<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Newsprint availability and prices : the international scenario</th>
</tr>
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<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date</strong></td>
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<td><strong>URL</strong></td>
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<td><strong>Rights</strong></td>
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Newsprint Availability And Prices -
The International Scenario
Session 1:

Newsprint availability and prices - the international scenario

An update on sources, availability and pricing of newsprint in the international market
The newsprint market
World Paper & Board Production
(in 1,000 tonnes)

Average growth: + 3.1 %/year
World Paper & Board Production by Grade (1993)

- Other Board (25 Mt)
- Other Paper (24 Mt)
- Printing & Writing Papers (76 Mt)
- Packaging Paper & Board (94 Mt)
- Newsprint (32 Mt)
Paper & Board Consumption in kg/year/inhabitant for selected countries in 1993

- USA: 317.3 kg/year/inhabitant
- Finland: 262 kg/year/inhabitant
- Canada: 218.9 kg/year/inhabitant
- Belgium: 213.7 kg/year/inhabitant
- Denmark: 208.4 kg/year/inhabitant
- Netherlands: 206.5 kg/year/inhabitant
- Sweden: 200.6 kg/year/inhabitant
- Switzerland: 198.4 kg/year/inhabitant
- Germany: 189.7 kg/year/inhabitant
- Norway: 181.2 kg/year/inhabitant
- United Kingdom: 169.5 kg/year/inhabitant
- Austria: 166.4 kg/year/inhabitant
- France: 154.4 kg/year/inhabitant
- Italy: 127.8 kg/year/inhabitant
- Spain: 120.3 kg/year/inhabitant
- Ireland: 103.1 kg/year/inhabitant
- Portugal: 68.8 kg/year/inhabitant
- Greece: 63.1 kg/year/inhabitant
- Hungary: 46.8 kg/year/inhabitant
- Poland: 27.1 kg/year/inhabitant
- Bulgaria: 20.2 kg/year/inhabitant
- China: 17.2 kg/year/inhabitant
- Romania: 13.5 kg/year/inhabitant
- India: 3.3 kg/year/inhabitant
Composition of Paper Consumption

2010
Total = 443 million M.T.

1991
Total = 243 million M.T.

57.6%
50.9%
13.3%
29.1%
35.7%
13.5%

Newsprint
Printing and Writing
Other
Paper Consumption
Per Unit of GDP

Consumption (KG)/$GDP

20 15 10 5

1961 1991

Developed\nDeveloping
Per Capita Paper Consumption

- 1991 -

Kilograms

180
160
140
120
100
80
60
40
20

World

Developed

Developing

150
45
10
World Fiber Consumption

Millions of M.T.

<table>
<thead>
<tr>
<th>Year</th>
<th>Pulp</th>
<th>Recovered Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>252</td>
<td>34%</td>
</tr>
<tr>
<td>2010 Projected</td>
<td>455</td>
<td>38%</td>
</tr>
<tr>
<td>2010 High</td>
<td>465</td>
<td>47%</td>
</tr>
</tbody>
</table>

Projected Scenario

High Recovered Fiber Scenario
The Paperless Office?

Copiers, fax machines and laser printers in Western Europe
Remarks
on the newsprint market

--> Worldwide consumption in 1993: 32.7 million tonnes.

--> 80% of this was used in three main markets:
    North America, Europe and Japan.

--> There is a correlation between the "degree of development"
of a country and its newsprint demand. There are other
influencing factors (cultural characteristics, traditional
readership, alphabet used,...)

--> The developing countries only account for 18% of world
newsprint demand today.

ifra
Newsprint Market Trends

Increase of the demand in the USA:
- Low stocks in newspapers
- Increase of the newsprint consumption

Increase of the demand in Europe:
- Great Britain = +300,000 t in 1994
- Germany and France will increase their consumption in 1995
- Better economical situation in Europe

Development of some Asian countries:
For example:
- Korea (900,000 t in 1994)
- China (800,000 t in 1994)

Estimation for newsprint consumption:

<table>
<thead>
<tr>
<th>Year</th>
<th>North America</th>
<th>West. Europe</th>
<th>East. Europe</th>
<th>Asia</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>12.7</td>
<td>8.1</td>
<td>1.1</td>
<td>7.5</td>
<td>2.7</td>
<td>32.1</td>
</tr>
<tr>
<td>1994</td>
<td>12.9</td>
<td>8.4</td>
<td>1.1</td>
<td>8.5</td>
<td>2.8</td>
<td>33.2</td>
</tr>
<tr>
<td>1995</td>
<td>13.2</td>
<td>8.7</td>
<td>1.1</td>
<td>9</td>
<td>3</td>
<td>34.5</td>
</tr>
<tr>
<td>1996</td>
<td>13.3</td>
<td>8.9</td>
<td>1.1</td>
<td></td>
<td>3.2</td>
<td>35.5</td>
</tr>
</tbody>
</table>
Newsprint Production 1980-1993
(in 1,000 tonnes)
The main producers of newsprint in 1993

- Canada: 9.1 Mt
- United States: 6.4 Mt
- Japan: 2.9 Mt
- Sweden: 2.3 Mt
- Finland: 1.4 Mt
- Germany: 1.3 Mt
- Norway: 1.0 Mt
- Others: 8.3 Mt

Total: 32.7 Mt

Canada: 28%  
United States: 20%  
Japan: 9%  
Sweden: 7%  
Norway: 3%  
Germany: 4%  
Finland: 4%  
 Others: 25%

--> Seven countries represent 75% of the World newsprint production
Newsprint consumption for selected countries in 1993
(in 1,000 tonnes)

- Italy: 544
- India: 565
- Australia: 599
- France: 746
- China: 774
- Canada: 1146
- United Kingdom: 1943
- Germany: 2109
- Japan: 3408
- USA: 12549

--> The USA consume 38% of the World newsprint production

--> The 10 countries in this chart consume 75% of the World newsprint production
Newspaper copies sold for 1000 inhabitants

- Italy: 113
- France: 154
- Canada: 202
- USA: 233
- Russia: 237
- Netherlands: 311
- Germany: 324
- Austria: 328
- Great-Britain: 351
- Switzerland: 404
- Japan: 576
**Newsprint 1993 - 1994**

<table>
<thead>
<tr>
<th></th>
<th>1993</th>
<th>1994</th>
<th>Evolution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>World Consumption</strong></td>
<td>32.7</td>
<td>33.6</td>
<td>+0.9 (Mt)</td>
</tr>
<tr>
<td><strong>Capacities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>36.7</td>
<td>37.7</td>
<td>+0.7 (Mt)</td>
</tr>
<tr>
<td>USA/Canada</td>
<td>9.3</td>
<td>9.7</td>
<td>+0.4</td>
</tr>
<tr>
<td>Other</td>
<td>16.3</td>
<td>16.3</td>
<td>+0</td>
</tr>
<tr>
<td>Other</td>
<td>11.1</td>
<td>11.4</td>
<td>+0.3</td>
</tr>
<tr>
<td><strong>Utilisation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>93.5 %</td>
<td>95 %</td>
<td></td>
</tr>
<tr>
<td>USA/Canada</td>
<td>96 %</td>
<td>97 / 98 %</td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>82 %</td>
<td>84 %</td>
<td></td>
</tr>
</tbody>
</table>
Newsprint Production by Region in 1994

- Others: 6%
- North America: 47%
- Western Europe (without Nordic countries): 13%
- Nordic countries: 14%
- Eastern Europe: 4%
- Asia (Japan included): 16%
<table>
<thead>
<tr>
<th>Region</th>
<th>Est. 2000</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>12733</td>
<td>1055</td>
</tr>
<tr>
<td>Western Europe</td>
<td>8025</td>
<td>1753</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>1323</td>
<td>488</td>
</tr>
<tr>
<td>Japan</td>
<td>3699</td>
<td>987</td>
</tr>
<tr>
<td>Asia/Africa/Oceania</td>
<td>4654</td>
<td>2222</td>
</tr>
<tr>
<td>Latin America</td>
<td>1760</td>
<td>649</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39348</td>
<td>7154</td>
</tr>
</tbody>
</table>

**Newsprint demand in 2000**

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Asia-Pacific Newsprint Demand

selected countries

Philippines
Singapore
Malaysia
Hong Kong
Indonesia
Thailand
Taiwan
Korea

Equity Research Associates

2.4 million tonnes

1980
1982
1984
1986
1988
1990
1992
1994
Strong demand in Asia
Newsprint demand forecast

+ 5 to +10 % / year
(94 to 96)
Canadian Newsprint Shipments Overseas

in Thousands

1000

800

600

400

200

0

12-month moving total

Europe

Asia

Latin America

Other

1000 tonnes

0

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

Equity Research Associates
Importance of advertising on newsprint demand

--> Circulation in markets such as USA, Western Europe or Japan are static or declining

--> The driver for newsprint demand is advertising: 1/3 of newspaper pages and 40% of revenue are attributable to advertising.

--> Different forms: printed in the newspaper, ROP advertising, new supplements with heavy ad. content. More and more non-newspaper applications: up to 10% of the newsprint market in certain regions.

--> Advertising directly influences the half of newsprint demand.
Newsprint is an essential component in the freedom of expression:

- Just having ideas is not enough.
- One must be able to express and spread them.
- The only true vector of these ideas is paper.
- Even with the competition of TV and radio, paper has a better "reaching effect".
How much is it to make newsprint?
(Prices in SEK)

- Capital costs
- Delivery
- Other fixed costs
- Personnel
- Other variable costs
- Bought energy
- Bought fibres
- Wood
North American Newsprint Industry

Manufacturing Costs
(expressed in US $ per finished tonne)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furnish - Wood</td>
<td>35</td>
<td>42</td>
<td>60</td>
<td>58</td>
</tr>
<tr>
<td>BKP</td>
<td>30</td>
<td>38</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>ONP *</td>
<td>20</td>
<td>35</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>115</td>
<td>95</td>
<td>113</td>
</tr>
<tr>
<td>Chemicals</td>
<td>32</td>
<td>35</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>Energy</td>
<td>75</td>
<td>77</td>
<td>69</td>
<td>70</td>
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<tr>
<td>Labour</td>
<td>50</td>
<td>52</td>
<td>51</td>
<td>52</td>
</tr>
<tr>
<td>Maintenance</td>
<td>50</td>
<td>53</td>
<td>42</td>
<td>43</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
<td>21</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Mill Level Cost</td>
<td>312</td>
<td>353</td>
<td>320</td>
<td>345</td>
</tr>
<tr>
<td>Change</td>
<td>+13.1%</td>
<td></td>
<td>+ 7.8%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 25% ONP/OMG

source: DIR
Canadian Newsprint Profitability
Average Operating Margin

Quarterly

Eastern Canada
(4 companies)

Canada
(3 Eastern,
2 Western)

| 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | 92 | 94 |

Equity Research Associates  * Up to Q3/93, Abilab is newsprint only; new curve, starting Q1/93, includes specialties.
Wood Chip Costs - B.C.

Source: DIR
Cost Pressures

- Sharp Increase in Raw Material Costs
  
  - BC Wood Costs Increase 65% - 1991-1995
  
  - US South Pulpwood Costs Increase 75% - 1991-1997
  
  - BKP Prices Increase 100% - 1993-1995
  
  - ONP Prices Increase 400% - 1993-1995
  
  - Secondary Treatment Adds $15 per Tonne
Supply Pressures

- No New Capacity in North America
  - 375,000 tonnes of Surplus Capacity

- Major Capacity Additions in Europe and Asia
  - New Machines Start Up in Korea, Thailand
  - Two New Machines Start Up in Germany
  - New Machine to Start Up In UK - March 1995
  - New Machine Proposed in Sweden 1996
**NORTH AMERICAN NET NEWSPRINT CAPACITY**

(000 Metric Tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15,732</td>
<td>16,267</td>
<td>16,574</td>
<td>16,466</td>
<td>16,155</td>
<td>16,243</td>
</tr>
</tbody>
</table>

*SOURCE: AMERICAN FOREST & PAPER ASSOCIATION, CANADIAN PULP AND PAPER ASSOCIATION*
<table>
<thead>
<tr>
<th>Year</th>
<th>North American Demand (000 Metric Tons)</th>
<th>Source: Goldman Sachs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991*</td>
<td>15,061</td>
<td>AFPA, CPPA</td>
</tr>
<tr>
<td>1992*</td>
<td>15,177</td>
<td>**Goldman Sachs</td>
</tr>
<tr>
<td>1993*</td>
<td>15,548</td>
<td></td>
</tr>
<tr>
<td>1994**</td>
<td>15,710</td>
<td></td>
</tr>
<tr>
<td>1995**</td>
<td>15,850</td>
<td></td>
</tr>
<tr>
<td>1996**</td>
<td>16,035</td>
<td></td>
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</tbody>
</table>

North American Newsprint Capacity Utilization

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity Utilization (%)</th>
<th>Source: AFPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989*</td>
<td>96%</td>
<td>**Goldman Sachs</td>
</tr>
<tr>
<td>1990*</td>
<td>93%</td>
<td></td>
</tr>
<tr>
<td>1991*</td>
<td>91%</td>
<td></td>
</tr>
<tr>
<td>1992*</td>
<td>92%</td>
<td></td>
</tr>
<tr>
<td>1993*</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>1994**</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>1995**</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>1996**</td>
<td>97%</td>
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### WORLDWIDE CAPACITY INCREASES

(000) MT/YEAR

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<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>NORTH AMERICA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<td>--</td>
</tr>
<tr>
<td>CENTRAL AMERICA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SOUTH AMERICA</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>EUROPE</td>
<td>20</td>
<td>--</td>
<td>250</td>
<td>--</td>
<td>--</td>
<td>270</td>
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<tr>
<td>ASIA/OCEANIA</td>
<td>401</td>
<td>145</td>
<td>35</td>
<td>70</td>
<td>--</td>
<td>651</td>
</tr>
<tr>
<td>AFRICA</td>
<td>--</td>
<td>50</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>50</td>
</tr>
<tr>
<td>TOTAL &quot;FIRM&quot;</td>
<td>421</td>
<td>195</td>
<td>285</td>
<td>70</td>
<td>--</td>
<td>971</td>
</tr>
<tr>
<td>SPECULATIVE</td>
<td>280</td>
<td>555</td>
<td>200</td>
<td>330</td>
<td>1,515</td>
<td>2,880</td>
</tr>
<tr>
<td>TOTAL CONSIDERED</td>
<td>701</td>
<td>750</td>
<td>485</td>
<td>400</td>
<td>1,515</td>
<td>3,851</td>
</tr>
</tbody>
</table>

**Source:** Food and Agricultural Organization, United Nations
Eastern U.S. Newsprint Prices

$U.S./tonne

Source: Miller Freeman
Forecast for Newsprint Prices
(Source: Pulp & Paper Week, prices for 45 g/m² standard newsprint in $/t)
<table>
<thead>
<tr>
<th>Year</th>
<th>Germany</th>
<th>Great Britain</th>
<th>Sweden</th>
<th>Russia</th>
<th>Korea</th>
<th>Thailand</th>
<th>China</th>
<th>Australia</th>
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<tbody>
<tr>
<td>1993</td>
<td>250</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1994</td>
<td>460</td>
<td></td>
<td></td>
<td>100?</td>
<td>260</td>
<td>100</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>1996</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Estimation Capacity / Consumption**

- Capacities: +0.7, +0.8, +0.65, +0.75
- Consumption: +0.3, +1.1, +1.3, +1

*ifra*
### New machines in Europe

<table>
<thead>
<tr>
<th>Companies</th>
<th>Countries</th>
<th>Capacities</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halindi (D)</td>
<td>Germany</td>
<td>250</td>
<td>end 1993</td>
</tr>
<tr>
<td>Enso (F)</td>
<td>Germany</td>
<td>280</td>
<td>09 / 1994</td>
</tr>
<tr>
<td>Palm (D)</td>
<td>Germany</td>
<td>200</td>
<td>10 / 1994</td>
</tr>
<tr>
<td>SCA/Mondi (S)</td>
<td>Great Britain</td>
<td>260</td>
<td>mid 1995</td>
</tr>
<tr>
<td>Holmen (S)</td>
<td>Sweden</td>
<td>270*</td>
<td>mid 1996</td>
</tr>
</tbody>
</table>

But: machines conversions reduce the increase in capacities

(* example: Holmen 270 → 130*)
Producers / editors partnership = responsible price policy

A responsible price policy should take into account gains in productivity

<table>
<thead>
<tr>
<th>Speed</th>
<th>1980</th>
<th>1980</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>700 m/mn</td>
<td>1200 m/mn</td>
<td>1600 m/mn</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Higher width</th>
<th>1980</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6 m</td>
<td></td>
<td>9.2 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employees</th>
<th>1980</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 persons</td>
<td>400 persons</td>
<td></td>
</tr>
<tr>
<td>280 000 tons</td>
<td>480 000 tons</td>
<td></td>
</tr>
</tbody>
</table>
Partnership between producers / editors = responsible price policy

- Price rises are too strong

Inflation: + 2% / + 4%
Fall in prices: 2 years
The productivity and finished quality of the assembly plants covered by the MVP

Classical mass production

Lean Production

Japanese

North Americans

Europeans

Quality (assembly errors/100 vehicles)

Productivity (hours per finished vehicle)

Source: "The machine that changed the world"
Apply the rules of lean production

1. Deal with a reduced number of suppliers – suppliers of the first order; i.e. component suppliers who themselves deal with suppliers of the second order and so forth.

2. Exchange information with suppliers regarding expected changes in production volume, but also in analysing production methods and by doing joint cost analysis and definition of the supply prices.

3. Establish a close relationship with the suppliers based on partnership by means of:
   — framework agreements on business relations;
   — joint responsibility of cost;
   — agreement on cost reductions to be achieved;
   — freedom to effect product changes within the framework of the standard functions;
   — assistance in the event of production problems; and
   — mutual financial participation.