



# Global Pulp & Paper Economic Outlook and Financial Performance

UBS Investment Research  
Global Paper & Forest Products  
May 8, 2008  
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**Analyst Certification and Required Disclosures Begin on Page 17**

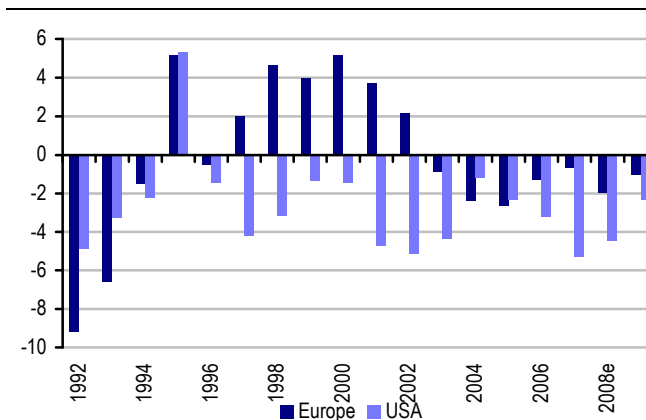
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# Challenges

- ◆ Industry dogged by history of poor returns, facing considerable challenges
  - Inflation
  - Foreign Exchange
  - Freight
  - Demand

Return on Capital less Cost of Capital US/Europe Paper Ind.



Source: Company reports, Bloomberg, Thomson DataStream, UBSe

# Inflation

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- ◆ Costs rising in all parts of the world
  - RISI data suggests c25% cost inflation since 2002 in the U.S.
- ◆ Fiber (wood and wastepaper)
  - N.A. wood costs up do to low sawmill generation of residual chips; fuel costs and some weather-related harvest issues
  - Europe wood costs up do to harvest issues (warm winters), competition from energy end uses and rising Russian tariffs
  - Asian costs up due to high pulp costs, particularly hit by rising wastepaper costs
- ◆ Energy costs rising
  - Europe slightly more insulated due to long term contracts and currency
  - In general, high energy costs relative benefit for pulp and integrated papermakers
- ◆ Freight costs and availability an issue
  - Impacting global trade flows

# Exchange Rates

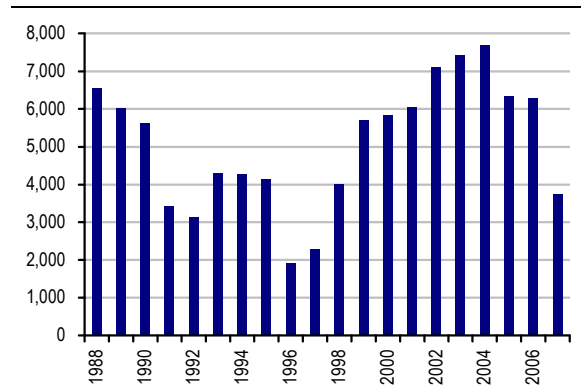
## ◆ Weak U.S. dollar taking its toll

- Canada, heavily reliant on U.S. dollar denominated exports of pulp, newsprint, lumber, feeling a pinch with net exports off c25% since 2004
- Europe net exports rose 2002-06 despite the sharp rise in the euro...newsprint/containerboard imports inched up in 2007
- Even Brazil feeling a squeeze: Aracruz EBITDA/tonne is relatively flat despite 60% rise in eucalyptus pulp prices since 2003

## ◆ U.S. industry increasingly competitive

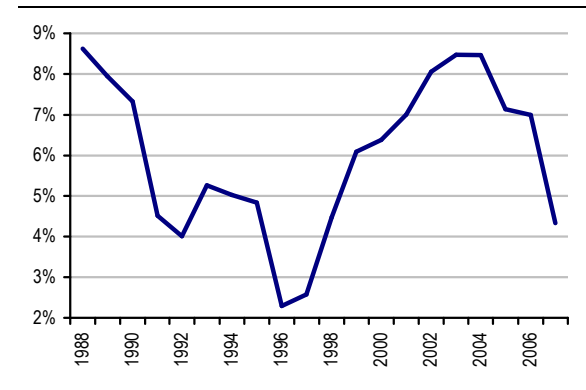
- This has clearly made the U.S. industry more competitive on global markets and importantly less attractive for imports. U.S. net imports are off c50% from 2004 peak

U.S. Paper & Paperboard Net Imports (000 tonnes)



Source: AF&PA, industry sources and UBS

U.S. Paper & Paperboard Net Imports as % Consumption

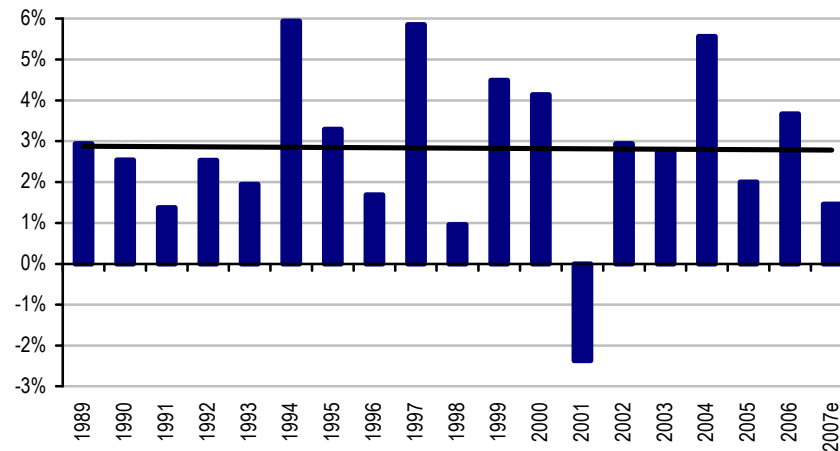


Source: AF&PA, industry sources and UBS

# Demand growth

- ◆ Paper demand growth has slowed as some developed markets have experienced secular declines, partially offset by growth in emerging markets
- ◆ While there is significant potential, to date, the paper industry has not seen a significant demand pull from emerging markets as exhibited in other basic materials (yet).

World Paper & Board Demand Growth



Source: RISI, PPPC, AF&PA, CEPI, industry sources and UBS estimates

# Slower Global GDP Growth

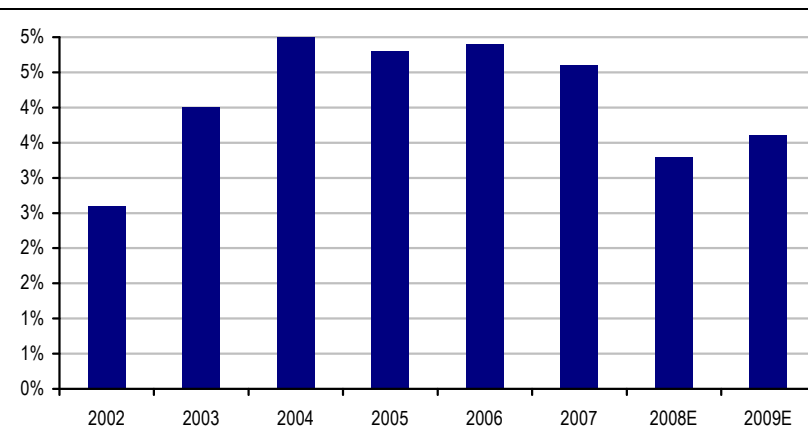
- ◆ UBS economics forecast assumes weaker macro backdrop – but start of recovery in the U.S. economy by year end 2008

UBS Global GDP Growth Forecasts

	2002	2003	2004	2005	2006	2007	2008E	2009E
<b>USA</b>	2.2%	2.7%	3.9%	3.2%	3.3%	2.2%	0.8%	2.6%
<b>Canada</b>	3.4%	2.0%	3.3%	3.1%	2.8%	2.7%	1.2%	2.5%
<b>Japan</b>	-0.3%	1.4%	2.3%	1.9%	2.4%	2.1%	1.0%	1.6%
<b>W. Europe</b>	1.0%	1.0%	2.1%	1.7%	2.9%	2.7%	1.6%	1.5%
<b>Latin America</b>	-0.5%	2.0%	5.7%	4.4%	5.2%	5.1%	4.1%	3.8%
<b>Asia</b>			8.8%	8.6%	8.4%	8.5%	7.4%	7.6%
<b>China</b>	10.0%	12.0%	11.7%	10.9%	10.7%	10.9%	9.9%	9.5%
<b>World</b>	2.6%	4.0%	5.0%	4.8%	4.9%	4.6%	3.3%	3.6%

Source: UBS calculations and estimates

Global GDP Growth (%)



Source: UBS calculations and estimates

# Control the controllables

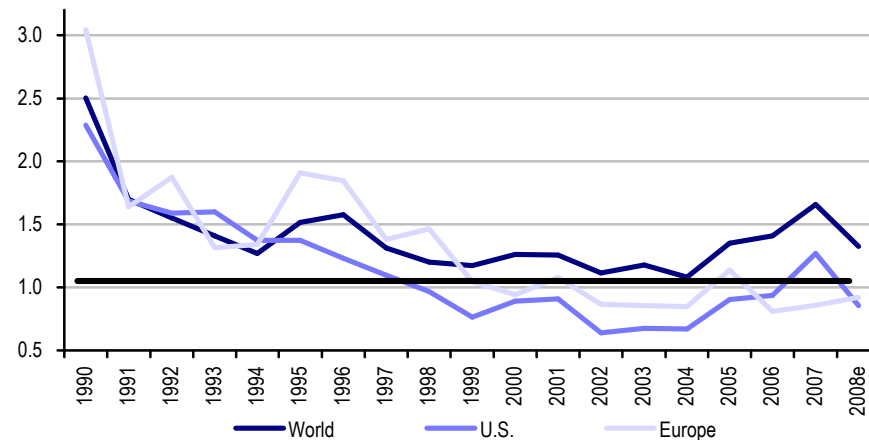
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- ◆ The industry cannot control
  - Inflation
  - Foreign exchange
  - Global GDP growth
  
- ◆ The industry can control
  - Supply
  - Some costs
  - Industry structure
  - Pricing

# Capital spending

- ◆ Companies in developed markets have become more disciplined allocating capital
  - U.S. cap ex/depreciation ratio has been below 100% every year since 1998
  - Spending at major W. European companies trending down
  - Strong growth in emerging markets (Latin American pulp, China, etc)

UBS Global Paper – average cap ex/depreciation

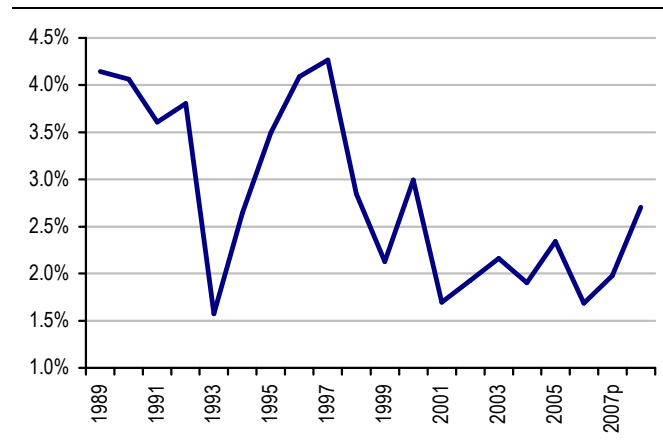


Source: Company reports and UBS estimates

# Supply growth slowing

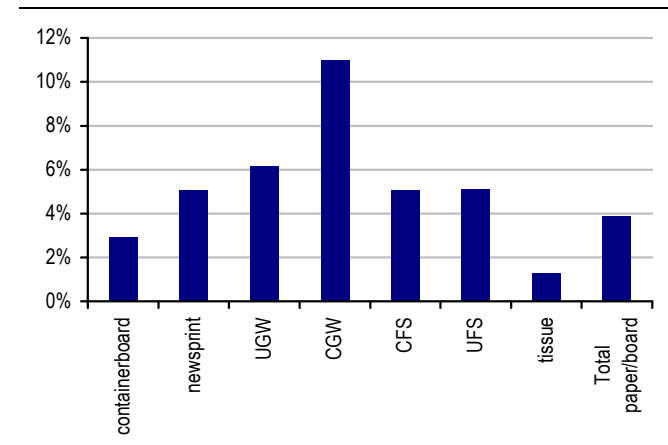
- ◆ World paper and board capacity growth has slowed
  - 2% growth from 3%
  - US supply lowest level since 1995
  - Global capacity closures since mid-2005 >15 million tonnes
  - Canadian paper/board capacity down 20% since mid-2005

World Paper & Board Capacity Growth y/y % change



Source: RISI, AF&PA, PPPC, Cepi, industry sources and UBS estimates

World Paper & Board Closures since mid, % market

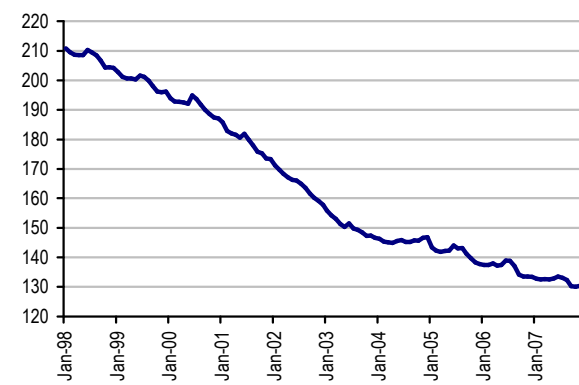


Source: Company reports, industry source and UBS est

# Cost cutting

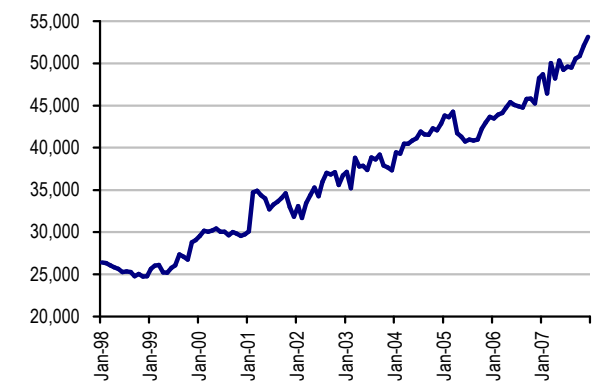
- ◆ While the benefits are obscured by inflation, the industry has worked to aggressively reduce costs.
  - European industry employment in 2006 was 33% below 1991 levels while the number of mill fell 22% but industry production rose 51%
  - In the past 10 years U.S. industry employment is off 38% while revenue per employee has essentially doubled.
  - Many companies report 20% or greater reductions in purchased energy per unit of output. Though this has been offset by higher unit costs for energy

US Paper/Pulp/Board Mill Employment (000)



Source: US BLS

US Pulp/Paper/Board Mill Revenue per Employee (\$)

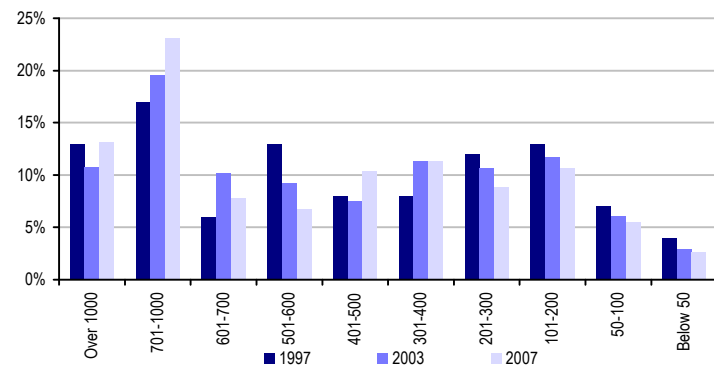


Source: US BLS, AF&PA

# Cost cutting

- ◆ Relative cost position is essential
  - Clear advantages for those with lowest cost assets
  - Cost inflation has not been spread evenly. Relatively more pressure on the high end of the cost curve
  - Energy advantages of integration
  - Access to lower cost fiber increasingly important
  - Latin American pulp clearly advantaged. U.S. increasingly attractive on a global basis while Europe is more challenged
  - High transport prices impact decision to serve certain markets
- ◆ One way for companies to achieve this is by closing higher cost assets
  - U.S. industry structure more weighted towards larger machines versus 1997

U.S. Paper and Board Capacity by Machine Size (ton/year)



Source: AF&PA, UBS

## Management change

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- ◆ Over the past several years there has been a impressive change in management throughout the industry
  - Many new managers come from outside the industry
  - In Europe, Stora Enso, UPM, SCA, Norske Skog, M-real all have new senior management in the past few years
  - In the U.S.: International Paper, Weyerhaeuser, Smurfit-Stone, Potlatch, Temple-Inland, Abitibi-Bowater are just a few of the companies to see new senior managers in the past few years
- ◆ Often these new managers are bringing new perspective, influencing decision making

# Consolidation

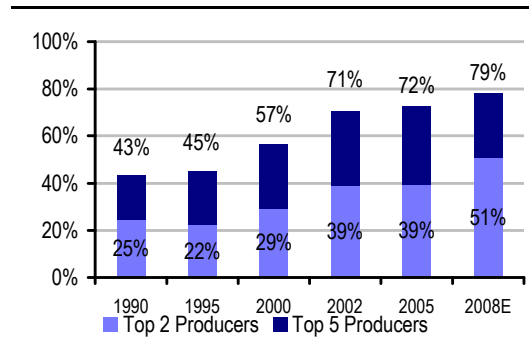
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- ◆ In the past 10 years there have been two waves of M&A
- ◆ In the late 1990s transactions were driven by scale
- ◆ In the current round of M&A companies are specializing by
  - Selling non core assets
  - Making acquisitions focused on specific grades

# Consolidation

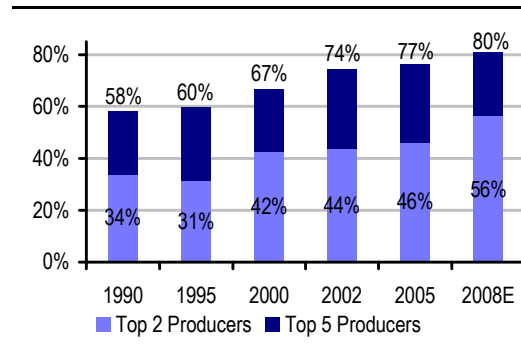
- ◆ With recent/pending deals every key U.S. paper/board market has a single leader with 30%+ share and most have top 2 with combined 50%+ share
- ◆ Consolidation in Europe delayed by valuations, uncertainty over Russian wood supply
- ◆ Fragmentation not an excuse – paper is more consolidated than some other materials were when they realized material earnings recovery

**US Containerboard Market Shares**



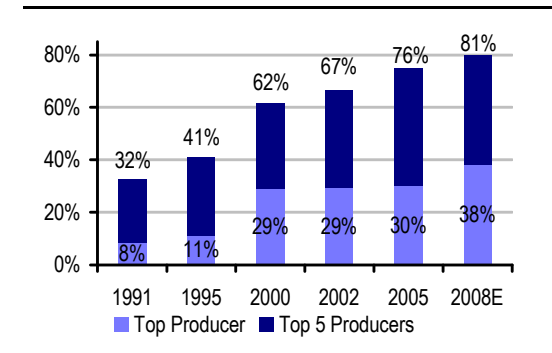
Source: Company reports, industry sources, RISI, UBSe

**US Uncoated Free Market Shares**



Source: Company reports, industry sources, RISI, UBSe

**N American Newsprint Market Shares**



Source: Company reports, industry sources, RISI, UBSe

# Pricing

- ◆ Most obvious way to offset higher costs is to pass along to customers via higher product prices
- ◆ US and Asia currently have significant pricing power
  - Asian newsprint prices up aggressively this year
  - U.S. graphic paper prices rising sharply, though linerboard prices stalled
  - European prices largely stagnant, weakness in newsprint (per annual contracts), some modest pickup in groundwood grades
  - Pulp pricing appears to be peaking, but the floor for global pricing has been lifted due to F/X and inflation (high cost capacity at risk).

## Year to date Global Price Trends

	US	Europe-€	Europe-\$	Asia-\$
Linerboard	0.0%	-0.9%	7.2%	3.9%
Newsprint	12.8%	-4.0%	3.8%	25.4%
Uncoated free	5.1%	-0.5%	7.6%	5.5%
Coated free	3.1%	0.0%	8.2%	13.5%
Coated groundwood	7.1%	5.1%	13.8%	
Uncoated groundwood	4.9%	3.5%	12.0%	

Source: RISI

# Outlook

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- ◆ Industry likely to remain under pressure and not all companies will follow the same path
- ◆ We expect U.S. industry to maintain solid supply/demand balance as imports are rendered increasingly less attractive (F/X & freight) and benefits of consolidation takes hold
- ◆ We remain more cautious on Europe given the pressures from rising costs, limited pricing power and currency
- ◆ Latin America – we see relatively selective opportunities given UBS view that the pulp market has peaked. Prefer companies with organic growth opportunities
- ◆ Emerging markets are a key: if demand in these markets starts to follow the path of other basic materials could be opportunities
- ◆ Fiber supply will play a key role



## Risk Statement

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The global paper and forest product industry is highly sensitive to shifts in supply and demand. Consequently, the key risks are weak demand, as evidenced by general economic conditions, or increases in supply, in the form of capacity additions. These could cause market imbalances and lead to price declines.

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UBS 12-Month Rating	Rating Category	Coverage <sup>1</sup>	IB Services <sup>2</sup>
Buy	Buy	59%	38%
Neutral	Hold/Neutral	34%	35%
Sell	Sell	7%	26%
UBS Short-Term Rating	Rating Category	Coverage <sup>3</sup>	IB Services <sup>4</sup>
Buy	Buy	less than 1%	67%
Sell	Sell	less than 1%	25%

1:Percentage of companies under coverage globally within the 12-month rating category.

2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

3:Percentage of companies under coverage globally within the Short-Term rating category.

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Source: UBS. Rating allocations are as of 31 March 2008.

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Neutral	FSR is between -6% and 6% of the MRA.
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UBS Short-Term Rating	Definition
Buy	Buy: Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.
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<b>Aracruz Celulose</b> <sup>16, 20</sup>	ARCZ6.SA	Sell (CBE)	N/A	R\$13.30	02 May 2008
<b>MeadWestvaco</b> <sup>4b, 6b, 6c, 7, 16</sup>	MWV.N	Buy	N/A	US\$26.03	02 May 2008
<b>M-real</b>	MRLBV.HE	Neutral	N/A	€1.90	02 May 2008
<b>Stora Enso</b> <sup>4a, 6a, 16</sup>	STERV.HE	Neutral	N/A	€8.30	02 May 2008
<b>Suzano Papel e Celulose</b> <sup>2a, 20</sup>	SUZB5.SA	Buy (CBE)	N/A	R\$28.10	02 May 2008
<b>Temple-Inland</b> <sup>2b, 4b, 13, 16</sup>	TIN.N	Buy	N/A	US\$12.12	02 May 2008
<b>UPM</b> <sup>4a, 6a, 16</sup>	UPM1V.HE	Neutral	N/A	€12.76	02 May 2008
<b>Votorantim Celulose e Papel</b> <sup>16, 20</sup>	VCPA4.SA	Buy (CBE)	N/A	R\$51.05	02 May 2008
<b>Weyerhaeuser</b> <sup>3, 4b, 6b, 7, 16</sup>	WY.N	Buy	N/A	US\$63.68	02 May 2008

Source: UBS. All prices as of local market close.

Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

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