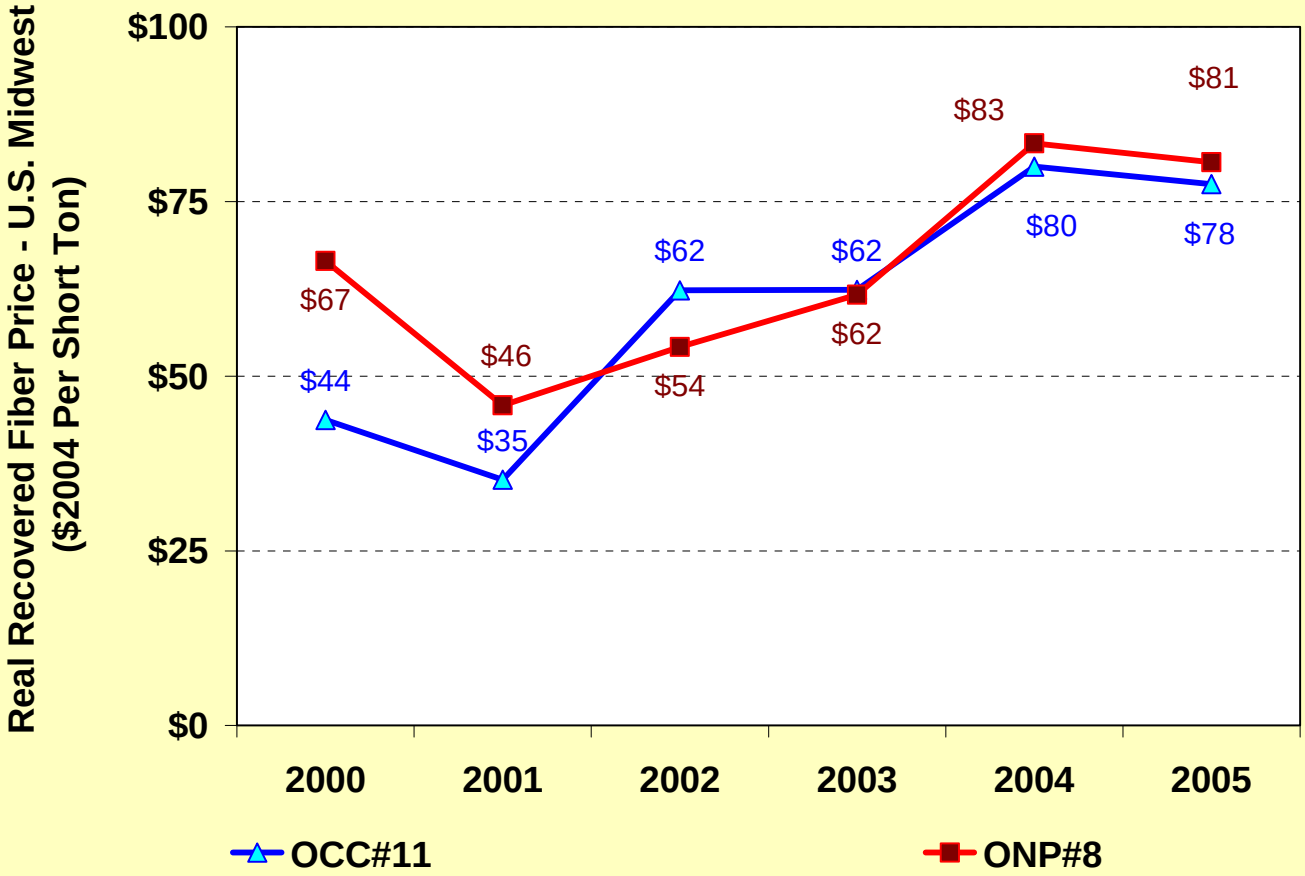

**Excess Tissue Capacity *Is Building But Will Moderate* As The Rate Of Capacity Additions Slow**

# Outlook – NA Tissue



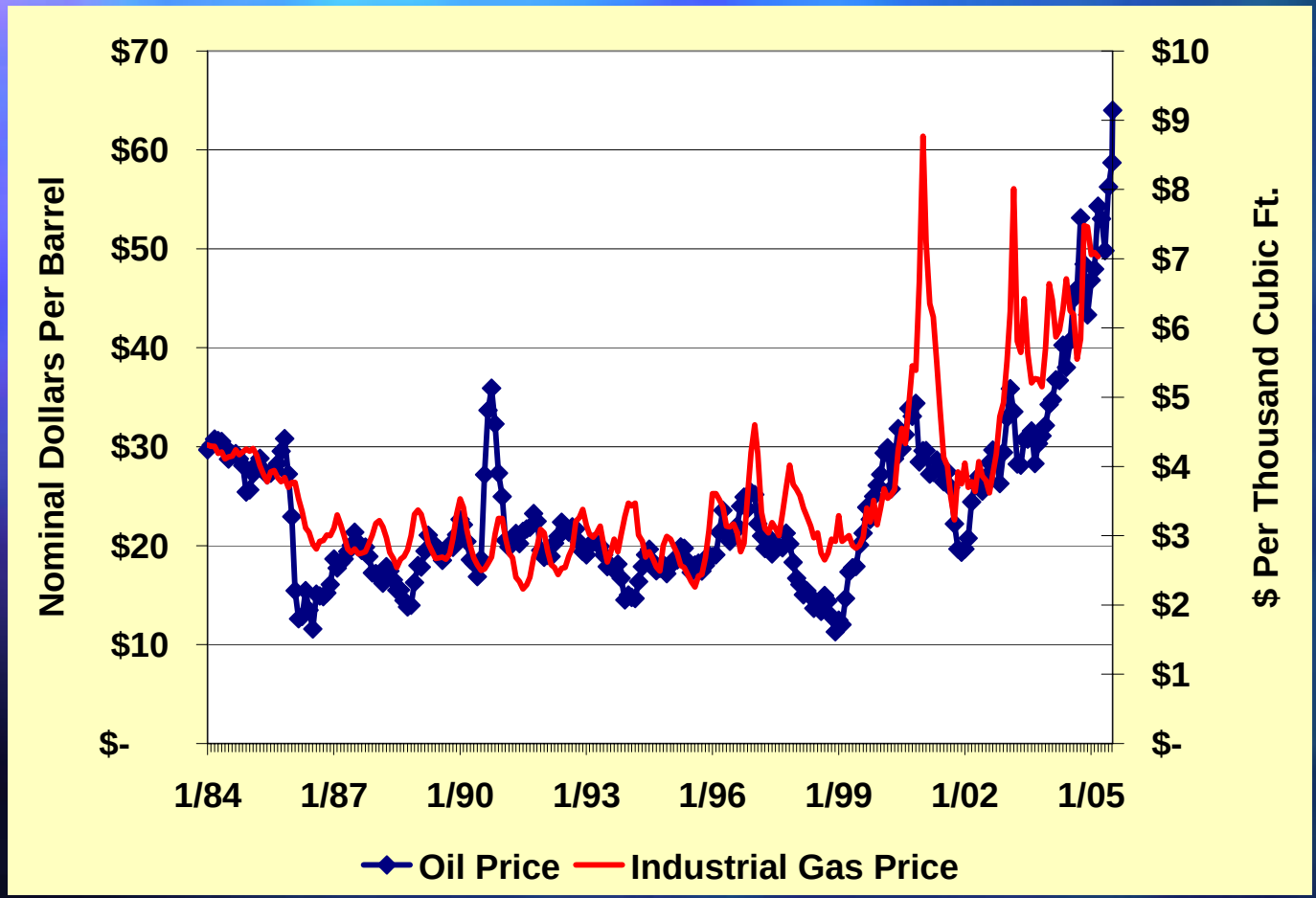

**Consumer Products Pricing *Is Trending Upward* – The Away-from Home Market Trends *Are Less Favorable***

# Outlook – Recovered Fiber




**Recovered Fiber Is Creating *Upward Cost Pressures* Across Grades – & With China's Needs – *Pressure Expected to Sustain***

# Outlook – Energy – Oil and Natural Gas




**$60+ Bbl Oil & $7/Mcf Natural Gas *Will Create GDP & Industry Instability* – But Also Raise Value Opportunity *For Wood To Fuel . . .***

# US Industry Spending

## History – Issues – Directions

- Capital Spending – Overview & Outlook
- Profitability & Capital Turnover
- ROTC Versus Cost of Capital
- Debt Levels
- Production Capacity Expectations
- Capital Spending/Depreciation
- Capital Spending Level

# US Industry – Capital Spending

**US *capital expenditures will continue to be depressed* by poor financial performance & slowing of capacity growth --**

- **M&A crowded out CAPEX on PPE last 5 years – *Should ease within largest firms* – antitrust constraints**
- **However, asset swaps & *business-line spin-offs likely to accelerate* + second-tier players consolidation**
- **There is risk that unexpected international acquisitions activity *will interrupt capital spending patterns***

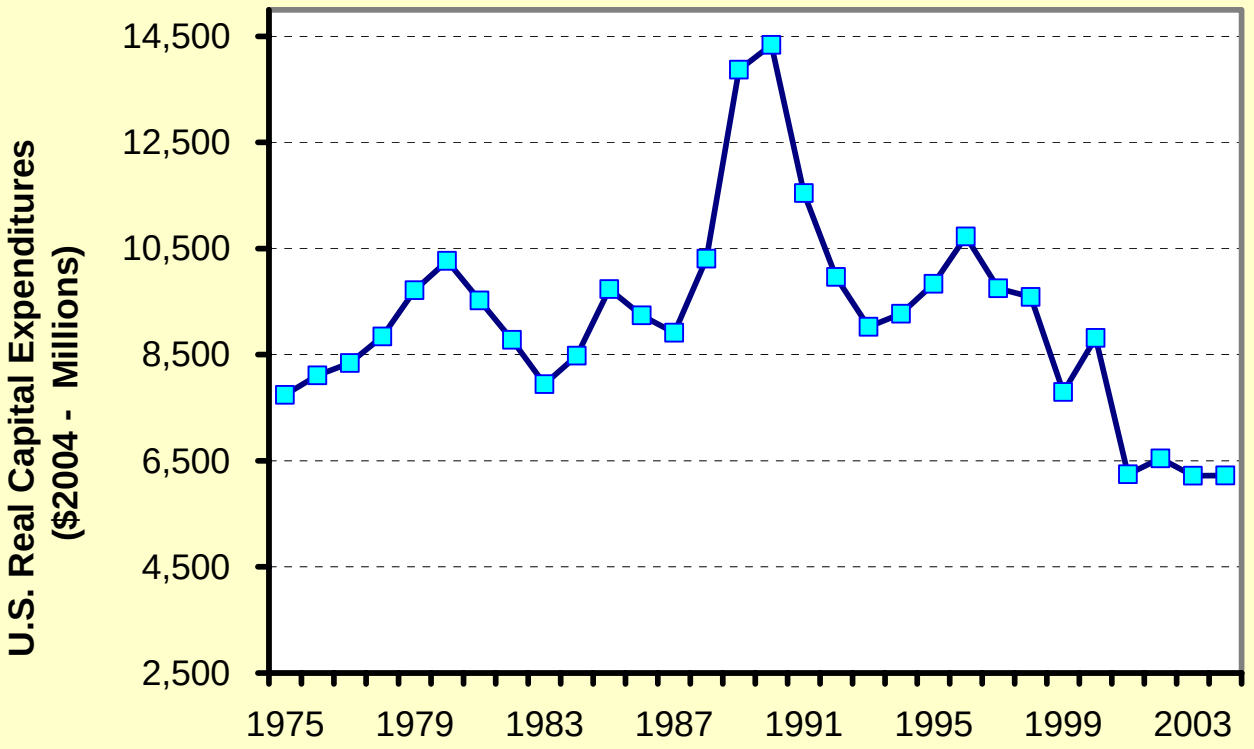
**Overall, net M&A impact should be better (less impacting) for CAPEX than the last 5 years – *but not enough to offset weak investment fundamentals yet.***

# US Industry – *Capital Spending*

**Combination of economic, pulp and paper market, and financial / investment realities drove US capital expenditures down *from $8+ billion in 2000 to $6+ billion* by 2001 --**

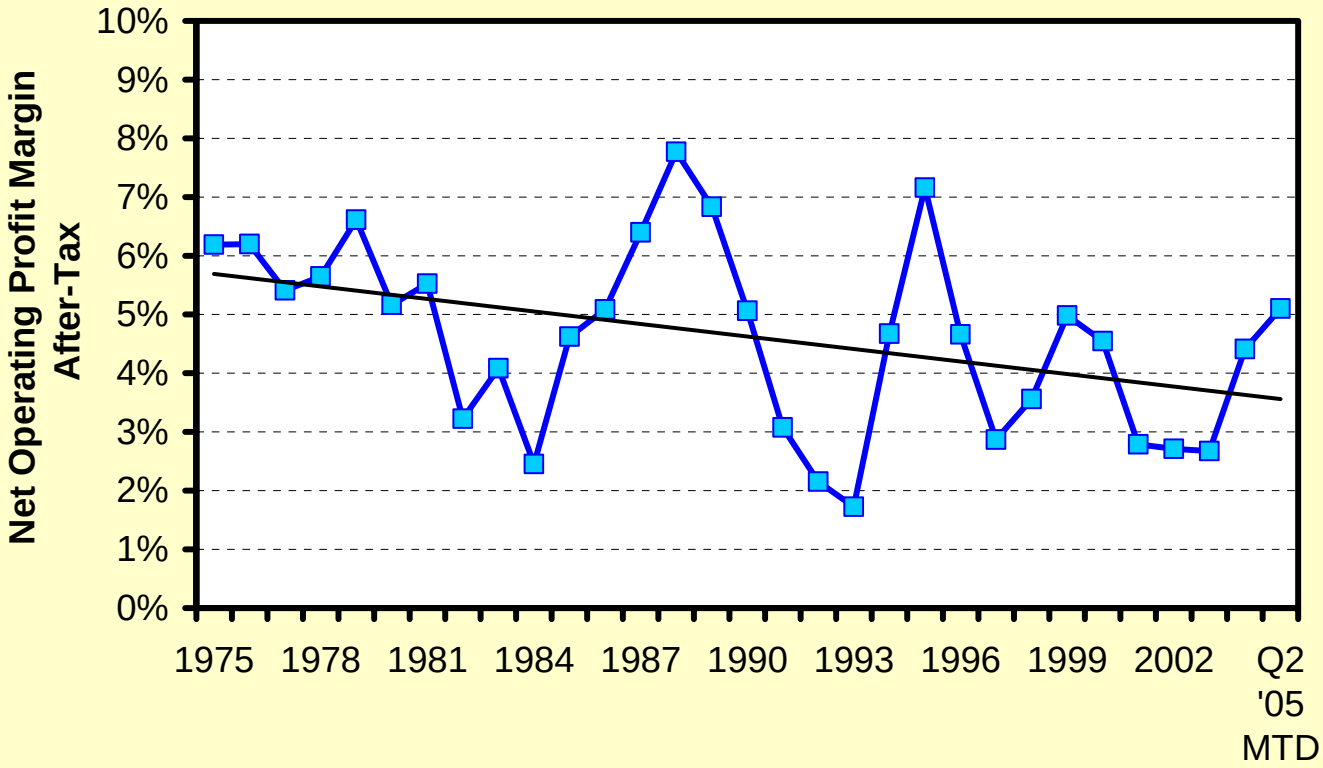
- **2005 capital expenditures *will fall again* to $6 billion and then likely cycle between $6.0 billion and $8.5 billion through 2006**
- **The following table and graphs summarize these historical trends and projections**

# US Industry – *Capital Spending*



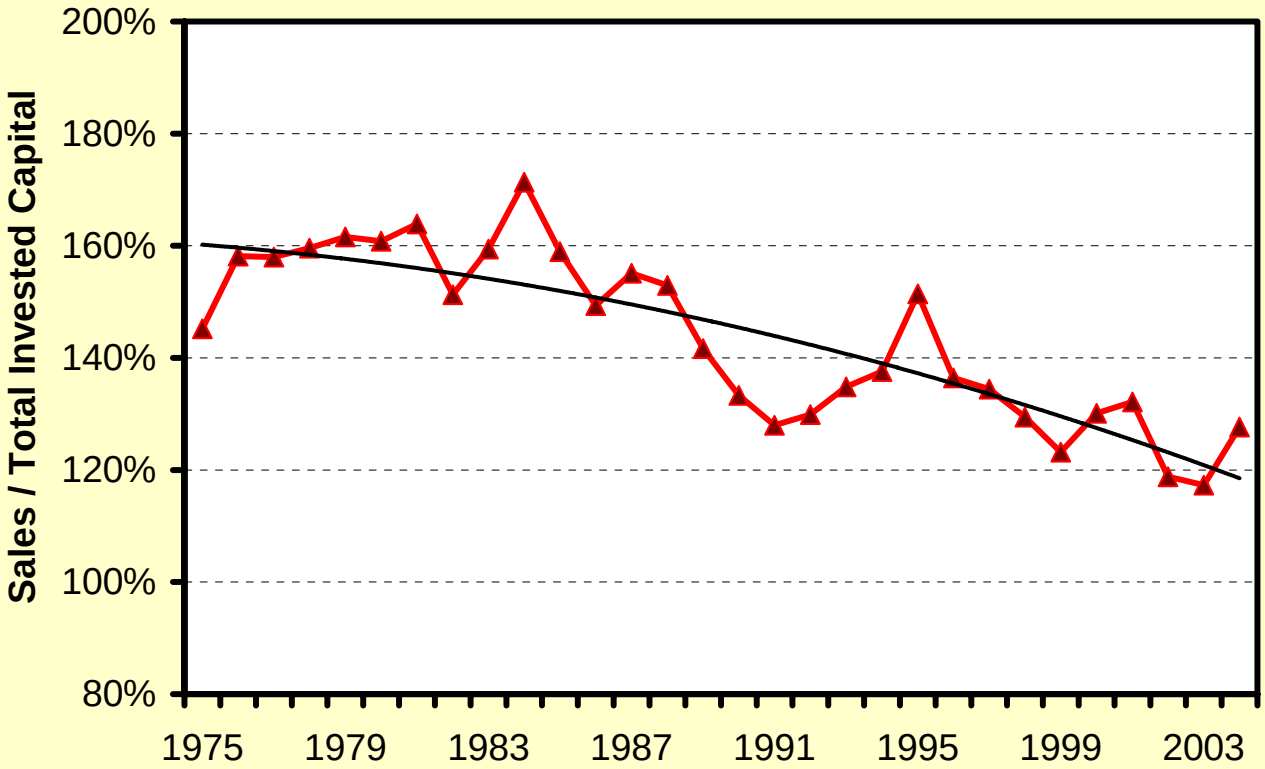

**Capital Expenditures (CAPEX) *On Pulp & Paper Property, Plant & Equipment* (Nominal $ Millions)**

# US Industry – *Profitability*



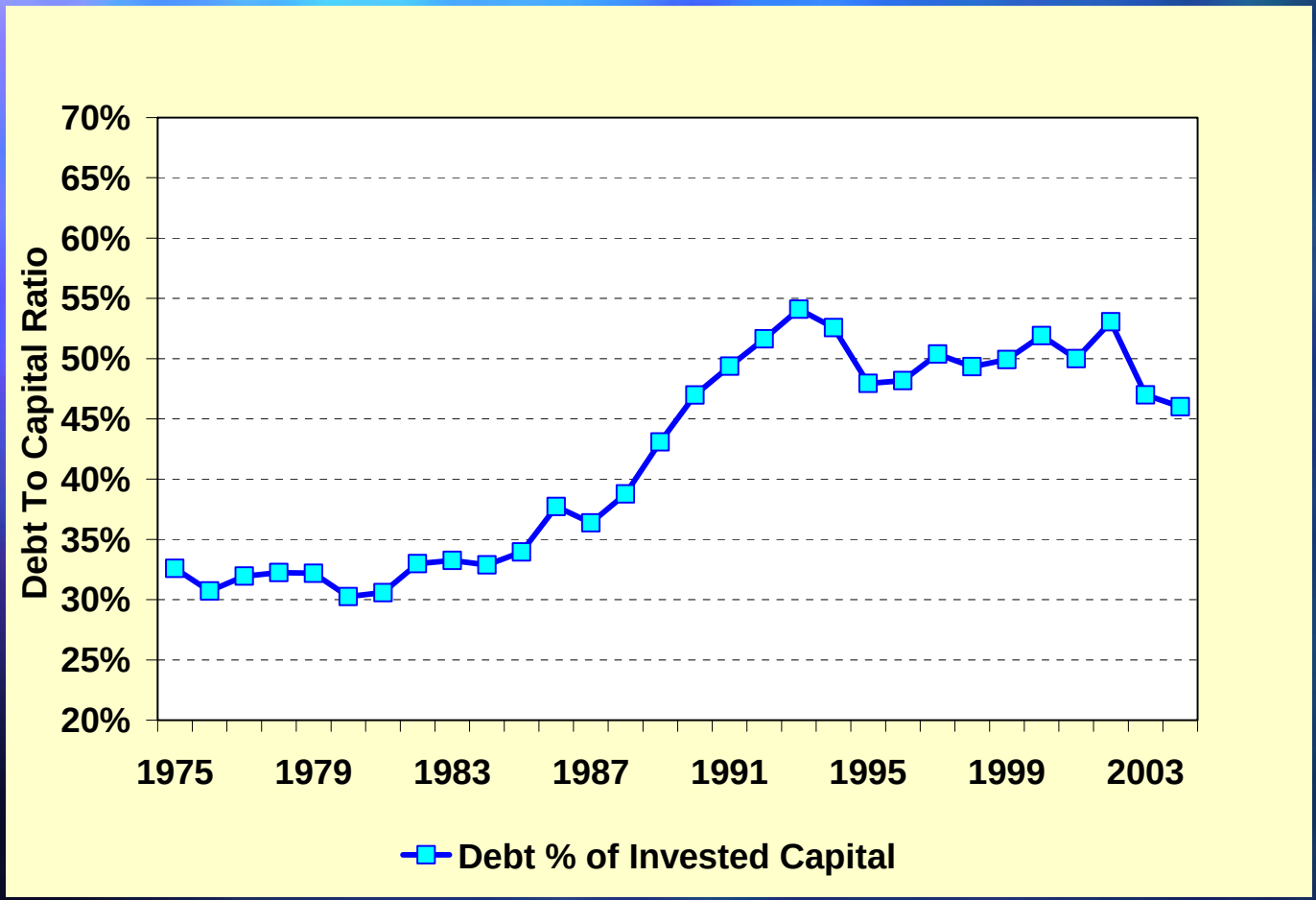

**Profitability Has Improved, But *Continues To Trend Downward – And Is Expected To Weaken* For the Remainder of 2005**

# US Industry – *Capital Turnover*



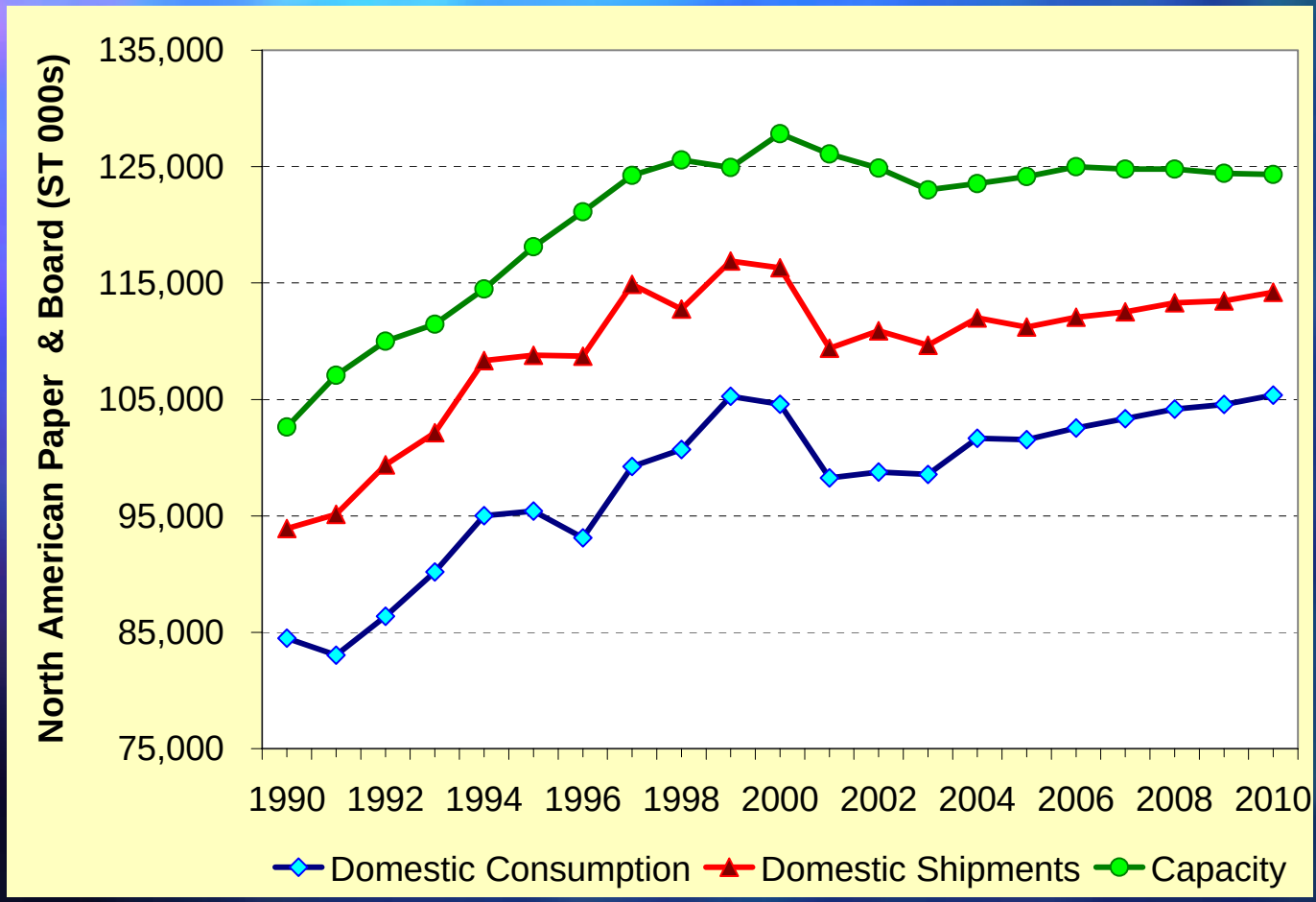

**Capital Turnover Is *Trending* Downward Yet Also Has Rebounded & Trend *May Be Flattening***

# US Industry – *Debt Levels*



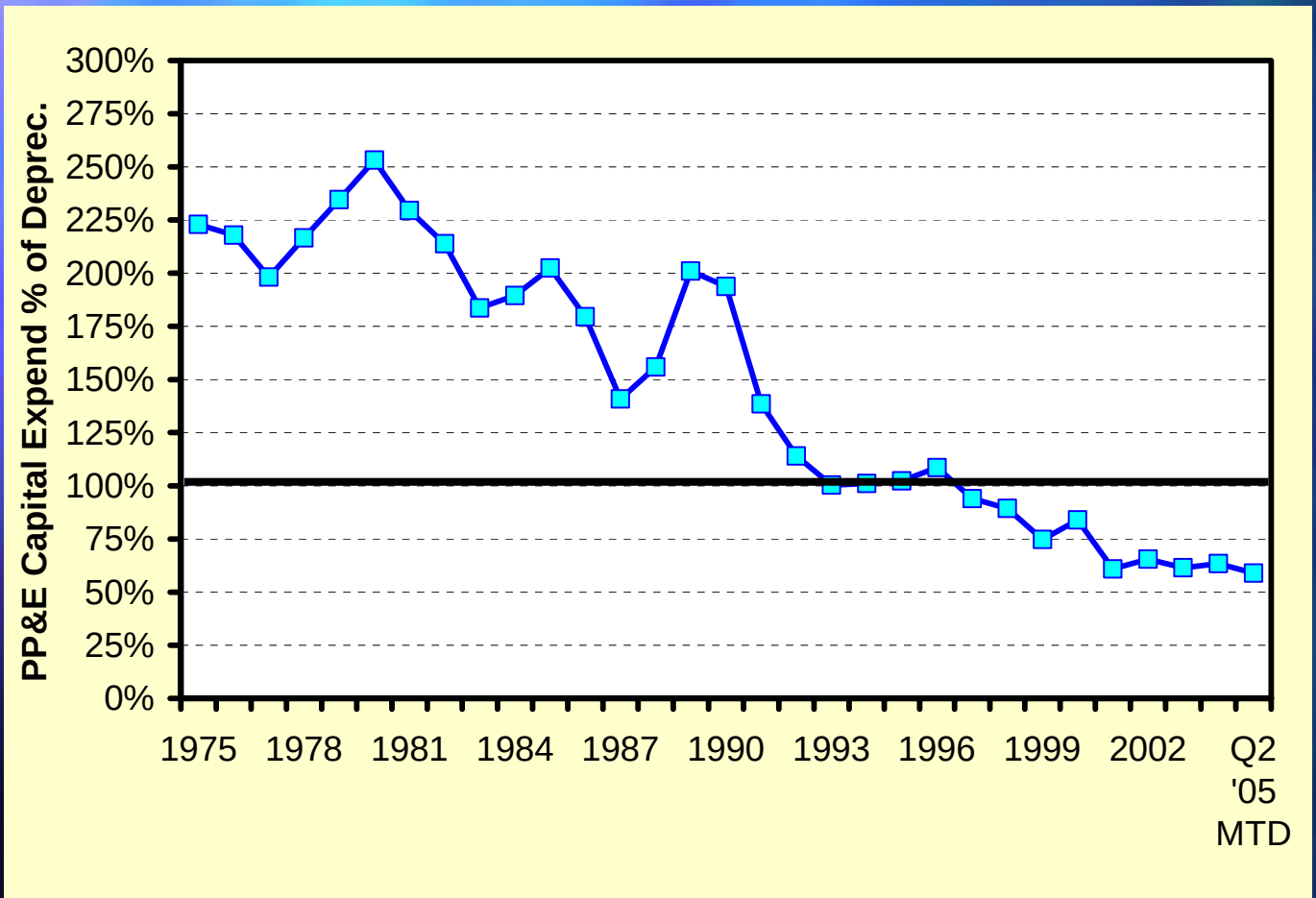

**Improved Debt Levels *Are Still Constraining* Needed Business Investments – Yet Debt is Now *Much Lower Cost Than Equity***

# US Industry – *Production Capacity Expectations*




**Total US Paper & Board Consumption *Is Resuming Growth* – While Overall Capacity *Is Relatively Flat***

# US Industry – *Capital Spending/Depreciation*




**US Capital Expenditures Remain *Significantly Below Depreciation Levels* – But Seem To Have Stabilized**

# US Industry – *Investment Decisions' Drivers*

## Attractive Opportunities = More Likely To Invest

- ***Strong ROTC*** = Proven capability to identify/execute value creating projects – more likely to attract & invest capital *than poor performers*
- ***Good Outlook Product Mix*** = More likely to invest (i.e. tissue, selected P&W) *than poorly performing segments* (i.e. boxboard, newsprint, UCF, market pulp)
- ***Geographic Mix*** = Firms in Higher growth geographic markets (i.e. Asia & Latin America) more likely to invest than US and Canadian *(and now some European)* focused players

# US Industry – *Investment Decisions' Drivers*

## Greater Capital Availability = More Likely To Invest

- ***Debt-To-Capital Ratio*** = High debt % – the more likely to divert cash to lower debt instead for capital expenditures
- ***Debt Capacity*** = Low debt % – creates real opportunities to use *new low cost debt* for innovative investment moves
- ***Cash Flow Available For Reinvestment*** = More cash generated by operations, the more funds *typically invested in the business* & to stimulate investors

# And Remember . . . .

**Even though the Current Industry State of Affairs is Still Unstable & Many Systemic Problems Remain -- As that Famous Arm Chair Philosopher Ziggy Once Said . . . .**


***"You can Complain Because Roses have Thorns, or you can Rejoice Because Thorns have Roses"***

# Recap & Final Thoughts

***The essential focus we should have at this place in our industry's path forward is that*** **the future is ours to create – timidity will undermine our efforts . . .**

***And . . . In this context – our challenge is really*** **to seize the opportunities instead of simply enjoying our respite –** ***to innovate and restructure in new and novel ways . . .***

# Recap & Final Thoughts

**Thank You! -- Copies Available At**

**www.valueresolution.com -- And -- www.cpbis@gatech.edu**

**Contact Information**

**Dan Cenatempo**
**President -- Value Resolution Group, Inc.**
**770-522-8972 -- dan@valueresolution.com**

**Jim McNutt**
**Executive Director – Center for Paper Business & Industry Studies**
**404-894-5733 – jim.mcnutt@cpbis.gatech.edu**