# European Printing Industry: Market Insights

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# Agenda

- Introduction – Smithers Pira print research
- EU commercial printing industry
  - Printer demographics (employment, companies)
- EU print market trends
  - Market overview
  - Print product/process trends
  - Consumables & equipment
- Outlook

# Who we are

3 Information Hubs
in Europe
and the US

Working with a
Global Network
of associates
consultants, freelancers
and experts

To serve a
World-wide
Customer Base

Delivering high value information
*enabling you to make better decisions, faster*

# Who we serve

SMITHERS RAPRA | SMITHERS PIRA (pira) | SMITHERS APEX

**Print**

**Paper**

**Packaging**

**Food Contact**

hp | STORAENSO™ | amcor | Nestlé®

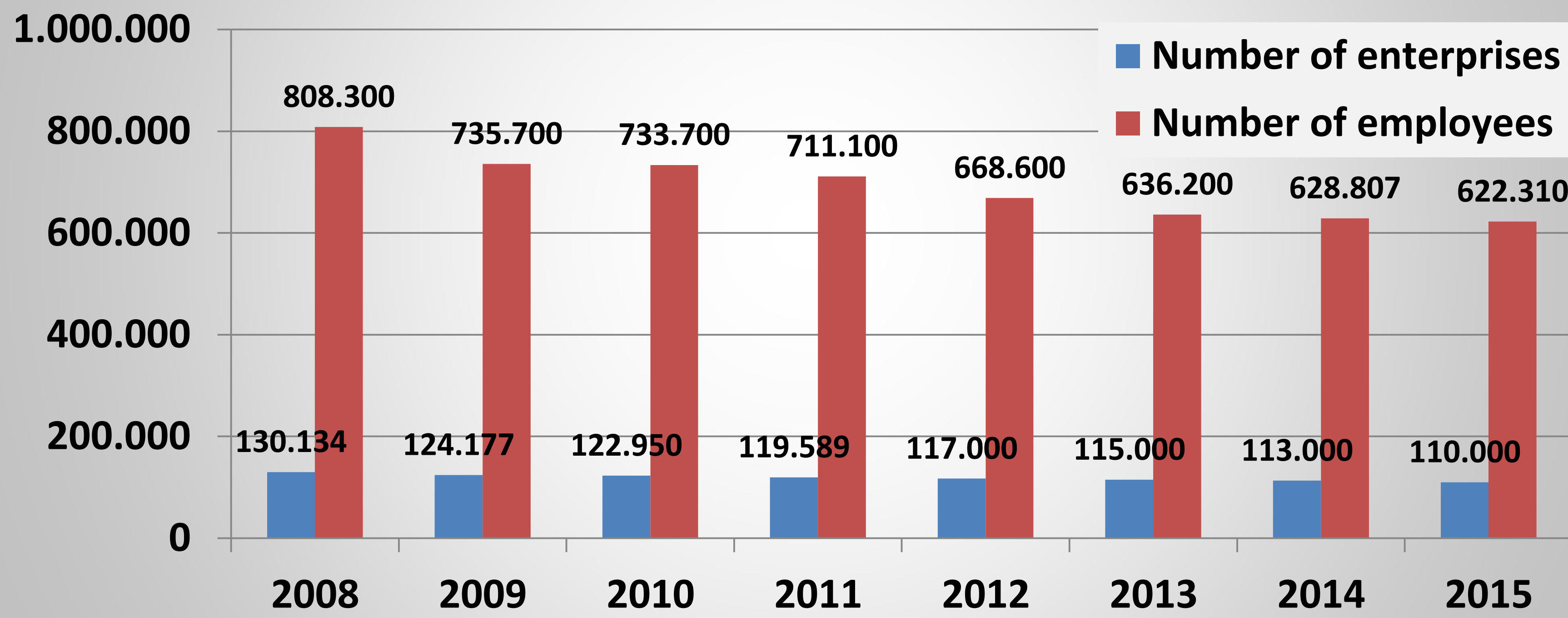
# Smithers Pira

- 50 market reports on paper, print, packaging & other industrial areas each year
- Bespoke multi-client & single-client market research and technical consultancy
- Producer of 20-30 industry conferences each year
- Journals & online database products
- Laboratories & package testing facilities

# General methodology

- Primary and secondary research, backed up by in-house technical consultants
- Global network of market research associates in Europe, Asia and the Americas
- Survey programs plus informal contacts with industry
- Wide range of secondary sources consulted
- Proprietary in-house print database and information centre

# EU28 commercial printing industry – employment and enterprises, 2008-2015




*Source: Eurostat/Smithers Pira estimates*

# Employment levels hit by combination of declining demand and rising automation

Declines in print demand have remained the norm since 2007/8. Further consolidation and job losses have occurred but the rates of decline have flattened out somewhat since 2012

Increasing automation leading to greater efficiencies throughout the print business, including in both administration and print production. Key areas include online printing portals (e.g. VistaPrint), photobook manufacturing, self-publishing – and also standard jobbing print items

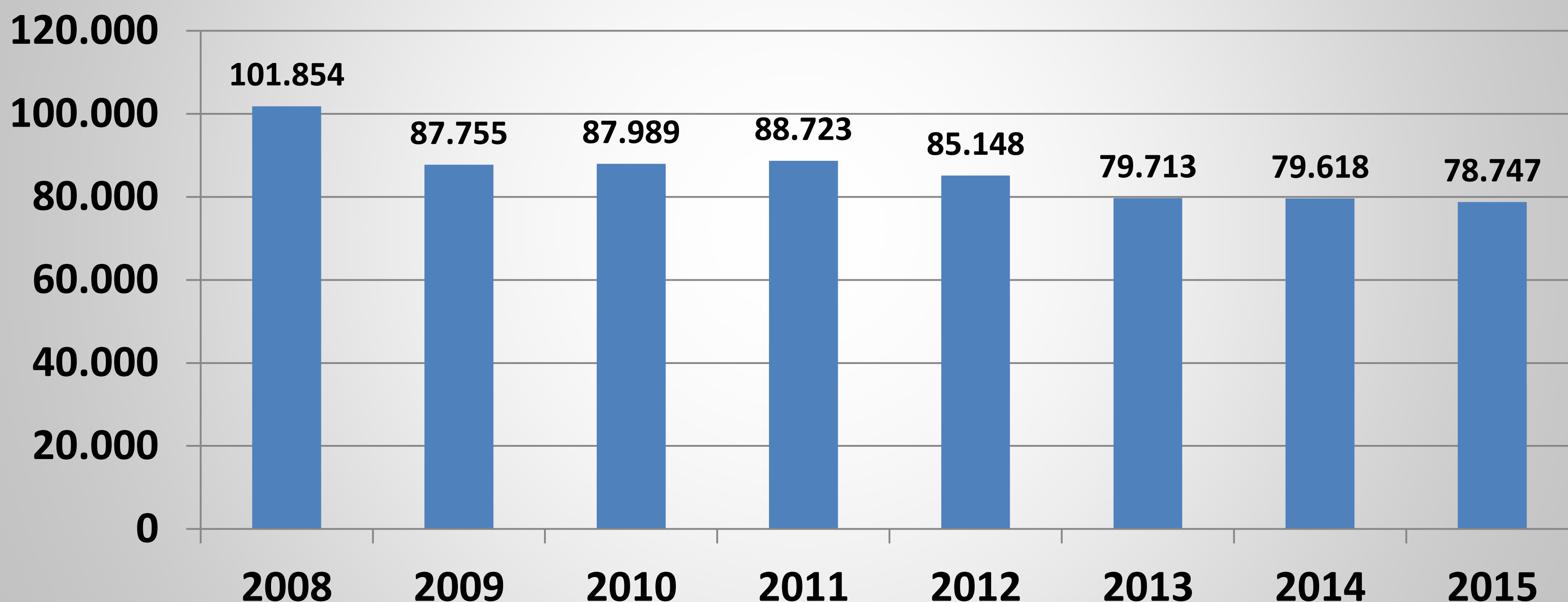
Companies increasingly adopting workflow systems that gang jobs together, often employing one makeready for multiple jobs. Prepress becoming largely automated, with plates automatically generated by workflow system. A variety of jobs can be bundled on a single plate – possibly 6 business card jobs or even 150

Print production process also becoming increasingly automated, with equipment taking instruction from admin side, normally enabled through JDF (job description format) from original order. Changeovers on modern sheetfed presses now taking less than 10 minutes for whole makeready, with minimal manual intervention required

# Some stabilization in commercial printing industry output after protracted period of decline, with production value down by around one per cent in current € in 2015

- EU28 commercial printing production value, 2008: €100 billion
- Sharp downturn in output in 2009 (down 14%) followed by more stable conditions in 2010/11
- Annual € declines of 1.9% per annum, 2009-2014
- Overall decline of 1.1% in production value in 2015 although volume declines more pronounced

# Production value of EU28 printing & allied industries, 2008-2015 (€ million)




*Source: Eurostat/Smithers Pira estimates*

# Graphic paper demand continues to decline although rates vary according to data source

## EU28 printing & writing paper consumption by type, 2007-15

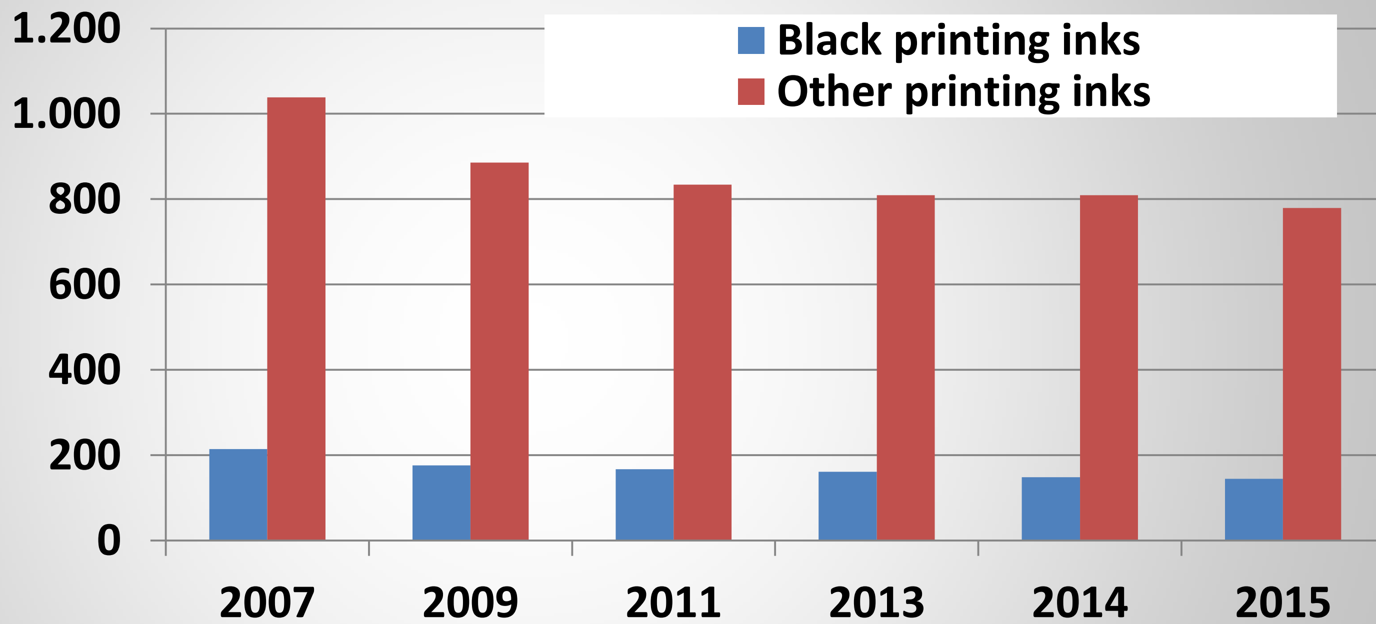
| 000 tonnes | Eurostat data | | | | | | | Eurograph | |
|---|---|---|---|---|---|---|---|---|---|
| | 2007 | 2009 | 2011 | 2013 | 2014 | 2015 | CAGR % 07/15 | % C, 14-15 | % C, 14-15 | % C, 15-16 |
| Newsprint | 11,098 | 9,186 | 8,999 | 7,971 | 7,772 | 7,216 | -5.2 | -7.2 | -7.9 | -3.8 |
| Uncoated woodfree | 11,064 | 9,371 | 8,861 | 7,958 | 8,098 | 8,652 | -3.0 | 6.8 | -0.8 | -4.1 |
| Uncoated mechanical | 5,503 | 4,965 | 3,179 | 5,070 | 4,685 | 4,547 | -2.4 | -3.0 | -1.1 | 0.4 |
| Coated woodfree | 5,377 | 4,257 | 4,899 | 4,627 | 4,444 | 4,415 | -2.4 | -0.7 | -2.3 | -6.2 |
| Coated mechanical | 9,082 | 6,246 | 6,633 | 6,000 | 6,202 | 6,002 | -5.0 | -3.2 | -5.4 | -7.3 |
| Total | 42,124 | 34,025 | 32,571 | 31,626 | 31,202 | 30,831 | -3.8 | -1.2 | -3.6 | -4.2 |

*Note: Eurostat data based on apparent consumption (production + imports – exports, does not take into account stocks; Eurograph data for Europe as a whole excluding Russian woodfree domestic deliveries*

*Source: Eurostat/Eurograph*

# Printing ink demand down 3.6% in 2015

EU28 printing inks demand, 2007-15 ('000 tonnes)

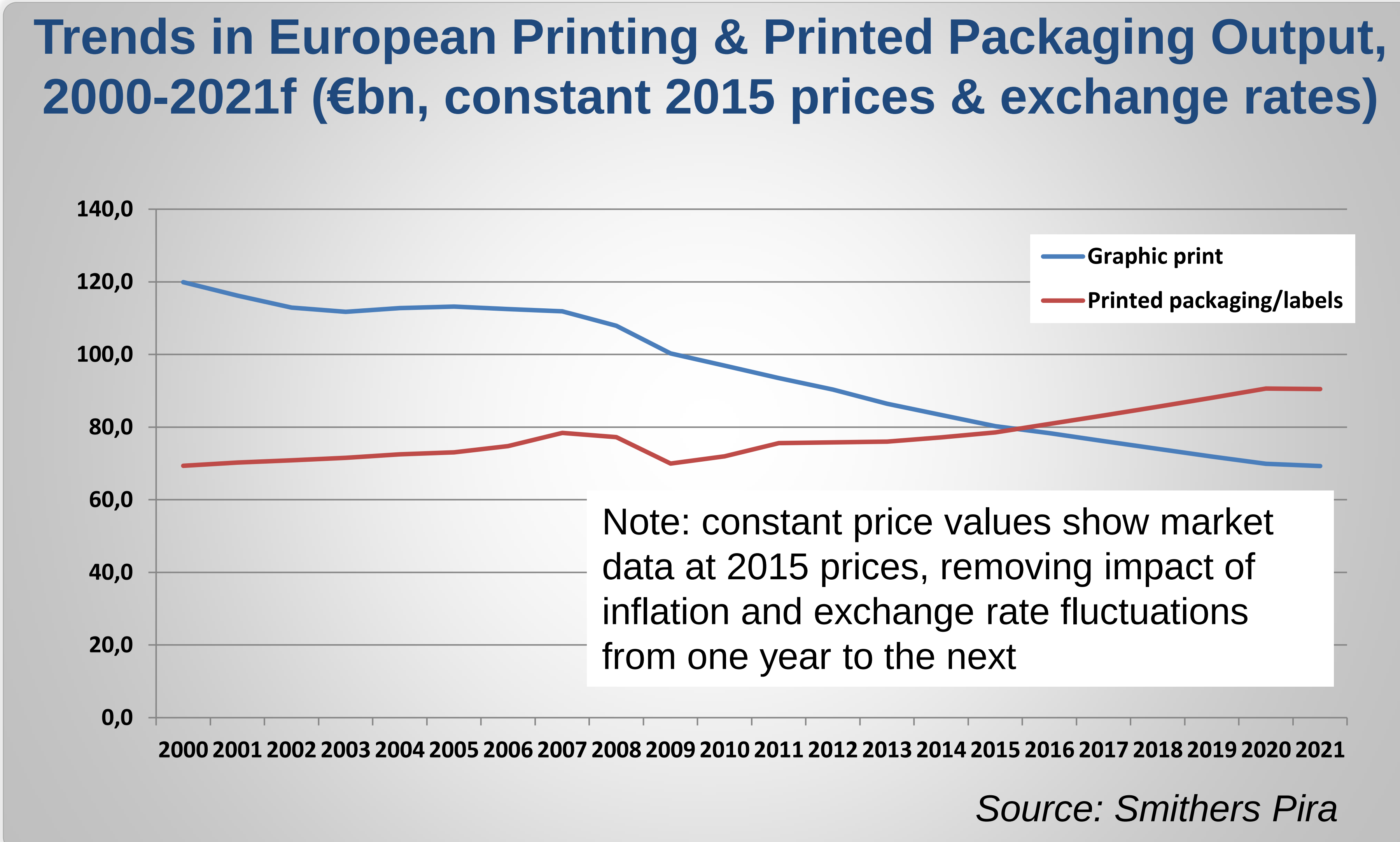


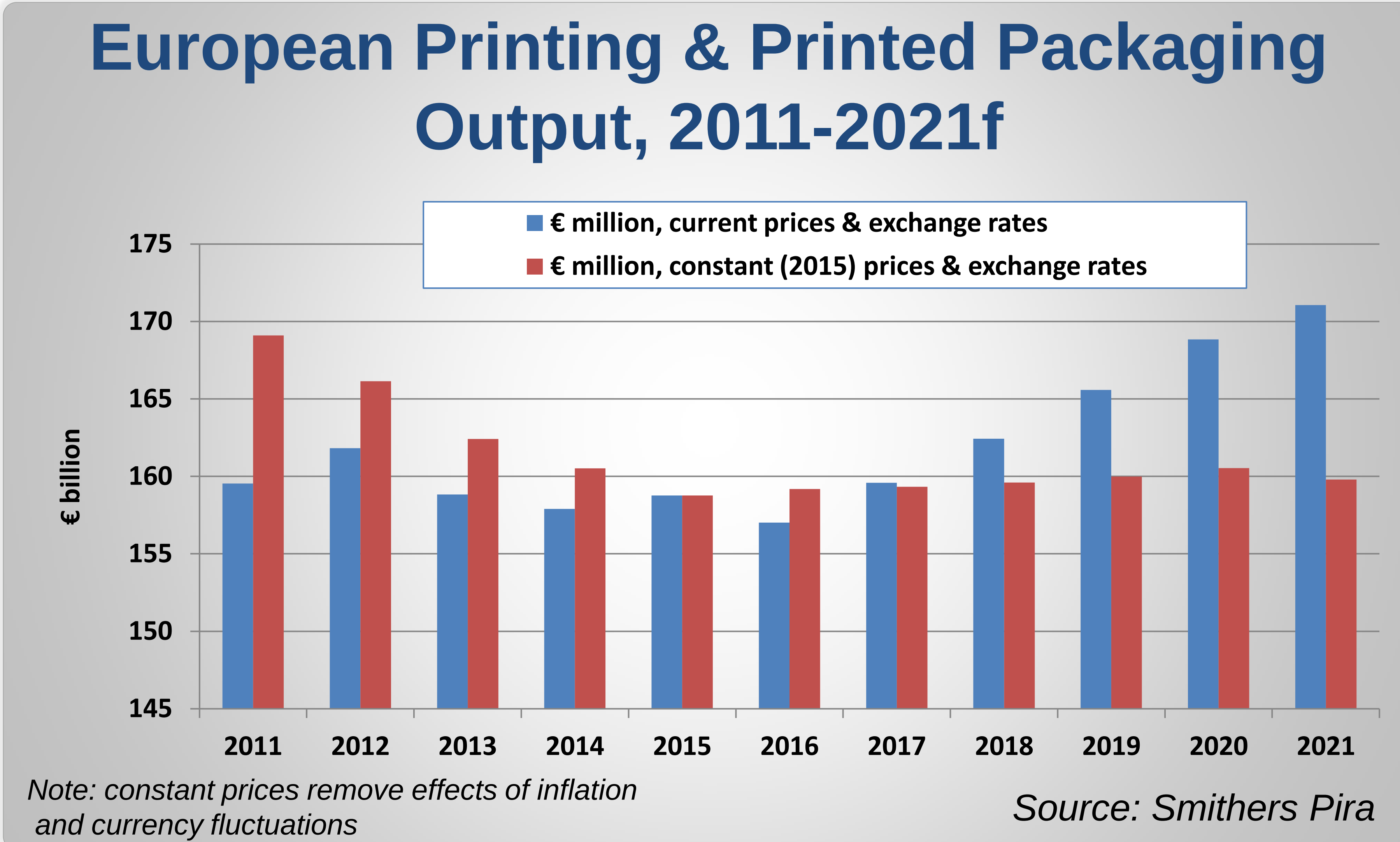

| 000 tonnes | 2007 | 2009 | 2011 | 2013 | 2014 | 2015 | CAGR 07/15 | % C, 14-15 |
|---|---|---|---|---|---|---|---|---|
| Black printing inks | 214 | 176 | 167 | 161 | 149 | 144 | -4.8 | -2.8 |
| Other printing inks | 1,039 | 886 | 834 | 809 | 809 | 779 | -3.5 | -3.7 |
| Total | 1,253 | 1,062 | 1,001 | 970 | 958 | 924 | -3.7 | -3.6 |

*Source: Eurostat*

# Smithers Pira view

- Recently completed annual European Print Market Review for Intergraf, which forms the basis of this presentation
- European printing & packaging output down one per cent in current terms to €157 billion in 2016, but up 0.3% in real terms
- Big decline in Russian printing revenues in current terms in 2015 and 2016 in line with decline in value of the rouble
- EU-28 revenues down 0.2% in current terms but up 0.2% in constant terms in 2016
- Relatively strong performance in southern Europe after degree of rebounding in countries hit hardest by Eurozone crisis


Trends in European Printing & Printed Packaging Output, 2000-2021f (€bn, constant 2015 prices & exchange rates)
140,0
120,0
100,0
80,0
60,0
40,0
20,0
0,0
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Graphic print
Printed packaging/labels
Note: constant price values show market data at 2015 prices, removing impact of inflation and exchange rate fluctuations from one year to the next
Source: Smithers Pira


European Printing & Printed Packaging Output, 2011-2021f
€ million, current prices & exchange rates
€ million, constant (2015) prices & exchange rates
€ billion
175
170
165
160
155
150
145
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Note: constant prices remove effects of inflation and currency fluctuations
Source: Smithers Pira

# Graphic print down, packaging up

- Graphic print down 2.4% in real terms to €78.3 billion in 2016
- Continuing declines in output across most graphic printing area with magazines, newspapers, catalogues and directories all down by around five per cent
- Book printing output stabilising in line with slowdown in Kindle sales and declining share of extra-EU book imports including from China, boosted by increased use of digital printing for short turnaround in line with new JIT business models
- Packaging & labels up 3.0% in real terms to €80.5 billion

# European Printing & Printed Packaging Output by Print Product, 2015-2021f

| | Current prices & exchange rates | | | | | Constant (2015) prices & exchange rates | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **2015** | **2016** | **% C, 15-16** | **2021f** | **CAGR (%), 16-21** | **2016** | **% C, 15-16** | **2021f** | **CAGR (%), 16-21** |
| Books | 6.86 | 6.85 | -0.1 | 6.28 | -1.7 | 6.94 | -2.5 | 5.91 | -3.2 |
| Magazines | 9.30 | 8.69 | -6.6 | 7.72 | -2.3 | 8.81 | -8.4 | 7.24 | -3.8 |
| Newspapers | 6.16 | 5.75 | -6.7 | 5.04 | -2.6 | 5.82 | -5.8 | 4.68 | -4.3 |
| Advertising | 24.67 | 23.70 | -3.9 | 23.94 | 0.2 | 24.13 | -2.2 | 22.40 | -1.5 |
| Catalogues | 3.83 | 3.62 | -5.4 | 3.27 | -2.0 | 3.63 | -4.8 | 3.04 | -3.5 |
| Directories | 2.85 | 2.66 | -6.7 | 2.24 | -3.4 | 2.67 | -6.0 | 2.08 | -4.8 |
| Security | 1.35 | 1.30 | -4.1 | 1.23 | -1.0 | 1.30 | -2.7 | 1.15 | -2.5 |
| Transactional | 3.42 | 3.48 | 1.6 | 4.00 | 2.9 | 3.54 | 1.8 | 3.76 | 1.2 |
| Other commercial | 21.81 | 21.16 | -3.0 | 20.35 | -0.8 | 21.49 | -2.3 | 19.04 | -2.4 |
| Packaging | 71.10 | 72.12 | 1.4 | 87.61 | 4.0 | 73.08 | 1.2 | 81.75 | 2.3 |
| Labels | 7.43 | 7.69 | 3.5 | 9.38 | 4.1 | 7.77 | 2.6 | 8.74 | 2.4 |
| Total | 158.77 | 157.01 | -1.1 | 171.06 | 1.7 | 159.18 | -1.2 | 159.80 | 0.1 |

*Note: constant prices remove effects of inflation and currency fluctuations*

*Source: Smithers Pira*

# Newspapers

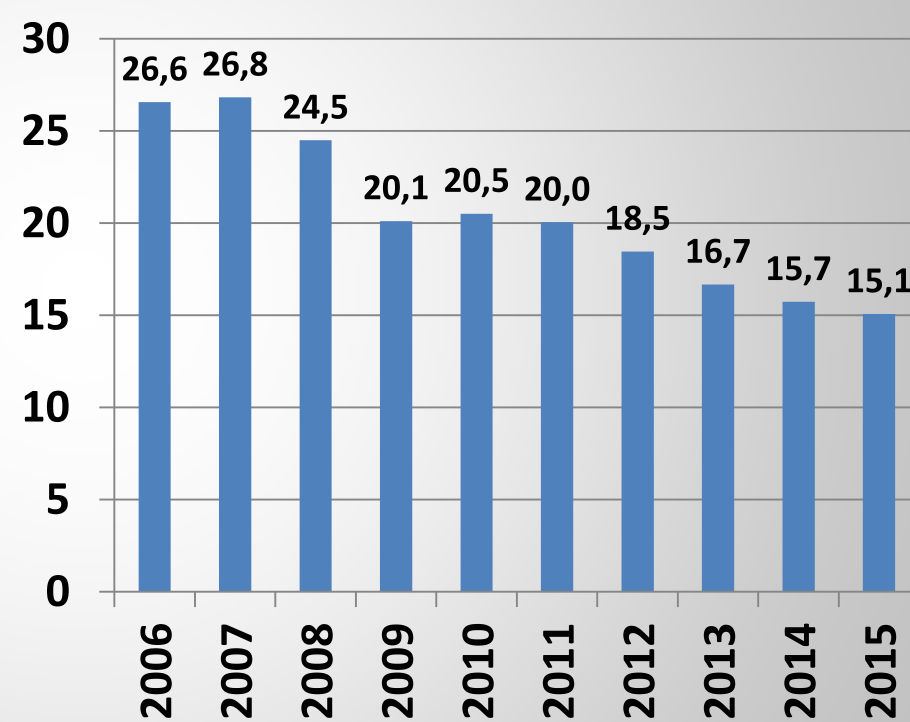
**European mkt, 2016: €5.75bn**

**-5.8%, 2016p**
*(constant prices)*

**-4.3% p.a., 2021f**
*(constant prices)*

*Source: Smithers Pira*

**European newspaper advertising expenditure, 2006-2015 (€ billion)**




*Source: WAN/IFRA*

# Magazines

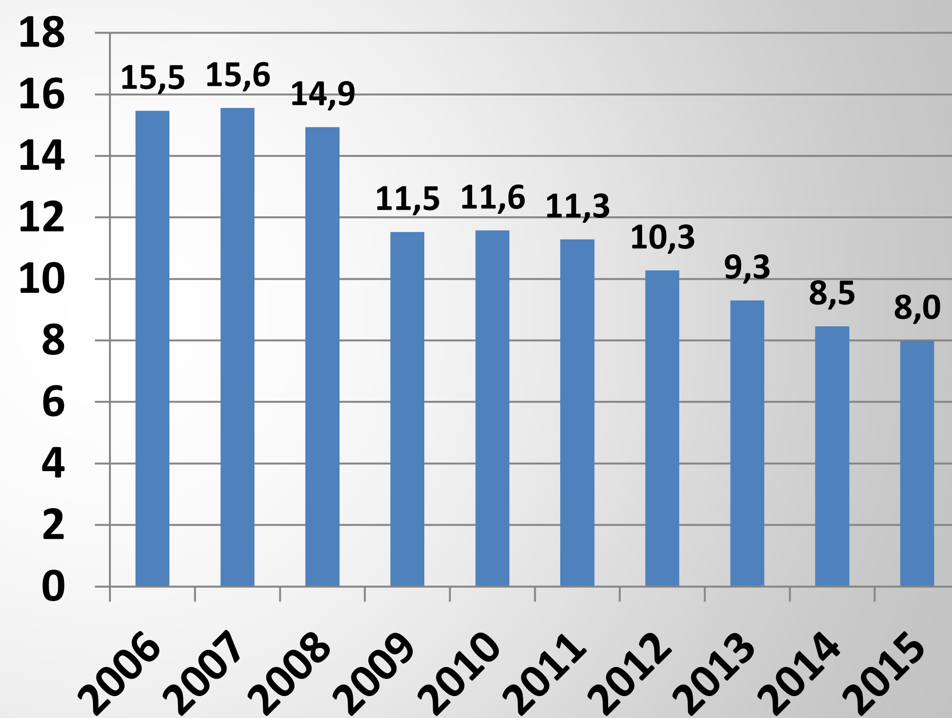
**European mkt, 2016: €8.69bn**

**-8.4%, 2016p**
*(constant prices)*

**-3.8% p.a., 2021f**
*(constant prices)*

*Source: Smithers Pira*

**European magazine advertising expenditure, 2006-2015 (€ billion)**




*Source: WAN/IFRA*

# Books

**European mkt, 2016: €6.85bn**

**-2.5%, 2016p**
*(constant prices)*

**-3.2% p.a., 2021f**
*(constant prices)*

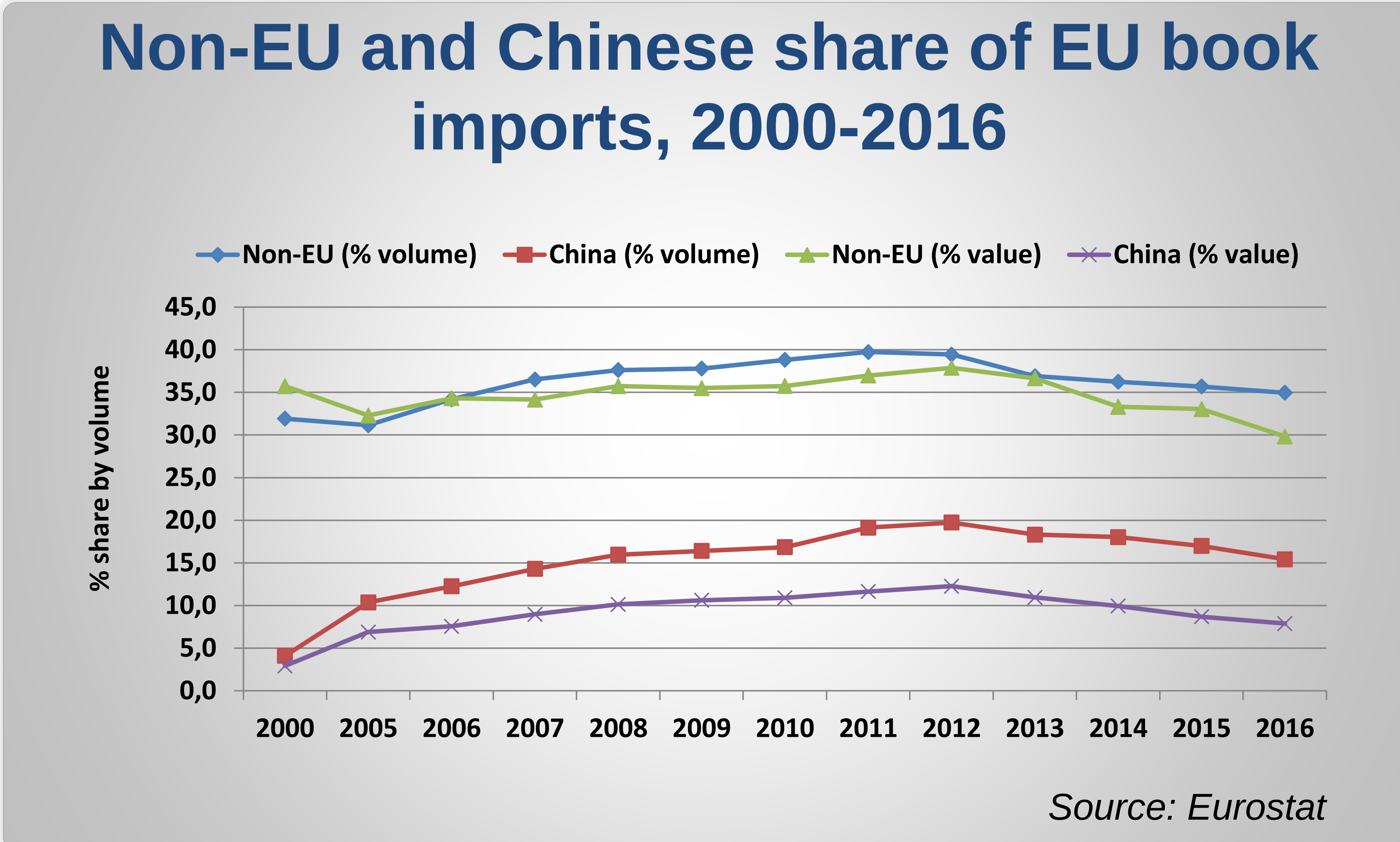
*Source: Smithers Pira*

## EU 28 book printing revenues by type, 2008-2015 (€ million)

| | 2008 | 2015 | % change, 2008-15 |
|---|---|---|---|
| Books, total | 5,075 | 4,672 | -7.9 |
| Books, brochures, pamphlets (excl. single sheets) | 4,209 | 4,617 | 9.7 |
| - UK | 829 | 1,795 | 116.5 |
| - Excluding UK | 3,380 | 2,822 | -16.5 |
| Children's picture, etc. books | 279 | 33 | -88.2 |
| Dictionaries & encyclopaedias | 502 | 14 | -97.2 |
| Map books, etc. | 85 | 8 | -90.6 |

*Note: UK stats office data points to increase from €1.21bn in 2014 to €1.80bn in 2015. It is not guaranteed though that the same basis is used from one year to next*

*Source: Eurostat*


Non-EU and Chinese share of EU book imports, 2000-2016
Non-EU (% volume)
China (% volume)
Non-EU (% value)
China (% value)
% share by volume
45,0
40,0
35,0
30,0
25,0
20,0
15,0
10,0
5,0
0,0
2000
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Source: Eurostat

# Catalogues

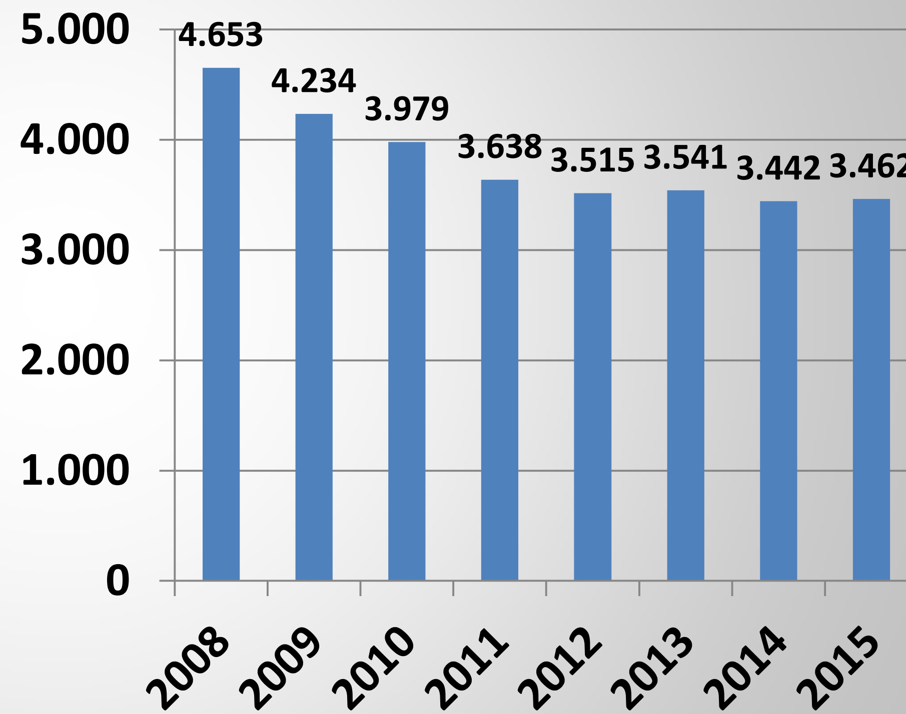
**European mkt, 2016: €3.62bn**

**-4.8%, 2016p**
*(constant prices)*

**-3.5% p.a., 2021f**
*(constant prices)*

*Source: Smithers Pira*

**EU 27 catalogue printing revenues, 2008-2015 (€ million)**




*Source: Eurostat*

# Advertising

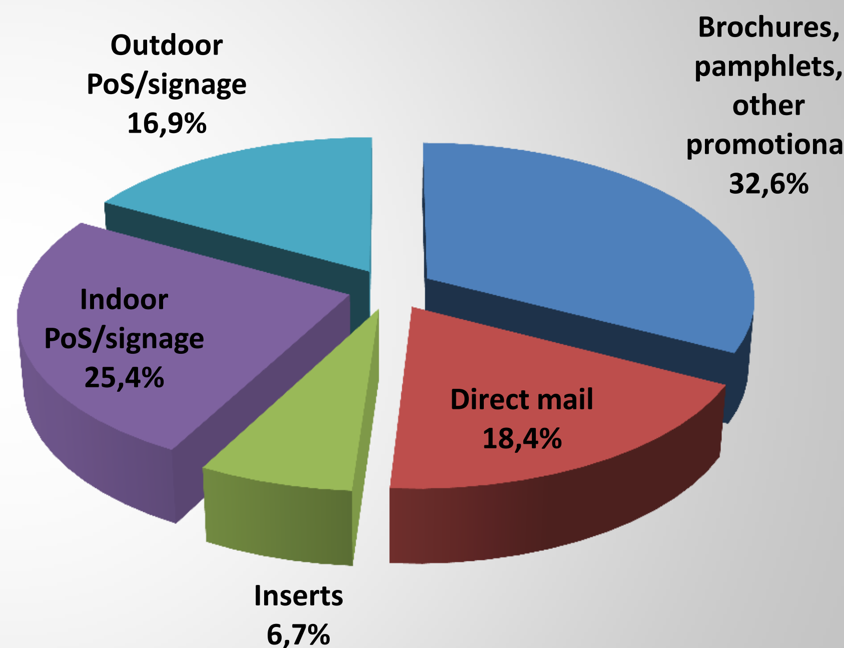
**European mkt, 2016: €23.7bn**

**-2.2%, 2016p**
*(constant prices)*

**-1.5% p.a., 2021f**
*(constant prices)*

*Source: Smithers Pira*

## European printed advertising output by type, 2016 (% share by value)




*Source: Smithers Pira*

# Other commercial print

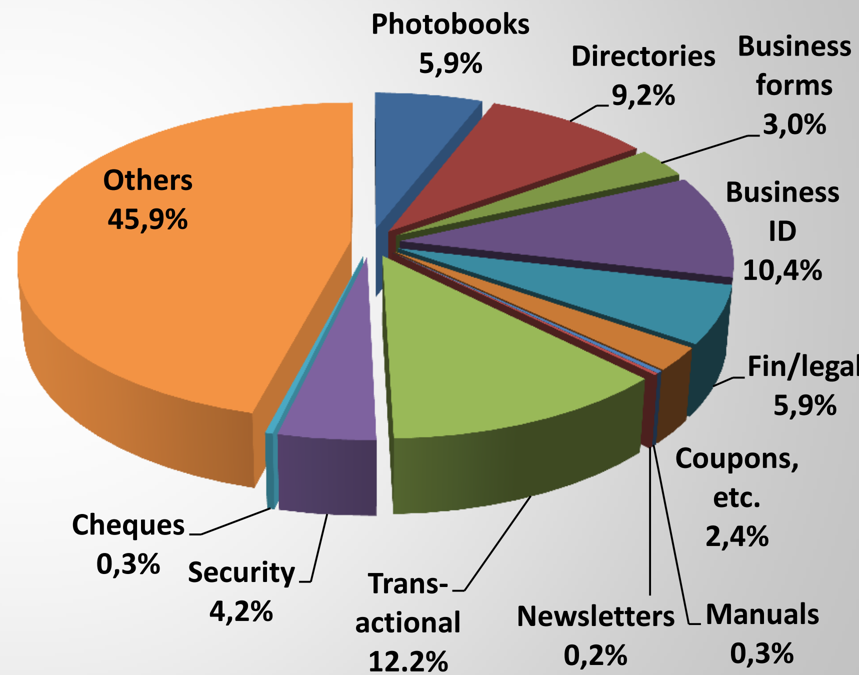
European mkt, 2016: €28.6bn

-1.5%, 2016p
*(constant prices)*

-2.1% p.a., 2021f
*(constant prices)*

*Source: Smithers Pira*

**Other European commercial printing output by type, 2016 (% share by value)**




*Source: Smithers Pira*

# Packaging & labels

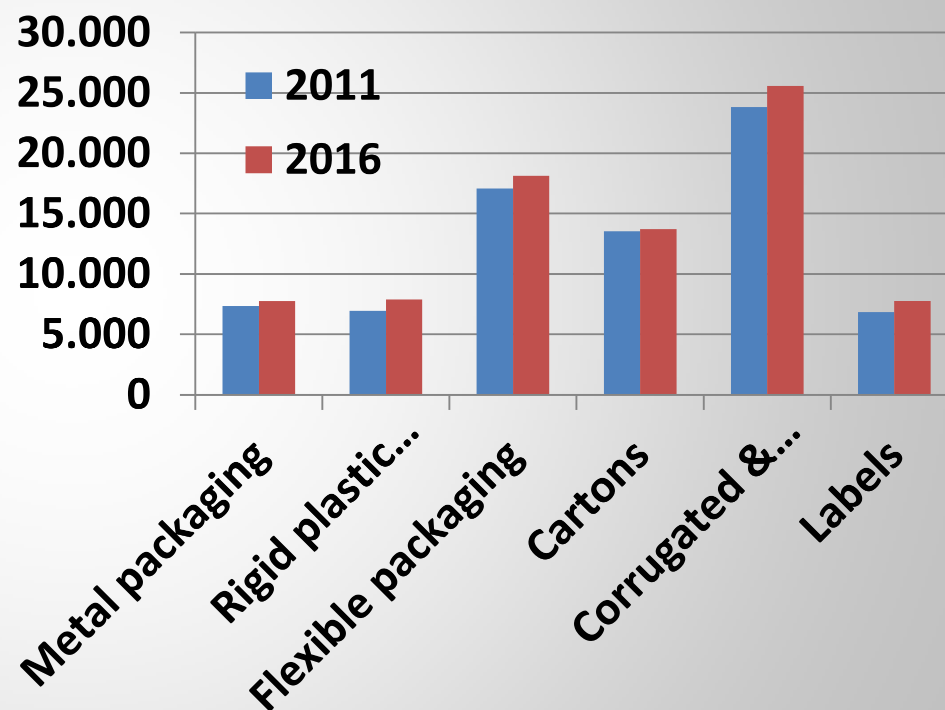
**European mkt, 2016: €79.8bn**

**+3.0%, 2016p**
*(constant prices)*

**+2.3% p.a., 2021f**
*(constant prices)*

*Source: Smithers Pira*

**European package & label printing revenues by type, 2011-2016 (€ million)**

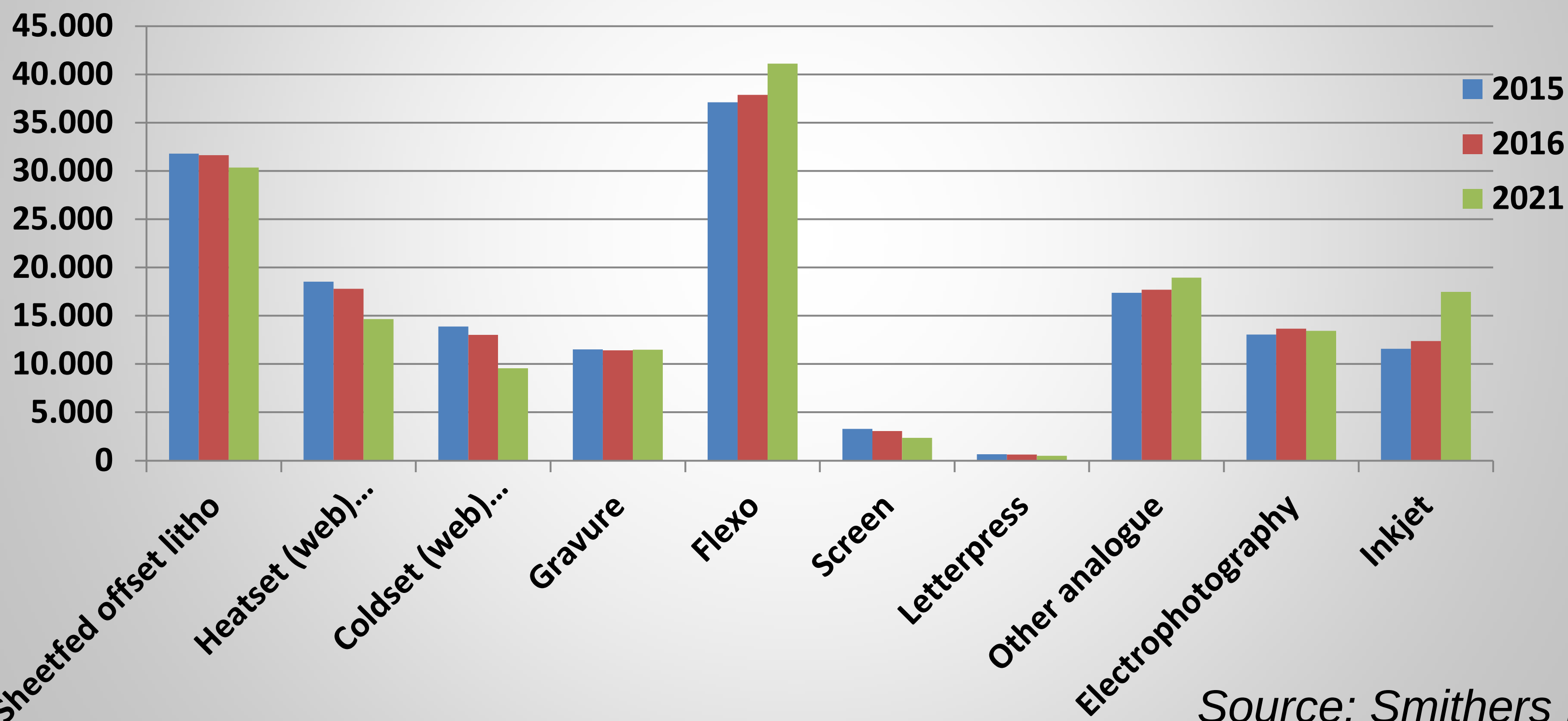



*Source: Smithers Pira*

# Flexo single largest process; digital print gains ground

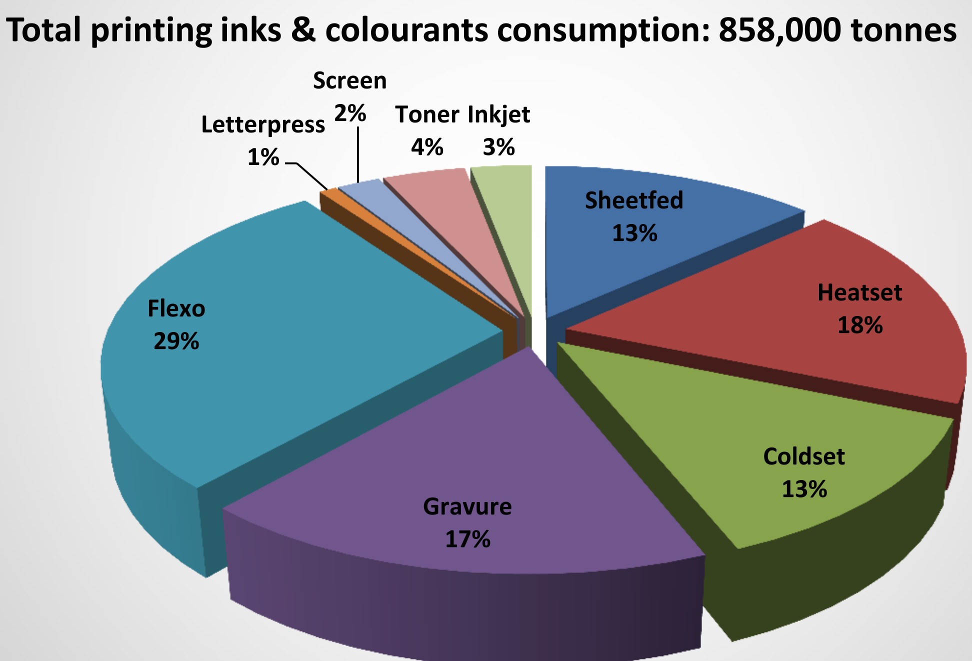
- Flexo printing output valued at €38bn, growing in line with package and label printing demand
- Sheetfed offset litho down only slightly to €32bn, but sharp falls in web offset printing output
- Overall digital printing output now standing at €26bn. Inkjet set to grow by 7%pa in real terms to 2021, with rising inkjet usage not only impacting upon analogue print but also leading to flat electrophotographic printing revenues

# European Printing & Printed Packaging Output by Process, 2015-2021f (€ million, constant 2015 prices & exchange rates)




*Source: Smithers Pira*

# European Printing Inks Consumption by Type, 2016 (% share by volume)



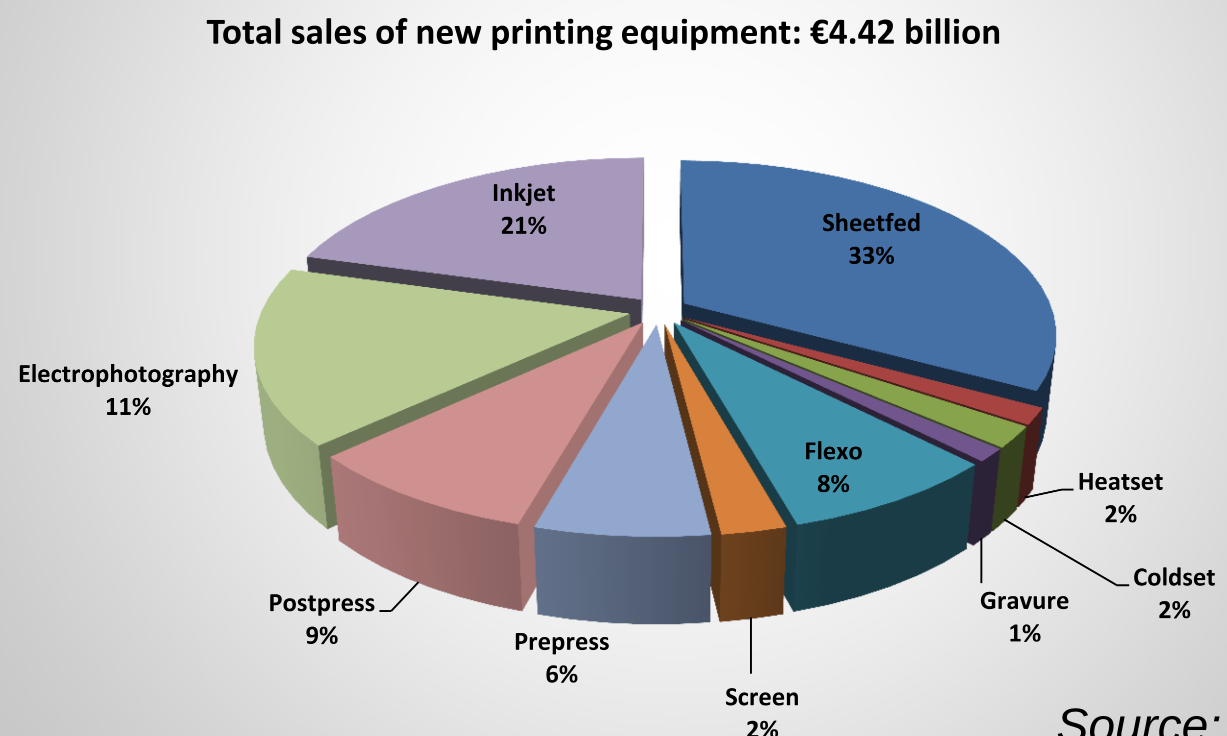

Source: Smithers Pira

# EU28 commercial printing press sales by type, 2008-2015 (sold production, € million)

| | 2008 | 2009 | 2011 | 2013 | 2014 | 2015 | CAGR 08/15 | %C, 14-15 |
|---|---|---|---|---|---|---|---|---|
| Reel fed offset | 2,008 | 1,106 | 523 | 521 | 364 | 240 | -26.2 | -34.0 |
| Other offset | 2,515 | 1,157 | 1,800 | 1,291 | 1,500 | 1,000 | -12.3 | -33.3 |
| Flexographic | 127 | 99 | 82 | 88 | 60 | 42 | -14.6 | -30.0 |
| Reel fed letterpress | 443 | 365 | 548 | 535 | 575 | 660 | 5.9 | 14.8 |
| Gravure | 171 | 40 | 138 | 161 | 158 | 165 | -0.5 | 4.0 |
| Others | 1,010 | 864 | 1,590 | 1,711 | 1,561 | 1,592 | 6.7 | 2.0 |
| Total | 6,274 | 3,631 | 4,681 | 4,307 | 4,219 | 3,699 | -7.3 | -12.3 |

*Source: Eurostat*

# European Sales of Printing Equipment by Type, 2016 (% share by value)




Source: Smithers Pira

# Outlook

Smithers Pira forecasts continued declines in European graphic printing output and growth in package/label printing, with overall growth of 2% in current € terms and flat in real terms

Landscape likely to remain challenging for many printers with further consolidation likely. Those companies most able to invest/grow, adapt or focus on key niche areas among those most likely to succeed

Investment growth in inkjet printing equipment will settle back to around 3% per annum, but inkjet printing will continue to gain share. Digital printing share to rise from 16% in value terms to 19% to 2021 with volume share rising from 2.7% to 3.8%

Technological, commercial and cultural change will continue to favour investment in digital printing equipment as well as systems like workflow software and web-to-print as printers seek to tailor their offer to their customers in the most effective manner

# Thank you for your attention!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