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A PROFILE OF

MUNKSJÖ AB

Written on behalf of the EGF

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1. History and activities

Established in Sweden in 1862, Munksjö AB is active in the manufacturing of: special papers, pulp, industrial packaging, envelopes, hygiene, creped and impregnated papers. Munksjö holds its head office in Jönköping Sweden and in 1990 operated facilities in 10 other Swedish towns, 2 in Denmark, 3 in Norway and 8 in the U.K.

Munksjö's largest single business is the manufacturing of envelopes. It only moved into this business in 1986/87. In 3 years it accounted for 30% of sales. In 1987 the Ljungdahl packaging and envelope company was taken over, followed by the take-over of Björnbak, the leading Danish envelope maker. Another major acquisition was realised in 1989, as Munksjö took over the struggling U.K. envelope and paper maker Chapman Industries. Chapman's problems were caused by the rising competition for a small group. Mr Tony Easter, Chapman's managing director said 'we recognised in 1988 that we needed to be a bigger player in our markets.' Munksjö was thought to be the most suitable partner as it has complementary operations across Chapman's range of paper, packaging, envelope and waste paper interests. After its acquisition of the two other envelope companies the purchase of Chapman, its first outside Scandinavia, made Munksjö the second largest envelope manufacturer in Europe after DRG (now part of the Swiss Biber Holding).

In 1990 Munksjö's took over Hexagon, a mixed industrial group ranging from parquet flooring to bakeries and from ice cream sales to car parks.

Until the take-over of Hexagon in 1990, pulp and paper manufacturing accounted for half of Munksjö activities. Hexagon however, was the same size as Munksjö. It soon proved Munksjö had bit of more than it could chew. The next table shows the relative importance of the different activities.

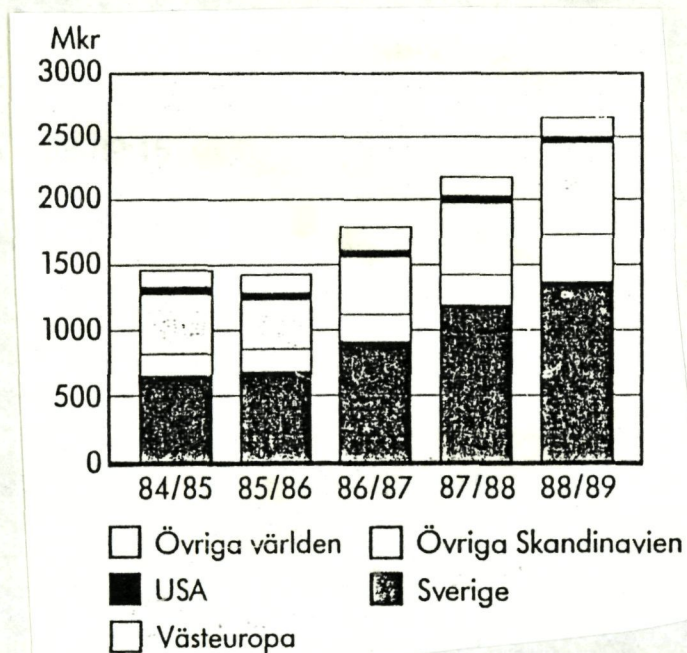
Table 1: Relative importance of different activities, 1989/90

	Employees	Invoiced Sales	Capital
Envelope division	1,225	17%	562.9
Chapman	1,003	8.3%	309.7
Kraftemballage AB	717	12.5%	451.0
Hygiene	344	4.7%	321.3
Pulp and paper	903	23.4%	824.7
Hexagon	4,119	34.1%	2,697.1
Total	8,311	100%	5,166.7

Source: Annual report 1990

The table shows the difference between the capital intensive pulp and paper sector and the labour intensive envelope and hygiene division. Kraftemballage ranks in between.

The next table shows that, until the take-over of Hexagon, Munksjö was selling its products for more than 50% abroad, with continental Europe taking the largest share. From 1986/87 onwards Munksjö started to expand the share of its sales in other parts of Scandinavia, mainly Denmark.



2. Munksjö's owners... and main problem

In the past years, Munksjö has hit the headlines mainly because of its financial problems. The background to these problems are not to be found in the paper industries recession, however severe as it might be, but in the complicated financial transactions made by Munksjö's owners. Therefore it seems appropriate to start with a look at who owns Munksjö.

Large parts of the Swedish industry are part of one of three groups:

- Wallenberg (e.g. Providentia, Stora, Electrolux, Saab-Scania)
- Volvo-Skanska (e.g. Procordia, Euroc, Sandvik)
- Handelsbanken/Industrivärden (e.g. SCA, Modo, PLM, Dacke, Aga)

These groups can control large parts of the economy without actually owning the majority of the shares, because there are shares (A-shares) with extra voting rights.

Apart from these three groups the biggest Swedish bank, the Enskilda Banken (SEB) is jointly owned by the Wallenberg and Volvo group together with the insurance company Trygg Hansa SPP. The Wallenberg group holds the chair. Trygg Hansa was both involved in Industrivärden and in Nordbanken, a bank which played a pivotal role in Munksjö's recent history.

In 1987 Munksjö was largely owned by Beijer Industries, which is connected to the Swedish Enskilda Banken (SEB) but is privately owned by two families. Beijer also held a large amount of shares in Industrivärden. Other important shareholders were AB Aritmos and the Götabankens Pensionsstiftelse. Munksjö for its part held important shares in the packaging company PLM, belonging to the Handelsbanken/Industrivärden group and Beijer industries.

Through large shareholdings in PLM and some shares in Industrivärden, Munksjö can be regarded as associated to the Handelsbanken/Industrivärden

group, but Munksjö was relatively independent, owned by Beijer and with connections to other industrial groups. SEB was the main financier for Munksjö via the holding company Munksjö Intressenter.

This changed as Nordbanken tried to create a fourth industrial-financial group. The Custodia investment company was to be the vehicle for this ambition. It had as its main shareholders Trelleborg¹, Nordbanken and Procordia. Custodia was the product of the former head of PKbanken (now Nordbanken) Christer Zetterberg's dream of having the bank's "own" investment company, which would compete with Svenska Handelsbanken's Industrivärden or SEB's Investor. Munksjö was the first large company which Custodia took control of. It may also have been the last. Custodia purchased Munksjö to get an industrial cash-flow. This was why Custodia was to take over Trelleborg's 50% stake in Munksjö Intressenter next year. The investment company Custodia had an option to acquire Trelleborg's stake in Munksjö, and that the option would be exercised by the summer of next year at the latest.

In 1990 Custodia, Trelleborg and Beijer Capital set up Munksjö Intressenter which bought out the minority shareholders in Munksjö. After this transaction Munksjö was 100%-owned by Munksjö Intressenter, which was 50/50-owned by Trelleborg and Custodia. Custodia was itself 14%-owned by Trelleborg (which controlled 25% of the votes) and 44% by Nordbanken, while the remaining 42% was owned by Procordia, Linden Gruppen and Procof.

At the time Munksjö was already financially weakened after its acquisition of Hexagon for around SEK 2bn. In addition, the purchase of Munksjö by its parent company Munksjö Intressenter was also chiefly financed with loans. A quick sell-off of parts of Munksjö was therefore essential if the new owners were going to be successful. The intention was to use the capital gains from such sales to reduce Munksjö Intressenter's debt and interest burden. Otherwi-

¹ The main shareholder of Trelleborg is Dunker Funds (58% of the votes in 1991), other main shareholders are Latour and Handelsbanken. The main bank is SEB.

se Munksjö's cash-flow would have to be drained in order to meet interest payments.

Custodia's aim was to reduce the Munksjö group to the envelope division in Ljungdahls and Chapman of the UK. All Hexagon companies and the forestry-linked parts were to be sold. Around ten companies, including Car Park and Skandinavisk Design, were sold before prices fell too low. In addition Trelleborg took over the engineering company Swegon. In the mean time Munksjö's debts were still too high and the forestry division was troubled by a very weak market. The large Hexagon subsidiaries, Hemglass and Fristad, had to be retained in hope of better times.

In september 1991 it became clear that Munksjö's owners had got themselves into big problems. Trelleborg, with its massive liabilities, and Nordbanken, were neither of them very strong owners at the moment, and Munksjö Intressenter was finding it difficult to meet its share of the group's debts. In particular this concerned Custodia. Rather than making capital gains from Munksjö, Custodia ended up paying the interest on Munksjö Intressenter's heavy debt. This has brought Custodia to the brink of bankruptcy. The owners agreed that Custodia should be wound up, but could not agree on how the burden should be shared. Trelleborg's reluctance to simply take over majority ownership also caused problems.

Under the preliminary agreement Trelleborg was to become the sole owner of Custodia, Munksjö Intressenter and Munksjö. Nordbanken was to replace SEB as lender and provide SEK 2bn, of which SEK 1.2bn was for Munksjö Intressenter. Trelleborg was to receive an unknown sum to bolster Munksjö Intressenter's equity ratio and SEK 100m in the form of lower interest rates in order to wind up Custodia's other bad debts. These included its investment in Heron (a company linked with Nordbanken which is now bankrupt) and Regnbagen (linked with Lindengruppen, which was also one of Custodia's owners).

According to Mr. Borgstrom, financial director of Trelleborg AB, Munksjö AB would cope well if separated from its parent company. Mr. Borgstrom thought

it most unlikely that Nordbanken would allow Custodia to collapse, in view of what such a development would mean for the bank's international goodwill. Negotiations started about strengthening Custodia. The owners did not want Munksjö to collapse under the debt burden built up in the group and by its owners. Trelleborg believed that an injection of SEK 100-200m would suffice. At that time it seemed clear that Nordbanken would carry the cost and could add yet another failed venture to its long list.

This agreement was abandoned by Nordbanken in July 1991, making it almost impossible for Trelleborg not to end up as the sole owner of Munksjö whatever happened with Custodia and Munksjö Intressenter. Consolidating Munksjö with its total assets of SEK 4bn would reduce the equity ratio (a measure of financial strength) of the Trelleborg group by 3 percentage points. However, Munksjö was making a profit in spite of the recession. The sale of Hemglass for SEK 0.5bn in July 1991 had also improved the situation.

Nordbanken maintains that Trelleborg worked very closely with the bank's former management and that the Munksjö deal was Trelleborg's idea. For this reason it believed Trelleborg should carry a large share of responsibility for the deal began to go wrong before the divestment of Hexagon could be effected.

So, in November news came that Nordbanken was passing the problems in Custodia over to Trelleborg which would get the responsibility for reducing the investment company's losses alone. In order to make a clean break with Custodia, Nordbanken would have had to grant new loans of SEK 2bn and transfer several hundred million kronor to Trelleborg.

According to Veckans Affärer, this was too much for the bank's management. Nordbanken's deputy managing director, Jacob Palmstierna, was made to revise his plans and the result now looks like being bankruptcy for Custodia.

The problems of the industrial group Munksjö are thus transferred to Trelleborg and SEB, which was the main financier for Munksjö via the holding company Munksjö Intressenter. Writing off its shareholding and loans in Custodia will

cost Nordbanken "only" SEK 200m, while Trelleborg has already made loss allocations of SEK 450m.

In january 1992 a resolution has been reached on the Munksjö holding, giving Trelleborg 100% ownership of Munksjö.

3. Munksjö within the Trelleborg group

As Munksjö now is a part of the Trelleborg AB, we will have a short look at this company. Trelleborg, with 19,700 employees in 1991 (down from 26,400 in 1989) is mainly engaged in mining and metal industries. Other activities include rubber products.

To judge a merger, analysts often use the term 'synergy', meaning that a positive interplay should be realised were both partners add something to one another, so as 1+1 makes more than just 2.

It is not clear whether there will be any synergy between Trelleborg and Munksjö. Trelleborg incorporated the former Hexagon company Swegon apart from Munksjö. Swegon operates in the Building, Ventilation and Climate business. Also it incorporated Fristads AB, a manufacturer of work clothing, in its Ahlsell division².

What is left from Munksjö now operates as a Business Area, having incorporated the former Hexagon company Cerbo (packaging) and ID Kort.

Already before taking over Munksjö, Trelleborg had formally acquired all the shares and subscription rights in the engineering company Componenta previously owned by Munksjö. The holding corresponds to 48.3% of the shares and votes in Componenta. The deal formed part of a plan whereby Munksjö, in which Trelleborg controlled at that time 48% of the shares, is to concentrate entirely on forest industry products.

This lack of synergy indicates that Munksjö future as part of Trelleborg is not very certain. Indeed Trelleborg notes in its 1991 annual report to see great

² In 1991, Munksjö offered Fristads to the investment fund EDCC, to merge it with Ehco-KLM Kleding, based in Haaksbergen. Fristads was offered to Ehco-KLM some months ago, but the company decided against the acquisition.

opportunities for Munksjö to develop further, adding: 'either on its own or together with others in new structural forms.'

Trelleborg finds itself at the moment in a difficult period. Base metal prices were falling in 1991. The building market fell with 15-20%. Trelleborg cut its workforce at Ahlsell with 20%. 1992 is expected to be another weak year. Trelleborg sees 1991 profits at more than 500 million crowns, against an earlier forecast of profits between 500 million crowns and one billion crowns. The company wrote down the value of its holdings in associated firms Custodia and Munksjö by a total of 450 million crowns due to feared losses.

Trelleborg had a very weak performance in 1991 in terms of both operating margin (profit/sales) and return on shareholders equity. Also its equity ratio is very low, which points to high debts. The debt burden is even higher as it was for Munksjö before the take-over. Interest payments accounted for 1,285 SEK million in 1991, a bit lower than in 1990 (1,457 SEK million), whereas operating profit was negative: -46 SEK million. (before depreciation, taxes and interests). At Munksjö interest payments as a % of operating profit was 46.7% in 1990. This means that from every 100 Krona that Munksjö earned, it had to pay almost 47 Krona to the banks.

Trelleborg could write a profit over 1991 because of high earnings from dividends on shares in subsidiaries, compensating its losses from operational activities. This situation also existed in 1989 and 1990, but is improving.

In 1992 Trelleborg plans a share issue to improve the equity/assets ratio and 'to play an active role and be an attractive partner in the restructuring discussions which are in progress in nearly all its business areas', according to the annual report.

Table 2: Comparison Munksjö and Trelleborg

	1991	1990		1989		1988		1987	
	Trel.	Trel.	Mun.	Trel.	Mun.	Trel.	Mun	Trel.	Mun
return on total capital	9.6	18.6	11.8	20.6	24.2	19.4	11.5	12.8	17.3
ret. on shareholders equity	4.9	22.9	10.4	34.8	40.1	40.5	12.6	34.8	24.8
operating profit/sales	2.3	9.0	7.9	10.2	21.4	9.0	9.6	5.2	11.6
equity ratio (*)	25	29	26	22	56	20	50	12	50

Source: annual reports Munksjö, Trelleborg 1991

Due to differences in accounting principles, one should look more at differences in developments than at absolute values. But it is clear that Munksjö had a very good year in 1989, both in terms of its profit margin on sales and in terms of return on shareholders equity. However, both indicators do not show a clear parallel tendency. 1990 showed a worsening situation. But it is the equity ratio, which shows the most remarkable tendency. It halved in 1990, showing an acute crisis. A low equity ratio means that a company may run into solvency problems. In Sweden, it is more common for companies to be highly indebted, but the average equity ratio is far better than the ones shown in the table. Such a low ratio means that banks will only give credit under very strict conditions. Trelleborgs equity ratio was very low in 1987, but it showed a rising tendency, until 1991. It is still very low. Its return on shareholders equity was very high in 1988, but fell quickly, to quite a low level in 1991.

4. Divisions and internal structure of Munksjö

Munksjö has five main business areas: envelopes, packaging, hygiene products, paper and pulp. Within Trelleborg, Munksjö is an independent business area, with its headquarters still in Jönköping. Most business areas have different business units, based on formerly acquired companies or different plants.

Envelopes

Table 3: Key figures envelope division

		1989/90	1989/90	1988/89	1987/88
		Ljungdahl/Chapman			
Invoiced sales	SEK mil	829.6	405.4	679.6	555.8
Operating profits	SEK mil	38.2	-6.9	43.8	56.2
Return on total capital	%	9.3	neg.	11.9	14.6
Export share	%	18	2	18	18
Blue-collar employees	number	827	727	751	660
White-collar employees	number	398	276	338	278

Source: Munksjö annual report 1989-90, (before the Trelleborg take-over)

We cannot compare the most recent figures, as the Trelleborg 1991 annual report doesn't give detailed information about the different business areas. It just states: 'Falling volumes in the envelope market and unsatisfactory development for Ljungdahl Förpackningar, led to unsatisfactory earnings in 1991.'

Munksjö has become one of the biggest European envelope producers, with sales exceeding 12,000 SEK million and employing over 2,000 people (incl. Chapman, some packaging, and stationary products of the former Emil Sandberg AB), with envelope factories in 7 towns. Envelopes are manufactured in Nybro and Högsby (Sweden), Björnbak (Denmark), and in the UK in London and Darwen (special envelopes) and Edinburgh and Walsall (standard products). Products include both plain and printed envelopes, for which a 6 colour web offset press is used.

The envelope division consists of two companies: AB Sture Ljungdahl and its subsidiaries, and Chapman (UK). Until 1990 these two companies were independent business areas within Munksjö, but after the Trelleborg acquisition they have been merged.

As can be seen from the table, productivity and performance at Chapman was much worse than at Ljungdahl. In 1989/90 Chapman was restructured, at a loss of 15% of the jobs without affecting production capacity. The costs involved affected the company result.

In the UK, Munksjö has a market share of 16%, in Scandinavia it is market leader, with at least 30%.

Both companies also had packaging activities, like the Chapman sheet plants in Blackburn, Doncaster and Hertford, but it is not clear whether these have been transferred to another business area. Ljungdahl Förpackningar, specialized in high quality graphics products made of printed mini corrugated board, still is part of the envelope division. In 1987 a new packaging factory was opened, just in time to take advantage of a great expansion of the market.

The envelope division also contains some miscellaneous activities:

Ljungdahls Officina, which took over ESA (stationary wholesaler) in 1989, runs operations in the consumer goods area with products such as writing material, letter paper and office products (Tippex, Post-it). The business area is looking for expansion in special market segments such as environmental friendly recycled paper envelopes and other stationary products.

Business communications:

Ljungdahl Mailman (Stockholm), Skandinaviska Lithorex (Landskrona taken over in 1989) and Ralton (Helsingborg) are active in the direct mail market (printed matter, laser printing, mailing services). This area of business has not yet become very internationalized.

The former Hexagon company ID Kort, the largest manufacturer of identity cards in Sweden. It has subsidiaries in Norway (ID Data), Denmark (SystemCard) and the Netherlands (TIB Cards).

Expowell AB (offset-miniwell, Torsby) taken over from Munksjö Kraftemballagge AB in 1989. It is not clear whether this still is part of the company.

Packaging

Table 4: Key figures Packaging

		1989/90	1988/89	1987/88
Invoiced sales	SEK mil	620.8	625.9	542.6
Operating profits	SEK mil	45.5	68.9	62.2
Return on total capital	%	11.0	16.6	16.5
Export share	%	4	6	6
Blue-collar employees	number	530	566	566
White-collar employees	number	187	233	193

Source: Munksjö annual report 1989-90 (before the Trelleborg take-over)

Again we cannot give detailed figures over 1991. The Trelleborg annual reports notes: 'The recession in Sweden meant a decrease in the overall market. Return on capital is unsatisfactory, but Munksjö Kraftemballage nevertheless attained earnings on par with 1990.'

In the packaging sector Munksjö operates three companies: Munksjö Kraftemballage AB, Munksjö Lagamill and Cerbo.

Munksjö Kraftemballage is one of Swedens leading manufacturers of transport and consumer packaging, mainly based on corrugated packaging. It also produces solid board, liner board and recycled fibre-based paper packagings. The products are mainly manufactured from recycled paper from Munksjö Lagamill in Timfors. It has four plants, in Nybro (corrugated), Norrköping (corrugated), Timfors (corrugated/solid board, to be closed), and Landskrona (Ställiwell). Head office is at Nybro. Marketing activities are operated in cooperation with Pappersgruppen AB (Möndal) which also bought Vilen-Bolagen from Munksjö in 1990. Pappersgruppen AB is one of Swedens leading paper

wholesalers. Munksjö acquired 75% of Pappersgruppen corrugated sheet factory, Pegewell in Holsbybrunn.

The Expowell AB (Torsby) subsidiary, which was acquired in 1986, was sold to the envelope division Ljungdahl.

Munksjö Lagamill was split of Munksjö Kraftemballage and contains the Timsfors plants producing paper, board and lined board.

Cerbo is a packaging company in the plastics and board sectors. It was part of the Hexagon take over. Cerbo is organised in three divisions: Industry, Food and Medical Packaging. Sweden, Norway, Denmark and the Netherlands are the main markets.

Munksjö strategy in this sector is to develop high value systems. It can analyse, plan and install total packaging systems with automatic wrapping machines. Most of these systems are manufactured by the partly owned Norwegian Nor-Reg A/S company. Munksjö has invested highly in CAD/CAM.

In november 1991 news came that Munksjö Kraftemballage will close its Sweden corrugated board plant with a possible 153 job losses. Some employees will be offered work at Munksjö's Lagamill recycled paper plant in Timsfors. Employees within Munksjö Kraftemballage and Well Solid will be affected. The closure will mean corrugated board production is concentrated in Norrköping and Nybro.

In 1990 Munksjö Kraftemballage produced 52,000 m tpy of paperboard at its 3 plants (excl. Landskrona), with 20,000 m tpy coming from the plant at Nybro, Sweden. The Nybro plant is reported to be its most modern plant. The 14,000 ft² plant has 225 employees and makes mostly flatbed-diecut and glued boxes for systems packaging.

The new Linerflex 2000 preprint press started up recently in a dedicated plant adjacent to the Nybro packaging plant. The new GBP4 mil plant, which will soon reach its target of producing 5,000 m tpy preprinted liner, is now the most

modern preprint facility in Europe. It preprints kraft and test liner in basis weights of 40-400 g/m² at speeds to 300 m/min and a maximum width of 2.56 m. Its 1+6+1 print set-up features Infra-Red drying capability, an upstream coating station, printing in up to 6 colours and a final station for acrylic or high-gloss UV varnishing. Preprinted liner from the preprint plant is converted into corrugated packaging at the Nybro packaging facility, which houses a 2.45-m Simon corrugating line with a C-flute single facer and an MHI E and B flute dual facer.

In 1987 Munksjö acquired the Norwegian packaging firm Inpak S/A which produces paper bags and plastic bags with a turnover of SEK 130 million. In 1990 this company was ranked under the Pulp and Paper business area. This company was not mentioned in the Trelleborg annual report over 1991.

At the end of 1990 Tartu Wellpakk (USSR) was established by Munksjö (Sweden) and Tartu KEK (Estonia, USSR) to manufacture corrugated board and carton in Estonia. Munksjö will provide machinery and equipment, while the Estonian firm will take care of premises and a workforce. Investment is expected to total SEK 25 mil. The machines are old paper machines used previously by Munksjö but which are now being replaced. Packaging manufactured at the plant will be sold in two currencies, with western currency going to Munksjö.

Hygiene

Table 5: Key figures Hygiene

		1989/90*	1988/89	1987/88
Invoiced sales	SEK mil	232.1	143.5	106.5
Operating profits	SEK mil	6.7	8.0	-7.6
Return on total capital	%	5.0	6.7	neg
Export share	%	40	28	27
Blue-collar employees	number	240	117	105
White-collar employees	number	104	51	36

* from 1-1-1990 including Sunland-Eker

Source: Munksjö annual report 1989-90 (before the Trelleborg take-over)

This business area consists of Munksjö Hygiene AB and Sunland-Eker. In may 1990, Sunland-Eker (Norway), one of the last remaining small independent Norwegian paper concerns, was purchased by Munksjö. The concern is the largest manufacturer of hygiene paper in Norway, with a market share of 20%. It produces 25.000 t/y of crepe paper for domestic use, with turnover of around NKr225 mil/y. It uses only recycled papers.

The business area has two plants, in Jönköping and the Sunland-Eker plant in Drammen. At both these plants the recycling processing and the manufacturing of the finished products takes place. In addition, base paper is exported to industrial converters in most European countries.

According to the 1991 trelleborg annual report 'Competition is tough as there is overproduction of tissue paper in the Nordic countries. The years earnings were better than in 1990 but are still too low.'

Main competitors in Scandinavia are Metsä-Serla, Mönlycke (SCA) and Nokia. Munksjö is rather small, compared to its competitors. Four companies are dominating the European tissue market: Scott Paper holds 18% of the market, J/A Mont Group (Feruzzi, James River, Nokia) 14%, PWA: 11% and Kimberly-Clark: 5%. These four together control almost half the European tissue market (PPI november 1991).

Some companies, like Metsä-Serla and Stora-Feldmühle, have decided not to seek expansion in the EC tissue market as costs are too high and too many others are looking for the same opportunities. But as tissue products can not be economically transported over large distances, local producers are still able to hold some market share. In marketing, research and logistics, however the larger firms will have an advantage.

Many tissue producers in Europe try to get out of the squeeze between the large-sized producers of their inputs and the big retail chains which are their main customers. They are targeting 'institutional markets' like hospitals and schools because of higher margins and more stable sales.

Munksjö is stressing the environmental friendly characteristics of its products and has been broadening its product range to offer a full range in each area.

Paper and pulp

Table 6: Key figures Pulp and Paper

		1989/90	1988/89	1987/88
Invoiced sales	SEK mil	1,176.4	1,253.9	1,160.3
Operating profits	SEK mil	127.7	115.4	89.6
Return on total capital	%	18.5	18.3	16.8
Export share	%	82	82	84
Blue-collar employees	number	674	756	766
White-collar employees	number	229	256	244

Source: Munksjö annual report 1989-90 (before the Trelleborg take-over)

After Trelleborg took over Munksjö, it split up its paper and pulp business area into two different areas. Before that, Munksjö distinguished between Aspa Bruk and Billingfors.

Aspa Bruk pulp plant -->
bleached special pulp

Jönköping paper mill
electro-technical paper
carbonising base paper (until 1988)
envelope paper
value added paper products

Billingfors pulp plant -->
sulphate pulp

Billingfors paper mill
carbonising base paper
spantex (for veneered wooden surfaces and
kitchen interiors)
other paper

In 1988 Munksjö reorganised its paper and pulp activities, creating a Paper division (incl. Inpak from Norway) apart from Aspa Bruk. This paper division Munksjö Paper AB contained three divisions:

Thin Paper

Special Papers (mainly electro-technical paper)

Value Added.

At Jönköping two paper machines were closed down and production concentrated on electro-technical paper, groundwood base paper and value added paper.

After the Trelleborg take-over, the Paper division consists of the former Billingsfors and Jönköping paper activities, whereas the Pulp division is made up by the Aspa Bruk pulp mill. The position of the Billingsfors pulp mill is not clear.

In 1987 Munksjö acquired 33% of Sydved to secure its raw materials base.

Most of Aspa Bruks pulp is being exported. In carbonising base paper, Munksjö claims to be totally dominant in the European market. In electro-technical paper it claims a 35% market share. In other segments it competes with other small specialized firms and with UPM of Finland, PWA from Germany and U.S. Thilmany. The Trelleborg annual report notes for the Pulp division that a small loss was made, but this was still satisfactory in comparison with the industry in general. For the paper area it was said "The effect of the implemented rationalisation measures was a marked improvement in earnings in 1991".

5. The Hexagon subsidiaries

When acquiring Hexagon, Munksjö became the possessor of a lot of companies which didn't fit in to Munksjö main activities. When financial problems mounted, the need to sell them became very urgent.

Hexagon AB has now been dissolved and its subsidiaries are now subsidiaries of Munksjö. The companies which do not fit in with the Trelleborg/Munksjö strategy have been put up for sale. At the end of 1990 Lammhults Mobel (Sweden), furniture manufacturer, was acquired by Sydostinvest (Sweden) from Munksjö. Lammhults Mobel employed 90 people and had turnover of SEK 70 mil. The Swedish company Fabege AB acquired the car parking company CarPark by the end of 1990 from Munksjö for approximately SEK 200 million. CarPark owns and manages several parking constructions in Stockholm.

In the meantime Hexagon Denmark A/S of Copenhagen abandoned its former policy of acquisition of Danish companies following the takeover of its Swedish parent Hexagon AB by Munksjö. Hexagon Denmark sold all of its share stakes, leaving it as a paper company.³

By July 1991 the Trelleborg/Munksjö group had already disposed of 17 former Hexagon companies, at the turn of the year only one more had been sold. Mid-1991 the group decided not to sell ID-Kort, Fristads or Hemglass, all of which were originally part of the Hexagon group. Mr Kjell Nilsson, the chief executive of Trelleborg, said the group had decided to hold on to the companies because

3 In 1990 Hexagon Denmark suffered a deficit of DKr 23.286m, compared with a deficit of DKr 4.852m in 1989. Hexagon Denmark A/S is expected to show a huge profit for 1991 as a result of the sale of Bakkegarden and Glyngore. At the beginning of the year most of Hexagon Denmark's shareholders' equity of DKr 90.4m was on loan to Munksjö. Hexagon Denmark was delisted in connection with the change in ownership of Hexagon AB.

it had not received any acceptable takeover offers. ID-Kort has been made part of Munksjö's envelope division within Trelleborg.

In february 1992 Skandinaviska Forvarvskapital acquired Hemglass AB. The consideration for the deal is SEK 400 million. In 1991 Hemglass had a turnover of SEK 410 million, profit of SEK 65 million and about 400 employees.

6. Munksjö's Strategy

Paper companies have generally tried to enlarge themselves, because in a capital intensive industry like this, economics of scale are very important. There is a worldwide urge to merge as the pulp and paper industry becomes increasingly global. This results in an increasing internationalization and concentration of the paper-converting industry.

In this paragraph we will describe Munksjö's strategy and show that it doesn't differ much from most other integrated paper manufacturing and paper converting firms. The general strategy in this sector is marked by 3 characteristics:

- European firms are still not operating on a global level but are concentrating on the European market,
- There is a decreasing importance of pulp production in Europe,
- Major companies are looking for forward integration, mostly by buying paper-converting companies.

*** European firms are still not operating on a global level.**

Even Stora and SCA are concentrated on the European market. This concentration on the European market has an advantage and a disadvantage. The disadvantage being that the European market is very crowded. The European industry has been marked by restructuring and take-overs. Especially American firms, which account for 8 out of the ten biggest P&P companies in the world have sought expansion in Europe as their homemarket became saturated.

*** Forward Integration, mostly by buying paper-converting companies**

The decreasing importance of pulp production correspondent with a forward integration into paper converting by the major paper manufacturers. Also, many main paper-companies have moved into distribution.

Most of the time, forward integration was not pursued by starting greenfield activities, but by buying paper converting and distributing companies.

The paper industry has come to the end of the longest upswing in its fortunes that anyone in the business can remember. As profits are beginning to fall, the motivation for mergers is rising. Size brings economies and makes production planning simpler. The international nature of the industry leads to multinational groupings. Size is also vital when it comes to investment. A new machine is very costly. This scale of investment can only be made by a large, financially strong group. All these motivating factors will become even more pressing in the future, ensuring that competition between the large, aggressive paper groups will grow as the number of likely targets dwindles.

In the 1980s the trend of Nordic paper companies taking over other firms, was amplified by various factors. There are basically four reasons for the recent acquisitions:

- getting out of the volatile pulp market
- enlarging EC presence
- prepare for competition of US firms entering the European market
- paper companies had to find ways of investing the large sums they had earned in the long boom period of the 1980s.

The second reason became less important as the Swedish government applied for EC membership in 1991, but besides because of fear of EC-protectionism,

Nordic firms also feel the need to be close to their customers. This even leads to some Swedish companies moving their head quarters out of Sweden.

Munksjö most clearly followed a forward integration strategy when moving into the envelope business by some major take-overs. But Munksjö has also tried to follow a diversification strategy in the late 1980s. The Hexagon take-over was against the current wisdom in industrial management, where stress has been put on defining your core-businesses. In the paper industry this is qualified by the need for forward integration, but this is not the same as diversification.

Custodia planned to reduce Munksjö to the envelope division. In this business area also a forward integration strategy was pursued, as Munksjö moved into the mailing and business communications sector and in stationary distribution. Being a relatively small company, Munksjö is targeting small, specialised market segments like highly converted and pre-printed packaging, technical papers and envelopes, where the competition of the big producers is not as strong.

At the end of this profile, an in-depth analysis of Munksjö's two main sectors, envelopes and packaging is given, including a more detailed discussion of Munksjö's strategy in this field.

7. Performance

It is difficult to give a clear account of Munksjö's financial performance. First of all the acquisition of Hexagon, the purchase of Munksjö by its parent company Munksjö Intressenter and the take-over by Trelleborg, has time and again altered the balance sheet.

Secondly, after Munksjö became part of Trelleborg, we're without detailed figures on Munksjö's position.

During the second part of the 1980s Munksjö performed very well, even better than most other Swedish paper companies. It showed the highest rate of equity growth (PPI January 1992).

In par. 3 we compared Munksjö to Trelleborg and concluded that Trelleborg performance still is weak.

In par. 4 we discussed the development of the different business area's within Munksjö. Comparing them we might conclude:

- Chapman was performing badly, also Ljungdahl showed a weak performance in 1990 and 1991
- Packaging and Paper and Pulp is performing quite good, considering the market situation
- Hygiene seems to be improving, but is still not very strong.

As the envelope division is Munksjö biggest operation, with a large export share, and Munksjö also has the biggest market share, it may be expected that it will continue its activities here. This is not as clear for hygiene. Here it is possible that Munksjö will pull back, freeing highly needed financial resources for its other activities.

8. Labour issues

The next table lists the number of employees as of mid 1990, before the Trelleborg take-over and still including a lot of former Hexagon firms. The municipalities where no number is given for in 1989 are mostly these former Hexagon firms. Of these ID Kort (located in Stockholm, Strangäs, Oslo, Delft-the Netherlands, Hellerup-Denmark) and Cerbo (Trollättan, Göteborg, Kumla, Ästorp and Skjetten) are still part of Munksjö.

	1990	1989
Parent Company		
Askersund	242	241
Jönköping	273	385
Group Companies		
Alingsås	25	
Arvika	80	
Bengtstors	359	354
Borlänge	66	
Borås	115	23
Eskilstuna	23	
Essunga	22	
Gothenburg	117	20
Helsingborg	131	137
Högsby	34	41
Jönköping	168	
Kalix	29	
Kalmar	78	
Kumla	51	
Landskrona	98	
Lidingö	67	
Linköping	33	
Linköping	116	
Malmö	54	
Mark	49	
Markaryd	279	280

Mjölby	131	
Norrköping	204	220
Nybro	1,007	826
Skövde	59	
Stockholm	269	99
Strängnäs	290	
Sävsjö	63	
Tibro	263	
Torsby	22	22
Tranemo	30	
Trollhättan	158	
Tyresö	29	
Vara	25	
Växjö	74	
Ydre	43	
Åstorp	20	
Älmhult	135	
Örebro	161	
Other	146	38
Total	5,123	2,228
of whom		
Men	3,549	
Women	1,574	
Norway	449	58
Denmark	724	
Finland	79	
Great Britain	1,109	1,115
West Germany	110	
Portugal	137	
Canada	67	
Other	8	
Total	2,683	1,382
Total Munksjö Group	8,321	4,182

In 1991 Munksjö had 5,252 employees, of which outside Sweden: 1,715. This indicates that employment outside Sweden fell drastically: with 30%, from 2,399 in 1990. This was mainly due to the greater number of foreign employment at Hexagon. Total employment fell with 20%.

9. Munksjö, its sector and the main competitors

As the two most important business area's of Munksjö are envelope manufacturing and packaging, we will concentrate our analysis on these two sectors.

Envelope manufacturing and business communications

Munksjö has become one of the biggest European envelope producers. Munksjö most important competitors in Europe are the Swiss Biber company and La Couronne of France. In Scandinavia, were it its market leader, the most important competitors are Bongs Fabriker in Kristianstad and Harold Lynch and Co in Norway.

In direct mail Munksjö doesn't play an important role on an international level. In Sweden it competes with the Swedish Post Office Address Register and Esselte, which is also the most important competitor in office supplies.

The envelope market still is quite fragmented internationally. Many European countries still have a national market leader, which is not very important on a global scale but holds a substantive share of their home-market. For example Dreyer has 35% of the Norwegian envelope market.

In the UK, 4 companies hold 75% of the market, all of them part of international companies. The four market leaders of the late 1980s: DRG, Wiggins Teape, Spicers, and Chapman all changed ownership. Spicers became part of SCA, but could be divested in the future, and Wiggins Teape merged with Arjomari. Some markets, like the Dutch, which have been more fragmented, have witnessed the entrance of foreign competitors, for instance La Couronne taking over Excelsior. Excelsior holds a 5% share of the Dutch market.

Although in Germany the market leader is the Reinhardt Schmidt company, Eugen Lemppenau aims to get a hold of 8-10% of the German envelope and

letter paper market in three-four years, increasing from its current share of 3-4%. It has seen strong growth through a partnership agreement with Garniet-Ponsonnet-Vuillard (GPV) (France) and Mayer-Kuvert. The companies have been cooperating on a technical and commercial level, exchanging patents and product ranges.⁴

At the end of 1990 news came that Dreyer (Norway), envelope and label manufacturer, may be acquired by Bongs (Sweden), office equipment firm, following the reaching of an agreement with Harald Lynch (Norway), envelope manufacturer (6.7% shareholder in Dreyer) which was previously unwilling to cooperate. Dreyer was 90% acquired by Bongs in 1989 and the new agreement will allow Dreyer to be wholly acquired by Bongs.

Until lately, in Europe DRG was an important competitor. This large British conglomerate owned by the Dickinson Robinson Group sold its Stationery Products division (Apsley, UK) to Biber Hldg. The envelope division of DRG employs 3,000 people and has units in the UK, Canada, New Zealand, France and Australia. DRG is involved in production of envelope and writing goods, and will strengthen the activities of Biber in paper converting. Biber regards the envelope market as an area of future growth, having already acquired Gebr. Heyder (Dueren, W Germany).

In february 1990, Munksjö was also in the market for buying DRG. It was announced that DRG's (UK) envelope division was to be acquired by Munksjö for between SEK 1.2-1.5 bil. Munksjö is part owner of Pembridge (UK) together with Beijer Capital, and Pembridge in turn owns DRG.

4 According to some sources, GPV currently holds second place in the European envelope market, operating two plants, but this is doubtful. It is more likely to hold a second position in France.

The envelope sector has entered a restructuring stage. Big paper and pulp companies which had the manufacturing of envelopes as one of their many activities are, either selling these activities, or turning them into more important parts of their activities.

For instance, Abitibi-Price sold its envelope division to Supremex. International Paper was to sell its Envelope Converting Group, but in February 1992 refrained from doing so. The business had Dollars 1050 SEK mil in sales in 1991 and employs approximately 1,500 people.

Also SCA's Spicers division is not sure to stay a part of SCA. Other big concerns with peripheral envelope activities include Wiggins Teape and Jefferson Smurfit.

With Europe moving towards an integrated market, increasing concentration, and the entrance of US producers like American Business Products into the European market, it is useful to look at the US experience to see what could happen to the European industry.

The average envelope manufacturing plant in Europe of the more important producers employs 50-100 people, whereas in the US the average plant size is 100-200. Large US factories produce 9-10 million envelopes a day. Compare this to Otto Ficker, a leading German producer, which produces 75 million envelopes in a year.

In the US the industry suffers from excess capacity, which in turn has created fierce competition and a buyer's market. Substantial consolidation has already taken place over the past 10 years and the trend will probably continue. Large companies will grow bigger through acquisitions. This will also increase their interests for gaining market share in Europe, just like we've already seen in other paper converting sectors.

Also in Europe envelope manufacturers have concentrated on survival in a market that has seen problems. The current industry is characterised by a low investment level and company mergers, with the accent being on the develop-

ment of new products in a bid to compete for new business, often with the use of new materials. A rationalisation of the industry appears to be under way, with some big firms, and more recent smaller ones experiencing difficulties. For instance in 1990 Makem was acquired by competitor Rival Envelopes. There is not much news of investment being undertaken.

The next table list the few important investments that have been announced. It shows the recent increased activity of German firms.

Table 7: New investments in envelope manufacturing

	Investing company	Investment target	Specification
1992	Reinhardt Schmidt	Torgau (East-Germany)	SEK 36 million, 40 jobs
1991	Curtis 1000 Europe GmbH(*)	Neuwieder Couvert Fabrik	acquisition
1991	Biber	Schaller-Frewi	SEK 11 million
1991	Reinhardt Schmidt	Glinde branche (Hamburg)	?
1991	La Couronne	Excelsior BV (Netherlands)	acquisition 52 people
1991	Biber	Frenk BV (Netherlands)	acquisition
1991	Curtis 1000 Europe GmbH	Envelopes Int. Ltd.	acquisition
1991	Causton Envelopes UK	new CAD/CAM system	?
1990	Willy FP Fehling	Bad Tennstedt (Ex-DDR)	SEK 11-16 million 30 jobs
1990	Otto Ficker	Kirchheim	?
1990	Biber	Gebr. Heyder (Germany)	acquisition
1990	Dobson&Crowther (J.Smurfit)	new printed envel. machine	?
1990	Rival Envelopes	new mailing wallet machine	?
1990	Rival Envelopes	Makem	acquisition

(*) joint-venture owned by American Business Products, Inc.

Source: SOMO research

As can be seen from this overview, which is in no way comprehensive, the Biber company, involved in paper production, conversion and merchanting, is very expansive. With the acquisition of the DRG Stationery Products, the group

has continued its expansion into the envelopes and writing paper market. The company is pursuing its strategy of concentrating on high-margin products. Following the acquisitions in the envelope and writing accessory sectors, the group now ranks among the market leaders alongside La Couronne and Munksjö.

However, Biber is also affected by the recession in the paper industry, which arrived in a period when the company had already started an expensive expansion programme in graphic paper production. Biber reported a loss of SFr 28.6 mil in 1991, versus net profit of SFr 11 mil in 1990. This was the worst result in the company's history. Consolidated turnover increased 18.2% to SFr 893 mil. Targeted group turnover for 1991 is over SFr1 bil, of which a large portion is expected to come from John Dickinson (UK), paper company, which was recently acquired. In 1991 the loss was limited to 28.6 m SFr. only by reducing depreciations from 50.1 to 46.3 m SFr. The company's financing costs are expected to rise due to the new paper mill (Biber Nova) coming into full production. Biber is the largest paper manufacturer in Switzerland.

In 1990 Biber acquired 40% of Frenk (Amsterdam, Netherlands), paper trading firm. Frenk had already been representing the three Biber paper producing firms in the Netherlands for some years, as well as several other German paper producing firms. Biber hopes to build up its international paper trading network with its share in Frenk. The firm already has shares in Swiss, French, Italian and Danish paper trading firms. Biber currently gets 16% of its total turnover from its foreign paper wholesaling activities. The deal will boost this figure. In addition, Frenk has many years of experience in Eastern Europe.

The background to this restructuring stage is formed by ever increasing costs of new investments.

For example, the German market leader Reinhart Schmidt planned to invest 88 SEK million in 1991, after investing 22 SEK million in 1990. (Sales in 1990 rose to 525.3 SEK million.)

The increase of investment costs is caused by the following trends:

1. The scale of production is rising.

A new machine can turn out more than 30,000 envelopes per hour in comparison to older machines which produced 8,000-14,000 envelopes per hour.

This may lead to further restructuring in the sector as it is not yet clear whether the market will show significant growth in the 1990s. Industry's desire to convert from mail to wire services may have an adverse effect on the envelope industry, as fewer orders for bank envelopes come in. However, some experts note the computer and the fax machine failed to cause a predicted decrease in the use of paper and believe envelopes will survive the EDI (Electronic Data Interchange) challenge in similar fashion.

Paper envelopes face competition from plastics and from Tyvek envelopes. Tyvek is a material developed by DuPont. DuPont recently announced the expansion of its Tyvek manufacturing capacity, which seems to indicate growing demand. The company does, however, retain a patent on the material, also used extensively by the construction industry, and this curtails supply and tends to keep its cost from declining. Plastic film envelopes represent a potential growth area, increasing at a rate of 15-20% a year in Europe.

Plastic envelopes still account for a small part of the total envelopes market, 3% in the US, 2% in Germany and 1% in the UK. Plastics, due to their moisture resistance and light weight, have gained a share in the industrial shipping sack market. Plastic envelopes are rising in popularity with large-volume mailers as a replacement for heavier paper envelopes. Paper will remain dominant as plastics gain market share in specialty niche markets, such as chemical and biomedical shipping envelopes.

Industrial paper and chemical distributors have spied a window of opportunity in the sale of specialty envelopes, reveals a recent survey by Infometrics National Research Center. Without exception, all distributors who partici-

pated in the survey anticipate a rise in their 1990 specialty envelope sales over 1989 sales. Increments ranged from 4 to 12.77 percent - a 4 percent increase for kraft envelopes lined with nylon reinforcement fibers to a 12.77 percent increase for kraft envelopes lined with polyethylene bubble material. Additional envelopes charting hearty advances in the study are: clear plastic (8.20 percent); plain kraft paper, both bleached and coloured (8.27 and 9.17 percent respectively); Tyvek (11.8 percent); kraft lined with macerated news (12.25); and plain kraft paper (12.60). Respondents cite manufacturing plants as the most favourable area of sales growth for kraft envelopes, followed by advertising/direct marketing and shipping departments. Plastic envelopes show equivalent gains for courier services, shipping and manufacturing channels. Tyvek sales, on the other hand, are predicted to excel in manufacturing plants and direct marketing, and to a lesser degree, in the health care industry and shipping arenas.

Important are also end-user trends that record a preference toward tamper-evident closures and indestructible wrappers. Other desirable features include lightweight envelopes and self-sealing closures.

2. In addition to increasing scale to lower costs, developing specialty products, flexibility and quality are main competition items.

The envelope market is comprised of two segments - large end users to whom price is an issue, because they buy in very large quantities, and the smaller end users who need custom printing to make the envelope as unique as possible and enhance their image. The latter segment is growing, say industry experts.

Experts recommend that the envelope industry look for opportunities in specialty envelopes, which are less cyclical. They should expect and prepare for regulations that will require the use of more recycled fibers.

Colours are becoming very important as end users look for ways to be different. Some specialty envelope and mailer end users want outstanding strength and printability. All this means that producers have to produce more varieties, and hence shorter machine runs. This will mark an important area of new investment, as now machines are being produced which can within 30 minutes change the size of the envelope and window format to be produced. It is now necessary to be able to supply small quantities of envelopes to end users. Distributors and end users are looking for good inventory levels for just-in-time delivery. Offices do not have the space to store large quantities.

3. Vertical integration is becoming more important as envelope manufacturers try to customize their products, for example by delivering pre-printed envelopes.

Elberfelder Briefumschlagfabrik (Elberfeld, Germany, subs of Reinhard Schmidt), envelope manufacturer, produces 220 mil/y envelopes, with capacity of 65 mil post-printed envelopes.

Causton Envelopes (UK) has invested in IPDS Design CAD/CAM system software for use in preparing envelope samples. With the system, a Misomex MP 3000 Plotter has also been installed. Arden Software supplied the package.

Vertical integration can even be extended to sheeting.

Diamond Envelope, a US full-service envelope company, added in-house sheeting capabilities to improve turnaround and cut materials costs at its new 50,000 sq ft plant at Naperville, IL. When the new plant opened, Diamond's storage and warehousing space was expanded. Its dependence on outside sources to supply sheeted stock limited its materials availability. The new Maxson sheeter, which features close-tolerance cutting, eliminated the need to pay the upcharge for trimming and sheeting stock. The new unit requires only 1 operator to sheet an average of 80,000 lb of paper/week. This will save an estimated Dollars 70,000-75,000/yr because stock can be purchased in roll form at a lower cost vs pre-sheeted stock.

In-house sheeting also allows Diamond to improve its turnaround time. Its orders for rollstock are filled in about 1 wk, vs 4-6 wk for sheeted stock.

4. Expanding the automatization of the production process is also a reason for investments:

Schaller-Frewi, envelope manufacturer, has seen investment of more than 110 SEK 30 mil by parent company Biber (Switzerland) in a new 20k sq mt building, which includes an automated transport system and 6k pallet places. Two new short run machines have considerably increased capacity at Schaller, and it now uses recycled paper for some 25% of production.

A problem facing the industry today is the unavoidable generation of waste from manufacturing processes. Not only is it a nuisance in the production area, but it becomes costly and often dangerous if removed by hand. The solution, in many industries, lies in the use of automated air extraction systems. One company which has used this solution to a sorting problem is Wiggins Teape (Stationers).

Its problem was how to cope with over 600 tonnes of process trim generated per year, much of it reclaimable and of consequent resale value. At the manufacturing site in Aberdeen the company makes up to 28million envelopes per week, many with the cut-out window - a process which generates a huge amount of waste paper. The envelopes come in various hues. To maximise resale value these different colours must be separated effectively and to achieve this, Wiggins Teape decided to modify and extend its existing waste extraction system.

A Survey of the packaging market and Munksjö's position

A slowdown of growth, increased demands by the food-industry and tougher environmental laws; these are the main characteristics of the packaging market in the 1990s.

Main markets will be France, Germany, Great Britain, and Italy. Germany is the biggest market.

There is a tendency in reducing the weight of packaging and development of returnable and recyclable packaging. Bringing back the weight of packaging is an important task of the packaging industry. This both means lower costs for the manufacturer which uses the packaging, as less waste. Besides that there is a tendency to more sophisticated packagings which are at the same time a display aid to selling, since goods have to sell themselves. Today's shopper expects a much wider selection of goods, including exotic fruits and vegetables out of the season. Transporting these has required more protection and better display. The environmental issue is becoming ever more important. Companies in countries with tough environmental laws, may have an competitive advantage because they will be the first to introduce more environmental friendly products.

The next table shows the biggest European packaging firms.

In packaging, SCA is Munksjö's biggest competitor. It also focuses on corrugated and it is also very active in the Scandinavian and U.K. market, where Munksjö is concentrated.

In 1991 SCA Packaging had sales of 9,516 sek million. Its major plants contain:

Division Corrugated board: Belgium, Ireland, France, the Netherlands, Italy, Sweden, Great Britain. Employees 7,840.

Division Containerboard: Sweden (Obbola, Munksund), the Netherlands (Eerbeek), Italy (Porcari), Great Britain (Aylesford) Employees 2,150.

Table 8: Top 9 European Paper and carton based Packaging Companies 1990

Rank	European Packaging Sales (\$ m)	Company	Country	European Sales (\$ m)	Packaging Sales (\$ m)
1	2,030	Tetra Pak	Sweden	2,538	3,760
2	1,587	Stora	Sweden	10,997	1,692
3	1,321	SCA	Sweden	5,121	1,321
4	1,056	ASSI	Sweden	1,273	1,077
5	758	Modo	Sweden	2,928	808
6	727	Enso Gutzeit	Finland	1,895	908
7	683	Bühmann-Tetterode	Netherlands	2,486	842
8	675	Lin Pac	UK	688	852
9	625	Bowater	UK	1,244	691

Sources: Pira European Packaging 1991/BZW/Company Report.

Recycling: Great Britain, Italy, the Netherlands. Employees 530.

The financial power of SCA to make large investments can hardly be matched by Munksjö.

SCA Packaging's Aylesford (Kent) branch has completed a GBP13.5 mil expansion and is now one of the UK's largest and most efficient corrugated plants. The project raised capacity by 40% and improved service capabilities and expanded the Kent plant with 300 employees. Installations included a new GBP4 mil BHS corrugator, a 4-colour flexo folder-gluer and an automated materials handling system. Aylesford's main products are apple cases and other types of produce packaging.

Future investment of SCA Packaging in the UK includes a GBP20m 'mega plant' which will be built on a greenfield site in 1993/4 to replace the company's existing two Scottish plants. In December 1991 SCA Packaging announced to invest GBP10 mil upgrade its corrugated fibreboard transit and display packaging plant in Wigan. The investment will include the installation of a new GBP4m BHS 2450mm corrugator which can produce B and C flute board at speeds of up to 300m/minute. The machine can run two separate score profiles. The other corrugator at the Wigan plant will be updated as part of the investment. SCA will also be installing a 3-colour press at the plant in a bid to extend its present printing service.

In 1995, SCA Packaging UK will turn its attention to the Lydbrook plant, thus completing its multi-million pound investment programme to bring all its factories up to Euro-standards, in terms of production and service excellence in all areas of corrugated manufacture.

Besides the U.K., also Sweden receives some major investments. SCA has spent SEK 100 million to boost liner capacity at its SCA Nordliner Obbola mill. The mill has 1 kraftliner machine, a 250,000 t/y kraft pulp line and 115,000 t/y wastepaper unit. A new line will be added so that wastepaper treatment capacity will rise to some 260,000-290,000 t/y. Testliner is made from recycled fibre, and output at Obbola will be some 40,000 t/y at first, a figure that could rise to some 100,000 t/y in a few years.

SCA market positions in corrugated packaging are quite impressive: 1st in Sweden (32%) Great Britain (15%), Belgium (28%), Italy (16%), 2nd in the Netherlands (30%), 6th in France (5%). This shows that the corrugated market is divided between a large share, controlled by a few big firms, and another share where a lot of smaller companies compete.

In comparison with SCA Munksjö is more or less a 'niche player' which means that it finds itself a special part of the market to avoid competing with the mass producers. Munksjö specializes in pre-printed board and mini-corrugated board. In Western Europe, preprint output totals about 940 mil m², while corrugated board consumption totals about 20 bil m²/yr. Preprinted board may achieve a market share of 30% of the corrugated board market, vs about a 5% market share currently. In Sweden, corrugated board consumption totals about 550 mil m²/yr, about one-eighth the consumption in the UK, Germany or France. With the equipment in place, Munksjö Kraftemballage has the preprint capacity to supply 6.5% of the domestic market for corrugated board. It has sales of 110 mil m² of corrugated board, or a 20% market share.

Although through its Colour Reel operations at Corby, SCA Packaging has UK leadership in the market for flexo pre-print, perhaps Munksjö's most important competitor is ASSI from Sweden, because this company is very close to Munksjö's specialities. All the Assi corrugated packaging businesses benefit from the close association with a kraftliner mill to be able to forge ahead on product

development. Assi Packaging UK, which operates eight corrugators, has its roots in the acquisition of Dolan Packaging in 1977 and Thames Case from Unilever in 1987.

The three specialist businesses are Assi Print & Packaging, which includes the Warrington Mainline, Lithoflex and Supaflex operations, and also incorporates the Cumbernauld plant of Assi Packaging Scotland; Assi Packaging Systems; and Assi Packaging Special Products, including Assi Displayprint, of Brentwood, and Gough Packaging, of Norwich.

The UK businesses offer a good example of Assi Packaging's management ethos, of which one of the clearest demonstrations is the GBP20m greenfield development at Assi Packaging (South West) in Bristol. Described 'an entirely new concept', it takes the lion's share of the GBP25m investment programme, will include the very latest technology, and within 12 months will be the most up-to-date corrugated plant in Britain.

The investment programme also includes a corrugator recently installed at Stalybridge, while both the Northampton and Purfleet plants are upgrading corrugators and installing automatic materials handling systems. Assi Print & Packaging at Warrington is installing a 6-colour Simon Legend press. Each business within Assi Packaging UK is reported to have ambitious development plans for the current year, and at the leading edge is the Northampton plant of Assi Packaging (South East), described as the most advanced example of Assi's attempt to get close to its customers and become a 'service-oriented manufacturer'.

Assi concentrates on delivery reliability, help in emergencies, early discussion of delivery changes, good lead times, technical back-up and product design/-innovation.

At the heart of the Northampton plant is a computer-based loading system which literally allows 'customers to schedule the plant'. The computer system facilitates the integration of sales, production planning and customer delivery. It provides an instant and accurate statement of the hours available on each production line, permitting customer service representatives to give accurate timescales to clients. Furthermore, the system provides a mechanism for satisfying emergency orders, while 7-day-a-week operations, with no holiday shut-downs, gives maximum flexibility. The system is also linked to Assi Packaging plants nationwide, adding further adaptability to service customers' requirements. Corrugated board is produced on the principle that each customer order is manufactured as a single and complete unit and constraints are not imposed by decking or grade run length considerations. Thus corrugator time is sacrificed for customer efficiency.

The Lithoflex business within Assi Print & Packaging at Warrington has been upgraded. The use of flexo pre-print is allowing carton quality printing standards to be achieved. It is equipped to produce the whole corrugated product range in multicolour, flexo post-printed and lithoprinted packs, and also has the latest CAD and CAG systems. In between corrugated packaging and folding cartons, there is an area of overlap which corrugated is proving to fill effectively.

Of special interest from Assi Print & Packaging is the new F, or Microflute, range of grades. This is a fine, strong board with minute F-flute corrugations, giving the rigidity and cushioning properties of corrugated, without its usual appearance. It has clean edges and can be run in single or double-face construction laminated to litho sheets or preprint reels. In Mr Thomas's view, the surface of the promotional potentialities for well-printed corrugated packaging has scarcely been skimmed.

Printed corrugated board

The use of improved graphics combined with economic printing costs has opened up opportunities for adding advertising value to the functional efficiency of the corrugated container. The printing process responsible is flexography which combines printing from rubber plates or stereotypes with the use of fast drying inks. Two flexographic printing methods are employed - Flexo-Preprint and Flexo-Postprint. Flexo-Preprint involves reel to reel printing of the top side kraft or test liner before the lining of this material to the fluting and bottom liner. On certain flexo machines it is possible to print up to eight colours at running speeds of up to 375 metre/min.

Flexo-Postprint involves printing on already lined corrugated board. This direct printing method offers box users a special advantage - lined board can be held in stock by the case makers ready for printing short to medium runs at comparatively short notice.

The relative benefits of offline flexo printing, vs inline printing, for corrugated containers are several. The offline process is defined as direct printing on

corrugated board as a single operation that does not include slotting, folding, gluing or diecutting in the printing line. Offline printing now features high-speed multicolour presses that produce stacks of printed board that are then fed into flatbed or rotary diecutters. Container materials are changing to meet the needs of display printing and high quality corrugated graphics. Corrugated made with mottled or white outer linerboard (white top), which accepts higher quality graphics, accounts for 37% of the corrugated output for W Europe and 23% in the US and Japan. That figure will rise as more value-added printed boxes are made.

Besides ASSI and SCA, a lot of other packaging firms have been investing in flexo-print, mainly in the UK.

Mead Packaging opened its first UK plant in november 1991 to design, print and convert coated natural kraft into multipacks for bottles, cans, carton bricks and jars. In terms of board throughput, the new plant, at Yate near Bristol, currently has a capacity of 10,000 tonnes/year. Phase one of the project will be completed in May 1993 with the installation of an 8-station reel-fed flexographic press with in-line cutting and creasing. The new press will represent an additional investment of GBP2m and will be built by Mead. Two further production lines are expected to be installed in phases two and three of the expansion. Ultimately the plant will have a capacity of 30,000 tonnes/year and the number of staff employed will rise from the present level of around 100 to 250-300, said managing director Ian Gatehouse. The expansion plans are expected to be completed within the next five years. Meanwhile, the Dollars 25m (GBP14.7m) factory contains some of the most advanced printing, cutting, creasing and glueing equipment, including a Planeta Varimat 7 offset litho press (pictured below) with in-line coater, capable of printing up to 10,000 impressions an hour. Printing plates are made in-house on Dainippon equipment; the use of a Planeta Veri plate scanner reduces make-ready time and a 6-colour machine changeover can be achieved in around three hours.

In the same month, Ashton Corrugated (Midlands) has opened a flexo preprint plant at its corrugated box plant in Clay Cross, England. The new 8-colour flexo press, supplied by Cobden-Chadwick, was installed in the expansion at the box plant. The press has been designed to handle recycled linerboard, which Ashton expects to be using in higher volumes. Ashton is a recently acquired subsidiary of OTOR (France), a leading producer of preprinted linerboard and is Europe's leading producer of recycled paper. The state-of-the-art Linerflex preprint unit is the 6th Linerflex press to be installed at facilities owned by OTOR.

AE Willmer (Luton, UK) has installed a Bizzozero Pioneer 1800 flexo printer-slotter at its plant at Luton, England in october 1991. The modular unit is based on a rotary slotter that can be made

up as a 3-colour casemaking line with additional modules. The Pioneer 1800 can handle up to 12,000 sheets/hr and will provide Willmers with a higher degree of flexibility, allowing it to produce printed cases with greater speed and efficiency.

Bux Corrugated Containers plans to spend GBP4.8 mil at its plant at Norfolk, England, mostly to upgrade and expand the Peters corrugator there. The project will include installation of 2 multilute single-facers plus other equipment and upgrades for the corrugator. Two new flexo printer-slotter, a flexo rotary diecutting press and an automatic flat bed diecutter will also be installed to handle increased output from the corrugator.

Also outside the UK, investment into flexo-print is mounting:

CorrPrint (Vamdrup, Denmark) produces 35 mil sq m/yr of preprinted corrugated board and has installed a 2nd press to raise its output by 45 mil sq m/yr. It operates a Cobden Chadwick press, installed in 1989, to produce preprinted packaging, mostly for food products. The 2nd press, a Fischer & Krecke flexo line, will more than double its current capacity.

The next table sums these investment projects:

	Date	Destiny	Costs	Specifications
Munksjö	1990	Nybro	40 SEK mil.	6-colour plus coating press
SCA	1991	Aylesford	145 SEK mil*	4-colour flexo-folder gluer
		Wigan	?	3-colour press
Assi	1991	Bristol	214 SEK mil.*	?
	1991	Warrington	?	6-colour press
Mead Pack.	1991-96	Bristol	21 SEK mil.	8-station reel-fed flexographic
	1991-96	Bristol	?	7 offset litho press
Ashton Corr.	1991	Ashton	?	8-colour flexo press
AE Willmer	1991	Luton	?	3-colour flexo printer-slotter
Bux Corr.	1991	Norfolk	51 SEK mil.*	2 flexo printers-slotter
CorrPrint	1991	Vamdrup	?	2nd flexo press
* incl. non-printing investments				

Source: Somo research

The gigantic cost of these projects, is one reason why board producers are increasingly seeking to face the future by merging into broader conglomerates.

Most major takeovers have a Swedish parent: that of Thames case and Dolan being taken over by ASSI, and Thames Board being acquired by Iggesund. The Thames-Iggesund undertaking was subsequently, in the summer of last year, taken over by the MoDo Group. SCA took over Reedpack. Stora is concentrating on the German market, by its Feldmühle acquisition.

There are two reasons for the increasing scale of packaging firms. First, there is a continuous integration happening between food processing, food packaging and food distribution. This was for instance the reason for Tetra Pak to buy Alfa Laval.

Secondly, the European food multinationals, which are the main customers, are planning to concentrate their production, to develop European brands, and to standardize packaging and distribution. They find themselves confronted by retail chains which are becoming bigger and more powerful, and who are able to press their interests. In between them, the packaging industry is too small to influence developments and has to adapt to the wishes of the food processing industry. It may be expected that, in the context of "Just-in-time" production, the food processing industry wants the packagers to work "wall-to-wall". In the longer run it may even be the case that the food industry decides that filling and packaging is no core activity, and go looking for partners to do contract-packaging. They then will prefer firms which are big enough to do the necessary investments in large quantity systems, to satisfy high international standards, and to be able to operate in all countries where the food-processing industry is operating. Therefore, companies are expanding all over Europe and taking over other companies. For other companies only local niche markets will remain. But this all depends on the ability of the food-industry to promote European brands.

It may be doubted whether Munksjö can keep its investments at the level needed to meet the international competition. But this may also be the only aspect in which big companies really have an advantage.

In contrast to the pulp and paper sector, paper converting is dominated by small and medium sized firms. In this sector a strong market orientation, and thus flexibility, is needed. Also technology determines this smaller scale. A modern corrugator plant has an average capacity of 35,000t/y, compared with 200,000t/y for a paper machine. Cartonage industry has to come to terms with smaller average orders size from for instance in Germany 25 tons 10 years ago, to 14 tons nowadays.

In the packaging sector there is a great need for local supply combined with an understanding of the need for collaboration between individual units to service customers on a national level. Although some major customers are talking about organising corrugated supplies on a pan-European basis, their real need is to have a supplier who is sensitive to their country or regional requirements. The prospect of European brands, European standards and pan-European specifications, although very real, is some way off. There are too many national differences which relate to local market preferences. So, for example, it is not surprising to see one pan-European margarine manufacturer making slightly different formulations of the same product for each country, then packaging them in a wide range of containers, which also differ from country to country. Corrugated specifications for basically the same range of products all vary tremendously and it is going to take some time to sort out the differences.

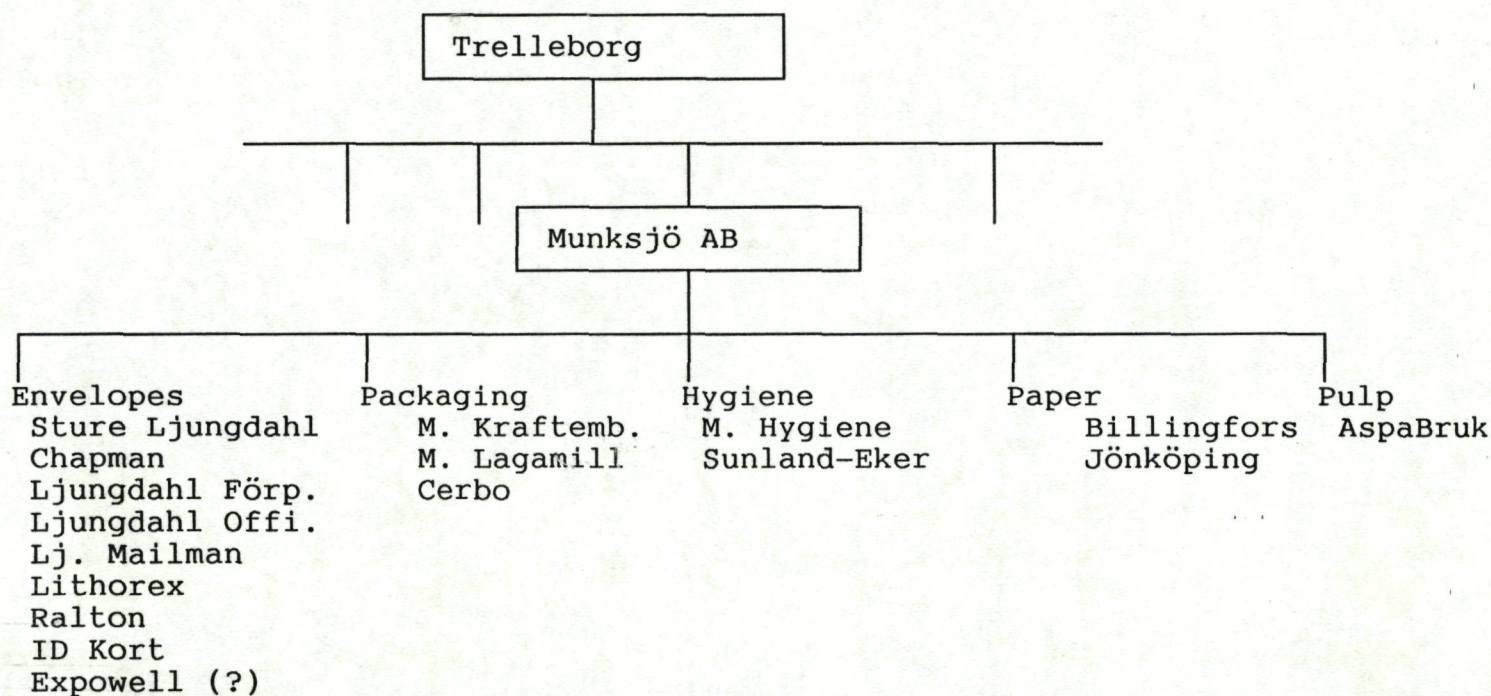
To conclude, we must begin with the assessment that Munksjö is not a big player in the international packaging business. It concentrates on Scandinavia, mainly Sweden, and the UK. In Sweden it claims a 20% of the market for industrial packaging, versus SCA's 32%. In the special segment of highly converted and pre-printed products it claims a 50% hold of the Swedish market. In 1990 it only exported 4%. This scale of production may be too small for the

big investment needs in this sector. On the other hand, the specialization on the local market and the lack of big scale, doesn't have to be a disadvantage. Whether the very big companies like SCA can be successful in this sector remains an open question. Although the corrugated packagings market is mainly local, companies like SCA seeks economics of scale in areas of specialization, R&D, and because of ever more expensive machinery. But more important than sheer economics of scale will be flexibility and quality:

- There is a great need for tailor made solutions for customers. Just in time production of customers, mainly in the food business, means also stricter quality control. Also customers are demanding better printability, higher gloss, etc.
- In packaging, carton boxes etc. transport costs limit plant size. For corrugated case materials, it is estimated that 150 miles is the maximum distance over which transport costs still leave a reasonable margin for producers.
- There are still many differences between nation markets.

All this may lead to the conclusion that Munksjö's size is not prohibitive to survive in this highly competitive market. But a high level of investment will remain necessary.

Annex 1: The Munksjö company



Most of these listed subsidiareis operate several plants, for instance Munksjö kraftemballage has plants in Nybro, Norrköping and Timsfors. Cerbo itself has three divisions: Industry, Food and Medical.

The Paper business area also contains the Spantex division.

(Source: annual report Trelleborg 1991, Munksjö 1990).

The position of the former associated companies is not clear. The Munksjö 1990 annual report of 1990 gave the following list:

Pappersåtervinnings AB	33%	0
Nyckeln Holding	22%	*
Vättern Invest	38%	*
Sydved	33%	*
Pool Investment KB	30%	0
Forvälnings AB Stråken	25%	0
Group companies also owned:		
Chipwich Inc.	48%	0
Shamash & Sons Inc	15%	0
A/S Pava-Finess	50%	
Scan Ply wood Ltd. (HongKong)	49%	*
Nor-reg A/S	34%	0
AB Snikki-Produkter	40%	
Royal Tullip SA	50%	*
HB Lövträ	30%	0

(0: value zero SEK, *: significant value)

According to the Who owns Whom (1990 data), Munksjö also owned the following firm:
Borås Invest AB

Sture Ljungdahl owned:
SFH Scandinavian Fulfilment House AB
T-Son Tele-Strategi Scandinavia AB.

Associated to Munksjö were:
Radio AB Samskogen
SMG Swedish Machine Group
Silvesco AB
Vättern-Invest
(Munksjö shareholding between 5 and 50%)

Annex 2: Addresses

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Munksjö's owners
 (situation before the Trelleborg take-over)

