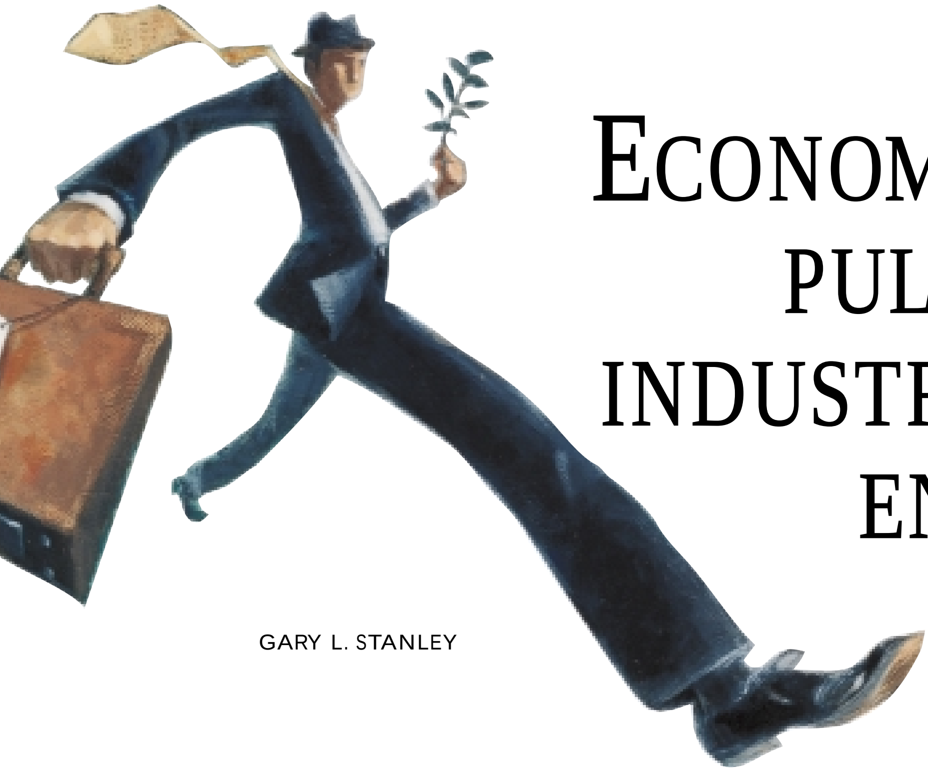

ECONOMIC DATA FOR PULP AND PAPER INDUSTRY SHOWS AN ENCOURAGING FUTURE

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THE GLOBAL PAPER AND ALLIED PRODUCTS INDUSTRY is an important contributor to the total health of the world economy. Although viewed as a mature sector, the industry has very dynamic product development and technological improvements covering distribution, handling, processing, converting, and environmental protection. The industry is currently continuing a globalization process where producers are expanding their raw material holdings; improving product manufacturing, converting, and distribution networks; and streamlining order procedures to foreign markets. Leading world producers especially in the developed, industrialized nations can no longer be content with simply focusing upon the domestic market for their sales growth. They must expand their customer base to the world marketplace as globalization in the paper and allied products industry continues into the new millennium.

As domestic sales have stagnated—up 1.5%–2%—over the past five years, the industry has refocused on export sales and placed greater emphasis on increased exports by directing more resources toward world markets. The globalization of the world paper and allied products manufacturers has been a continuing development for more than a decade. Many U.S. paper and allied products companies are active exporters, but they also engage in foreign production, converting, and packaging operations and have joint ventures and direct foreign capital investments in partnerships and ownerships.

IMPORTANT FACTORS FOR FUTURE GROWTH

The U.S. paper and allied products sector has a worldwide reputation as a high quality and volume, low-cost producer that benefits from many key operating advantages. These include a large domestic consumer market; the world's highest per capita consumption; a modern manufacturing infrastructure; adequate raw material, water, and energy resources; a highly skilled labor force; and an efficient transportation and distribution network. The industry is among the most modern in the world because of continued large capital expenditures. Driven primarily by production improvements, this spending and the goal of increased recycling have totaled approximately US$ 9.5 billion in 1999.

Following a poor performance in 1996, the U.S. paper and allied products industry has had three consecutive years of increased domestic sales, slowly improving prices, higher capacity use rates, and moderating inventories. Total shipments of paper and allied products therefore increased 1.5% in real terms and 1.8% in current dollar terms in 1999. A modest movement upward in prices for many primary commodity grades of paper and paperboard and certain converted paper products and packaging materials resulted in an increase in the current

value of shipments. Real GDP increased about 3% in 1999. This led to noticeable increases in real disposable income, total U.S. industrial production, and purchases of nondurable goods. These combined to increase domestic paper and paperboard demand and an improvement in the industry's shipments.

New paper and paperboard tonnage capacity in 1999 was approximately 1.3% above the previous year. This helped producers decrease their inventories and instituted better industry fundamentals entering 2000. Considerable tonnage will come on-line when price and demand levels begin to increase again. By controlling operating rates and allowing inventories to decrease and stabilize for most of 1998–1999, domestic pulp and paper producers were in better economic and operating positions for most of 1999. This should bode well for the industry in 2000. Industry capital expenditures increased 1.5% in 1998 to $9.41 billion and increased an additional 1.2% in 1999 to US$ 9.53 billion. Since 1992, a leveling of industry spending has occurred following the record high levels of the late 1980s. For 1998–2000, expenditures for environmental and energy (nonoutput related) projects should account for about 23.5% of total capital outlays over the three-year period.

As the new millennium arrives, the U.S. paper and allied products industry has a good position to become Internet friendly in a global environment where increasingly more advertising, sales, product introduction, and information are available and used every day by global paper makers. Companies that do not embrace the new electronic marketplace will definitely remain on the sidelines as the smarter, progressive, innovative, and aggressive companies use communication and information technologies.

Earnings for domestic paper and paperboard companies should have improved slowly in 1999 because of increasing demand, slightly higher prices, increased operating rates, and the end of a major inventory reduction cycle. Most U.S. pulp and paper companies saw total sales, net profits, and average earnings per share improve slightly in 1999 over one year ago. Labor, chemicals, and wood raw material costs remained in place but energy prices increased slightly for the industry in 1999.

The United States is the global leader in the generation, recovery, consumption, and export of recovered paper and paperboard. What was once a fiber supplement has become a critical source of papermaking raw material. In 1999, the U.S. paper and paperboard industries consumed 33.4 million metric tons of paper and paperboard. This is less than a 1% increase over the 1998 record level. U.S. paper and allied products companies are not only the world's leading collectors and consumers of recovered paper, they are also the global leaders in exporting. Using six-month data from 1998, the United States exported almost eight million metric tons to about 80 world markets. The tremendous improvements in pre and post consumer paper recovery operations must continue if the primary paper and paperboard industry is to meet its self-imposed 50% recycling goal by 2000.

SHORT TERM GROWTH PROJECTIONS

U.S. GDP should continue to expand in 2000. Product shipments by the U.S. paper and allied products industries should follow with a 2% increase. Over the 2000–2004 forecast period, product shipments in real terms should expand 2.1% annually. A move by the industry to improve its fundamentals over the past few years should allow it to reap positive benefits. This will be true especially if demand remains high and the industry can control its capacity additions better. The U.S. paper and allied products industry should experience improved sales, prices, and earnings over the forecast period. Increases in domestic and foreign shipments will drive this. As foreign market access barriers decrease through both NAFTA and WTO GATT agreements, the industry can probably increase exports. This forecast depends on the economic performance of key world paper consuming markets.

U.S. exports should increase by 2.8% in 2000 and by 3% annually over the next five years. Imports will also increase as the U.S. economy expands. This will cause increased paper and paperboard demand. U.S. imports will probably increase 2.5% in 2000 and 3% annually during 2000–2004. The large U.S. paper consuming market will continue to be the primary target of many foreign paper producers.

GLOBAL MARKET PROSPECTS

Growth of U.S. exports of paper and allied products will depend on the improved economies of many key foreign markets. Over the past five years, the industry has been successful in penetrating many emerging markets including Mexico, China, South Korea, and Brazil. Substantial growth has also occurred in many nontraditional developing markets in Latin America, Southeast Asia, and portions of Eastern Europe. Determining the long-term impact of the Asian financial crisis that nearly paralyzed the economies of important paper-consuming markets including Thailand, Malaysia, the Philippines, Korea, and Indonesia is still too early. The full extent of the impact of

Asia's financial markets will likely not occur until sometime late in the forecast period. Many pulp, paper, and paperboard capacity announcements made by several key Asian producers will certainly experience delay or perhaps cancellation due to the region's financial problems. At press time, some projects initially delayed were slated for starting during the forecast period.

PULP MILLS

Industry performance in 1999

The U.S. market pulp industry followed a disappointing sales performance in 1998 with a turnaround of higher shipments in 1999. Using six-month industry data, U.S. market pulp product shipments increased 2% in 1999. Although the industry continued to find foreign demand sluggish and increased its use of secondary fiber and recovered paper, the industry benefitted from a stronger-than-expected domestic pulp market. The industry continues to deal with fluctuating prices and an almost perpetual global oversupply situation. It did enjoy a better sales performance in 1999. Exports represented about 59.5% of the volume of all U.S. market pulp shipments in 1999. This is below the 1998 share of 63% and reflects the lowest market share for exports in a decade. Despite improved demand in portions of Europe and Latin America, the Asian financial crisis still significantly influenced the global pulp sector.

Global commodity

Chemical paper-grade market pulp used primarily in the manufacture of coated and uncoated free sheet printing and writing paper grades is a global commodity and bellwether for the general health of the world paper and paperboard sector. Unfortunately, the sector has not been very profitable during the 1990s. Except early 1994 to early 1996, many global pulp producers have not been profitable. Chronic oversupply, cyclical demand, rapidly fluctuating operating rates, sharp inventory swings, and uneven world demand has plagued the global pulp market for more than a decade. Nevertheless, about 27 countries worldwide still produce the product. The 1999 global capacity amounted to nearly 38.4 million metric tons. About 62% or 23.7 million metric tons of world output came from the Norscan countries (United States, Canada, Sweden, Finland, and Norway) in 1999. The combined capacities of Canada (the global leader) and the United States were slightly less than 47% or 17.9 million metric tons of the world chemical paper-grade market pulp total.

International competitiveness

The pulp market has a global nature. Large quantities of virgin papermaking fiber trade principally duty-free internationally from countries with a net surplus of fiber to those papermaking countries that are fiber deficient by nature. Norscan countries are the leading suppliers due to adequate forest resources, large domestic pulping infrastructures, sufficient transportation and distribution facilities, and low-cost pulp processing facilities. Canada and the United States are the world's leading producers and exporters of market pulp. For most of the 1980s and the early 1990s, the United States was the global leader in market pulp production. In 1996, Canada surpassed the United States. Currently, the United States is the world's largest captive pulp supplier and the second leading market pulp supplier. Canada's total practical maximum market pulp capacity is 10.4 million metric tons compared with the United States' market pulp capacity of 8.66 million metric tons.

Prospects for 2000

A turnaround in the important Asian pulp-consuming economies with an increase in production by domestic paper producers should result in increased demand for U.S. market pulp in 2000. As a result, market pulp shipments should increase 2.2%. Higher demand by U.S. and Asian producers of printing and writing paper should contribute to the expansion. The industry should experience higher shipments, prices, and operating rates in 2000 that should cause a return to profitability for the sector.

The volume of U.S. exports of pulp should increase about 4% and increase their product share of total pulp shipments to more than 60%. For U.S. pulp exporters to improve their sales in 2000, significant improvements will be necessary in the Asian economies that have been adversely affected by the recent financial crisis. The sector's ability to export to Korea, Thailand, Malaysia, and the Philippines is critical if exports are to increase. The rebound of Japan's and China's economies and key European markets are also important to the sector's export prospects for 2000. Strengthening of the U.S. dollar throughout the

East Asian region has reduced the price competitiveness of U.S. market pulp in the region. Strengthening of local currencies within the East Asian region will aid U.S. exporters' ability to export to these large paper-producing, fiber-deficient markets.

Long-term prospects

Over the 2000–2004 forecast period, U.S. market pulp suppliers should enjoy increased global demand and a corresponding increase in domestic sales as product shipments increase about 1.75% annually over the five years. Much growth in sales will link to foreign demand as exports continue as the major use for U.S. market pulp shipments. The U.S. dollar must stabilize especially in the East Asian region if the United States is to remain competitive in world pulp markets. Exports as a percentage of total market pulp shipments are likely to increase to the 70% level over the five-year period. This is because U.S. paper and paperboard producers will continue to consume even larger quantities of recovered paper and paperboard. Pulp imports and especially bleached hardwood kraft will find new markets in the U.S. paper and paperboard sector that is the world's leading market. Other economic and performance characteristics important to this sector include domestic and foreign paper and paperboard demand—especially printing and writing paper, capacity use rates, various pulp inventory levels, and market pulp prices. For this industry to remain productive and profitable, use rates of 92%–96% should be maintained. Producer inventory levels should stay near the 25-day supply level.

PAPER AND PAPERBOARD MILLS

Industry performance in 1999

The U.S. paper and paperboard industry experienced a disappointing sales performance in 1998 when product shipments declined 0.5%. This was the first year-over-year drop in shipments since 1985. In 1999, the industry experienced a turnaround in its sales performance when product shipments by the U.S. paper and paperboard mill sector increased about 1.2%. An increase in domestic consumption of paper and paperboard fueled by an expanding U.S. economy—a 2.7% increase in real GDP—primarily drove this.

In 1999, a slight improvement occurred for both the paper and paperboard sectors. For the U.S. paperboard sector, domestic mill operating rates declined from the 1994 high of nearly 97% to below 95% in 1995 to less than 93% in 1996. Since the inventory reduction process continued and demand remained high in 1997, domestic paperboard sector operating rates improved to 95% In 1998, operating conditions declined to 92% as foreign demand especially in the area affected by the Asian financial crisis remained soft. Operating rates for the paperboard segment increased to almost 95% in 1999 driven by stronger demand in the U.S. market fueled by the increase in U.S. economic performance. Results for the paper segment of the industry were similar. Operating rates declined from the 1994 level of nearly 95% to only 90% in 1996. Although operating rates increased back to the 94% level in 1997, they decreased to 92% in 1998. Operating rates improved to almost 94% in 1999. As a result, domestic producers could reduce their inventories and pass along legitimate price increases on several important paperboard and printing and writing paper grades for the first time in several years.

In 1999, U.S. production of paper and paperboard reached a new record with output of 86.8 million metric tons. Paperboard commodities were responsible for 53.2% or 46.2 million metric tons of the sector's output while paper commodities were responsible for 46.8% or 40.6 million metric tons. On a current dollar basis, paper commodities have a higher per unit value. Shipments of paper therefore accounted for 62% of the paper and paperboard mills total. Paperboard shipments accounted for the remainder.

Paper mills

Slowly improving operating rates, increases in domestic demand, and moderately improved prices for certain grades of printing and writing paper characterized the U.S. paper mill sector in 1999. Total production increased 0.5% in the paper segment of the industry. Although the reduction of inventories that started in the middle of 1995 was slower than expected, it contributed to better performance by U.S. producers in 1999. This was especially true for manufacturers of coated and uncoated free sheet printing and writing papers. The process of inventory reduction occurred due to producers' efforts to keep operating rates in check, minimize capacity additions, and take advantage of the stronger demand. The strength in the U.S. economy with real GDP increasing 2.7% was the principal cause for the increase in domestic demand. Although exports of paper and paperboard have increased strongly over the past decade, 90% of the output from U.S. paper mills was destined for the domestic market. According to a leading industry survey, domestic papermaking capacity from 1999–2001 should increase at less than 1% annually. This should allow supply and demand to continue to come into balance as the industry moves into 2000.

Paperboard mills

In 1999, U.S. production of paperboard commodities increased by slightly more than 1% due to a slight increase in domestic sales. Paperboard for export declined significantly in 1999 as exports of U.S. containerboard mills and boxboard mills experienced significant declines. U.S. producers of containerboard—linerboard and corrugating medium—experienced noticeably higher sales in only one major segment—the domestic corrugated and solid fiber box sector. Despite the decline in exports in 1999, U.S. paperboard mills and especially the containerboard sector have enjoyed record sales opportunities for many of its products in corrugated box, shipping container, and carton plants in Southeast Asia, Europe, and Latin America over the past several years. This has led to a noticeable increase in the sector's exports.

The Asian financial crisis leading to a downturn in the economies of major paperboard-consuming economies, i.e., Japan, Korea, Thailand, Malaysia, the Philippines, Hong Kong, and Taiwan, suppressed U.S. paperboard exports in 1999.

According to a recent industry capacity survey, domestic paperboard mills will add more than 1.4 million metric tons of additional capacity during 1999–2001. This reflects an average annual growth rate of 1% over the three-year period. This is a noticeable decrease from the 3% average annual increase in capacity over the 1988–1998 period. Approximately half the new capacity will occur in the containerboard sector.

International competitiveness

Weak foreign demand and a global oversupply situation in 1999 led to a significant decline in the quantity—down 8% to 8.3 million metric tons—and

value—down 4.6% to slightly below $6 billion. Foreign demand was weakest in certain Asian markets and was also lower in many European, Latin American, and African markets. Paper exports represented 33.5% on a volume basis of the total, and paperboard represented 66.5% of the total in 1999. On the paper side, the only sectors that enjoyed higher exports in 1999 were coated and uncoated free sheet printing and writing papers at 12% and 6%, respectively. Exports of the other paper sector commodities declined. This included tissue at 10%, packaging and converting paper at 16%, uncoated groundwood printing and writing paper at 27%, and newsprint at 7%. On the paperboard side, decreases occurred for exports of all major paperboard grades including bleached and unbleached linerboard at 19%, recycled paperboard at 6%, semi-chemical corrugating medium at 28%, and unbleached kraft paperboard at 19%.

In 1999, the strong U.S. economic performance led to significant increases in paper and paperboard consumption. Other paper-producing countries including Canada, Sweden, Finland, Indonesia, Brazil, and several Asian economies seized the opportunity to increase their exports to the United States to take advantage of the increase in demand. As a result, a 5% increase occurred in the volume of U.S. imports of paper and paperboard and a 5.2% increase in the value of U.S. paper and paper imports in 1999. The U.S. market is not protected by significant tariff and nontariff market access barriers. Consequently, this makes the U.S. market that is by far the global leader for apparent paper consumption vulnerable to low-cost or surplus paper and paperboard output from many foreign competitors.

Due to the dependance of the U.S. newspaper publishing market on newsprint imports primarily from Canada, the U.S. paper and paperboard mill sector has traditionally run a trade deficit. In 1999, U.S. imports of newsprint amounted to 6.1 million metric tons. This reflects an approximately 2% increase over the 1998 level. In addition, U.S. imports of almost every other commodity grade of paper and paperboard surged in 1999. This included significant increases in U.S. imports of printing and writing paper at 6%, unbleached kraft packaging and converting paper at 6%, semi-chemical corrugating medium at 38%, kraft paperboard at 39%, and paperboard at 17%.

Forecast for 2000

Shipments from domestic paper and paperboard mills should increase at least 1.5% in 2000 as the U.S. economy continues to expand. This results in higher domestic demand for a variety of paper and paperboard commodity grades. The forecast is contingent not only upon an improving U.S. economy but also upon better economic conditions in key Asian, Latin American, and European markets and reduced market access barriers in key foreign markets. A stabilized U.S. dollar compared with foreign currencies especially in Asia and Latin America will aid U.S. exporters in increasing their exports in 2000. Although domestic producers have traditionally directed much output to domestic converters and packagers, significant future growth will center in vital international markets and especially in Asia and Latin America. Although still important, exports to Europe will not grow as fast due to competition from Canadian and Scandinavian producers that already have a strong presence in the European market. Exports of paper and paperboard will increase 2.5% on a volume basis and 3.5% on a value basis in 2000. The combination of the large, open U.S. market, insignificant market access barriers, and an expanding U.S. economy will result in additional U.S. imports of paper and paperboard. Canadian, Western European, Latin American, and Asian paper-producing economies will again find the U.S. market as the best outlet for their output in 2000. As a result, U.S. imports of commodity paper and paperboard should increase 2% in volume and 2.5% in value. If the U.S. economy expands at a level beyond 2.5%, the rate in increase of U.S. imports could easily double. Prices for principal paper and paperboard grades that have struggled to increase over the past two years should increase in 2000 if operating rates and inventories remain in check and the supply and demand balance is maintained.

The outlook for the global paper and paperboard sector is uncertain. Although world demand should increase about 1.4% over the 1998–2001 period, the rate of expansion is not near the 2.3%–2.5% levels of the late 1980s and early 1990s or even equal to the 2% annual increase of 1997–2000. The long-term impact of the Asian financial crisis will continue to unfold in 2000. Those countries hardest hit by the crisis, i.e., Thailand, Indonesia, Malaysia, the Philippines, and Korea, are only beginning the road back to recovery. These five countries will attempt to move rapidly to protect and stabilize key manufacturing sectors including the paper and paperboard sector. Asia represents the fastest growing paper-consuming and paper-producing region. Many projects that were delayed due to the financial crisis may be back on track now that the region's economic and investment climate may be stabilizing. According to the latest United Nations Food and Agriculture (FAO) Organization Pulp and Paper Capacities Survey, Asian paper makers will add more than two million tons of capacity during 1998–2001. China and Indonesia have indicated that additional projects including several paper machine installations and mill constructions are possible in the Asian region. The survey also indicates that significant capacity additions will be coming onstream from Western European and Latin American papermakers. The fastest growth will come from European producers in Finland, Sweden, Italy, and Germany.

Long-term prospects

During 2000–2004, the U.S. paper and paperboard mill sector should see shipments increase about 1.8% annually. The large, price-competitive, high-quality, and low-cost U.S. paper and paperboard sector is well prepared to move into the new millennium. It should find new domestic and international end-users that should spur more growth for domestic producers. As major Asian paper-consuming markets recover and other global economies grow, this should result in increased consumption of paper and paperboard. The U.S. industry should be in the best position to supply much increased demand. As additional U.S. capacity is added, the industry will expand its overseas activities in Mexico, Southeast Asia, other Latin American countries, and Eastern Europe. The United States has the world's largest paper and paperboard industry producing nearly 30% of the world's paper and paperboard output. As market access barriers decrease over the next five years through implementation of the NAFTA and WTO GATT agreements, demand for U.S. paper and paperboard products will increase. As a result, U.S. exports on a volume basis will increase by at least 2.3% annually through 2004. As the world's leading paper-consuming market, the United States will continue to be the target for many countries' surplus paper and paperboard output. Low-cost imports from Indonesia, Brazil, Canada, and certain European countries will increase during the forecast period. Practically no market access barriers will impede other countries from exporting to the large U.S. market. As a result, imports will increase during 2000–2004 by 3% annually.

Competition on a global scale should increase over the forecast period as world producers seek to maintain current market shares and broaden their customer base. According to the United Nations FAO, global paper and paperboard capacity should grow from 333.6 million metric tons in 1998 to 348.1 million metric tons by 2001. This is an increase of 14.5 million metric tons over the three years. Although the United States will remain the global leader in output, its share of total world production will likely decline over the forecast period when competition from Asian, Latin American, Canadian, and Western European producers increases. The most growth should come from Asia as producers in China, South Korea, Japan, and Indonesia seek to satisfy more domestic demand and move into the export arena. By 2004, the U.S. sectors share of global paper and board production will have decreased from the current level of slightly more than 29% to 27%. Additional technological, product, and distribution innovations will continue by U.S. suppliers to allow domestic producers to remain powerful players in the still-expanding global paper and paperboard market. TJ

Editor's note: This article contains excerpts from a comprehensive review and outlook by the author. Corrugating International *will publish information from the original report for corrugated and solid fiber boxes. For information to obtain copies of the complete document, contact the author directly at the address below.*

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