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New Year's Message from the Director

By Patrick McCarthy

Happy New Year to the CPBIS Community! On behalf of all at CPBIS and Georgia Tech, I hope that you experienced a safe and pleasant holiday and that you and yours are enjoying the start of 2013. I look forward to a year of higher economic growth, lower unemployment, and to an increasingly vibrant pulp and paper sector, whose products daily make our lives just a little bit better.

The Center and all it serves owe a tremendous debt of thanks to two individuals who continually and tirelessly work, and generously provide their time, to help the Center sustain and add to its accomplishments: Dr. Tom McDonough, who writes and manages the Center's monthly newsletter, and Ms. Aselia Urmanbetova, who manages the CPBIS web site, MillsOnline database, and the Market Place, all CPBIS products that many of our stakeholders have used extensively. The impact that their efforts have had upon the scope and quality of CPBIS activities is substantial.

Recent Industry Activity

Where are we now? Below are some statistics that characterize selected historical and recent trends in the industry, specifically economic activity (output), productivity (output per labor), capital investment, and prices that producers receive (producer price index). The information is adapted from a forthcoming CPBIS report on comparative trends in the industry and all data are available from the CPBIS Data Center. The report, complete with data tables and graphs, will be available via the CPBIS web site on February 1.

Industrial Production Indices, 2007=100

Between 1990 and 2010, the pulp and paper production index decreased 13%, from 100.1 in 1990 to 87.2, and from 2000 to 2010 experienced an annual

average growth of -1.43%. During the same 2000-2010 period, related industries generally suffered comparable or even greater production losses. If one considers related industries in the pulp and paper's supply chain, the wood products industry experienced an annual 4.35% decline in production while the chemical industry declined 0.74% per year. The plastics and rubber products industry (many of whose products serve as substitutes for pulp and paper products) declined 2.12% annually between 2000 and 2010. Also noteworthy is the fact that the pulp and paper industry appears to be emerging more slowly from the great recession, with a -1.88% growth in the past two years compared with stronger growth in the wood products, chemical, and plastics and rubber industries.

Output per Labor

As the industry has gone through peaks and troughs over the years and employment losses in recent years, what has happened to labor productivity, defined as output per labor? Annual growth in labor productivity for the selected industries ranged from a low of 1.46% in chemical manufacturing to 2.52% in wood products. The paper industry experienced a 2.16% annual growth in labor productivity which is a bit higher than the 1.98% annual growth rate experienced during the 1990s.

% Net Capital Stock Invested

In 2011 the paper products industry invested 7.2% of its net capital stock, less than the plastics and rubber industry (10.1%) and about equal to the chemical (7.1%) and food industries (7.3%). The wood (2.1%) and printing (4.8%) sectors, however, have invested smaller proportions of net capital stock in fixed assets. With a 7.2% pace of investment, there is cautious optimism that this will have a positive effect on output and labor productivity.

Producer Price Index

The producer price index (PPI), which is an indicator of prices that sellers receive, spiked in the mid-1990s,

reflecting a strong market for the industry, but subsequently slumped as the industry added capacity. PPIs again rose in the late 1990s, fell during the recession in the early part of the new millennium, and, with the exception of a modest decline during the great recession (2007-2009), have steadily risen. The PPI in the converter sub-sector has also risen since 2004. The most recent year has seen strong PPI growth in each of these sub-sectors. Between 2010 and 2011, PPI growth was 6.2%, 3.5%, 3.2%, and 2.4% in the pulp mill, converted products, paper mill, and paperboard mill sub-sectors, respectively. These figures presumably reflect increasing demand for paper industry products as economic growth increased and the economy came out of the recession.

For a more detailed discussion and supporting tables and graphs, please see the complete report, soon available at <http://www.cpbis.gatech.edu/>

CPBIS Connectivity

Web site statistics provide one measure of the value that CPBIS provides to industry, academic, government and other stakeholders. For the period January 1, 2012 – December 31, 2012, the table below identifies the number of web site visits by country of origin. There were 22,516 total visits from 119 countries and of the total, 16,971 were unique visitors, i.e. the number of persons visiting the site. Visits originating in the USA are by far the most frequent, 83.7% of all visits, followed by those from Canada (3.7%), India (2%), and the UK (1.3%).

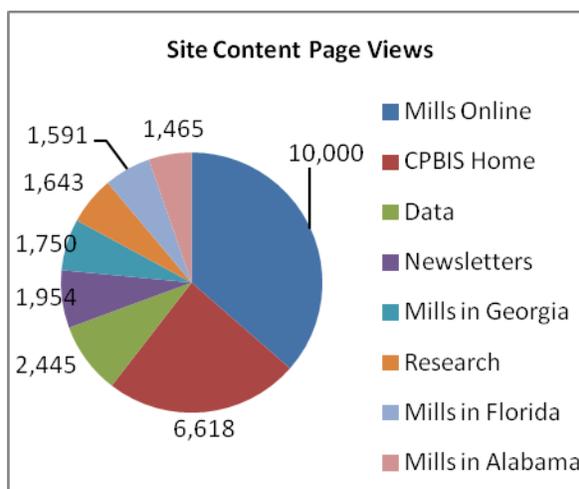
CPBIS Website Visits

	Website Visits	%
United States	18,836	83.7%
Canada	829	3.7%
India	455	2.0%
United Kingdom	294	1.3%
Germany	132	0.6%
Finland	129	0.6%
China	128	0.6%
Brazil	78	0.4%
South Korea	69	0.3%
ROW	1,566	7.0%

Below is a comparative breakdown of visits between this year and last, indicating that the total number of hits was down 28.5%. The number of page views was also down significantly (22.9%) compared with last year, although higher than 2010 (not shown). The fact that visitors are viewing more pages per visit (up 8%) and staying on the site a bit longer (up 3.3%) is positive.

Statistics	2011	2012	% Change
Unique Visits	23,740	16,971	-28.5%
Page Views	86,865	66,953	-22.9%
Pages/Visit	2.75	2.97	8.0%
Average Time on Site	2.12	2.19	3.3%

In the following figure, we delve more deeply into the web site statistics. The figure provides information on CPBIS web site content that most attracts visitors. Not surprisingly, the CPBIS home page receives a large number of page views, 6,618 views or 6.17% of the site's total. Of importance is the strong interest that the



Center's MillsOnline generates. At 10,000 and 15% of the 66,953 total views, MillsOnline is the most frequently viewed page and reflects the value that this product provides to the Center's stakeholders. And when combined with content related to the Center's Data Center and specific mills in Georgia, Florida, and Alabama, then about 25% of the Center's visitors appear to be statistics-driven searches. Complementing this, another 1,954 and 1,750 page views focus on newsletter archives and research. The graph portrays a total of 27,466 page views. A large portion of the remaining 39,127 page views are associated with MillsOnline or data center pages. For example, mills in AK, CA, GA, LA, ME, MI, NC, NY, TX, WA, WI,

and VA each generated from 500 – 1,000 page views in the report.

Past and Future

The web site content statistics are suggestive of the value that CPBIS provides its stakeholders: MillsOnline – Data – Newsletter – Research. These hits reflect the recent CPBIS strategy of developing MillsOnline products and that this is a viable strategy for further Center development. During the coming year, we will discuss this with stakeholders in the academic, industry, government, and related communities.

Leverage Your Interest

Important points for your thought and consideration:

Current Activities

MillsOnline (the only complete database of US mills electronically available at a nominal cost), the Market Place, Data Center, Newsletter, Website, and Research, maximize value to our diverse stakeholders;

Future Activities

Please contact us (<http://cpbis.gatech.edu/contact-us>) if there are other deliverables you would like to see. What types of knowledge, data, and other resources can CPBIS provide to assist you?

CPBIS Development

Current CPBIS activities receive no on-going annual funding. CPBIS is not a line item on any budget sheet.

Future activities can only continue with your help and that of your organization. If you have found our activities and offerings to be valuable to you and your organization, please consider leveraging this interest to ensure that CPBIS continues to help meet your needs, as well as those of your organization and the pulp and paper community.

Thank you as always for your interest in CPBIS and I look forward to a productive and collaborative 2013!

Recent Industry Intelligence Inc. Headlines

[Industry Intelligence Inc.](http://www.industryintel.com) has provided market intelligence to more than 600 companies worldwide since it began as Forestweb in 1999. Industry Intelligence delivers a daily report featuring news of the paper and forest products industries. For your subscription visit: <http://www.industryintel.com>

Below is a selection of particularly relevant recent headlines, together with brief synopses.

January 15 - 21

UPM to cut its graphic paper capacity by 580,000 tonnes/year in Finland, Germany and France, in addition to prior announced plans to close 270,000 tonnes/year mill in Stracel, France, cites demand decline, overcapacity, high costs

Structural changes in paper end-uses and the current condition of the European economy have prompted the move.

Catalyst Paper targeting Latin America for expansion of its paper exports, says CEO Clarke, who's planning to visit region to meet with strategic buyers in April

The company already has a presence in Venezuela, Colombia, Brazil and Mexico.

MeadWestvaco expands its presence in India's corrugated packaging market, to invest US\$184M including recent acquisition of Vapi, India-based Ruby Macons, future increase in mill's capacity with new paper machine

The plan is already underway and should yield significant increases in production starting in 2013.

January 7 - 14

Canadian trade group PPPC says its drive to change rules for testing wine and liquor boxes succeeded; the province's Liquor Control Board recently switched to edge crush testing, which will 'open door' for recycled paperboard producers

The LCBO will allow its suppliers the option of using the edge crush test (ECT) as an alternative to the burst strength (or Mullen) test that it has used for over 20 years to assess the delivery performance of corrugated packaging. In one series of tests, the box with the highest Mullen (and therefore the most likely to be the best performer according to LCBO specifications) was actually the worst performing box.

Sales of print books in 2012 down 9%, about the same rate as declines in two previous years, says Nielsen data, indicating stabilization despite rise in e-book sales

A recent Pew Research Center study says that 89 percent of regular book readers claim to have read a print book within the last year, while only 30 percent said that they had read an e-book in the same time period.

January 1 - 7

Domtar seeks new pulp strategies, including fluff pulp, new uses for lignin and nanocrystalline cellulose, amid shifting market and consumer behavior, sustainability goals

Domtar VP of Sustainability David Struhs estimated the fluff pulp market will grow 6%-8% annually.

Graphic Packaging expects biomass boiler at its Macon, Georgia, pulp mill to need additional equipment to meet amended EPA air pollution rules, mill manager says; deadline extension could give affected mills as late as 2016 to comply

A company official says extending the deadline will spread out demand on equipment suppliers and installers, which some had feared would be stretched too thin for all companies to meet the EPA's original timeline.

Lincoln Paper & Tissue hopes to make a deal for a natural gas pipeline soon for its facility in Lincoln, Maine; mill co-owner says pipeline would be most important planned improvement in 2013

The announcement comes almost a year after a \$2 million conversion to liquefied natural gas at the mill that was expected to save the paper and tissue maker as much as 30 percent of its major energy costs.

University of California, Riverside teams with OfficeMax to decrease paperboard waste by receiving office supplies in reusable, heavy-duty paperboard boxes called 'Boomerang Boxes', hopes to see reduction of more than 5,000 boxes/year

OfficeMax introduced the Boomerang Box program in the Seattle area in June, 2012, and then expanded it nationwide during the second half of the year.

December 25 - 31

Clearwater Paper starts up tissue products facility in Shelby, North Carolina, plans to add 30-40 employees in coming year through expected addition of conversion lines, capability to produce folded napkin products

Clearwater, which first announced plans in June 2010 to build a paper machine and distribution center, started operating the machine this month.

China production of newsprint for January-September period up 4.2% year-over-year to 2.9 million tonnes, imported 98.3 billion tonnes of newsprint, up 837.23%, exported 3.8 billion tonnes, down 77.9%

2012 newsprint production in China is expected to be 4.1 million tonnes, up about 3% compared with 2011.

December 18 - 24

NewPage completes financial restructuring, emerges from Chapter 11, closes on its exit financing consisting of US\$500M term loan facility and US\$350M revolving credit facility

Commenting on the development, CEO George F. Martin said, "This step helps to solidify our position as the leading North American producer of printing and specialty papers."

Stora Enso, Chalmers' Encubator collaborate on intelligent pharmaceutical packaging to address poor adherence to prescription instructions by patients; package would send reminder wirelessly to mobile phone if medication is missed

The package registers when pills are removed.

AF&PA issues statement on EPA's release of the Final Boiler MACT rules, looks forward to improvements from December 2011 proposition on use of biomass residuals, yet several billions of dollars will be necessary to comply

According to AF&PA CEO Donna Harmon, the required capital spending is a significant investment for an industry still recovering from the economic downturn.

December 11 - 17

Domtar to close pulp machine at Kamloops, British Columbia, mill, by March 2013, curtailing 120,000 tonnes/year of sawdust softwood pulp, affecting 125 employees, will continue operating remaining 350,000 tonnes/year softwood kraft pulp line

Reduced competitiveness of the small pulp manufacturing line, together with unforeseen boiler repair costs triggered the closure.

MWV Specialty Chemicals completes acquisition of Brazilian pine chemical company Resitec Industria Quimica

MWV will continue to provide innovations and market response expertise for rubber, lubricants, food, and adhesives markets, as well as new markets, including asphalt and oilfield.

Performance of Canadian paper and paperboard industry market forecast to decline by compound annual rate of change of 2.2% for five-year period 2011-2016, expected to drive market to value of US\$5.4B by end-2016, report forecasts

According to a recently released report by Research and Markets, the Canadian paper & paperboard market had total revenue of \$6.1 billion in 2011, representing a compound annual rate of change (CARC) of -15.2% between 2007 and 2011. The performance of the market is forecast to decline further but with a slower pace, with an anticipated CARC of -2.2% for the five-year period 2011 - 2016, which is expected to drive the market to a value of \$5.4 billion by the end of 2016.

AF&PA News

The American Forest and Paper Association recently released its November 2012 Printing/Writing, Recovered Fiber, Containerboard, Kraft Paper and Paperboard Statistics Reports. Below are the key findings:

- U.S. industry consumption of recovered paper in November was 2.36 million tons, 5 percent lower than in October 2012.
- Inventories increased for most grades. Year-to-date total consumption in 2012 is 4 percent lower than during the same period last year.
- U.S. exports of recovered paper showed strong gains across all grades, except for high grade deinking.
- Corrugated exports increased to levels not seen since April 2011.
- Year-to-date exports of recovered paper in 2012 are 6 percent lower than during the same period in 2011.
- Total boxboard production increased by 2.1 percent compared to November 2011 and increased 1.7 percent from last month.
- Unbleached kraft boxboard production increased over the same month last year and increased compared to last month.
- Total solid bleached boxboard & liner production increased compared to November 2011 and increased compared to last month.
- The production of Recycled boxboard increased compared to November 2011 but decreased when compared to last month.
- Containerboard production fell 1.5 percent over October 2012 but rose 1 percent over the same month last year. However, the month-over-month average daily production increased 1.7 percent.
- The containerboard operating rate for November 2012 gained 0.6 points over October 2012, from 96.3 percent to 96.9 percent.
- Total printing-writing paper shipments decreased 4 percent in November compared to November 2011.
- Three out of the four major printing-writing grades posted decreases compared to last November, with coated free sheet posting the only year-over-year increase.
- November shipments of coated free sheet (CFS) papers increased year-over-year for the sixth time in the past 12 months.
- CFS shipments increased 1 percent when compared to November 2011 to 330,800 tons, the fourth highest total in 2012.
- While uncoated free sheet (UFS) papers shipments decreased 2 percent compared to November 2011 to 705,500 tons, October exports increased year-over-year for the third consecutive month.
- Year-to-date shipments of UFS paper are down 3 percent compared to the same months in 2011.
- Exports of UFS increased year-over-year in October, up 15 percent.
- Year-to-date UFS exports are up 11 percent in 2012 compared to same 10 months in 2011.
- November uncoated mechanical (UM) paper shipments decreased 24 percent when compared to November 2011, the twentieth consecutive month of year-over-year decline.
- November shipments of coated mechanical (CM) papers decreased 5 percent compared to November 2011.
- Year-to-date shipments of CM are down 5 percent compared to the same 11 months in 2011.
- Total kraft paper shipments were 120.4 thousand tons, a decrease of 11.2 percent compared to the prior month.
- Bleached kraft paper shipments increased year-over-year 21.2 percent.
- Unbleached kraft paper declined 15.7 percent year-over-year.
- Total month-end inventory increased 4.3 percent to 76.0 thousand tons this month compared to October 2012 month-end inventories.

The complete surveys with detailed tables can be purchased by contacting Caroline Nealon (Statistics_Publications@afandpa.org or 202-463-2448).

Statistics Corner: Capacity and Capacity Utilization

Figure 1 shows that, post-recession, the U.S. paper industry is operating at a more or less steady rate that is only slightly lower than pre-recession levels. But upon closer examination it becomes apparent that the

outlook is not as positive as the graph suggests: the operating rate is at least partly a result of the continuing decreases in U.S. paper production capacity. Although the high rate of capacity reduction seen during 2008 and 2009 slowed in 2010, Federal Reserve Board statistics (Figure 2) indicate that the industry closed or idled production facilities at an increased rate during 2012. ■

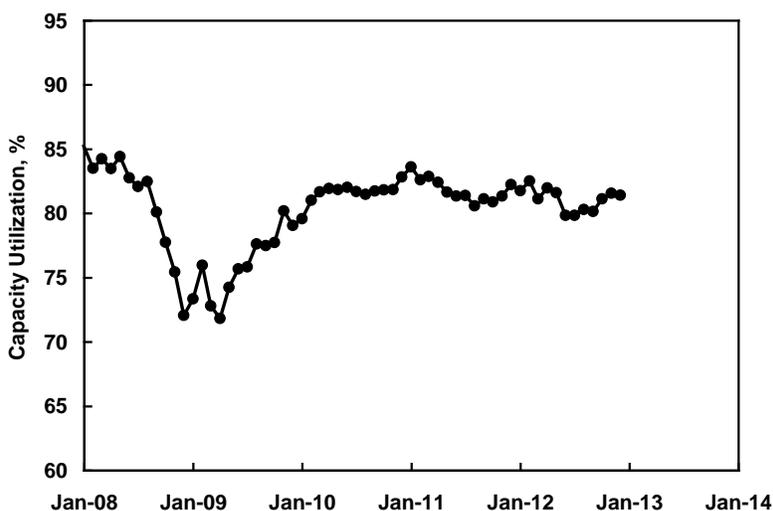


Figure 1. Capacity utilization (operating rate) 2008 – present.

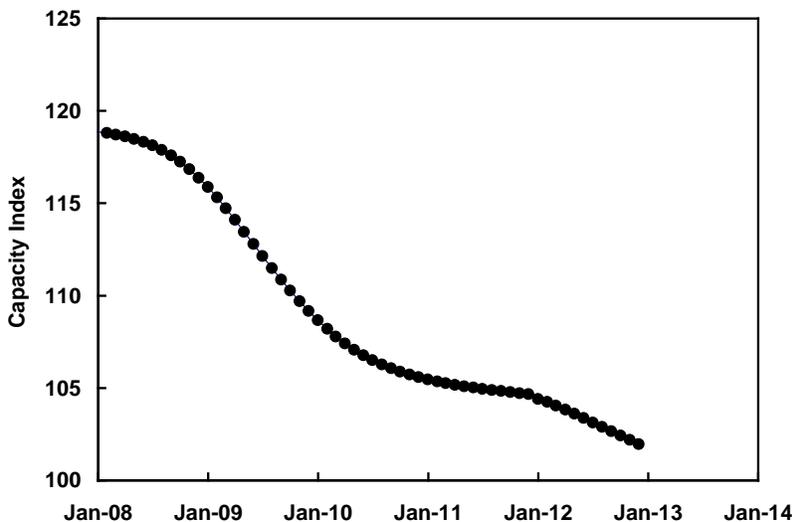


Figure 2. Paper industry production capacity 2008 – present.