

State of the North American Pulp & Paper Industry



Review In Brief ~ The Industry Context

~ Q3 2007 Data ~

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Student Summit

Center for Paper Business and Industry Studies (CPBIS)

~ Dr. Jacquelyn McNutt ~

FairValue Advisors, LLC ~ Dan Cenatempo AVA

Overview

North American Forest Products Industry Review ~ *The Industry Context*

Where Are We?

Financial Performance

Outlook ~ How Competitive

Outlook ~ The Economy

Key Takeaways

Final Thoughts

Where Are We?

NA Industry ~ Overview

Private Equity Commentary

Volume Trends

Price Trends

Where Are We?

North American Industry Context ~

- Enjoys significant *fiber resources & logistics...*
- Competitiveness boosted by weaker U.S. dollar, *but is strained by aging assets...*
- Has enjoyed a moderate, cyclical upturn, but solid returns still lag & *volumes still struggling a bit...*
- With prices, and financial performance improved moderately in 2006-07 ~ *Stable to OK for 2007...*
Maybe will rebound a bit in 2008 ~ but 2008 = ?
- ...Many companies are now making moderate investments ~ *however the bigger spending is for private equity to acquire substantial industry assets...* **Stay Tuned!**

Where Are We?

North American Industry Context ~

- **Still a major player** *in US and global economy*
- **NA sector still largest in the world** ~ *supply & demand*
- **Mature industry** ~ financially distressed
- **Organizational structure** in turmoil
- **Significant improvements** essential for survival & opportunity to reassert dominance

Where Are We?

Private Equity Comments

- Paper manufacturing is one of those *laughably bad* industries. Stocks have gone nowhere *for over a decade*
- It's hard to imagine investing in paper
- Yet a lot of really bad industries turned 180 degrees once *consolidation and discipline* took hold.
- The Steel & Can industries are examples of industries going from down in the dumps to *shareholders' delight*

Where Are We?

Private Equity Comments

- Could paper be the next *"turnaround" industry?*
- Private Equity Investors *certainly think so*
- Ten years ago, the UCF market was a free-for-all, with *10 ~ 14 major producers* slugging it out
- Today, *three firms control 70%* of the market
- And good things happen to industries when *supply becomes extremely constrained*
 - ✓ *Consider crude oil refining and today's windfall profit taking . . .*

Where Are We?

Private Equity Comments

- A new mill hasn't been built in *last 12 years*
- Even with zoning, environmental & regulatory clearances ~ *cost would almost be economic suicide for major players*
- Private equity is paying about *30-40%* invested capital costs for assets ~ *and*
 - ✓ *Returns on capital for new capacity are so low it's economic suicide to build new now*
 - ✓ *In the not-too-distant-future this will lead to supply constraints, allowing paper companies to earn healthy returns on capital*

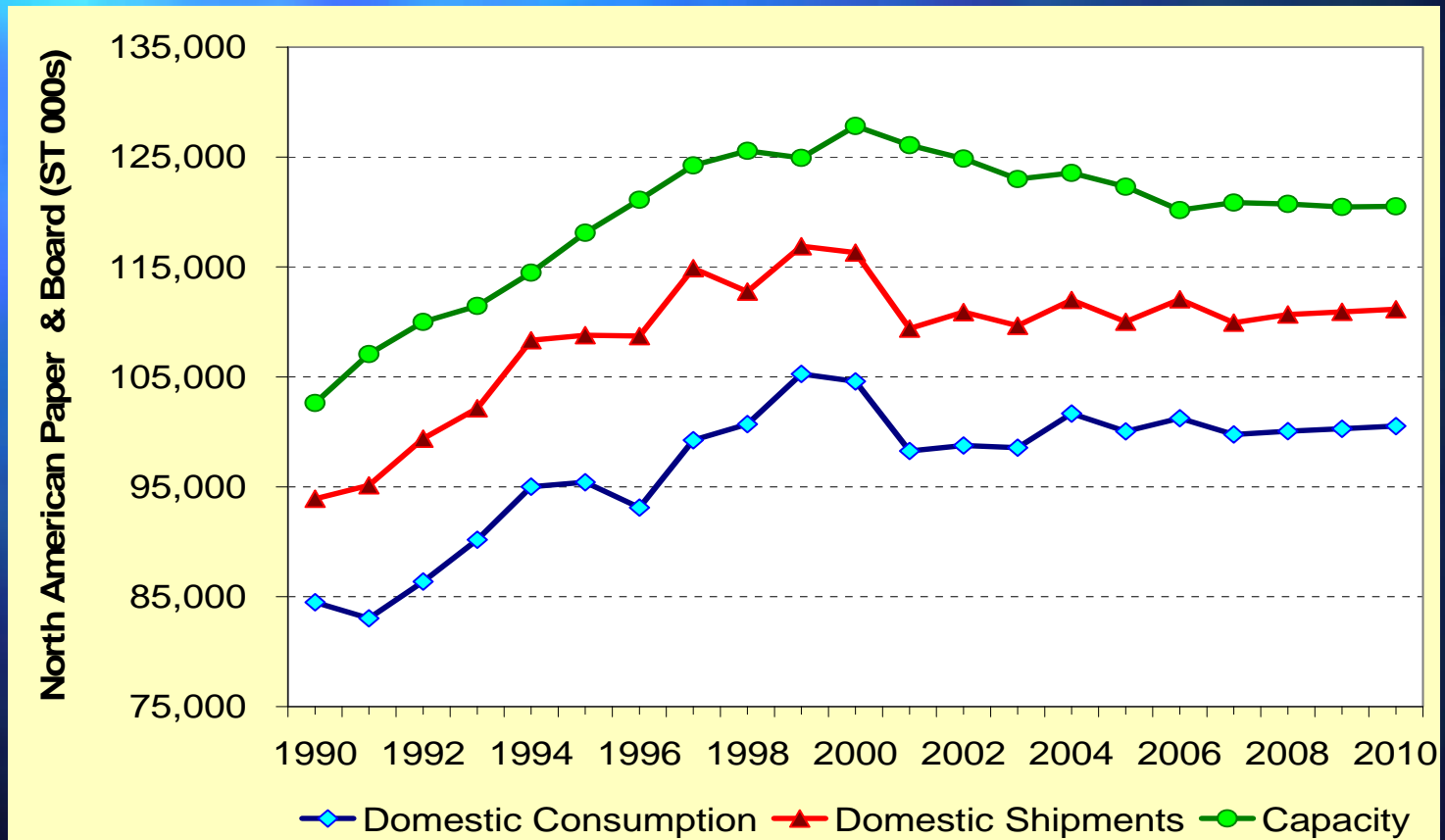
Where Are We?

Private Equity Comments

- *A couple other drivers provide tailwinds for the US paper industry ~*
 - ✓ *Weakening dollar makes imports more expensive*
 - ✓ *Currently ~ UCFS costs 10%-20% more to ~ previously around 10%-15% of total supply*
 - ✓ *Asia's huge appetite for commodity & pulp + rising shipping costs = an unprecedented situation ~ it's now more expensive to import paper products from Europe & Asia than to manufacture them domestically*
 - ✓ *And unlike the US automotive industry ~ paper makers don't have major legacy issues ~ pensions, health care, or environmental headaches*
- *Some now then think all of this = bullish future for our industry . . .*

Where Are We?

Volume Off 3-4% from 1999 Peak ~
But Rebounded A Bit As Of Late



Where Are We?

Yet Current Volume Is Dropping ~ *Prices Mixed*

NA Grade	2007 YTD Change In NA Production	2007 YTD vs. 2006 Average Price
Printing & Writing	-1.6%	+1%
Boxboard	-1.2%	+2%
Containerboard	0.1%	+4%
Newsprint	-5.1%	-10%
Chemical Paper Grade Pulp	-2.5%	+10%

Where Are We?

Selected Current Prices Report ~ *Mixed Results*

Grade	Date	Latest	Year Ago	% Chg
50lb UFS (US\$/ton)	08/2007	\$994	\$937	+6%
60lb #3 CFS (US\$/ton)	08/2007	\$901	\$925	-3%
42# Kraft Liner (US\$/ton)	08/2007	\$510	\$490	+4%
30lb Newsprint (US\$/tonne)	08/2007	\$586	\$649	-10%
Pulp NBSK List (US\$/tonne)	08/2007	\$613	\$564	+9%

Financial Performance

Comparative Trends ~ Revenue & Profits

Return on Capital Employed & Debt

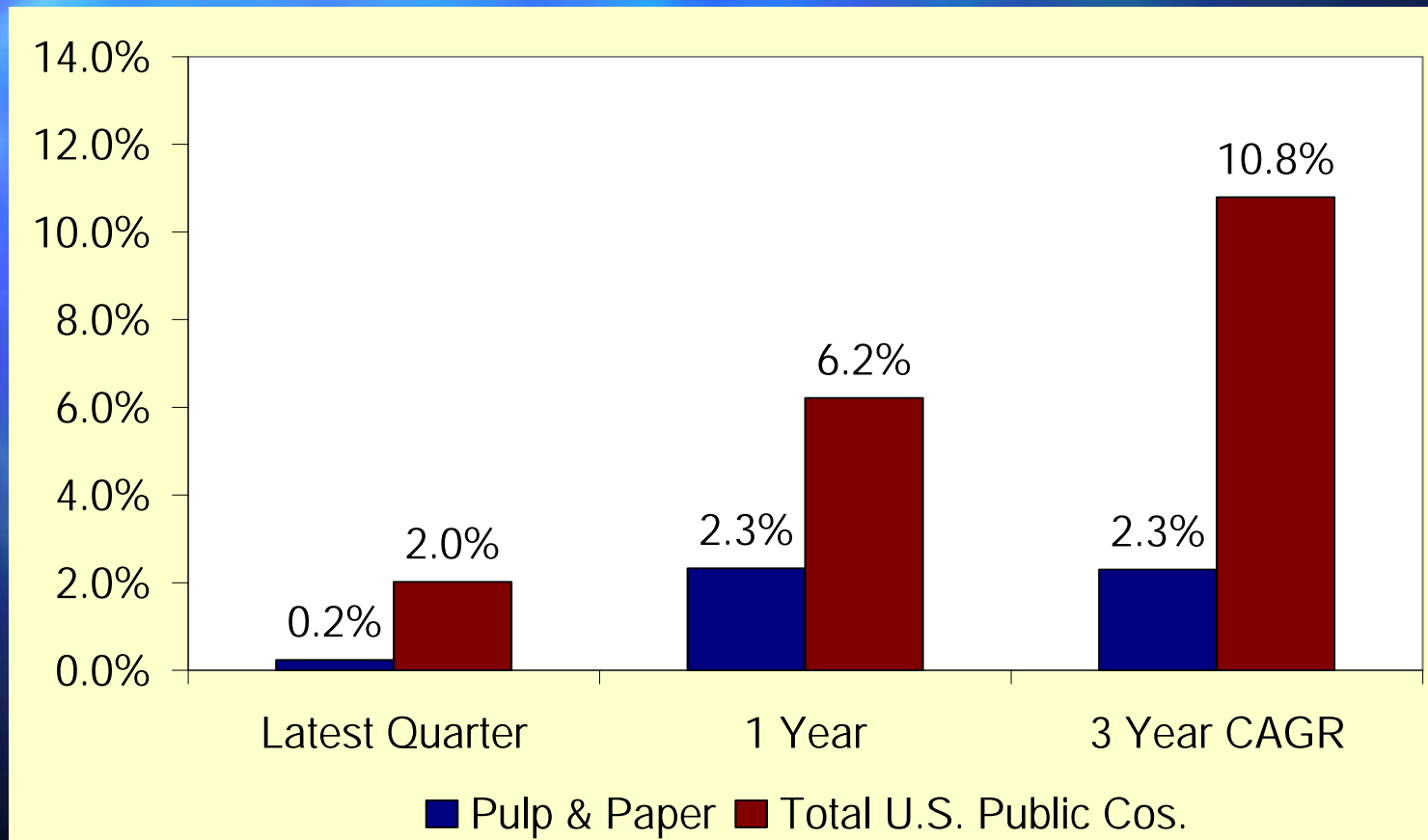
Investment Spending

Other Financial Measures

[Asset turnover, EBITDA, enterprise value, & role of intangibles]

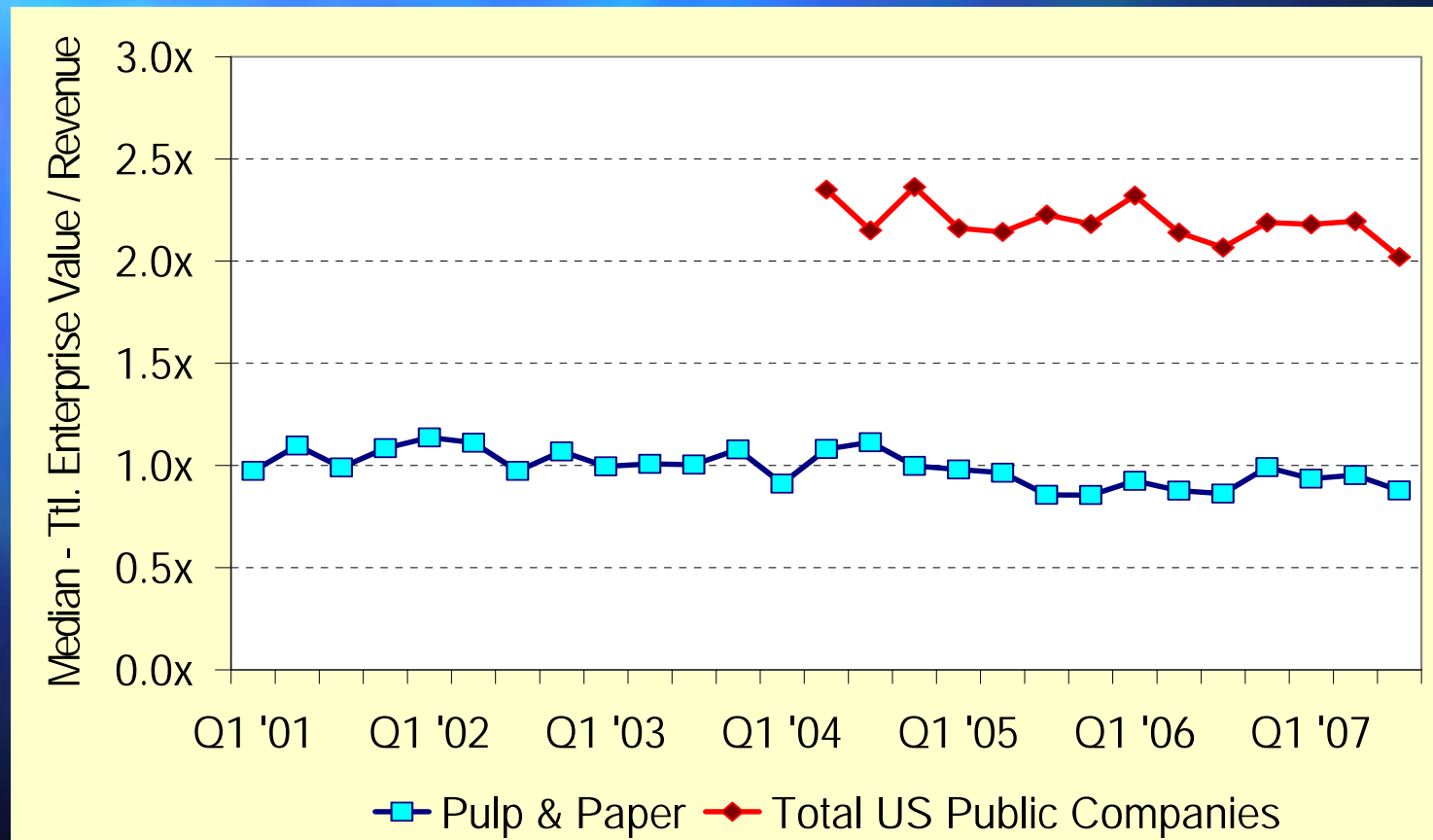
Financial Performance

Pulp & Paper *Revenue* Continues To Grow ~
Yet Significantly Lags The Total of US Companies



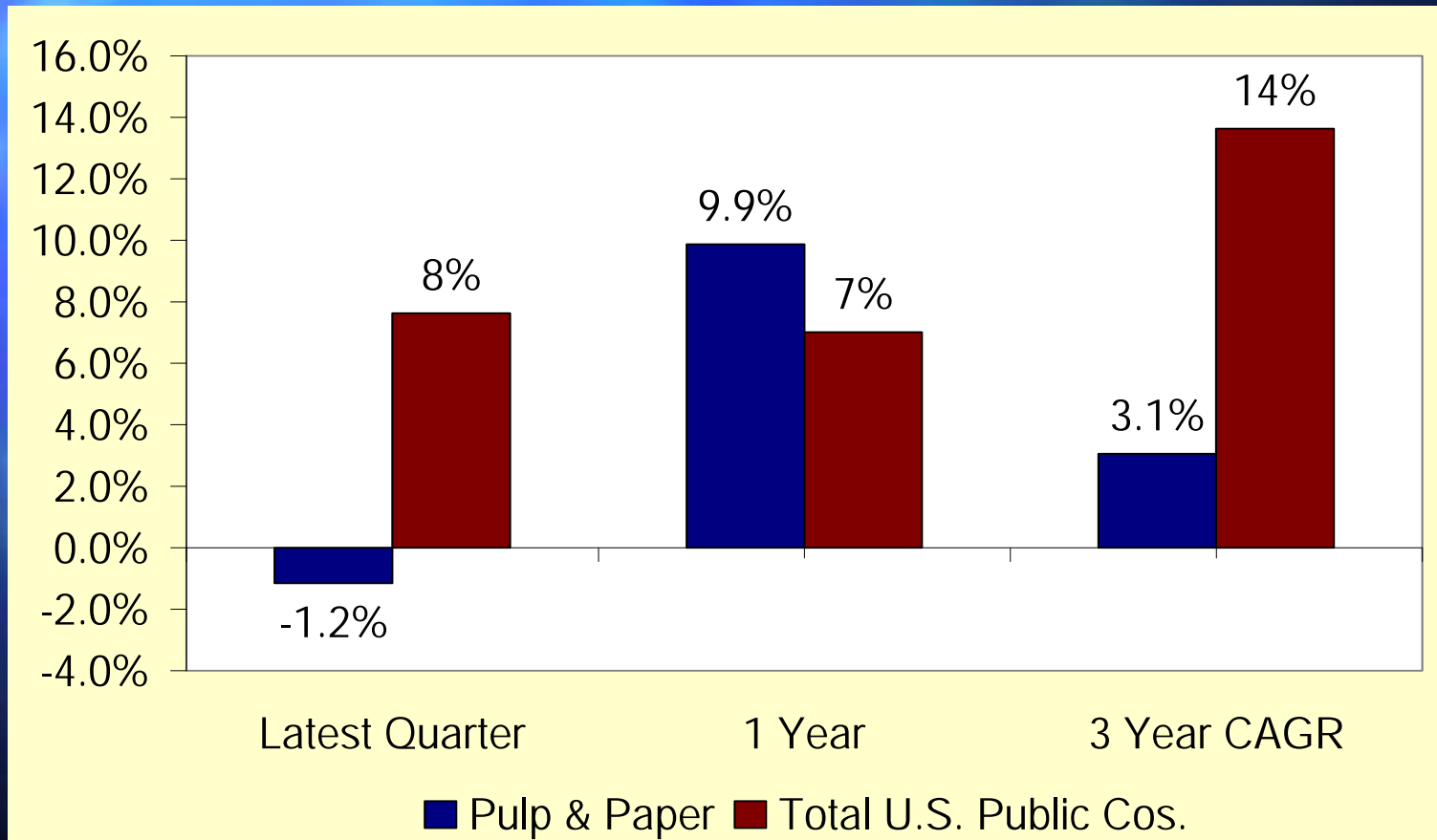
Financial Performance

But ~ *Revenue Multiple* ~ Pulp & Paper Valuations
Still Significantly Trail U.S. Public Companies



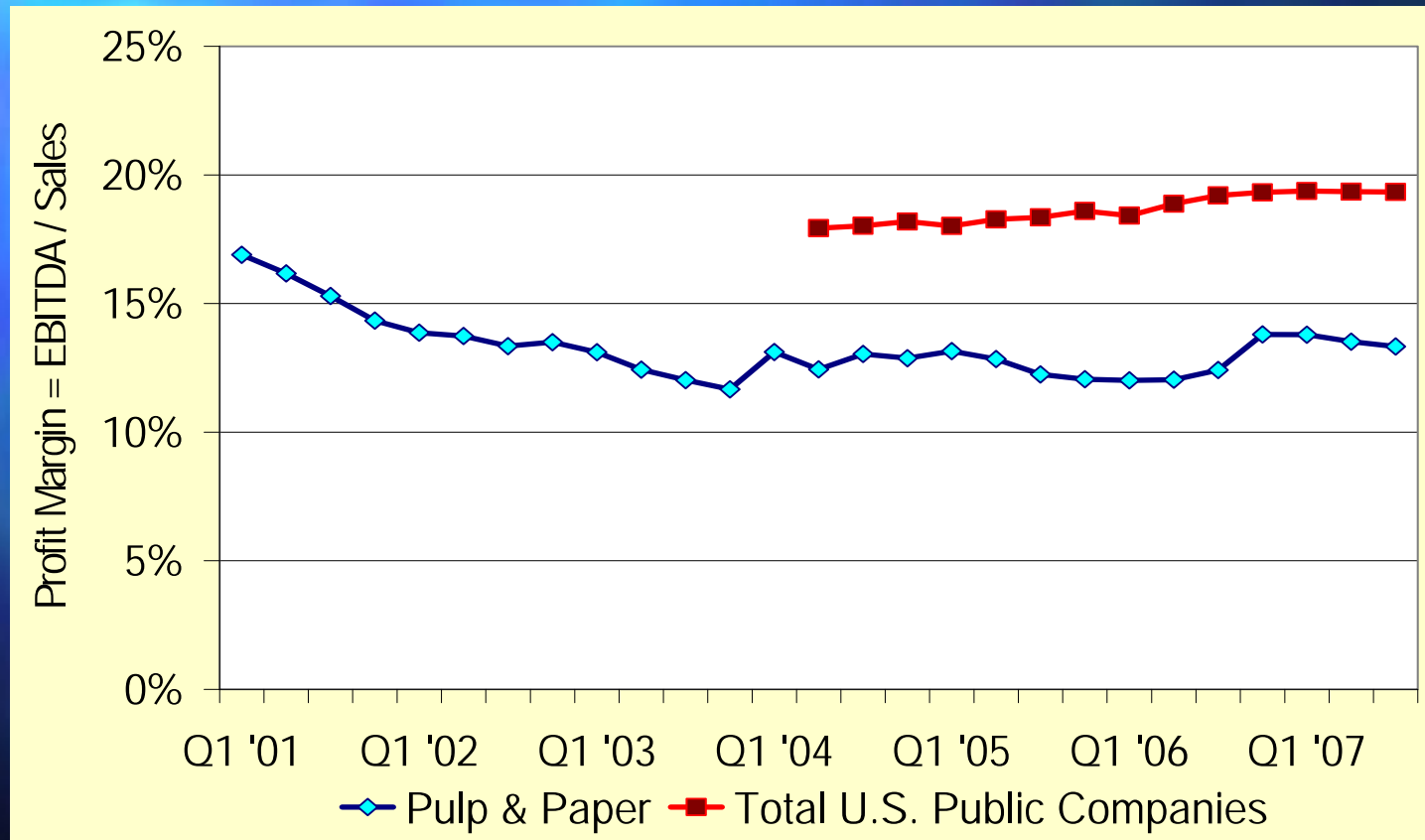
Financial Performance

Pulp & Paper *Profits* Falling After A Strong Year ~
Lag Total of US Companies In The Longer Term



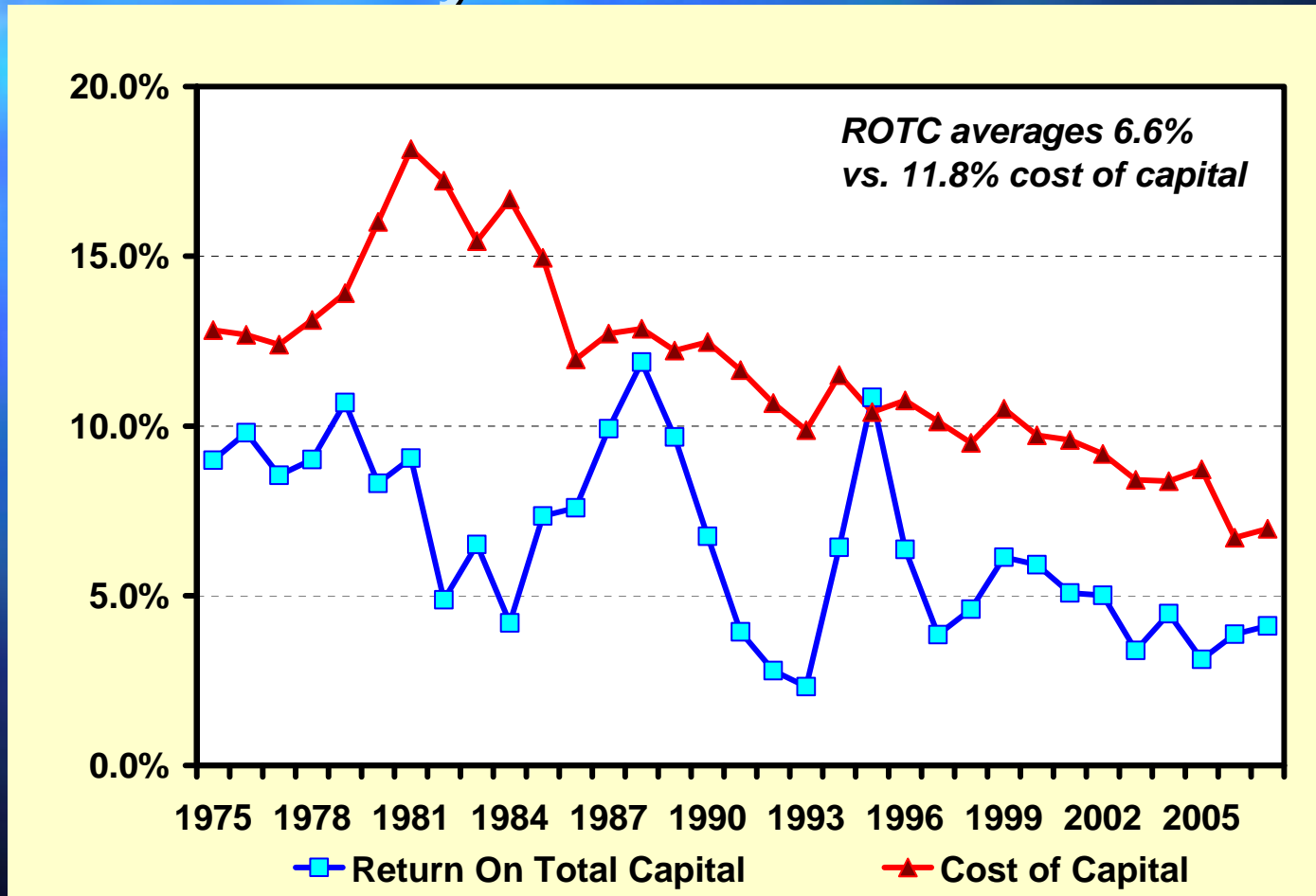
Financial Performance

Profit Margins Have Steadied After A Period Of Decline ~
But Are Still 6 Points Lower Than Total U.S. Companies



Financial Performance

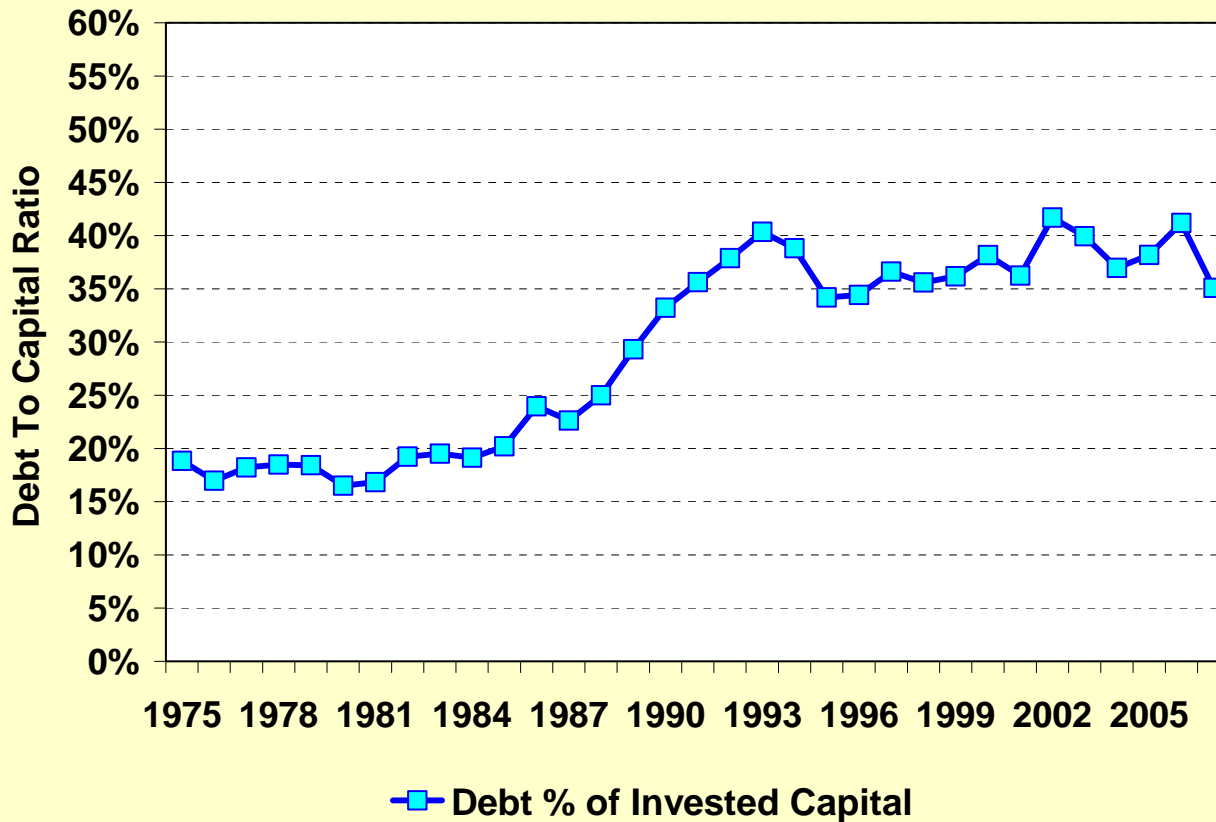
*Returns on Total Capital Employed ~
Still Consistently fall far short of Cost of Capital*



Financial Performance

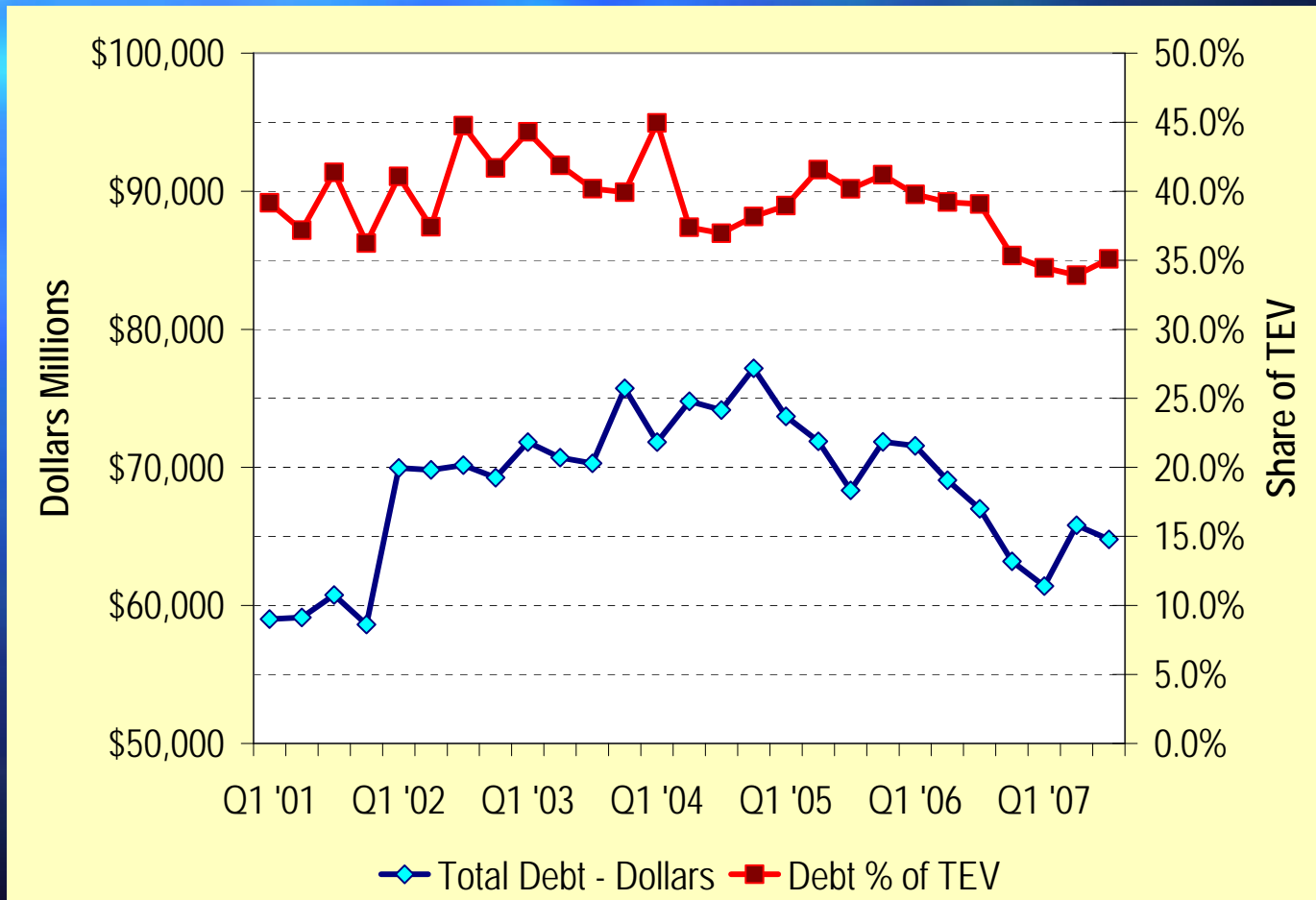
Increased *Debt Levels* Across Time ~

Significantly Limit Investment Opportunities & Flexibility



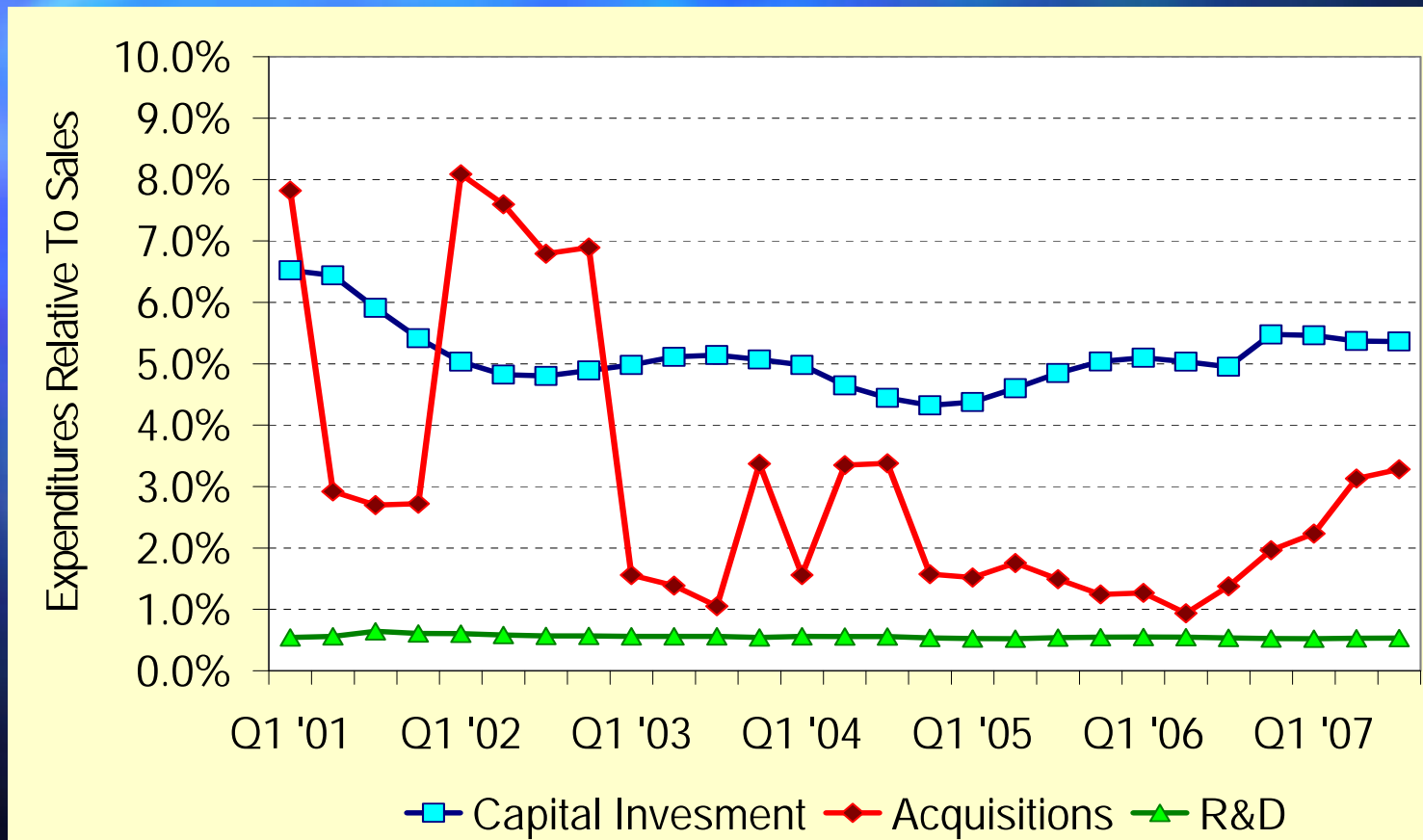
Financial Performance

Pulp & Paper *Debt* Is Finally Being Paid Down ~
In Both Absolute and Relative Terms



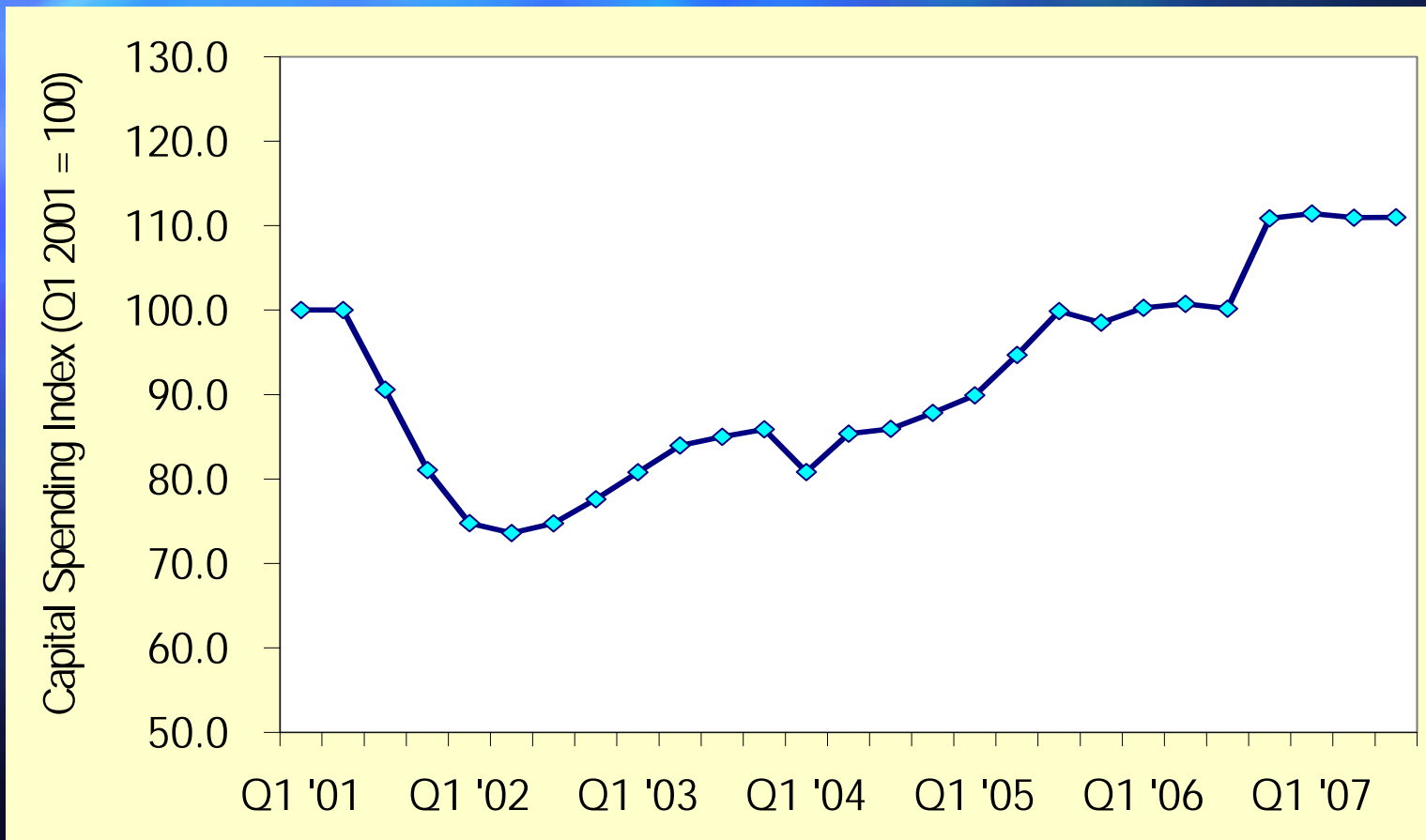
Financial Performance

Capital and M&A *Spending* Now Increasing ~
Yet Still Remains Below 2001 Levels ~ R&D Is Flat



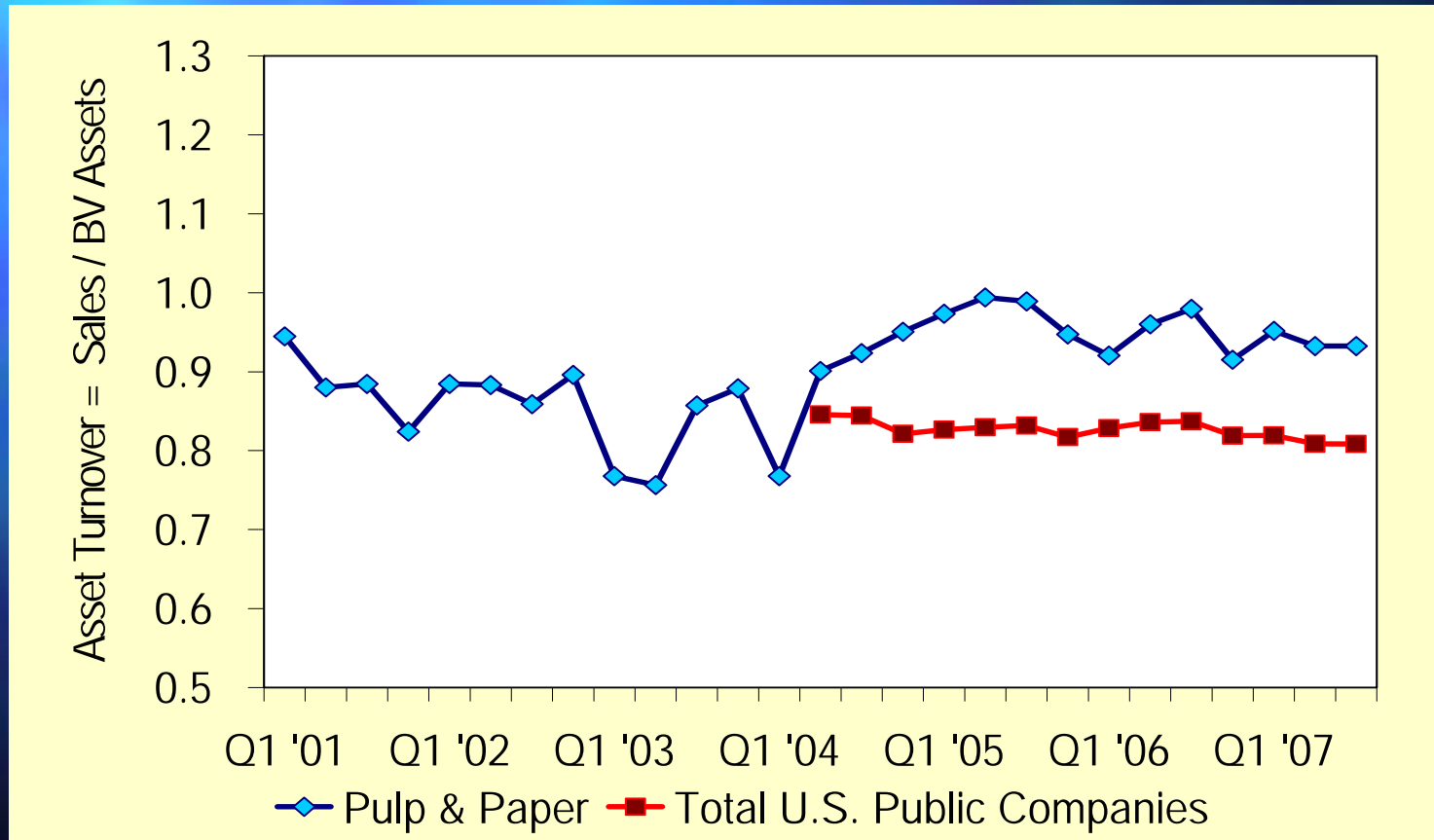
Financial Performance

A Closer Look at Slowly Recovering *Capital Spending* Dollars ~ After Significant 2001/2002 Drop



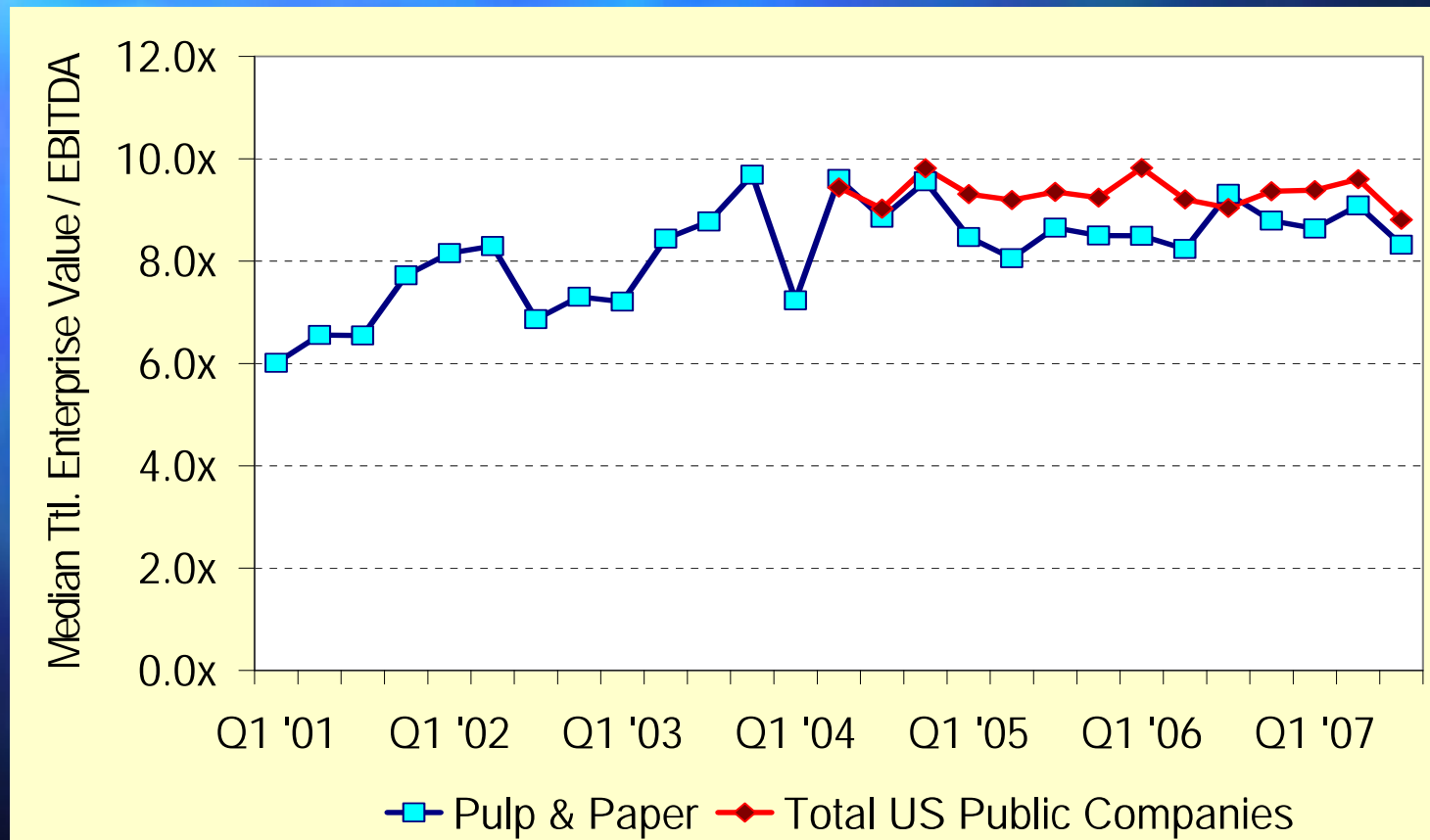
Financial Performance

But ~ *Asset Turnover* Is Improving ~
Now Exceeds Total U.S. Companies By 11%



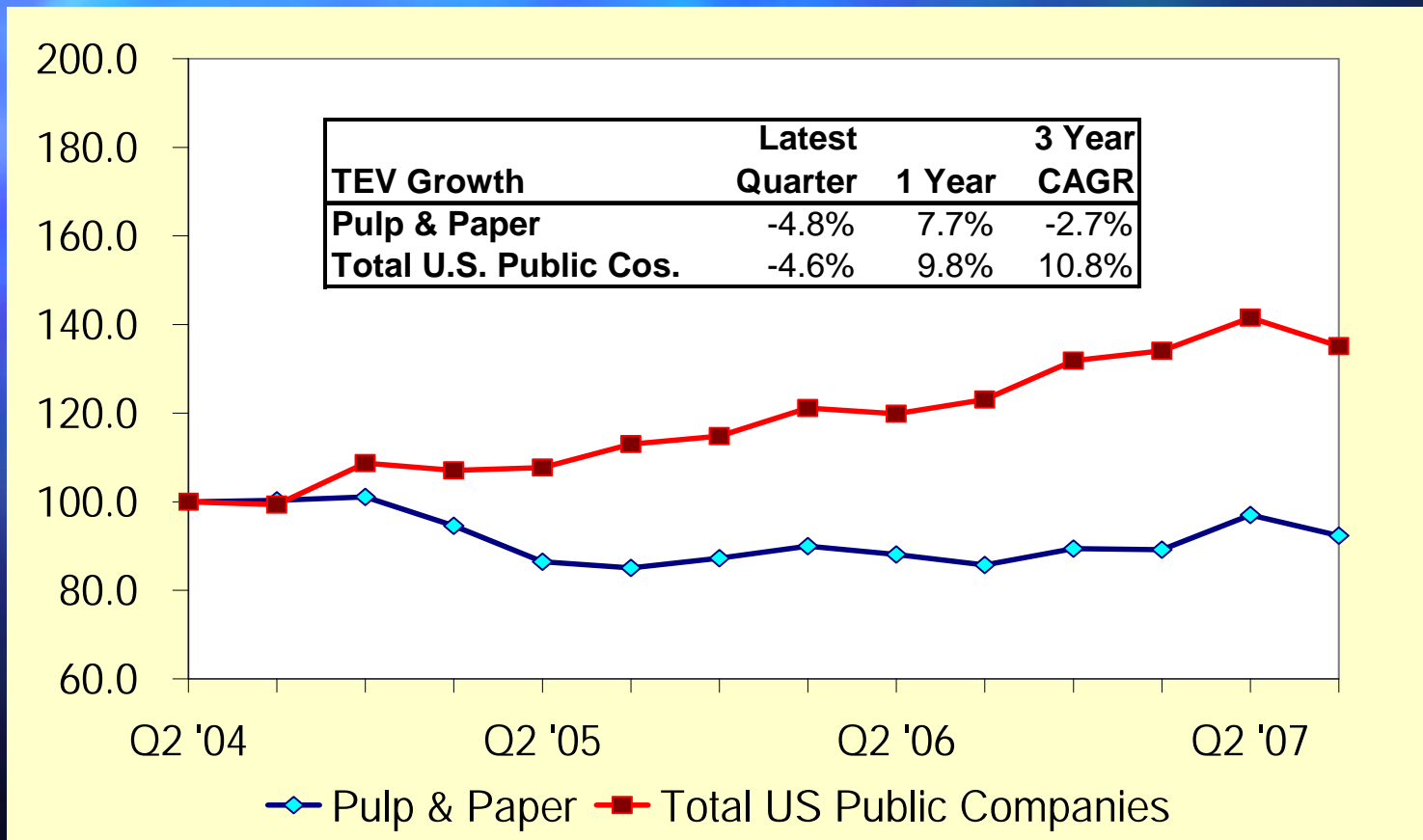
Financial Performance

And ~ *EBITDA* Multiples ~
Now More In Line With U.S. Public Companies



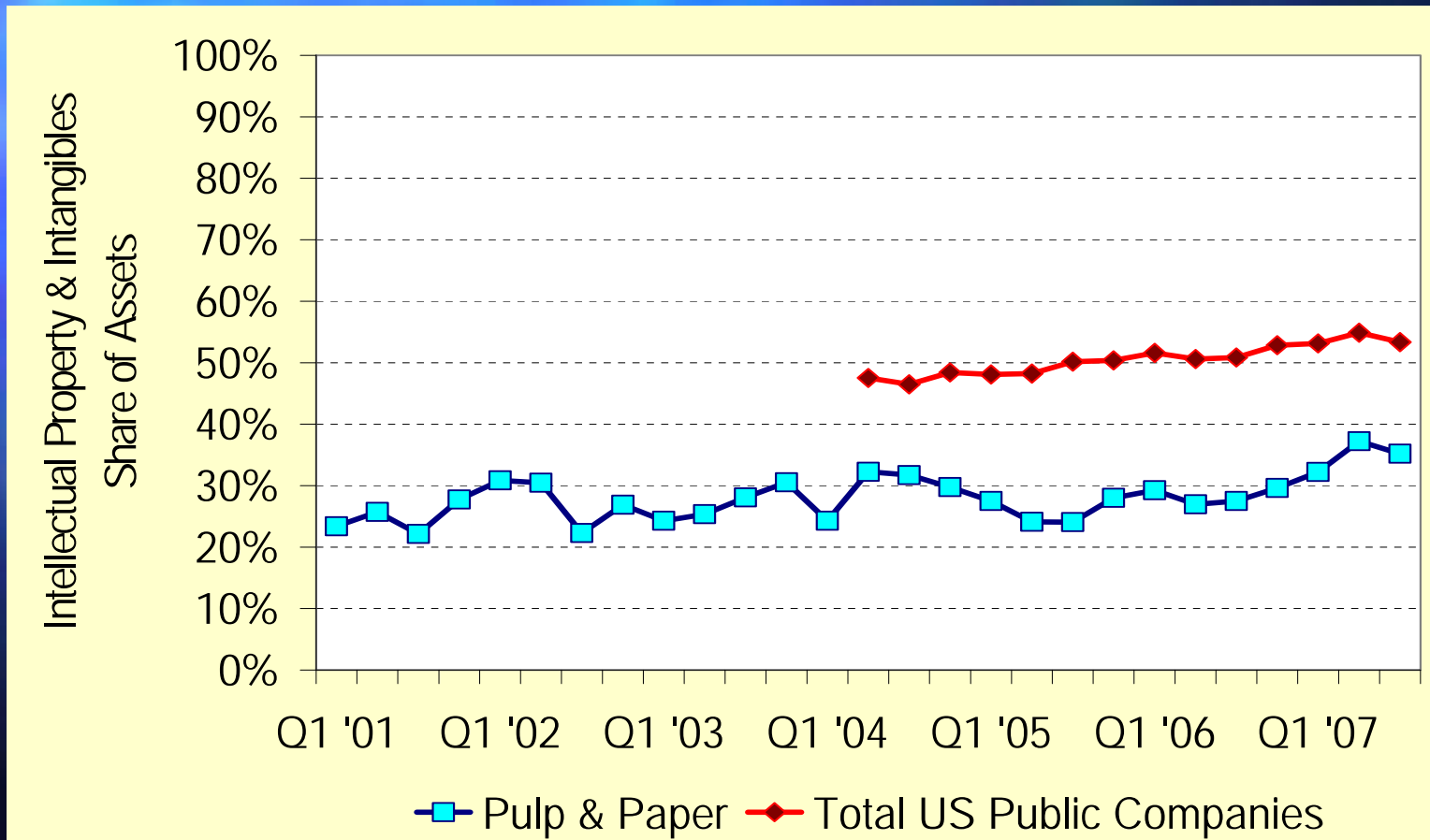
Financial Performance

And Yet ~ *Enterprise Value Growth* of Pulp & Paper ~
Continues to Decline In Both Absolute and Relative Terms



Financial Performance

Total Asset Value From *Intellectual Property and Intangibles*
For P&P ~ *Still Trails Other US Cos. by 18 Points*



Outlook ~ How Competitive

What Is Competitiveness ~ Looking Out?

*What Do We Need To Embrace ~ To Reassert A
Competitive Based Performance?*

How Do NA Assets Stack Up ~ Looking Out?

What Are Key Grade ~ Competitiveness Factors?

Changing Measures of Competitiveness

[Trade patterns, role of print, & assets' age]

What Are The Competitiveness Implications?

Outlook ~ How Competitive?

We Need to Understand That Competitiveness
Is Multidimensional ~

- Mill Performance vs. International Competition ~ *i.e. NA vs. SA/ European/ Asian mills' productivity/ quality*
- Product Performance vs. Substitutes ~ *i.e. paperboard folding cartons vs. plastic packaging, newspaper vs. TV, etc.*
- End-User Performance vs. International Competitors ~ *i.e. domestic vs. international manufacturers*
- Financial Performance vs. Other Investments ~ *i.e. returns on paper investment vs. alternatives of similar risk*

Outlook ~ How Competitive?

Based On These Dimensions ~ Industry
Participants

Must Recognize ~

- Off-shoring and substitution by alternative mediums drove *long-term demand below current levels*
- NA had become *increasingly uncompetitive* in pulp and paper production
- The industry's cost based competition and capital rationing strategies did *erode its asset base*
- The composite financial performance of the industry became pitiful ~ and yet with the current upturn and improving & changing economics ~ *there is real potential*

Outlook ~ How Competitive?

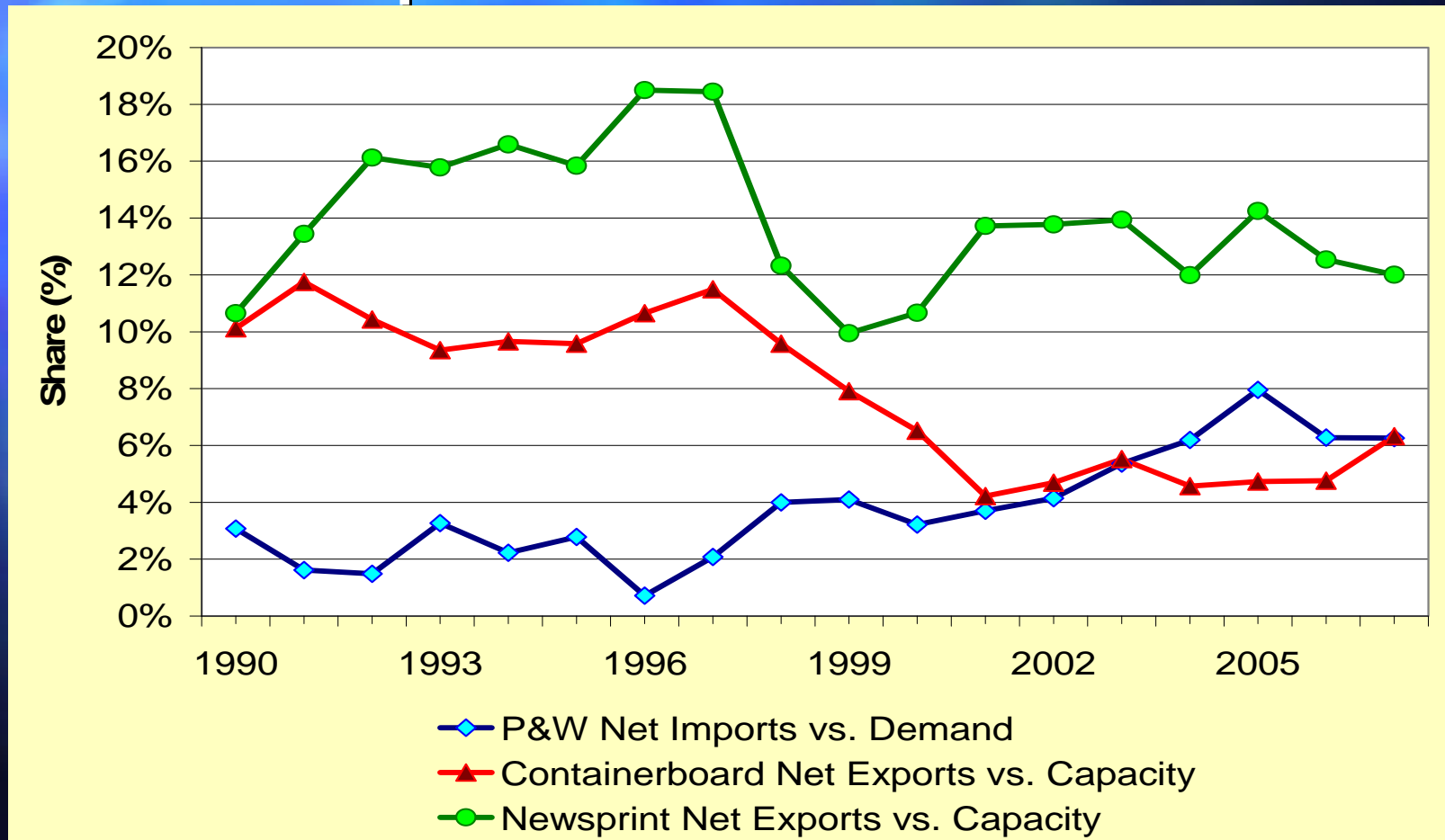
High Volume NA Grades

Have Significant Substitution Threats

Grade Category	Potential Substitutes
Containerboard	Re-usable shipping containers, offshoring of manufacturing
Packaging Grades	Flexible packaging, offshoring of manufacturing
Printing & Writing Papers	Electronic communications, alternative advertising mediums
Newsprint	Electronic communications, alternative advertising mediums
Tissue	<i>No Major Substitutes</i>

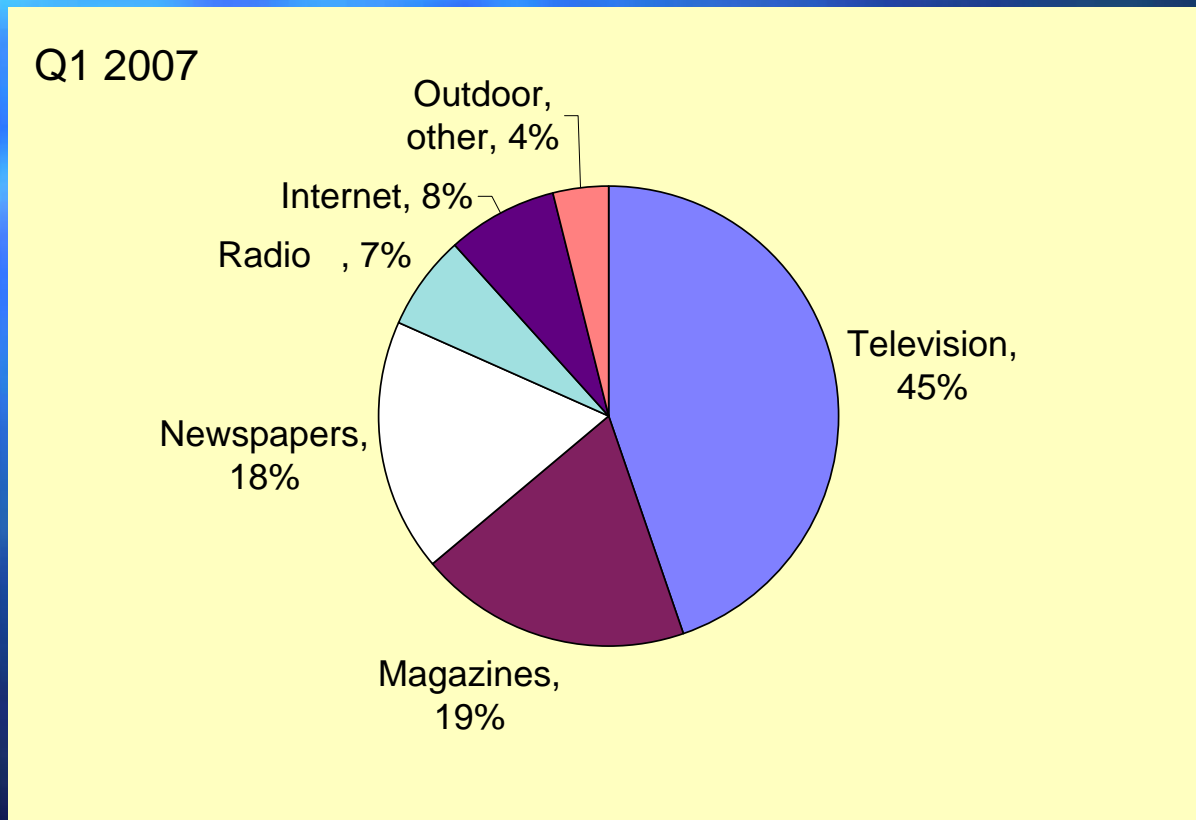
Outlook ~ How Competitive?

Trade Patterns *Have Weakened For NA Producers*
But Improvements Are Now Visible



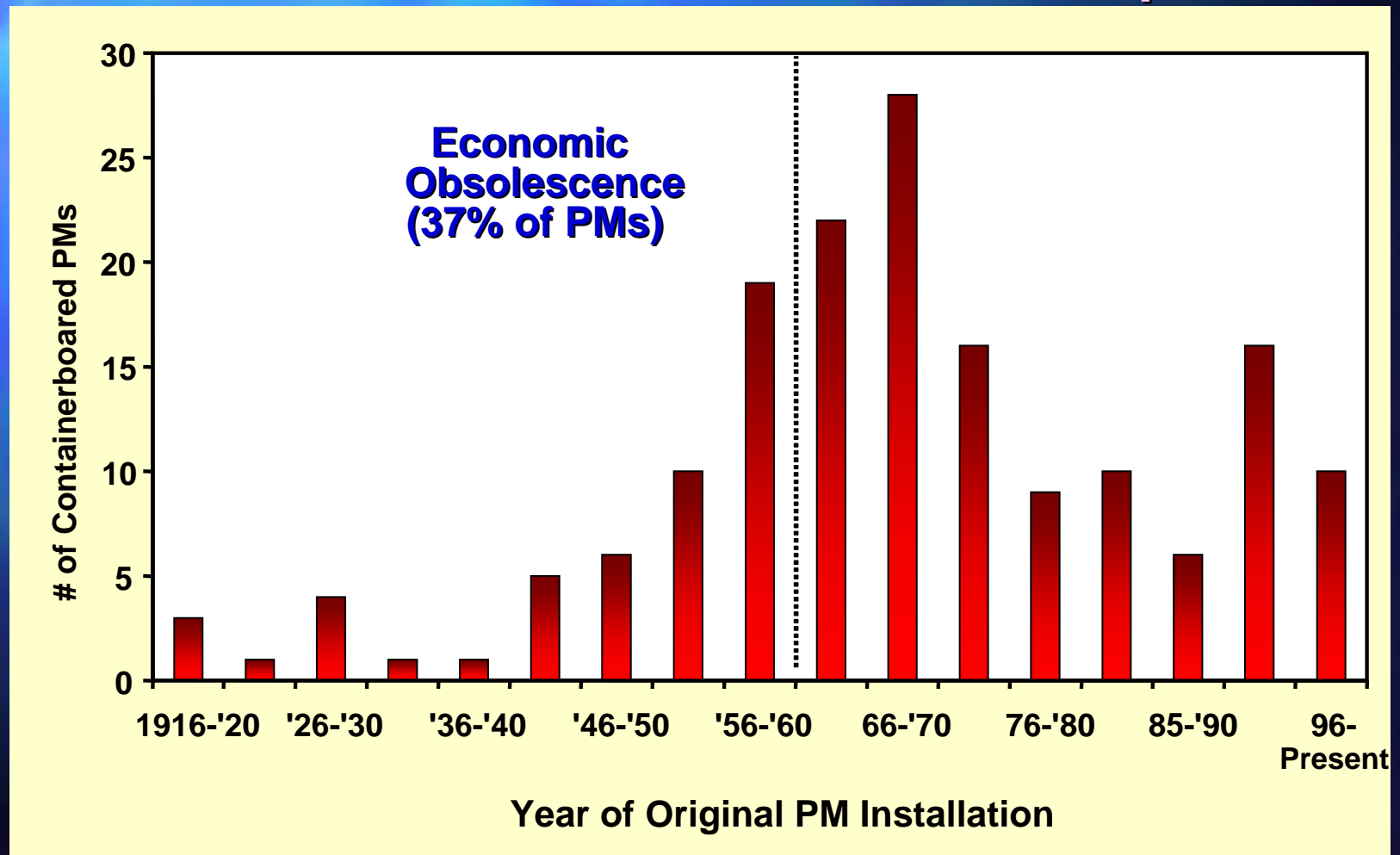
Outlook ~ How Competitive?

*Print Now Accounts For Only 37% of Advertising ~
Down Nearly 10 Points Market Share Since 1991*



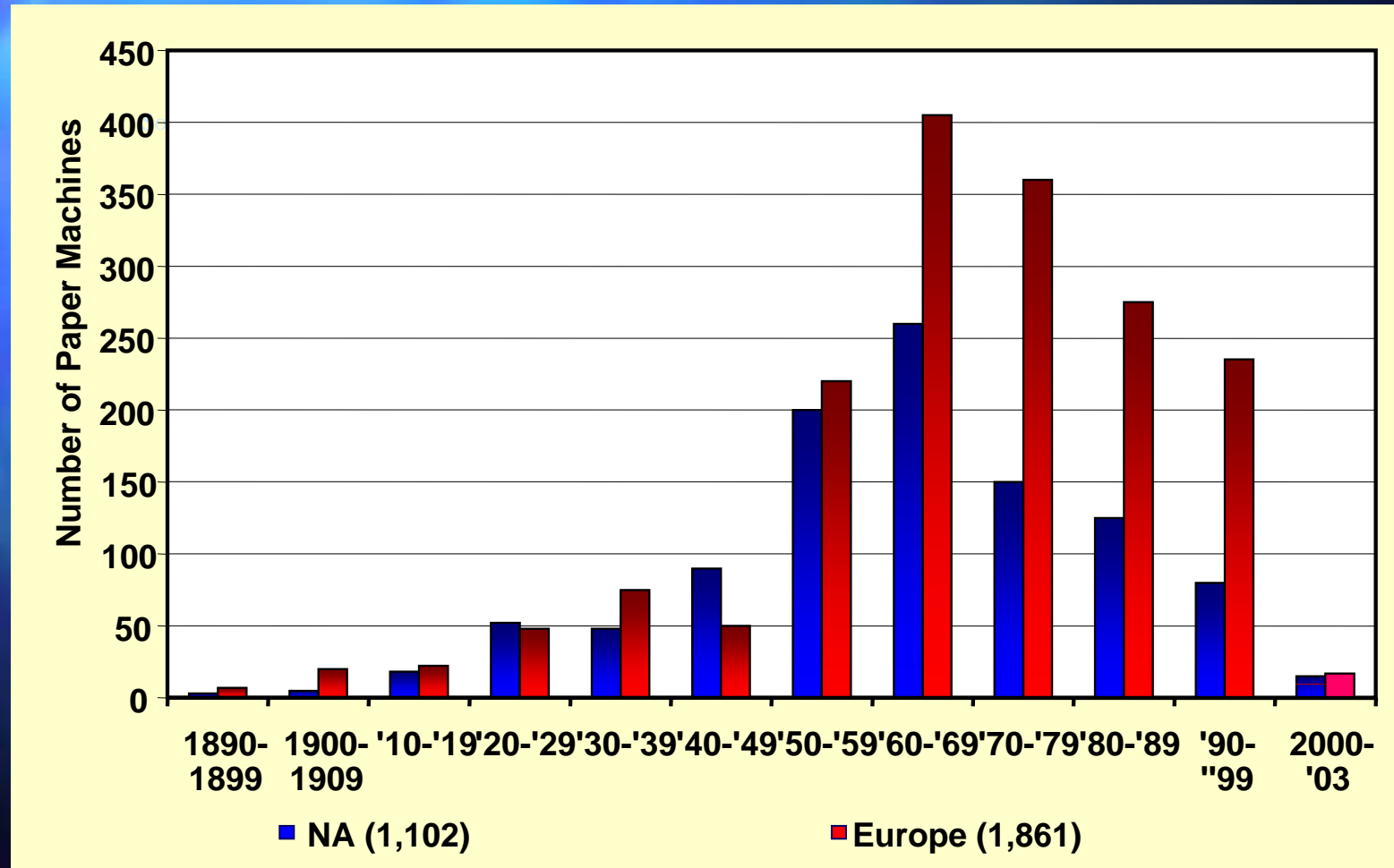
Outlook ~ How Competitive?

Large Share of NA Assets Are Approaching the End of Their Economic Lives ~ *Containerboard Example* ~



Outlook ~ How Competitive?

Europe Is Facing Similar Demand & Competitive Issues ~
But Has A Newer Asset Base



Outlook ~ How Competitive?

- The industry was a poor performer since the 1970s ~ yet even though it faces a continually tough business environment ~ *improvements are truly possible*
- Yet ~ we need to be mindful of constraints ~
 - ✓ *High-volume grades have significant substitution and global market place threats*
 - ✓ *The current US economy is rocky at best ~ a recession is possible*
- Also note ~ traditional business models have been *stretched to the limit* with
 - ✓ The emergence of the *global marketplace*
 - ✓ The new power of rapidly moving *knowledge and knowledge transfer; plus*
 - ✓ *New technologies ~ such as bio-energy, nanotechnology, etc.*

Outlook ~ How Competitive?

Accordingly ~ participants must ~ *and can* ~
learn how to thrive under these often
intense and rapidly changing conditions

...Individual companies can excel if they use the
current upturn & new economics to chart a new
course looking out ... *In some cases a VERY NEW*
looking course ...

Outlook ~ The Economy

Overall Economic Growth

NA Economy Sectors Outlook ~

[Implications for the Industry]

Outlook ~ The Economy

Overall Economic Growth Projections ~
Indicate Slower Growth In The Industry

Real GDP Growth By Region	2004	2005	2006	2007F	2008F
Advanced Economies					
US	3.9%	3.2%	3.3%	2.1%	2.5%
Euro Area	3.2%	2.6%	3.2%	2.7%	2.3%
Japan	2.7%	1.9%	2.2%	2.4%	2.1%
UK	3.3%	1.9%	2.8%	2.7%	2.5%
Canada	3.3%	2.9%	2.7%	2.5%	3.0%
Other Advanced Economies	4.3%	5.8%	5.7%	4.9%	5.1%
Emerging Markets	6.6%	6.7%	7.3%	6.7%	6.2%
Africa	4.5%	5.8%	5.6%	5.8%	5.8%
Central / Eastern Europe	5.5%	6.0%	6.8%	6.0%	5.0%
Developing Asia	7.6%	9.0%	9.5%	8.7%	8.0%
Middle East	5.1%	4.3%	5.0%	4.5%	4.6%
Latin America	4.6%	4.7%	5.6%	4.8%	4.3%

Outlook ~ The Economy

*NA Sectors That Directly Drive Pulp & Paper Demand
Are Weakening Again ~ But Are So Far Positive*

Economic Indicator	Industry Segment Impacted	1995-2000	2000-2005	2006	2007E
Real GDP	All	4.1%	2.5%	3.3%	2.1%
Implicit Price Deflator	All	1.6%	1.9%	3.1%	3.4%
Personal Consumption Expenditures	All	4.4%	3.2%	3.1%	3.1%
Industrial Production	All	6.0%	0.1%	3.9%	2.1%
Indust. Prod. - Non-Durables	Containerboard	1.3%	-0.6%	2.1%	2.1%
Indust. Prod. - Durables	Packaging	9.5%	0.7%	7.4%	5.3%
Food & Beverage Sales	Boxboard	3.2%	3.6%	1.0%	-9.5%
Food services and drinking places	Tissue	5.5%	6.3%	+8.0%	6.0%
Computer & Peripheral Sales	P&W Papers	5.2%	2.0%	+5.5%	-12.5%
Professional Employment & Business Services	P&W Papers, Tissue	5.3%	-0.4%	3.4%	1.9%
Housing Starts	Tissue, Building Products	2.9%	5.5%	-13%	-25%

Key Takeaways

Overall ~ 2006 & 2007 were *good to OK years*

But 2007 *demand slowed* with the overall economy and / or in reaction to higher prices
[& 2008 is a question]

This in turn causes erratic market dynamics where ~ *pricing is starting to weaken in some grades*

And as a caution ~ For the first time in a number of years ~ *there is a significantly increased chance of recession*

Key Takeaways

Looking Out

- The NA industry financial performance was very poor for a number of years ~ *But is improving*
- Short-term improvements are a relief ~ yet are sensitive to *significantly capacity increases ~ managed or new*
- Quality of investment decisions, economic & demand factors + industry's motivation for *changed business models* ~ will drive performance mid-to long-term
- Changes in industry direction will impact all aspects of the industry ~ *producers and suppliers alike ...*
- There is light on the horizon ~ *but it will come from new and evolving sources ~ stay tuned ...*

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 refocus and restructure in new and novel ways . . .*

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”***

Contact Information

Thank You! ~Copies Available At

www.fairvalueadvisors.com ~ And ~ www.cpbis@gatech.edu

Contact Information

Dan Cenatempo

President ~ FairValue Advisors

770-522-8972~dan@fairvalueadvisors.com

Jacquelyn McNutt

Executive Director – Center for Paper Business & Industry Studies

404-894-5733 – jacquelyn.mcnutt@cpbis.gatech.edu