WORLD GRAPHIC PAPERS

SEPTEMBER 2013

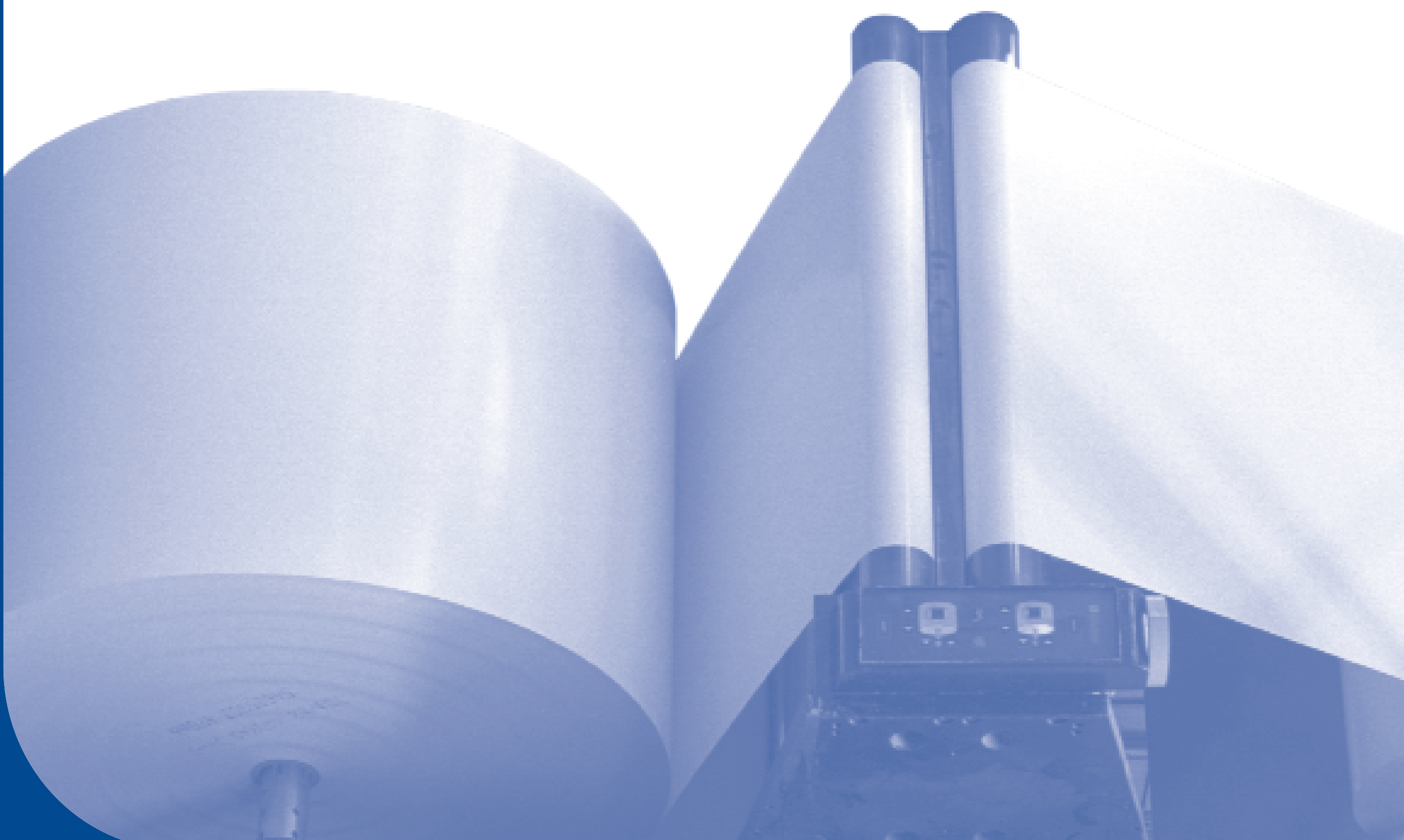

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Table of contents

Table of contents (continued…)

List of tables and charts

List of tables and charts (continued…)

List of tables and charts (continued…)

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Sources and Acknowledgement

The EMGE WORLD GRAPHIC PAPER report contains data and 5-year forecasts for paper demand, supply and price around the world.

To compile these reports we have used an extensive range of sources, including all published information available to EMGE & Co. Ltd. In addition to published data, we have made reference to much industry data, which companies have been willing to share with us non-confidentially.

Furthermore, we have applied our own market research resources to gather additional information, and included information from other co-operating companies.

The EMGE databases are updated daily. We publish these forecast reports twice a year (March/April and September/October), with new data and revised 5-year forecasts.

The forecast timescale is 2012 to 2017.

Definitions

Paper activity data are based on Volumes as sold, measured in metric tonnes (data have been converted from short tons to metric tonnes where appropriate).

The grades referred to in this study encompass Printing/Writing Paper grades as described below in their respective definitions *(some regional differences in definition do exist).* A separate study on "World Newsprint Markets" is also available.

Uncoated Mechanical (UM) - includes offset and gravure uncoated woodcontaining printing & writing papers, generally in the basis weight range >54gsm (e.g. SC Magazine), but including Directory, Improved Newsprint and other lightweight grades.

Coated Mechanical (CM) - includes offset and gravure coated woodcontaining printing & writing papers (>10% mechanical pulp), generally in the basis weight range 54-80gsm; but also includes ultra-lightweight coateds & heavyweight coated woodcontaining (as well as LWC & MWC) in sheets & reels.

Coated Woodfree (CWF) - includes coated Woodfree printing & writing papers (<10% mechanical pulp), generally in the basis weight range 80-300gsm; both 1 & 2-side coated free in sheets & reels are included.

Uncoated Woodfree (UWF) - includes uncoated Woodfree printing & writing papers (<10% mechanical pulp), generally in the basis weight range 60-150gsm; in folio sheets, reels and cut-size, covering both bulk grades and uncoated specialities.

Coated =	Coated Mechanical + Coated Woodfree
Woodfree =	Uncoated Woodfree + Coated Woodfree
Printing & Writing (P&W) =	Uncoated Mechanical + Coated Mechanical + Coated Woodfree + Uncoated Woodfree
Graphic Paper =	Printing & Writing + Newsprint

Demand / Consumption - calculated as Production + Imports - Exports

Production / Output - paper mill saleable production

Trade - Net Exports, i.e. Production - Consumption

Capacity - Annual Machine Capacity, based on technical, not market, conditions

Operating Rate - Theoretical Ratio of Production to Capacity

M/c – Machine

tpa – tonnes per annum (capacity)

Details of Country groupings in the Regional Tables are shown in the Country Data World-wide section (see page 49).

Report Contents

EMGE's WORLD GRAPHIC PAPER report (WGP), provides a unique and comprehensive database of world markets, assessing the current situation and the market outlook for the complete range of products in all world regions.

World Graphic Papers - a unique, global and fundamental perspective on the prospects for this important and dynamic industry.

The aim is to provide an objective update of the prospects for world paper markets – i.e. Coated Woodfree, Uncoated Woodfree, Coated Mechanical and Uncoated Mechanical (including Improved Newsprint).

The WGP report provides revised and updated forecasts of Demand, Trade, Output, Capacity and Operating Rates. The report covers the future global and regional demand-supply balance, by paper grade. The forecast timescale is 2012 to 2017.

New forecasts for Demand-Supply from 2012 to 2017.

We also provide country-by-country data for 2012. In addition, the report incorporates the latest information regarding capacity changes and investments, including M&A activity.

Latest information on capacity investments and M&A changes.

In order to assess the impact of consolidation and changing industry structure, the report provides detailed rankings of Leading Suppliers, by grade, region and total. Furthermore, we have incorporated the Herfindahl-Hirschman Index, which is an index based on market shares which is used by the Authorities to gauge the levels of concentration in an industry. We have applied this index to the Paper Industry and coined the term the Pi-HHi (pronounced "pie-high").

Detailed rankings of Leading Suppliers, by grade and region and EMGE's Pi-HHi – Herfindahl Hirschman Index.

As well as a comprehensive collection of market data, great care has been taken to assess machine capacity in detail. The capacity data used are mainly based on announced, financed and confirmed plans, as well as some assumptions and forecasts made by EMGE (e.g. unspecified closures). The report provides additional information on all announced plans, whether decided or not (see tables of Machine Investment Listings on page 77, which compare "decided" and "undecided" machines).

Detailed lists of capacity changes and additional information on all announced plans.

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SEPTEMBER 2013

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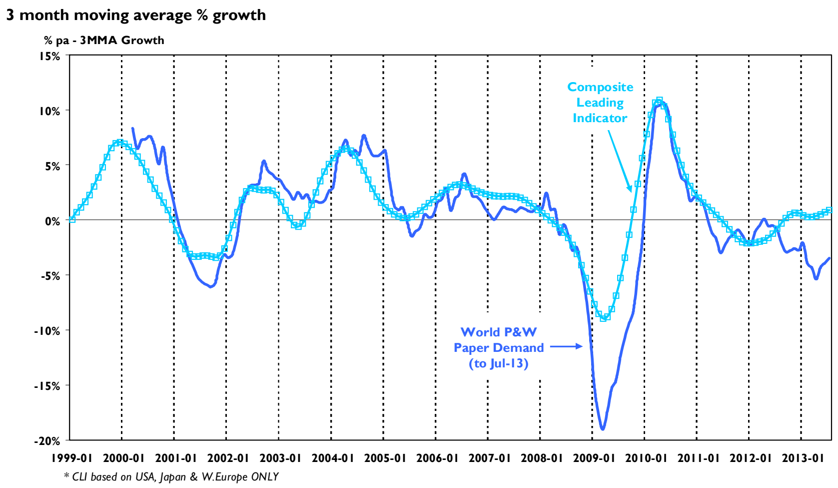
Introduction

FIGURE 1. WORLD P&W PAPER DEMAND vs. OECD LEADING INDICATORS



** The OECD Composite Leading Indicator is based on a various financial and business factors, which are calculated statistically to provide a few months' advance notice of economic activity – in this instance we have combined the OECD, USA, Japan and W.European series as a proxy for the world index.*

The **EMGE WORLD GRAPHIC PAPER FORECAST** report is a comprehensive, unique and independent assessment of the future for the paper industry. The latest report ("*EMGE WORLD GRAPHIC PAPER - SEPTEMBER 2013*") is an update in the **EMGE** series of WORLD GRAPHIC PAPER reports, covering fundamental global market issues.

The economic in the past few years have been typified by widespread government spending cutbacks and tight credit (despite low interest rates), which have restricted the consumer activity, advertising and many of the drivers of paper demand. More recently, the economic conditions generally have stabilised in 2013. However, during 2013, the declines in Global Paper Demand have worsened and Global Printing and Writing paper demand has fallen by -3.6 %pa (year-to-date January to July).

Looking forward, as shown in the above chart, the economic pointers around the world have been improving and economic growth is starting to improve a little once again. Meanwhile, paper demand is, in many cases, facing challenges and substitution from Digital Media. The challenges faced by the paper industry regarding declining demand and capacity management are critical.

Based on all the data available and combining the latest developments in the markets, we review past and current market conditions and examine the drivers and prospects for future change, to provide subscribers with an updated outlook for demand, trade, investment, capacity, operating rates for the world Printing and Writing paper markets.