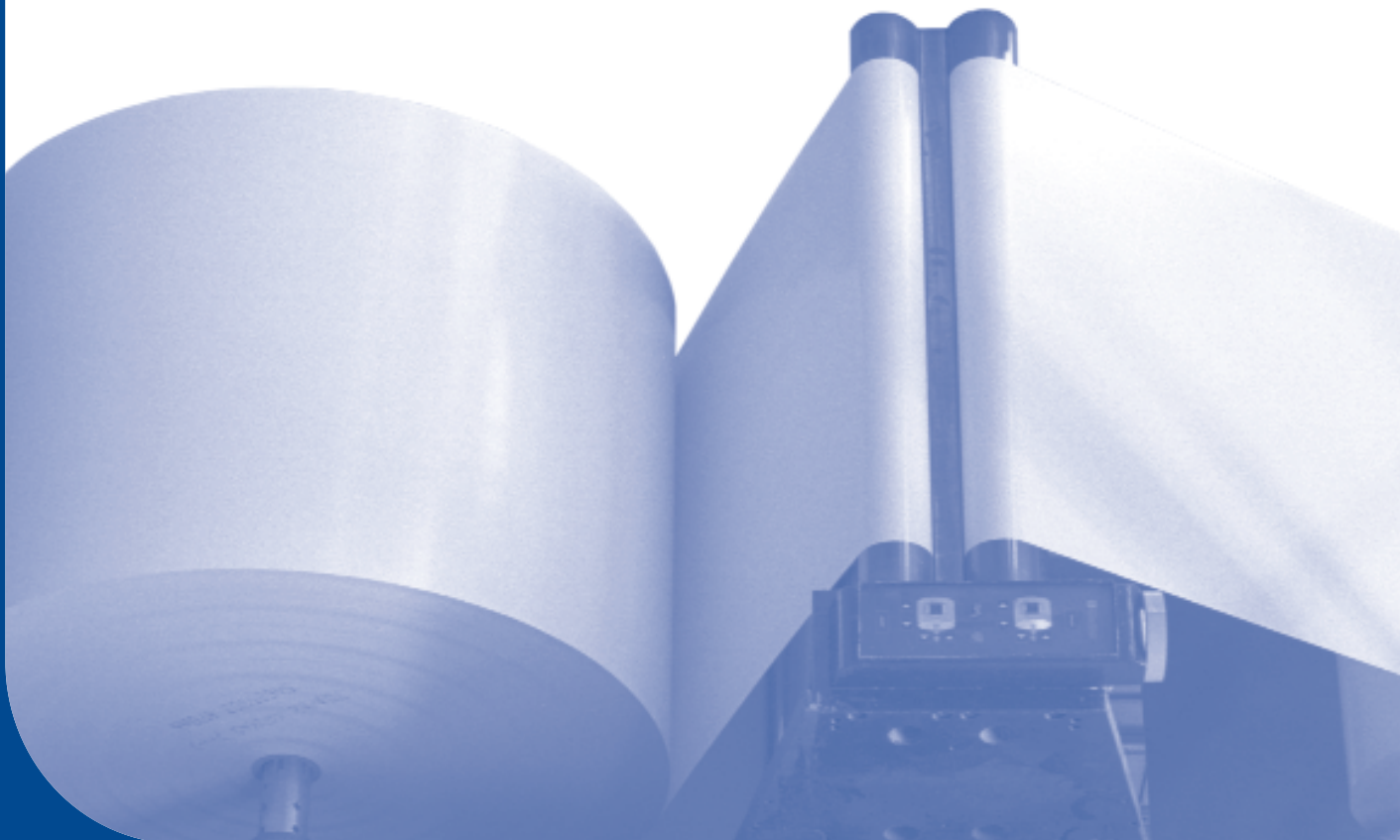




# **WORLD GRAPHIC PAPERS**

SEPTEMBER 2016



# TERMS & CONDITIONS

*Our products are supplied under the following terms and conditions, which cover material in all forms including paper, electronic, etc.:*

## CONFIDENTIALITY

All information provided is strictly confidential unless otherwise stated. The Client is responsible for safeguarding this confidentiality. The information contained in our publications is provided only for legitimate commercial purposes; it is not to be used in legal or anti-trust action against others.

## COPYRIGHT

*At EMGE we aim to assist clients in using our information, however it is your individual responsibility as well as that of your company to abide by the rules and regulations as set out under European & International copyright law.*

### Terms for standard usage

- Making copies of our work is not permitted. No part of any EMGE publication may be reproduced in any form, for external or internal use, without prior written permission from EMGE.
- You do, however, have permission to replicate small samples of non-sensitive information as required, on the condition that you clearly acknowledge the source.
- If you have any doubts as to the legitimate use of our information, please contact EMGE.

### Terms for Groupwide Distribution Licence holders only

- Copies of EMGE publications purchased under a Groupwide Distribution Licence may be distributed internally within the group only. Normally licences are granted under a regional basis, unless specified as a Global Groupwide Licence.
- None of the material provided may be copied or shown to other companies, industry consultants, finance companies or investment houses, under any circumstances.
- You do, however, have permission to replicate small samples of non-sensitive information as required, on the condition that you clearly acknowledge the source.
- If you have any doubts as to the legitimate use of our information, please contact EMGE.

## DISCLAIMER

While we aim to ensure that the information contained in our publications is as reliable as possible, we cannot accept responsibility for actions or decisions taken by the client, other company or person arising from our work.

**EMGE & Co. Ltd.**  
**PO Box 200**  
**Truro**  
**Cornwall**  
**TR1 1FN**  
**United Kingdom**

**Tel: +44 (0)1872 581000 | Fax: +44 (0)1872 264464**  
**Email: [post@emge.com](mailto:post@emge.com) | URL: [www.emge.com](http://www.emge.com)**

# Table of contents

	Page
September 2016 Update	i
Major changes to the forecast	ii
Summary of the forecasts	v
1. Demand and Trade	1
1.1. <i>Forecast Cycle</i>	3
1.2. <i>Regional Demand Forecasts</i>	9
1.3. <i>Paper Demand Drivers</i>	10
1.3. <i>Trade</i>	13
Caveats	14
2. Supply	17
2.1. <i>Supply Data - Base Capacity</i>	18
2.2. <i>Supply Data – Forecast Capacity</i>	20
3. Supply-Demand Balance	23
3.1. <i>Forecast Capacity Operating Ratios – Global Pr/Wr</i>	23
4. LEADING SUPPLIERS – 2016	25
4.1. <i>Leading Suppliers – Coated Woodfree Papers</i>	25
4.2. <i>Leading Suppliers – Uncoated Woodfree Papers</i>	27
4.3. <i>Leading Suppliers – Coated Mechanical</i>	29
4.4. <i>Leading Suppliers – Uncoated Mechanical</i>	31
4.5. <i>Leading Suppliers – Coated Papers</i>	33
4.6. <i>Leading Suppliers – Woodfree Papers</i>	35
4.7. <i>Leading Suppliers – Magazine Paper Suppliers</i>	37
4.8. <i>Leading Suppliers – Printing &amp; Writing</i>	39
4.9. <i>Leading Suppliers – N.America</i>	42
4.10. <i>Leading Suppliers – Europe</i>	43
4.11. <i>Leading Suppliers – Rest of the World</i>	44
4.12. <i>Leading Suppliers – Total World</i>	45
4.13. <i>Notes on Leading Suppliers</i>	46
5. Coated Woodfree - Forecasts	47
5.1. <i>Demand - Coated Woodfree</i>	47
5.2. <i>Trade flows - Coated Woodfree</i>	48
5.3. <i>Output - Coated Woodfree</i>	48
5.4. <i>Capacity Assumptions - Coated Woodfree</i>	50
5.5. <i>Capacity and Operating Rates - Coated Woodfree</i>	51

*Table of contents (continued)*

6. Uncoated Woodfree – Forecasts	53
6.1. <i>Demand - Uncoated Woodfree</i>	53
6.2. <i>Trade flows - Uncoated Woodfree</i>	54
6.3. <i>Output - Uncoated Woodfree</i>	54
6.4. <i>Capacity Assumptions - Uncoated Woodfree</i>	56
6.5. <i>Capacity and Operating Rates - Uncoated Woodfree</i>	57
7. Coated Mechanical - Forecasts	59
7.1. <i>Demand - Coated Mechanical</i>	59
7.2. <i>Trade flows - Coated Mechanical</i>	60
7.3. <i>Output - Coated Mechanical</i>	60
7.4. <i>Capacity Assumptions - Coated Mechanical</i>	62
7.5. <i>Capacity and Operating Rates - Coated Mechanical</i>	63
8. Unc. Mechanical – Forecasts	65
8.1. <i>Demand - Uncoated Mechanical</i>	65
8.2. <i>Trade flows - Uncoated Mechanical</i>	66
8.3. <i>Output - Uncoated Mechanical</i>	66
8.4. <i>Capacity Assumptions - Uncoated Mechanical</i>	68
8.5. <i>Capacity and Operating Rates - Uncoated Mechanical</i>	69
9. Newsprint - Forecasts	71
10. Country Data World-wide	73
10.1. <i>Country Data World-wide, Coated Woodfree</i>	73
10.2. <i>Country Data World-wide, Uncoated Woodfree</i>	77
10.3. <i>Country Data World-wide, Coated Mechanical</i>	81
10.4. <i>Country Data World-wide, Uncoated Mechanical</i>	85
11. Supply Outlook	89
11.1. <i>EMGE Forecast Capacity Projections – by Year and region</i>	96
12. Investments & Closures	99
12.1. <i>Machine Closures (Base Capacity)</i>	99
12.2. <i>Machine Investments (Base Capacity)</i>	99
12.3. <i>Individual Machine Investment Plans</i>	100
Appendices – Pr&Wr Papers	109

# List of Tables and Charts

	<i>Page</i>
1. <i>World P&amp;W Paper Demand vs. OECD Leading Indicators</i>	<i>i</i>
2. <i>Recent Pr/Wr Paper Demand Growth, Global</i>	<i>iii</i>
3. <i>Global Paper Market Summary</i>	<i>vi</i>
4. <i>Demand Forecast, World by Region, Total Pr&amp;Wr</i>	<i>1</i>
5. <i>World P&amp;W Paper Demand - 2016</i>	<i>2</i>
6. <i>Demand Growth, by Region and Grade - 2016</i>	<i>2</i>
7. <i>GDP Growth Outlook, 2016-17</i>	<i>3</i>
8. <i>Long Term Growth - Japan</i>	<i>4</i>
9. <i>GDP Growth - Russia</i>	<i>5</i>
10. <i>Share Price Indices</i>	<i>7</i>
11. <i>Paper Demand, Developed vs Emerging Nations</i>	<i>9</i>
12. <i>Global Growth in Adspend by Medium</i>	<i>10</i>
13. <i>Adspend Growth – Magazine vs. Total (China/Hk)</i>	<i>11</i>
14. <i>Global Pr/Wr Demand Growth by Region, 2015-20</i>	<i>12</i>
15. <i>Trade - World P&amp;W Net Exports by Region</i>	<i>13</i>
16. <i>Oil Prices</i>	<i>15</i>
17. <i>Major Paper Capacity Changes (2015+)</i>	<i>17</i>
18. <i>Base Capacity by Region</i>	<i>18</i>
19. <i>Capacity Growth Trends – Base Capacity</i>	<i>18</i>
20. <i>Base Operating Rates, by Region, Pr &amp; Wr Papers</i>	<i>19</i>
21. <i>Capacity – Unspecified Changes (Pr/Wr Papers)</i>	<i>20</i>
22. <i>Capacity Forecast Changes, by Region – PW Papers</i>	<i>21</i>
23. <i>Forecast Capacity Growth, World, by Grade</i>	<i>21</i>
24. <i>Forecast (Base + Unspecified) Capacity by Region</i>	<i>22</i>
25. <i>Forecast Operating Rates, World, by Grade</i>	<i>23</i>
26. <i>Leading Suppliers - 2016 Capacity, Coated Woodfree Papers</i>	<i>25</i>
27. <i>Leading Ctd W'dfree Paper Suppliers - World and Regions</i>	<i>26</i>
28. <i>Leading Suppliers - 2016 Capacity, Unc. Woodfree Papers</i>	<i>27</i>
29. <i>Leading Unc. W'dfree Suppliers - World and Regions</i>	<i>28</i>
30. <i>Leading Suppliers – 2016 Capacity, Coated Mech.</i>	<i>29</i>
31. <i>Leading Ctd Mechanical Suppliers - World and Regions</i>	<i>30</i>
32. <i>Leading Suppliers - 2016 Capacity, Unc. Mech.</i>	<i>31</i>
33. <i>Leading Unc. Mech. Suppliers - World and Regions</i>	<i>32</i>
34. <i>Leading Suppliers - 2016 Capacity, Total Coated</i>	<i>33</i>

*List of Tables and Charts (continued)*

35. <i>Leading Coated Paper Suppliers - World and Regions</i>	34
36. <i>Leading Suppliers - 2016 Capacity, Woodfree Papers</i>	35
37. <i>Leading Woodfree Paper Suppliers - World and Regions</i>	36
38. <i>Leading Suppliers - 2016 Capacity, Magazine Papers</i>	37
39. <i>Leading Magazine Paper Suppliers - World and Regions</i>	38
40. <i>Leading Suppliers - 2016 Capacity, Printing and Writing</i>	39
41. <i>Leading Pr/Wr Paper Suppliers - World and Regions</i>	40
42. <i>Top 5 Pr/Wr Suppliers – 1990 vs. 2000 vs. 2016</i>	41
43. <i>Leading Paper Suppliers – N.America</i>	42
44. <i>Leading Paper Suppliers – Europe</i>	43
45. <i>Leading Paper Suppliers – Rest of The World</i>	44
46. <i>Leading Paper Suppliers – Total</i>	45
47. <i>Notes On Leading Suppliers</i>	46
48. <i>Demand Forecast, World by Region, Coated Woodfree</i>	47
49. <i>Trade Forecast, World by Region, Coated Woodfree</i>	48
50. <i>Output Forecast, World by Region, Coated Woodfree</i>	48
51. <i>World Demand-Supply, Coated Woodfree</i>	49
52. <i>EMGE Capacity Assumptions, Coated Woodfree</i>	50
53. <i>Operating Rates, Forecast vs. Base, Ctd. W'dfree</i>	50
54. <i>Base Capacity, by Region, Coated Woodfree</i>	51
55. <i>Base Operating Rates, by Region, Coated Woodfree</i>	51
56. <i>Forecast Capacity, by Region, Ctd Woodfree</i>	52
57. <i>Forecast Operating Rates, by Region, Ctd. W'dfree</i>	52
58. <i>Demand Forecast, World by Region, Unc. W'dfree</i>	53
59. <i>Trade Forecast, World by Region, Unc. W'dfree</i>	54
60. <i>Output Forecast, World by Region, Unc. W'dfree</i>	54
61. <i>World Demand-Supply, Uncoated Woodfree</i>	55
62. <i>EMGE Capacity Assumptions, Uncoated Woodfree</i>	56
63. <i>Operating Rates, Forecast vs. Base, Unc. W'dfree</i>	56
64. <i>Base Capacity, by Region, Unc. W'dfree</i>	57
65. <i>Base Operating Rates, by Region, Unc. W'dfree</i>	57
66. <i>Forecast Capacity, by Region, Unc. W'dfree</i>	58
67. <i>Forecast Operating Rates, by Region, Unc. W'dfree</i>	58
68. <i>Demand Forecast, World by Region, Ctd Mechanical</i>	59
69. <i>Trade Forecast, World by Region, Ctd Mechanical</i>	60
70. <i>Output Forecast, World by Region, Ctd Mechanical</i>	60
71. <i>World Demand-Supply, Coated Mechanical</i>	61

*List of Tables and Charts (continued)*

72.	<i>EMGE Capacity Assumptions, Coated Mechanical</i>	62
73.	<i>Operating Rates, Forecast vs. Base, Ctd Mech.</i>	62
74.	<i>Base Capacity, by Region, Ctd Mechanical</i>	63
75.	<i>Base Operating Rates, by Region, Ctd Mechanical</i>	63
76.	<i>Forecast Capacity, by Region, Ctd Mech.</i>	64
77.	<i>Forecast Operating Rates, by Region, Ctd Mech.</i>	64
78.	<i>Demand Forecast, World by Region, Unc. Mech.</i>	65
79.	<i>Trade Forecast, World by Region, Unc. Mech.</i>	66
80.	<i>Output Forecast, World by Region, Unc. Mech.</i>	66
81.	<i>World Demand-Supply, Uncoated Mechanical</i>	67
82.	<i>EMGE Capacity Assumptions, Uncoated Mechanical</i>	68
83.	<i>Operating Rates, Forecast vs. Base, Unc. Mech.</i>	68
84.	<i>Base Capacity, by Region, Unc. Mech.</i>	69
85.	<i>Base Operating Rates, by Region, Unc. Mech.</i>	69
86.	<i>Forecast Capacity, by Region, Unc. Mech.</i>	70
87.	<i>Forecast Operating Rates, by Region, Unc. Mech.</i>	70
88.	<i>Demand, Trade, Output &amp; Capacity by Country, CWF</i>	73
89.	<i>Demand, Trade, Output &amp; Capacity, Unc. Woodfree Papers</i>	77
90.	<i>Demand, Trade, Output &amp; Capacity, Coated Mech.</i>	81
91.	<i>Demand, Trade, Output &amp; Capacity, Uncoated Mech.</i>	85
92.	<i>Capacity Changes by Country, Coated Woodfree Papers</i>	90
93.	<i>Capacity Changes by Country, Unc. Wdfree Papers</i>	91
94.	<i>Capacity Changes by Country, Coated Mech.</i>	93
95.	<i>Capacity Changes by Country, Unc. Mech.</i>	94
96.	<i>Capacity Forecast Changes, by Region - CWF</i>	96
97.	<i>Capacity Forecast Changes, by Region - UWF</i>	96
98.	<i>Capacity Forecast Changes, by Region - CM</i>	97
99.	<i>Capacity Forecast Changes, by Region - UM</i>	97
100.	<i>Capacity Forecast Changes, by Region - Coated</i>	98
101.	<i>Capacity Forecast Changes, by Region - PW Papers</i>	98
102.	<i>Global P&amp;W Paper Machines Closures</i>	99
103.	<i>Global P&amp;W Paper Machines Investments</i>	99
104.	<i>Investment Listing – Coated Woodfree</i>	101
105.	<i>Investment Listing – Uncoated Woodfree</i>	103
106.	<i>Investment Listing – Coated Mechanical</i>	106
107.	<i>Investment Listing – Uncoated Mechanical</i>	107
108.	<i>Demand Forecast, World by Region, Total Pr&amp;Wr</i>	109

*List of Tables and Charts (continued)*

109.	<i>Trade Forecast, World by Region, Total Pr&amp;Wr</i>	110
110.	<i>Output Forecast, World by Region, Total Pr&amp;Wr</i>	110
111.	<i>World Demand-Supply, Printing &amp; Writing Papers</i>	111
112.	<i>EMGE Capacity Assumptions, Prwr Papers</i>	112
113.	<i>Operating Rates, Forecast vs. Base, Prwr Papers</i>	112
114.	<i>Base Capacity, by Region, Pr &amp; Wr Papers</i>	113
115.	<i>Base Operating Rates, by Region, Pr &amp; Wr Papers</i>	113
116.	<i>Forecast Capacity, by Region, Pr&amp;Wr Papers</i>	114
117.	<i>Forecast Operating Rates, by Region, Pr&amp;Wr Papers</i>	114
118.	<i>Demand, Trade, Output &amp; Capacity, Total Pr&amp;Wr</i>	115



# 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.

The EMGE databases are updated daily. We publish these long-term forecasts twice a year (March and September), with new data and revised 5-year forecasts.

The forecast timescale in this report is 2015 to 2020.

# 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.

**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.

**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** = 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 Ratio** - 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.

# 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 graphic 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 Ratios. The report covers the future global and regional demand-supply balance, by paper grade. The forecast timescale is 2015 to 2020.

*New forecasts for Demand-Supply from 2015 to 2020.*

We also provide country-by-country data for 2015. 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.

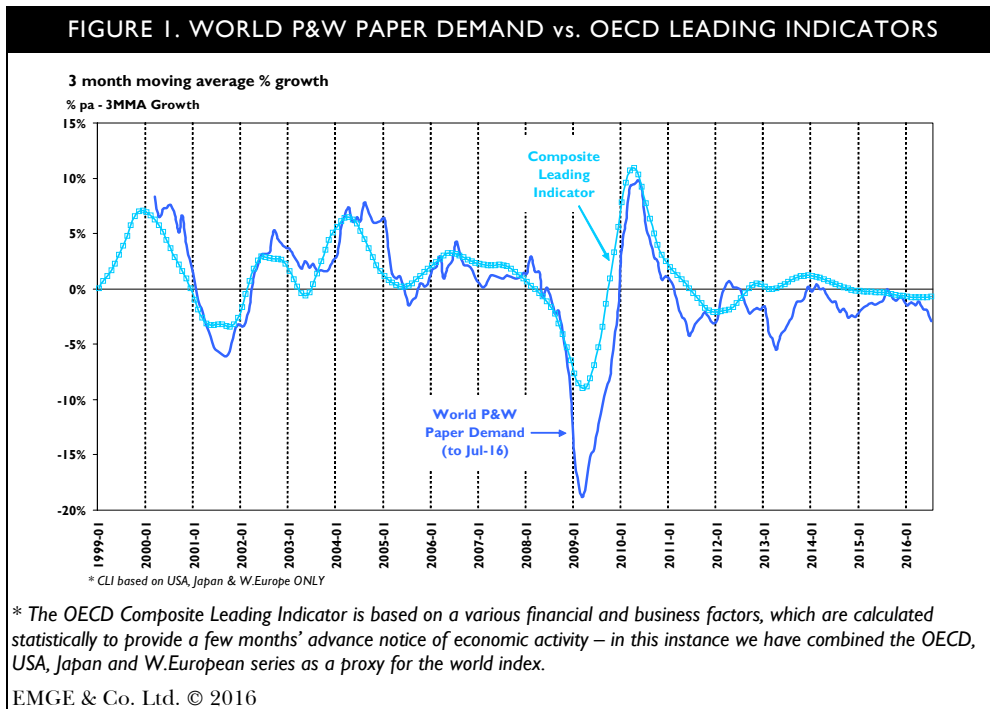
*Detailed rankings of Leading Suppliers, by grade and region and EMGE's Pi-HHi – Herfindahl Hirschman Index.*

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 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, which compare “decided” and “undecided” machines).

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

**EMGE & Co. Ltd.**  
**SEPTEMBER 2016**

# September 2016 Update



The EMGE WORLD GRAPHIC PAPER FORECAST report is a comprehensive, unique and independent assessment of the future for the paper industry.

This latest report (**EMGE WORLD GRAPHIC PAPERS SEPTEMBER 2016**) is an update in the EMGE series of WORLD GRAPHIC PAPER reports. The report covers fundamental global market issues for all grades of Printing and Writing Paper, in each region of the World.

Based on all the data available and combining the latest developments in the markets, we review the demand prospects and comprehensively assess producer capacity changes, to provide subscribers with an updated outlook for demand, trade, investment, capacity, operating rates and leading company market shares, for the world Printing and Writing paper markets, by grade and region.

**(SEPTEMBER 2016)**