

Chapter 9

Paper, paperboard and woodpulp – production, consumption and trade ¹

Highlights

- Economic recovery was the hallmark of pulp and paper market trends in 1999 and 2000, but a slowdown in global economic growth led to a more recent market reversal.
- European producers sustained record levels of paper and paperboard output in 2000, benefiting from regional GDP growth, a strong United States dollar and weak euro.
- Although prices had been climbing from early 1999 into 2000 for paper, paperboard, market pulp and recovered paper, they fell from peak levels during the first half of 2001.
- Market and profitability peaks attained earlier in the year 2000 gradually eroded, at first in North America and subsequently in Europe as well.
- The North American market reversal reflects impacts of a record United States trade deficit, a recession in the United States manufacturing sector, and weak economic growth in Asia.
- Monthly paper and paperboard purchases declined in the United States from early 2000 into the first quarter of 2001, the first protracted decline since the early 1990s.
- United States paper industry profits fell from the first quarter of 2000 to the first quarter of 2001, with weak exports, declining domestic purchases, and higher energy costs.
- Globally, net capacity growth remains subdued, well below historical growth rates, particularly in North America where many mills have been shut down in the past several years.
- A weakening of growth in Asian economies reduced pressures on global fibre supplies, further contributing to weakness in pricing for market pulp and recovered paper.
- Russia's pulp and paper sector experienced a significant recovery in 1999 and 2000, boosted by the devalued ruble along with growing domestic and export demands.

¹ By Dr. Peter J. Ince, Research Forester, USDA Forest Service, United States Forest Products Laboratory, One Gifford Pinchot Drive, Madison, Wisconsin United States 53705-2398, telephone +1 608 231 9364, fax +1 608 231 9592, e-mail: pince@fs.fed.us and Mr. Bernard Lombard, Recycling and Economics Manager, Confederation of European Paper Industries, 250 avenue Louise, B-1050 Brussels, Belgium, telephone +32 2 627 49 11, fax +32 2 646 81 37, e-mail: b.lombard@cepi.org and Prof. Eduard L. Akim, PhD, Saint Petersburg State Technological University of Plant Polymers, 4 Ivana Chernykh Str., Saint Perersburg 198095, Russia, and All-Russian Research Institute of Pulp and Paper Industry, telephone +7812 247 3558, fax +7812 534 8138, e-mail: akim@ed.spb.su

Secretariat introduction

The secretariat extends its appreciation to the authors of this chapter, senior author Dr. Peter J. Ince, Research Forester, USDA Forest Service, along with Prof. Eduard L. Akim, PhD, Saint Petersburg State Technological University of Plant Polymers, and All-Russian Research Institute of Pulp and Paper Industry and Mr. Bernard Lombard, Recycling and Economics Manager, Confederation of European Paper Industries (CEPI).

This is the second time that Dr. Ince has helped us with this chapter and this year he coordinated the contributions of his two co-authors. Dr. Ince is a contributor to the Timber Committee market discussions as well as a collaborator in other projects of the Committee's teams of specialists. He works in the same research unit on forest products markets as Mr. Henry Spelter who co-authored chapter 8, on wood-based panels. We truly appreciate their knowledgeable input to the Review and we thank simultaneously the USDA Forest Service, Forest Products Laboratory for enabling them to work together with us.

Professor Akim is a member of the FAO Advisory Committee on Paper and Wood Products and provided tremendous insight into the state of the pulp and paper industry in Russia for this chapter. He was a speaker at the Timber Committee and European Forestry Commission market discussions in 2000 because of his in-depth knowledge of Russian timber markets.

Mr. Lombard and his colleague from CEPI, Mr. Eric Kilby, Statistics Manager, continue the collaboration that we have had established with CEPI. We sincerely appreciate the willingness of Ms. Marie Arwidson, Director General of CEPI, to assist us with the European perspective in this chapter.

From the secretariat standpoint the contributions of these three authors provide a deeper regional coverage than in the past. Although unseen by the readers, the authors and their assistants in their respective organizations were most helpful in validating the statistics sent by country correspondents, or more importantly, in filling in the gaps when a country did not supply certain pulp and paper statistics.

9.1 Introduction

This chapter discusses recent trends in European, North American and Russian paper and paperboard markets, along with trends in woodpulp and fibre markets. The discussion relates to pulpwood trends which are explained in preceding chapters in the context of overall trends in wood raw material use. The chapter is based on UNECE/FAO statistics as broken down into the subregions of CIS, EU/EFTA, Other Europe and North

America. When statistics from CEPI are used, the text indicates the different basis.

9.2 Paper and paperboard

Although recovery in demand and profits had been the hallmark of European and North American pulp and paper markets in 1999 and well into the year 2000, a subsequent decline in global economic growth resulted in a reversal of market trends. From early 1999 through the first half of 2000 the market recovery in pulp and paper had propelled prices and profits to the highest levels since the previous global market peak in 1995. Record levels of consumption and production of paper and paperboard commodities were attained in both Europe and North America during the 1999 to 2000 period, but there were early signs that the recovery would be transitory by mid-2000, particularly in North America. Monthly United States purchases of paper and paperboard products had begun to decline early in the year. After years of sustained economic growth, the broad manufacturing sector of the United States went into a recession, heavily burdened by an exceptionally strong United States dollar and bulging trade deficit. The general slowdown in global economic growth reflects the record United States trade deficit, recession in United States manufacturing, and weak economic growth in Asia, particularly in Japan.

Looking back at the late 1990s, a number of key events signaled structural changes in the European and North American pulp and paper sectors, including corporate mergers, consolidation and a departure from historical patterns of growth in production capacity. The market volatility of the late 1990s was generally associated with a build-up of capacity and excess inventories in 1996, followed by the Asian economic collapse in 1997 and 1998. Corporate mergers, consolidation and slower capacity growth were largely a response to market volatility and variable profitability of the mid- to late 1990s, especially in the period from late 1995 through 1998. Market volatility was influenced also by expanded globalization of markets and currency exchange rate adjustments (i.e. strong United States dollar versus euro and other currencies). For a period in 1999 and 2000, it appeared that industry consolidation and constrained capacity growth were having the effect of stabilizing pulp, paper and paperboard commodity prices in North America and Europe. Record levels of product output and relatively high profits were attained in that period, at first in North America and subsequently in Europe. By early 2001, however, it appeared that markets had peaked in the previous year as prices for most pulp, paper and paperboard commodities were retreating on a global scale, owing in large part to the decline in United States domestic purchases and slow economic growth in

TABLE 9.1.1
Consumption ¹ of paper and paperboard in the UNECE region, 1997 -2000
(1,000 m.t.)

	1997	1998	1999	2000	Change 1999 to 2000	
					Volume	%
EU/EFTA	72,023	73,267	77,930	79,390	1,460	1.9
of which:						
Germany	16,454	17,073	17,766	19,112	1,346	7.6
France	10,418	10,743	10,955	11,359	404	3.7
United Kingdom	11,258	11,413	11,871	11,233	-638	-5.4
Italy	9,487	9,592	10,461	11,020	559	5.3
Spain	5,634	5,462	8,047	6,677	-1,370	-17.0
Netherlands	3,429	3,894	4,164	3,650	-514	-12.3
OTHER EUROPE	8,275	8,595	8,776	9,900	1,125	12.8
of which:						
Turkey	2,030	2,075	2,142	2,755	613	28.6
Poland	2,000	2,088	2,268	2,420	152	6.7
Czech Republic	761	782	803	854	51	6.4
Hungary	675	659	659	779	120	18.2
CIS	2,716	2,817	3,712	4,322	609	16.4
of which:						
Russian Federation	2,122	2,128	2,848	3,382	534	18.8
NORTH AMERICA	95,719	98,588	104,090	101,641	-2,448	-2.4
Canada	5,191	6,721	8,220	7,948	-271	-3.3
United States	90,528	91,866	95,870	93,693	-2,177	-2.3

¹ Apparent consumption = production + imports - exports.

Source : UNECE/FAO TIMBER database, 2001.

Asia. Table 9.1.1 displays recent paper and paperboard apparent consumption data and Table 9.1.2 displays paper and paperboard production data for Europe, divided into two subregions, the Russian Federation and North America (United States and Canada).

9.2.1 Paper and paperboard in Europe

In the year 2000, apparent consumption of paper and paperboard among the 41 UNECE countries in Europe increased by 3.0% to reach 89.3 million m.t. The change was far greater for central and eastern European countries (CEECs), increasing by 12.8% to reach almost 10 million m.t. while the EU/EFTA countries increased less, by 1.9% to reach a much larger volume, 79.4 million m.t. Apparent consumption of paper and paperboard in Europe had previously reached a record level of 85.3 million m.t. in 1999, up from 82.5 in 1998 according to UNECE/FAO data.

According to the Confederation of European Paper Industries (CEPI, Production Statistics 4th Quarter 2000), CEPI member countries² in Europe reached record levels of paper and paperboard production early in the year 2000. CEPI member countries include all leading European producers and account for over 95% of total paper and paperboard production capacity within the ECE EU/EFTA and other Europe subregions.

The year 2000 was generally a picture of sustained growth for CEPI member countries in total. The year 1999 had ended with a flourish, the final quarter registering a record level of paper and paperboard output. This impetus was carried through the year 2000 for paper, paperboard and pulp grades. Quarterly returns of production clearly show the progress during the year, but

² Throughout this chapter, the CEPI members, including associate members, are these 18 countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

TABLE 9.1.2
Production of paper and paperboard in the UNECE region, 1997 -2000
(1,000 m.t.)

	1997	1998	1999	2000	Change 1999 to 2000	
					Volume	%
GRAPHIC PAPERS						
EU/EFTA	40,003	41,336	42,586	44,912	2,326	5.5
of which:						
Finland	9,088	9,243	9,392	9,810	418	4.5
Germany	8,121	8,260	8,401	9,334	933	11.1
Sweden	4,884	5,023	5,125	5,367	242	4.7
Other Europe	1,963	2,109	2,046	2,244	198	9.7
of which:						
Poland	565	594	667	731	64	9.6
Turkey	308	348	319	385	66	20.7
Russian Federation	1,577	1,869	2,188	2,288	100	4.6
North America	43,108	42,964	44,618	45,223	605	1.4
Canada	13,824	13,736	14,884	15,554	670	4.5
United States	29,284	29,228	29,734	29,669	-65	-0.2
SANITARY AND HOUSEHOLD PAPERS						
EU/EFTA	4,553	4,716	4,937	5,105	168	3.4
of which:						
Italy	1,026	1,102	1,182	1,200	18	1.5
Germany	890	931	954	1,017	63	6.6
United Kingdom	639	635	718	724	6	0.8
Other Europe	773	764	776	859	83	10.7
of which:						
Croatia	178	181	179	179	0	0.0
Slovakia	133	114	84	130	46	54.8
Russian Federation	93	94	106	116	10	9.4
North America	6,449	6,598	6,876	6,922	46	0.7
Canada	617	624	664	652	-12	-1.8
United States	5,832	5,974	6,212	6,270	58	0.9

UNECE/FAO FOREST PRODUCTS MARKET REVIEW 2001

also reveal a gradual moderation in growth. At the end of the first quarter of 2000, the increase compared to the previous year was +8.3%. By mid-year the cumulative comparison was +7.0%, and it was +6.6% at the nine-month stage. By the end of the year, paper and paperboard production over the quarter was up by 5.6% compared to 1999, a hefty growth rate but somewhat less robust than earlier in the year.

Although quarterly trends reveal a peak in paper and paperboard production early in the year 2000, European

producers sustained relatively high production levels throughout most of the year. Quarterly production volume among CEPI member countries peaked at 22.7 million m.t. in the first quarter of 2000 and dropped only slightly to 22.4 million m.t. by the fourth quarter of 2000, still the highest production level ever recorded for a fourth quarter by CEPI member countries. Total production of paper and paperboard for CEPI member countries in 2000 was just over the 90 million m.t. per annum mark, a record level of 90.5 million m.t.

TABLE 9.1.2 (contd.)
Production of paper and paperboard in the UNECE region, 1997 -2000
(1,000 m.t.)

	1997	1998	1999	2000	Change 1999 to 2000	
					Volume	%
PACKAGING MATERIALS						
EU/EFTA	31,731	31,845	33,074	34,869	1,795	5.4
of which:						
Germany	5,798	5,983	6,217	6,574	357	5.7
Sweden	4,331	4,429	4,527	4,968	441	9.7
France	4,195	4,347	4,395	4,601	206	4.7
Other Europe	3,537	3,502	3,486	3,734	248	7.1
of which:						
Turkey	895	918	940	1,067	127	13.5
Poland	921	886	873	885	12	1.4
Russian Federation	879	1,242	1,705	2,121	416	24.4
North America	53,813	53,511	55,257	52,954	-2,303	-4.2
Canada	4,139	4,365	4,582	4,496	-86	-1.9
United States	49,674	49,146	50,675	48,458	-2,217	-4.4
OTHER PAPER AND PAPERBOARD						
EU/EFTA	3,378	3,497	3,606	3,757	151	4.2
of which:						
Germany	1,102	1,137	1,170	1,257	87	7.4
United Kingdom	415	464	515	480	-35	-6.8
Spain	302	366	423	439 E	16	3.8
Other Europe	280	338	409	421	12	2.9
of which:						
Poland	48	116	182	190	8	4.4
Croatia	71	69	75	75 R	0	0.0
Russian Federation	411	390	536	714	178	33.2
United States	2,131	2,103	2,155	2,157	2	0.1

Source: UNECE/FAO TIMBER database, 2001

Production for the year 2000 increased by 4.8 million m.t. overall, a prodigious gain relative to the previous year.

Among CEPI member countries, increased production was recorded in 2000 across all paper and paperboard grades. Output of graphic paper grades (including newsprint) rose by 5.7%. Within the sector, production of uncoated graphic paper grades increased by 5.4%, while coated paper grades registered an increase of 8.5%. Mechanical paper grades achieved higher output growth rates (+9.8%) than woodfree grades (+5.1%). Newsprint output rose by 1.5%. Production of packaging grades rose by 5.8%, with case materials up by 4.9% and

folding boxboards by 10.3%. Sanitary and household paper production increased by 3.6%.

Paper and paperboard consumption trends in Europe continued to track closely European GDP trends through the year 2000. Among the 18 CEPI member countries, consumption³ of paper and paperboard rose by 4.3% in 2000, an increase of 3.5 million m.t. to 84.1 million m.t.

³ CEPI calculates consumption on a different basis than UNECE and FAO. CEPI's consumption equals domestic deliveries plus imports from outside their 18-country region. UNECE and FAO calculate apparent consumption equal to production plus imports minus exports.

Economic growth was estimated to have been around 3.4% within CEPI member countries. Trends in both domestic demand and exports were very dynamic.

CEPI countries' exports to countries outside of their region had declined in 1999, mainly owing to weak markets in Asia. However, exports from CEPI member countries increased in 2000 by a percentage similar to the increase in production, 4.7% to reach 10.2 million m.t. The dollar/euro exchange rate in particular continued to favour European paper exports to North America and to regions with currencies pegged to the dollar. Exports were particularly strong to both North and South America, which more than offset a decline of deliveries to Asian markets. About 23% of exports from CEPI member countries went to North America (mainly to the United States), 19% to central and eastern Europe, and most of the remainder to Asia. However, during the last quarter of 2000 and first half of the year 2001, a decline in United States paper and paperboard purchases and slow growth in Asian economies resulted in a weakening of export markets and declining prices for most paper and paperboard commodities.

Among CEPI member countries, imports of paper and paperboard rose by 8.2% to 5.1 million m.t. in 2000. Imports contributed 6.1% of consumption (compared to 5.9% in 1999). Imports from North America fell slightly as did shipments from all other regions except eastern Europe. Imports from eastern Europe to CEPI member countries rose by 27% to 1.8 million m.t. Imports from North America accounted for 44% of CEPI imports while 35% came from eastern Europe.

In general, there was no great divergence in consumption trends among the major product sectors. Consumption of graphic paper grades increased by 2.5% among CEPI member countries. Graphic paper deliveries within CEPI member countries rose by 3.3%, with imports up by 8.5% and exports up by 1.6%. Consumption of newsprint among CEPI member countries increased by 0.7% to 10.9 million m.t. This was mainly met by an increase in newsprint imports of nearly 0.1 million m.t. (+8.1%). Imports accounted for 11% of newsprint consumption. Deliveries of newsprint to export markets fell by 11.8% and newsprint deliveries within the internal CEPI market fell by 0.2%. Consumption of uncoated mechanical paper grades rose by 4.2% to 4.9 million m.t., with imports, exports and internal deliveries all showing increases. Growth in consumption of coated mechanical paper grades continued (+7.3%), rising to just under 7 million m.t. Consumption increased in the year 2000 for both uncoated woodfree grades (+2.6%) and coated woodfree grades (+0.4%). Uncoated woodfree imports fell by 11.9%, while imports of coated woodfree rose by 37.1%.

Consumption of packaging grades increased by 7.3% to 33.9 million m.t., as gains were registered for both imports (+6.9%) and exports (+8.9%), as well as for deliveries within CEPI countries (+4.5%). Among packaging grades, consumption of corrugated case materials increased by 6.2%, folding boxboard rose by 2.9%, wrappings by 3.3% and other paper and paperboard for packaging by 28.1% (to 3.8 million tonnes). Imports increased among all the grades. Exports increased overall for packaging grades, but exports of case materials to countries outside of CEPI fell by 7%.

Consumption of sanitary and household grades fell 2% to 5.4 million m.t., resulting in a 2.2% decline in deliveries by CEPI producers within CEPI member countries. Imports and exports, which are equivalent to about 3% of consumption, rose; exports by 17% and imports by 5%.

Although European paper and paperboard producers experienced buoyant market conditions throughout most of 2000, production and consumption of paper and paperboard were declining in the United States. For example, while production increased by 5.6% among CEPI member countries, paper and paperboard production in the United States declined by 2.5% in 2000. Canadian producers, who export heavily into both the European and United States markets, saw production of paper and paperboard rise by around 3% in 2000 (slower than European producers but better than the decline experienced by United States producers). Production figures for the first quarter of 2001 show a paper and paperboard output of 22.7 million tons for CEPI member countries, slightly lower than in the same period of 2000. In the first half of 2001, prices generally weakened in Europe for most paper and paperboard commodities. For example, reported European prices for linerboard in June 2001 were about 15% lower than year earlier levels (Pulp & Paper Week).

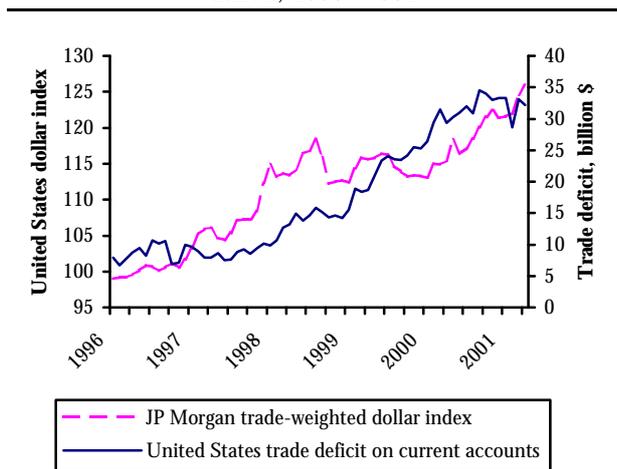
If not for the weakened condition of the United States economy (and weak growth in Asian economies), prospects for European exports might have continued to improve as a result of recent trade agreements. In June 2001, the United States suspended temporary trade sanctions on a number of export products from EU countries, including various paper and paperboard grades. Higher customs duties had been imposed by the United States in 1999 on European shipments of folding cartons, boxes, non-corrugated paper or paperboard cases, and uncoated felt paper and board. The United States had imposed the sanctions in the context of a trade dispute with the EU over bananas quotas which was resolved after a WTO ruling in April 2001. The United States then officially suspended the increased customs duties on various products (including paper and paperboard products) on July 1.

9.2.2 Paper and paperboard in North America

In the United States, 2000 and 2001 were marked by a strong dollar and a record trade deficit, resulting in a loss of competitiveness for United States manufacturers (graph 9.2.1) (see also chapter 2, section 2.1).

GRAPH 9.2.1

United States monthly trade-weighted dollar index (JP Morgan) and monthly United States trade deficit, 1996-2001

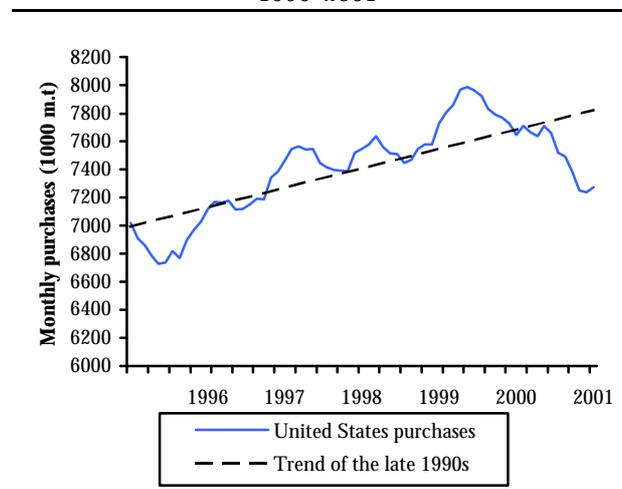


Sources: J.P. Morgan (board index), 2001; and United States Department of Commerce (trade deficit), 2001.

Although the United States housing market and American consumer confidence remained strong well into 2001, United States manufacturing activity had begun to recede earlier in 2000 in the face of declining export markets and increasing imports. The broad recession in the United States manufacturing sector contributed ultimately to a general slowdown in United States economic growth and a protracted downturn in domestic purchases of paper and paperboard from early 2000 to mid-2001, with reduced needs for corrugated case materials, packaging paper and paperboard, forms and office paper, and various other categories of paper and paperboard. Newsprint and sanitary paper products were not as immediately impacted by the manufacturing slowdown, but eventually purchases of most categories of paper and paperboard declined as the economic slowdown spread through the United States economy. Consequently, there was a sharp decline in monthly United States purchases of paper and paperboard products from early 2000 into the first half of 2001. The decline in monthly United States purchases of paper and paperboard products was a significant departure from the growth trend of the late 1990s and the first really protracted decline in domestic consumption of paper and paperboard since the early 1990s (graph 9.2.2).

GRAPH 9.2.2

United States monthly purchases of paper and paperboard products, 5-month moving average, 1996-2001



Source: American Forest and Paper Association, 2001.

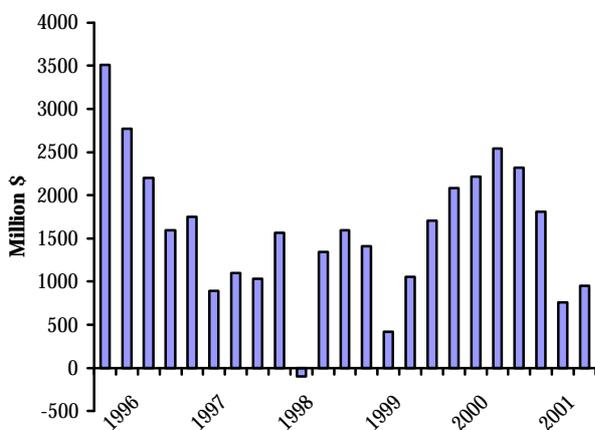
Through the late 1990s, apparent consumption of paper and paperboard in both Europe and North America had followed upward economic growth trends, correlated with robust growth in Gross Domestic Product (GDP). However, the recent decline in United States paper and paperboard purchases placed United States consumption and production on a negative track in stark contrast to weakened but still positive United States GDP growth. As annual United States GDP growth slowed from 5% in 2000 to 1% in the first quarter of 2001, the annual trend in United States apparent consumption of paper and paperboard slipped from -2.3% in 2000 to -4.7% in 2001 (on an unadjusted annual basis through May, 2001). While United States paper and paperboard prices had increased from the first quarter of 1999 through the first half of the year 2000, prices clearly had peaked and were retreating in the first half of 2001. Coupled with an economic slowdown in Asia, particularly in Japan, declining United States paper and paperboard purchases (stemming from the recession in United States manufacturing and bulging United States trade deficit) contributed to a generalized global reversal of pulp and paper market trends.

For the first time in many years United States producers faced the dual challenge of weak exports coupled with declining domestic demand, a circumstance bound to result in declining profitability. Even though production of paper and paperboard had increased in the United States in the late 1990s, United States exporters continued to be hampered by currency fluctuations and the generally strong value of the United States dollar, and United States markets became inundated by increased imports. Early in the second quarter of 2000 North

American producers began to also experience slippage in the tonnage of domestic shipments and profits. Eventually paper and paperboard prices peaked but not until later in 2000, allowing United States producers to achieve a peak in annual profits for the year 2000. However, quarterly profits in the United States paper and allied products industry were declining steadily throughout the year 2000 with the steadily declining tonnage of domestic purchases and declining exports (graph 9.2.3)

GRAPH 9.2.3

After-tax quarterly profits of United States paper and allied products industry, 1995 -2001



Source: United States Department of Commerce, Bureau of the Census, Quarterly Financial Report, 2001

Surging energy prices also offset profits for North American producers over the past year. In the late 1990s, electrical utility companies in California divested themselves of power plants to assume a new more limited role as energy distributors under the state's new deregulated market structure. The state created incentives for utilities to sell generating plants to unregulated private companies, but new power plant capacity was slow to be approved and built. This led to a short-run deficit in electrical energy generating capacity that became fully evident in California with power supply interruptions over the past year. In addition, whereas only about 10% of United States electrical generating capacity is based on natural gas, about one third of existing generating capacity in California (and much new capacity) is based on natural gas. Natural gas is also increasingly a preferred fuel in industry because of relatively low emissions and low pollution abatement costs (relative to coal or oil). Thus, in the year 2000 mounting demand pressures pushed wholesale prices dramatically higher for both purchased electricity and natural gas in North America, with the most pronounced impact in western regions

(numerous western states furnish electricity directly to the densely populated state of California). In addition to negative impacts on profits for pulp and paper producers, some mills in the western United States and Canada were temporarily idled or permanently closed in the past year due to higher energy costs.

In the year 2000, paper and paperboard consumption in North America dropped by 2.4%, with a 2.3% decline in consumption in the United States. In the United States alone, apparent consumption of paper and paperboard (including building paper) fell from a record level of 95.9 million m.t. in 1999 to 93.7 million m.t. in 2000 (based on production and trade data reported by the American Forest & Paper Association (AF&PA) Paper, Paperboard & Wood Pulp, Monthly Statistical Summary). The decline in United States paper and paperboard consumption stood starkly in contrast with United States GDP growth of 4% in 2000 (revised estimate). The decline in paper and paperboard consumption reflects impacts of the recession in the United States manufacturing sector and the record United States trade deficit.

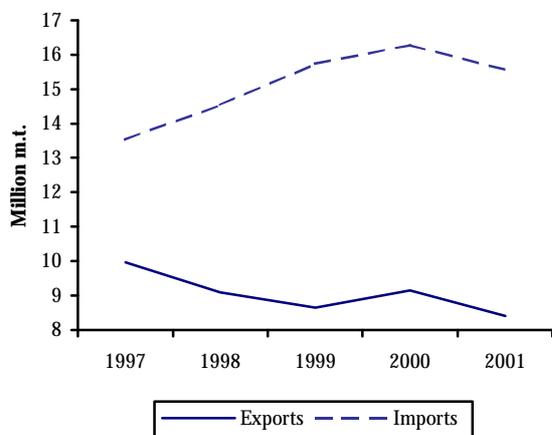
In the United States, production of paper and paperboard dropped in 2000 by 2.5%, from 97.9 to 95.4 million m.t., more than the drop in United States apparent consumption. More significantly, the production trend was generally declining on a monthly basis throughout most of the year and well into the year 2001. On an annual basis, United States production of paper and paperboard in the first five months of 2001 was 5.1% lower than production in 2000. The relatively high trade-weighted value of the United States dollar continued to dampen United States exports and provided economic incentive for high levels of United States imports.

The United States trade deficit in paper and paperboard widened significantly in recent years, as the tonnage difference between imports and exports approximately doubled between 1997 and 2000. The widened United States trade deficit in paper and paperboard since 1997 was attributable in part to the Asian economic decline in the period from 1997 to 1998, and also more recently attributable to the exceptionally strong value of the United States dollar. European producers continued to benefit from the exceptionally strong United States dollar and weak euro.

The trend in annual United States imports of paper and paperboard changed direction in 2001 based on preliminary data through April by AF&PA, but the drop in imports reflects weakness in the United States economy (graph 9.2.4). With declining domestic purchases, United States paper and paperboard imports were also declining by the first quarter of 2001, relative to record import levels in 2000. United States imports had

GRAPH 9.2.4

United States annual imports and exports of paper and paperboard, 1997 -2000, with preliminary estimates for 2001



Note: 2001 is forecast by AF&PA.

Source: American Forest and Paper Association, 2001.

increased to 16.3 million m.t. in the year 2000 (including construction paper and board), up from 15.7 million m.t. in 1999, but preliminary data for the year 2001 (through April) indicate an annual import volume of only 15.6 million m.t. In 2000, total United States exports of paper and paperboard were 9.1 million m.t., up from 8.6 million m.t. in 1999, owing primarily to a surge in exports early in the year 2000. However, over the year exports declined on a monthly basis, and preliminary data for 2001 indicate an annual export volume of only 8.4 million m.t.

In the United States, price trends for paper and paperboard commodities have generally continued to follow industry capacity utilization trends, as indicated by the correlation between trends in the nation-wide price index for all paper and paperboard commodities and trends in monthly capacity utilization (graph 9.2.5). The market trends for paper and paperboard are also generally correlated with trends in industry profits.

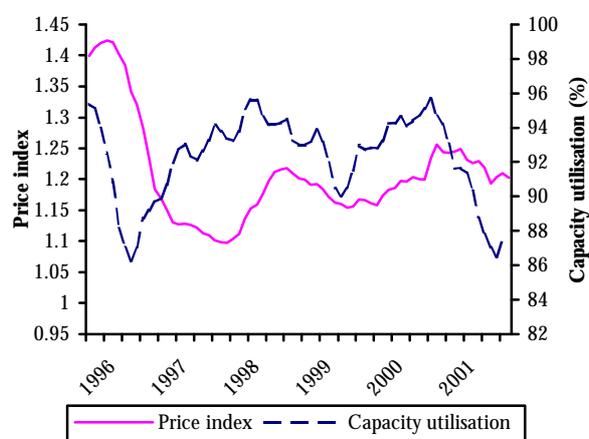
Prices and capacity utilization rates declined noticeably in the second half of the year 2000 and into the year 2001. By June of 2001, corrugated container board (case materials) and boxboard prices were down by 5 to 10% in North American markets relative to peak 2000 price levels (Pulp & Paper Week), while coated and uncoated graphic paper grades were also generally down from recent peak levels. As the capacity utilization rate generally leads price developments by a few months, the steep drop from mid-2000 to mid-2001 (from 96% to just over 86%) might indicate that further price weakness is possible.

During the late 1990s United States capacity utilization for paper and paperboard was correlated with

trends in United States exports as shown by monthly trends (graph 9.2.6). This correlation was the outcome of volatility in United States trade during the late 1990s. Even though United States exports were just 10 to 11% of United States paper and paperboard production, the volatile nature of export markets exerted a strong and variable influence on domestic markets (cf. graph 9.2.5). However, the two trends have diverged markedly in recent months. This divergence is a reflection of the

GRAPH 9.2.5

United States price index and capacity utilisation rate for paper and paperboard, 1995 -2001

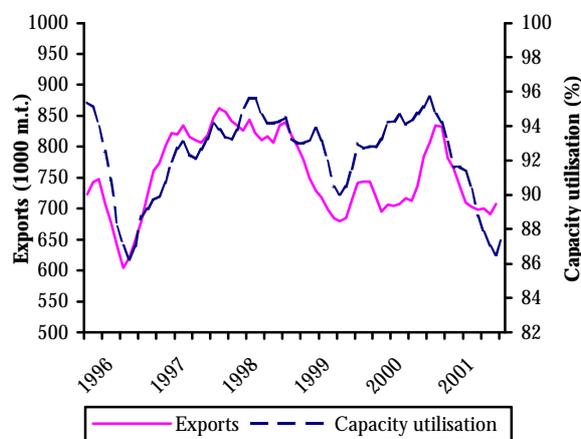


Note: Capacity utilisation is a 4-month average.

Sources: AF&PF (Capacity utilisation), 2001; and United States Bureau of Labor Statistics (Price index), 2001.

GRAPH 9.2.6

United States exports and capacity utilisation rate for paper and paperboard, 1995 -2001



Note: Capacity utilisation is a 4-month average.

Source: AF&PA (capacity utilisation), 2001; and United States Department of Commerce (exports), 2001.

recent decline in domestic purchases with the drop in domestic purchases overriding the relationship between exports and capacity utilization (cf. graph 9.2.2)

There are mixed signals for the short-term outlook for pulp and paper in the United States. By late June of 2001 there were few indicators of real strength in the overall United States economy and the United States manufacturing sector was still in recession. Overall United States industrial production fell by 0.7% in June of 2001, dropping industrial production to 3.5% below year earlier levels. The purchasing managers index (PMI), reported by the National Association of Purchasing Managers (NAPM), is a leading measure of manufacturing activity in the United States. The PMI had indicated that the broad United States manufacturing sector was in recession for 11 months up to June of 2001. However, the PMI turned upward in June 2001, its best level since November of 2000, reaching 44.7% (although an index value of less than 50% is still considered to be an indication that the manufacturing sector is contracting). Other conditions for economic growth apparent by mid-year 2001 included the recent Federal Reserve Bank reductions in short-term interest rates, declining energy prices, and a phased reduction in federal income tax rates. As an additional positive sign, total inventories of market pulp and containerboard declined in March through May of 2001, while the 4-month moving averages of paper and paperboard capacity utilization and exports trended upward for the first time in over a year (cf. graph 9.2.6).

Paper and paperboard capacity growth remains relatively subdued in North America where many older mills have been shut down in the past several years. Total paper and paperboard capacity in the United States and Canada is expected to increase by only about 0.8% per year between 2000 and 2003 according to estimates provided by the AF&PA and the Pulp and Paper Products Council of Canada (PPPC continues the statistical services formerly provided by the Canadian Pulp and Paper Association, CPPA, which is now known as the Forest Products Association of Canada or FPAC). The decline in growth for United States paper and paperboard capacity in particular stands in contrast to an average capacity growth rate of about 2.5% over the preceding 20 years. With declining levels of production for paper and paperboard, United States overall capacity utilization rates fell to an average of 91% in the year 2000 and dropped to around 84% on a monthly basis by May of 2001 (AF&PA).

For Canadian producers, overall pulp, paper and paperboard demand was strong in the year 2000 (including export markets), as reflected in record production, shipments and exports. This summary of Canadian trends is drawn from CPPA, 2000 Annual

Review, and PPPC, Canadian Pulp and Paper Industry Key Statistics. Canadian production of paper and paperboard reached a record 20.7 million m.t. in 2000, while Canadian production of market pulp reached a record just above 11 million m.t. Growth was sustained in all major product lines except packaging and in all major export markets except in China and Latin America. Growth in the economies of North America, Europe and Asia brought strong demand for Canadian paper products. The industry capacity utilization rate averaged a fairly healthy 94%. The pulp and paper industry's net earnings for the year 2000 were US\$1.8 billion, more than several times higher than weak profits of the preceding year.

Canadian exports of pulp, paper and paperboard increased to a record level of 26.5 million m.t. in 2000. Canada exported 85% of its total shipments to 122 countries. Shipments to the United States grew by 4% in 2000, reaching 16.6 million m.t., accounting for two thirds of all Canadian exports. Printing and writing paper (graphic papers excluding newsprint) accounted for most of the volume growth (+14%), although Canadian shipments of newsprint to United States markets also increased, by 1.4%. Canadian exports to Europe increased by 6% in 2000. Pulp accounted for about three fourths of total shipments to Europe, with the remainder of exports mainly in newsprint. Total Canadian exports to Asia, including Japan, decreased 2%. Canadian exports to Asia are primarily woodpulp. Growth in exports to Japan (7%) was offset by a 26% reduction in exports to China, largely as a result of increased Russian pulp shipments to China.

While the year 2000 was generally a good one for the Canadian pulp and paper sector, gains were not evenly distributed across the year and trends moved generally downward towards the end of the year. In effect, markets for Canadian producers mirrored the global economy, with softening in the fourth quarter as the United States economy entered a period of much slower growth. The fourth quarter decline in total production for Canada was about 5%.

9.2.3 Paper and paperboard in the Russian Federation

After years of economic instability in the 1990s, the first clearly positive results of privatization and realization of investment programs have shown up in the Russian pulp and paper sector over the past several years. Outputs of key pulp and paper products have increased by 20 to 30% or more since 1998. Structural reorganization of the industry proceeds. The Russian pulp and paper industry has become more export-oriented. There was a very large increase in cut-to-size office paper production that made it possible to significantly reduce imports of this expensive paper grade. Newsprint output has actually returned to

the levels of 1988 and 1989 (its previous peak) and thus newsprint mills are in full operation (PPB-Express, No. 3, No. 9, and No. 1, 2001, Moscow, A. Schwarz, Chief Editor).

Russia has the largest volume of standing timber of any country in the world, at an estimated 80.7 billion cubic metres. Currently in Russia only about 15 to 20% of the annual increment is utilized, much less than in countries such as the United States, Sweden, or Finland (where 55 to 75% of annual growth is harvested). Late in the 1980s timber harvest volume in the USSR was about 350 million m³ a year.

After disintegration of the USSR and abrupt transition from a planned to a market economy, Russia suffered drastic declines in output of all forest products along with a big reduction in timber harvest volume. The transition to a market economy and global price scale proved to be very difficult for the forest sector of Russia. Other reasons for the decline in harvest volume included drastic reductions in domestic demand and the lack of viability of exporting timber from regions such as Western Siberia, whether using ports in the Russian Far East or European Russia. However, trends of recent years point to a revival of the pulp and paper industry, although the economic situation remains rather complicated in other sectors of the forest industry (such as in harvesting, woodworking, and furniture).

Revival of Russia's forest industry will continue to be predicated on restructuring and large-scale investment. The feasibility of capital investment is in turn predicated on political and economic stability as well as stability of the legal system. Fifteen years ago the pulp and paper industry of the USSR occupied the fourth position in world output of paper and paperboard, and it was oriented mainly to domestic markets. Pulp and paper exports comprised no more than 30 to 35% of total output and exports were oriented toward eastern European countries. For reference the current exports are 50% of production as explained below. Imports consisted primarily of products such as office papers.

During the global market slump of 1995 to 1996, Russian pulp and paper output bottomed out at a level that was only 30 to 40% of 1988 to 1990 levels. Since then there has been a notable increase in output. Also, during recent years there was not only an increase in pulp and paper output but also an industry restructuring. Industry restructuring in Russia has been focused on becoming export-oriented. As this takes place, not only have exports as a share of total output dramatically increased but also the market structure and destination of exports have undergone certain changes. Major export destinations for Russian pulp and paper products now

include China, western European countries and even the United States.

The Russian pulp and paper sector, like all other industrial sectors, was strongly affected by the transition process, which led to rapid and profound changes throughout the 1990s, notably a long-term recession, with very low domestic demand, large-scale privatization and an increase in imports. However, the devaluation of the ruble in 1998 and the period of relative stability in 1999 and 2000 has led to more favourable conditions for the sector (see also section 2.1.4).

Compared to other domestic industries, the Russian pulp and paper industry has a number of advantages, which explain its growth in 1999-2000 and expected growth in the years to come. In the 1999-2001 period, the majority of Russia's forest, pulp and paper enterprises increased their output and raised production profitability. This may be attributed both to adaptation of the mills to market conditions and to adjustment in the ruble/dollar exchange rate. Whereas the prices of pulp and paper products in ruble terms underwent three- to four-fold changes during the last two years, production costs increased only 1.5 to 2 times. The major cost components (wood, power and labour) underwent smaller changes than prices of pulp and paper products in Russian and world markets. The adjustment in the ruble/dollar exchange rate was a positive factor for the Russian pulp and paper sector. By the end of the 1999-2000 period more than half of the outputs of Russia's pulp and paper industry were being exported.

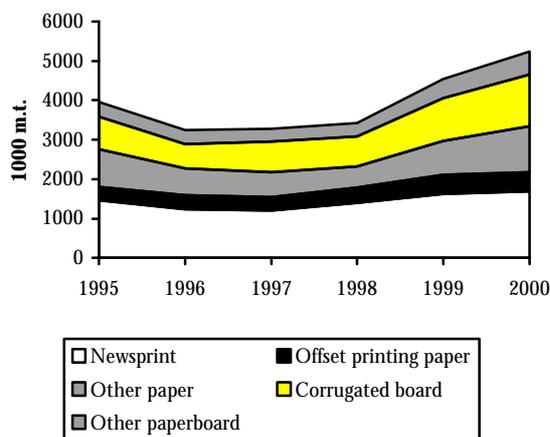
Exports of pulp and paper products are of considerably greater importance and offer greater prospects for economic development in Russia than exports of raw materials. Raw material conversion on site and manufacture of high value products provides jobs, increased purchasing power and higher living standards. The national income per capita is increasing in Russia and also paper and paperboard consumption per capita is rising. Russia's transition to a market economy resulted in growing consumption of higher value pulp and paper products, such as cut-to-size office paper grades, up-to-date types of paper and paperboard packaging, containers and tissue goods. Total imports of these products into Russia are as much as 600-700 thousand m.t. per year. At the same time, products such as market pulp, newsprint, kraftliner, and to a lesser degree, reeled offset paper were exported from Russia. With the recent dramatic change in the ruble/dollar exchange rate, it became evident that it would be profitable to manufacture all kinds of high quality pulp and paper products directly in Russia. The investment projects of strategic investors entering Russia's pulp and paper industry have precisely these purposes. The OAO Svetogorsk International Paper joint venture project is a prime example of this revival and

restructuring process. Although the contribution of Russia to global pulp and paper output dropped from 5.2% in 1980 to just 1.1% in 1997, Russia's share of global output recently increased to 1.6%.

Domestic consumption of paper and paperboard in Russia was 3.4 million m.t. in 2000, an increase of 19% compared with 1999. In 2000 exports of paper and paperboard reached 2.4 million m.t., an increase of 17% relative to exports in 1999. Even higher growth of exports of individual paperboard grades was observed in 2000; for example the growth in exports of boxboard was more than 40%. Paper and paperboard production in the Russian Federation reached 5.2 million m.t. in 2000, an increase of 18% over 1999, including growth in paper production of 13% and growth in paperboard production of 21% (graph 9.2.7). Although output of paper and paperboard has increased in recent years, output in 2000 was still only 62% of production in 1988 to 1989. By convention in Russia the production level of 1988 to 1989 is taken as the basis for computing capacity utilization. By the same convention, however, newsprint capacity was essentially fully utilized while 80% of corrugated paperboard capacity was utilized.

GRAPH 9.2.7

Annual production of paper and paperboard in the Russia Federation, 1995 -2000



Source: Goscomstat of the Russia Federation, 2001.

9.3 Woodpulp

9.3.1 Woodpulp in Europe

Output of woodpulp in Europe increased in 2000 (table 9.3.1). Total production among CEPI member countries, both integrated and market pulp, reached 40.7 million m.t., an increase of 5.5%. The increase in chemical woodpulp output was 4.4%, while production

of mechanical and semi-chemical woodpulp increased by 7.2%. According to FAO capacity data, the CEPI member countries account for more than 99% of total European pulp capacity. Overall consumption⁴ of pulp among CEPI countries increased to 47.4 million m.t. (+5.4%). Exports fell by 21.8%, while imports increased by 5.3%. Consumption of mechanical and semi-chemical increased by 6.6% to 15.1 million tonnes. Consumption of chemical pulp was 30.3 million tonnes (+4.4%).

Woodpulp production in central and eastern European countries increased more than the EU/EFTA subregion in percentage from 1999 to 2000. Chemical woodpulp rose by 10.3% to reach 2.8 million m.t., while mechanical woodpulp increased by 18.5% to 407,000 m.t. Chemical woodpulp apparent consumption increased 10.4% to reach 3 million m.t., indicating that a little more than the increased production was consumed.

Consumption of recovered paper continued to increase in Europe in 2000. Utilization of recovered paper among CEPI member countries was up by 6% at 41.1 million m.t. Apparent collection or recovery also increased, by 3.9%, to just below 43 million m.t. Thus, the apparent recovery rate of paper for recycling in Europe reached approximately 52% of total paper and paperboard consumption in 2000 according to estimates for CEPI member countries.

The weakening of global pulp and paper markets in the first half of 2001 contributed to weakness in prices for market woodpulp in Europe. Market woodpulp prices were generally declining in Europe during the first half of 2001. Reported European prices for Nordic birch pulp, for example, were just under 500 euro per metric ton by June 2001, more than 25% below price levels of a year earlier, while softwood market woodpulp prices were down by about 20% from levels of one year earlier levels (Pulp & Paper Week).

9.3.2 Woodpulp in North America

For Canada's woodpulp producers, market trends at the beginning of 2000 continued to exhibit the positive trends of 1999. Pulp markets remained robust through the first half of the year. However, eventually a drop in United States and Asian consumption and a draw-down of inventories by customers weakened pulp demand in the second half of the year, and flattened the growth in Canadian market pulp shipments to just 0.9% for the entire year. Canadian production of market pulp for the year 2000 was 11 million m.t. The bulk of United States

⁴ CEPI's apparent consumption is domestic deliveries plus imports. UNECE/FAO's apparent consumption is production plus imports minus exports.

TABLE 9.3.1
Production of woodpulp in the UNECE region, 1997 -2000
(1,000 m.t.)

	1997	1998	1999	2000	Change 1999 to 2000	
					Volume	%
MECHANICAL WOODPULP						
EU/EFTA	12,955	13,155	13,001	13,652	651	5.0
of which:						
Finland	4,469	4,637	4,602	4,810	208	4.5
Sweden	2,959	3,026	3,029	3,304	275	9.1
Norway	1,534	1,664	1,644	1,717	73	4.4
Other Europe	283	330	344	407	64	18.5
of which:						
Poland	99	113	126	130	4	3.2
Turkey	25	31	53	96	43	81.1
Russian Federation	899	981	1,129	1,280	151	13.4
North America	16,755	15,772	16,331	17,430	1,099	6.7
Canada	11,354	10,481	11,222	12,287	1,065	9.5
United States	5,401	5,291	5,109	5,143	34	0.7
CHEMICAL WOODPULP¹						
EU/EFTA	23,778	23,501	23,639	24,454	815	3.4
of which:						
Sweden	7,857	7,523	7,664	8,241	577	7.5
Finland	7,241	7,339	7,606	7,729	123	1.6
France	1,985	1,913	1,817	1,811	-6	-0.3
Portugal	1,703	1,708	1,755	1,774	19	1.1
Spain	1,546	1,545	1,617	1,673	56	3.5
Other Europe	2,234	2,460	2,353	2,646	293	12.5
of which:						
Poland	785	841	786	831	45	5.7
Czech Republic	453	490	504	569	65	12.9
Slovakia	181	339	339	419	80	23.6
Russian Federation	2,851	3,010	3,980	4,664	684	17.2
North America	68,759	67,355	67,172	67,506	334	0.5
Canada	13,795	13,122	13,919	14,112	193	1.4
United States	54,964	54,233	53,253	53,394	141	0.3

¹ Including semi-chemical woodpulp and dissolving grades.

Source: UNECE/FAO TIMBER database, 2001.

woodpulp imports come from Canada. United States imports of woodpulp from Canada increased from 5.0 million m.t. in 1999 to 5.3 million m.t. in 2000, but then levelled out in 2001 based on import data for the first four months.

Total woodpulp production in the United States (production at integrated pulping and papermaking facilities, market pulp, and dissolving pulp) reached 58.5

million m.t. in 2000, just 0.3% ahead of production in 1999. However, monthly production was generally declining since the first quarter of 2000. Statistics for the first five months of 2001 give a preliminary indication that the annual volume of United States woodpulp production has dropped by 7%. Woodpulp producers in the United States shipped about the same volume of paper grade market pulp in 2000 as in 1999, 7.6 million

m.t., but United States producers experienced a declining trend in shipments over the year and into 2001 as domestic paper production waned. By May 2001, paper grade market pulp shipments by United States producers stood at just 7.1 million m.t. on an annual basis, giving preliminary indication of a 6% decline.

United States imports of woodpulp rose from 6.0 million m.t. in 1999 to 6.6 million m.t. in 2000. Data for the first four months of 2001 indicate that imports have levelled out at 6.6 million m.t. on an annual basis. Imports from Latin America increased from 0.9 million m.t. in 1999 to 1.1 million m.t. in 2000. United States exports of paper grade market pulp increased from 4.9 million m.t. in 1999 to 5.4 million m.t. in 2000, but preliminary data for the first four months of 2001 indicate that exports have dropped back to an annual rate of 5.0 million m.t.

By the end of the year 2000 many North American pulp producers were responding to softening pulp markets by taking additional downtime, but price trends into the first half of 2001 remained generally negative. North American prices for benchmark grades of kraft market pulp declined from peak levels of around \$700 per metric ton in 2000 to the range of \$450 to \$550 per ton by the second quarter of 2001 (Pulp & Paper Week). As with paper and paperboard capacity, relatively slow growth is anticipated in North America for market woodpulp capacity, expected to average just 1% annually from 1999 to 2003.

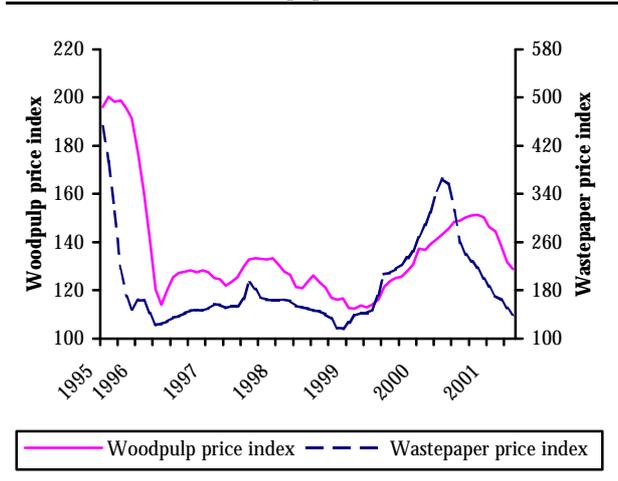
A number of new paper and paperboard mills began operation recently in Asia, and more are scheduled to begin operation in the near future (particularly in China). Included among the new Asian mills are some of the largest and fastest paper machines in the world. Many of the new mills are operating on the basis of imported market pulp (in the case of paper mills) or on the basis of recycled fibre (often imported fibre in the case of paperboard mills). Although much of the imported market pulp for Asian mills comes from sources in Asia, such as hardwood pulp from mills in Indonesia or softwood pulp from mills in Russia, growing fibre demands in Asia place new demands on global fibre markets, including demands for recovered paper directly from North America and Europe in some cases.

Conversely, when fibre demands weaken in Asia as they did in the 2000 to 2001 period, this contributes to downward trends in markets and prices for pulp and recovered paper. Prices for most grades of recovered paper including old corrugated containers, old newspapers, and pulp substitutes were retreating in North American markets over the period from mid-year 2000 to mid-year 2001. Also contributing to abundant supply of recovered fibre was a record recovery rate of paper for recycling of

48% achieved in the United States in 2000. The trends for these heavily traded commodities tend to follow the global market cycles for paper and paperboard, reflecting for example the general market reversal of the past year noted previously for paper and paperboard (graph 9.3.1).

GRAPH 9.3.1

United States average price indexes for market pulp and recovered paper, 1995-2001



Source: United States Bureau of Labour Statistics, 2001.

9.3.3 Woodpulp in the Russian Federation

In 2000, total output of woodpulp in the Russian Federation was 5.0 million m.t., an increase of 17% relative to 1999. In general, the share of pulp output based on older sulphite technology has been reduced. Output of market pulp in the Russian Federation was 2.0 million m.t., an increase in production of 16% relative to 1999. Also in 2000 exports of woodpulp increased by 21% and reached 1.6 million m.t. The export share of total production was 81.8%. China took first place among importers of market pulp from the Russian Federation.

Woodpulp shipments to China are dominated by Siberian pulp, paper and paperboard enterprises such as the Ust-Ilimsk Forest-Industrial Complex (where output of market pulp in 2000 was 0.5 million m.t.), the Bratsk Forest-Industrial Complex (0.36 million m.t.), and the Baikalsk Pulp and Paper Mill (0.17 million m.t.). Negotiations are now under way with China regarding construction of a new pulp mill in Ust-Ilimsk.

9.4 Conclusion

Consequences of the increased value of the United States dollar since 1997 included a record United States trade deficit and ultimately a recession in the broad United States manufacturing sector beginning in 2000 and continuing through mid-year 2001. Recession in the

United States manufacturing sector led to a more generalized slowdown of economic growth in the United States economy, with United States GDP growth in the first half of the year 2001 dipping to an annual rate of only about 1%. The United States economic slowdown and recent slow growth in Asian economies (with a mild recession in the Japanese economy) have led to a generalized reversal in pulp, paper and paperboard market trends, with declining domestic purchases of paper and paperboard in the United States and declining prices for pulp, paper and paperboard commodities on a global scale. The market reversal follows global peaks in production, consumption and industry profits that occurred in North America and Europe earlier in the 1999 to 2000 time period.

With the protracted downturn in United States purchases of paper and paperboard, growth in United States imports of pulp, paper and paperboard appear to

have leveled off. By mid-year 2001, the European economy appeared to be lagging but following the United States into an economic downturn. The pulp and paper sector of Russia experienced a significant recovery in 1999 and 2000, boosted by adjustments in the ruble/dollar exchange rate along with growing domestic and export demands.

Prospects for growth in the pulp and paper sectors of Europe, North America and Russia appear to be hinged largely upon trends in the dollar value, particularly trends in the dollar/euro exchange rate and the ruble/dollar exchange rate, trends in the United States manufacturing sector, and trends in overall GDP growth. Although much uncertainty exists about the ultimate direction of these trends, it is clear that the directions they take will be the signposts of future market directions for pulp, paper and paperboard producers throughout the UNECE region and elsewhere.