



# Inks, trends and developments

ERA Annual Meeting, Munich 2019

18 September 2019



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**Volume  
Trends Europe**

**Technology Trends**

**Advertising Trends**

**Raw Material  
Trends**

**Printer - / Enduser -  
Trends**

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## Terms and Sources

- Publication = Heatset + Coldset + Publication Gravure
- All other = Packaging, Sheetfed
  
- The following slides are using a mix of internal market intelligence and some external references (PIRA, EuPIA...)



# Volume Trends Europe

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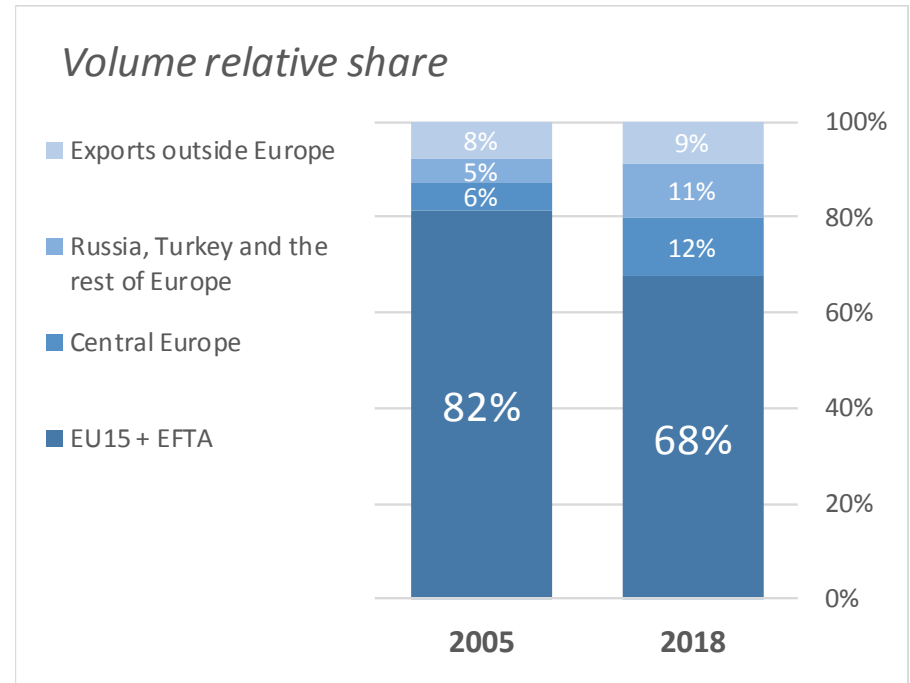
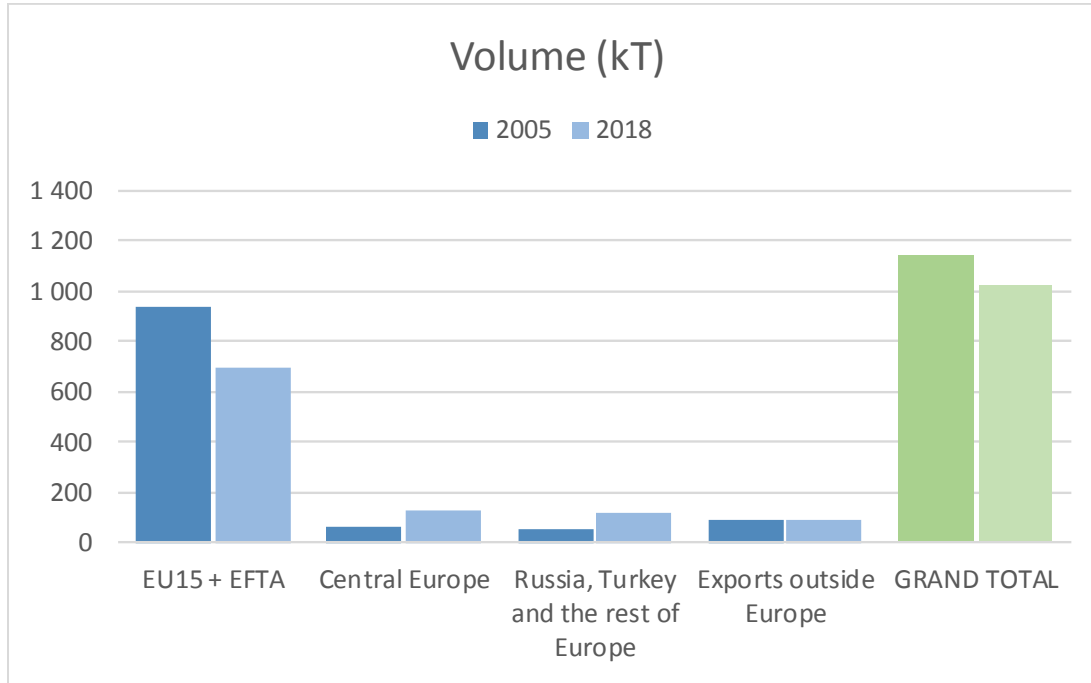
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# Europe total ink volumes sold

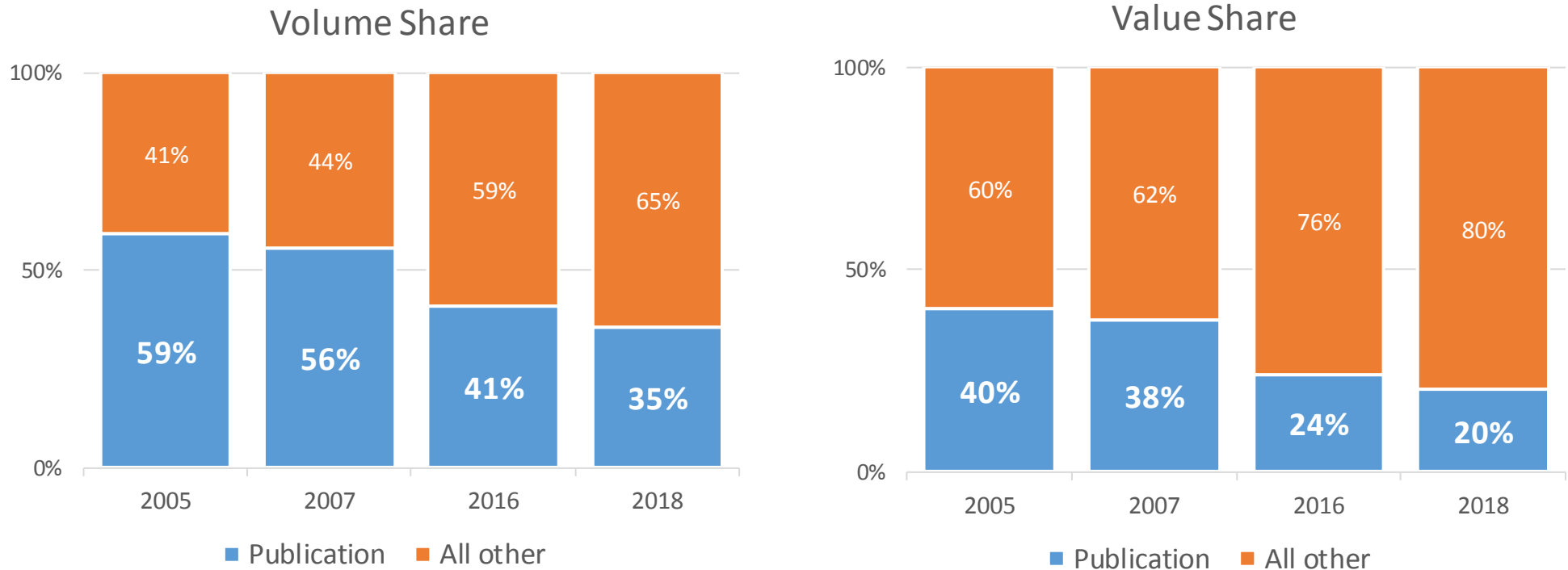
Total European ink market	2005	2018	Evo
Volume (kT)	1,15	1,03	-10%
Value (Billion €)	3,39	3,33	-2%
Value (inflation adjusted) *	4,13	3,33	-20%



- The market has shifted towards Central and Eastern Europe
- Total market size down by about 10% in volume
- Adjusted for inflation\*, the sales value dropped in that period by about 20%

\* Source: ECB inflation index 2005 > 2018

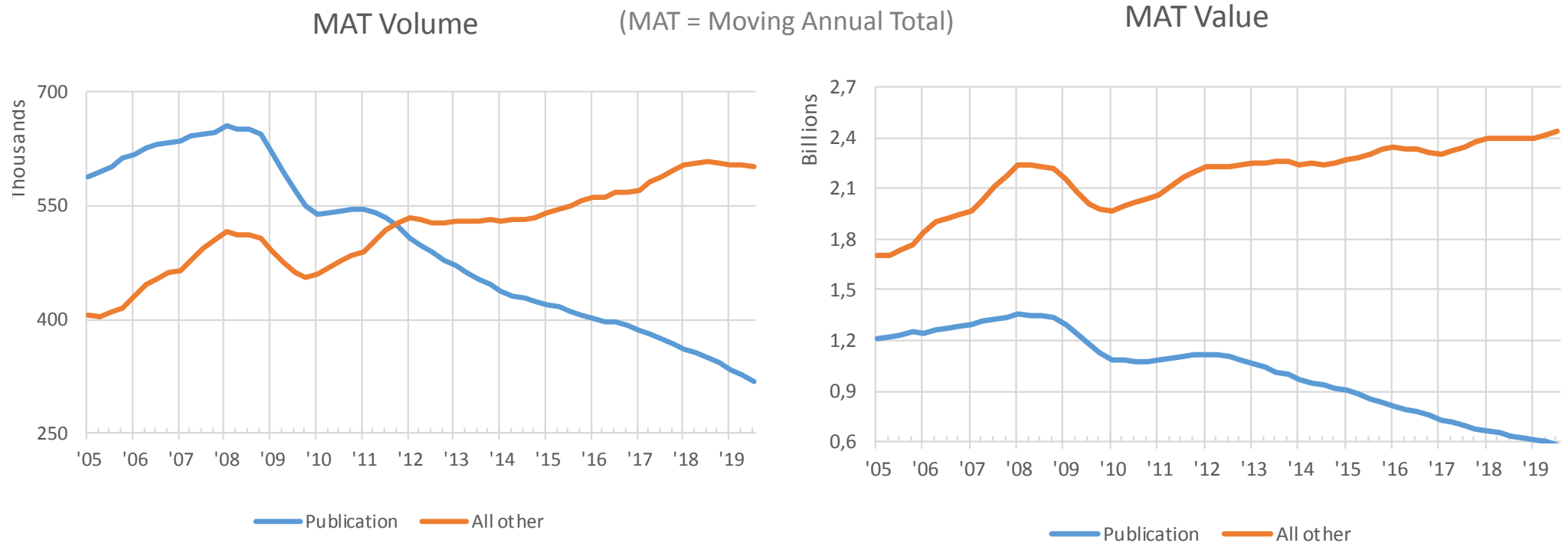
## Publication inks vs other markets in Europe – 2005 to 2018



*Publication share is now nearly halved vs 2005  
and shrinkage seems to accelerate*

Note: Publication = HS+CS+PG

# Publication inks vs other markets in Europe – 2005 to 2019

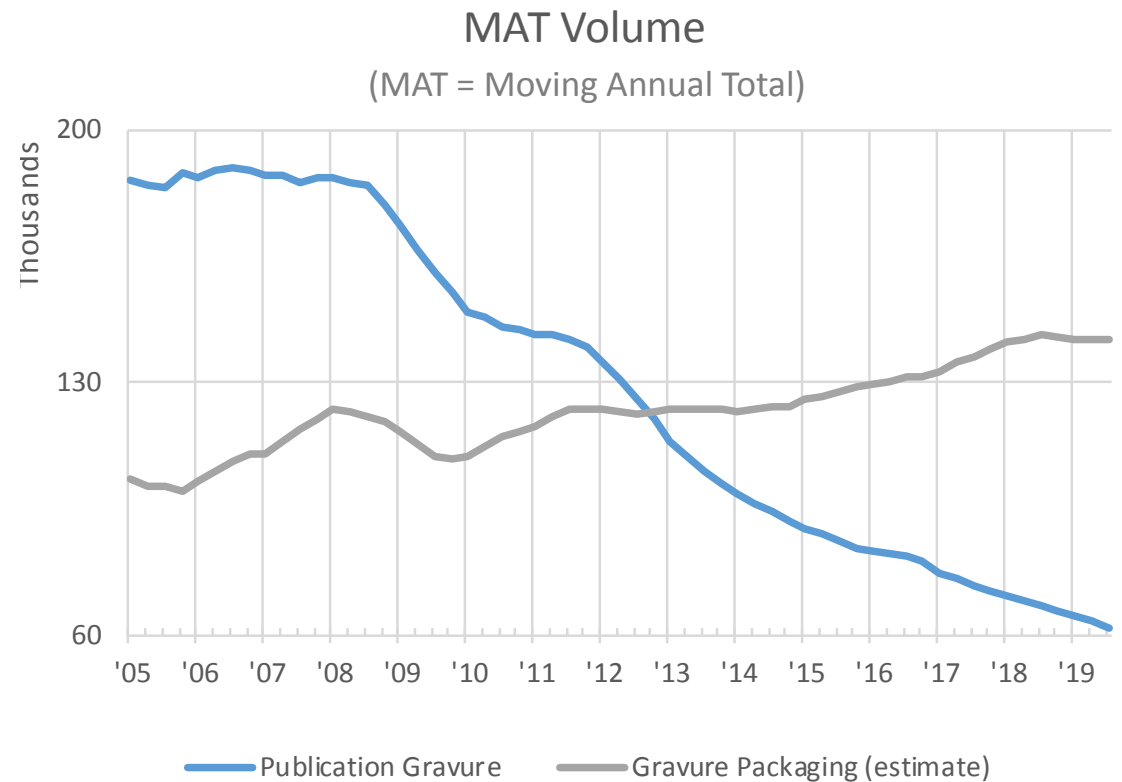


*After the financial crisis, publication ink businesses suffered most and never recovered*

Note: Publication = HS+CS+PG

## Publication Gravure vs Packaging Gravure ink markets

- The packaging gravure has a much different market environment compared to publication gravure and although subject to threats from other processes (flexo, digital).
- It still benefits from overall growth in markets
- The curve seems to flatten out (capacity used or market flat?)



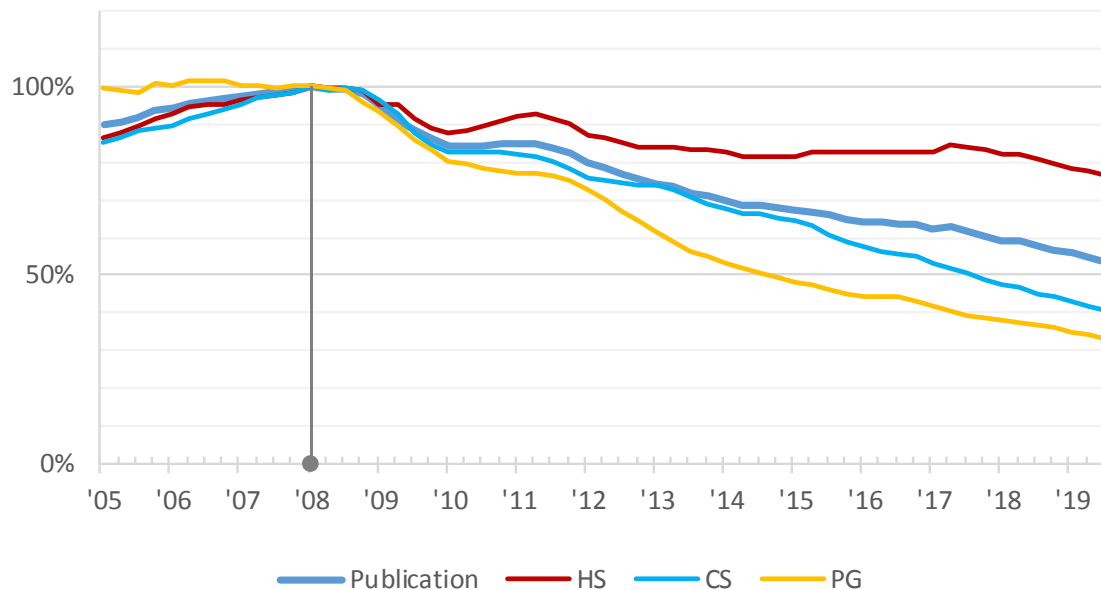
Note:

Gravure packaging estimated based on a typical ratio of gravure in key end use markets



## Publication markets dynamics since the 2008 financial crisis

MAT Volume trend  
(100% = Q4 '07)



- Publication Gravure suffered most in volume compared to CS and HS
- Heatset flattened out since a few years, possibly cannibalizing some business from PG (wide web presses)  
...BUT seems also to experience a recent fall
- Since 2016, CS and PG decline speed increases

## Publication ink manufacturing consolidation

### Publication Gravure historical suppliers

- C2E (Brie Comte Robert, FR)
- Gebr. Schmidt (Frankfurt, DE)
- Flint (Frankfurt, DE)
- SunChemical (Etten, NL)
- Siegwerk (Siegburg, DE)
- Baglini (IT)
- Huber (Celle, DE)
- Ruco (Eppstein, DE)
- Roto Smeets (Etten, NL)
- Burda (Schutterwald, DE)
- Print Color (CH)

### Publication Gravure suppliers today

- ~~C2E (Brie Comte Robert, FR)~~
- ~~Gebr. Schmidt (Frankfurt, DE)~~
- ~~Flint (Frankfurt, DE)~~
- SunChemical (Etten, NL)
- Siegwerk (Siegburg, DE)
- ~~Baglini (IT)~~
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- ~~Print Color (CH)~~

## Publication ink manufacturing consolidation

### Heatset historical suppliers

- Brancher
- Coates Lorilleux
- Flint
- SunChemical
- Siegwerk
- Huber/Hostmann
- CIBA
- Usher Walker
- Trenal
- Premier
- Schuite & Schuite
- ...

### Heatset suppliers today

- ~~Brancher~~
- ~~Coates Lorilleux~~
- Flint
- SunChemical
- ~~Siegwerk~~
- ~~Huber/Hostmann~~
- ~~CIBA~~
- ~~Usher Walker~~
- ~~Trenal~~
- ~~Premier~~
- Schuite & Schuite

*.... and the same has happened in Coldset...*



# Advertising Trends

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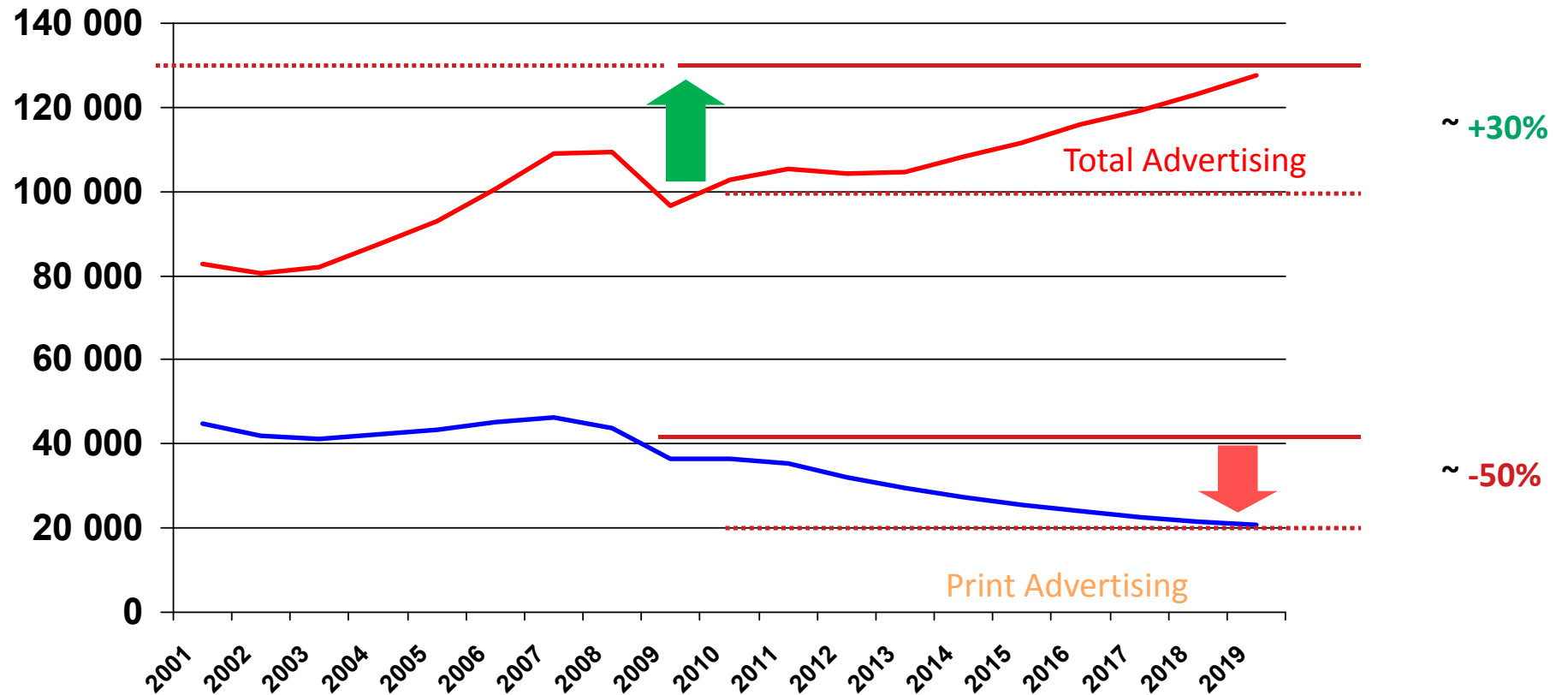
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# Advertising Expenditure: Europe

US\$ millions at current prices

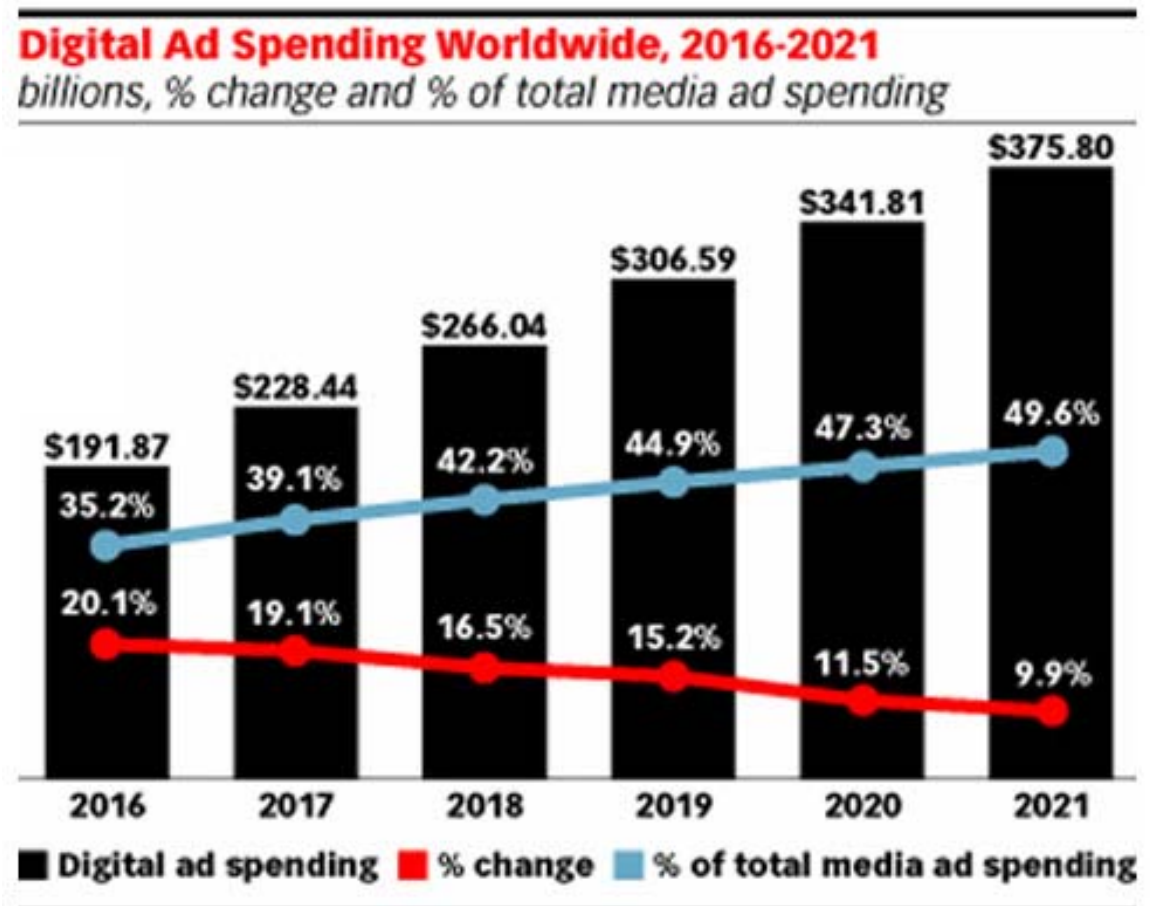
Latest available data to end of September 2017

Source: Zenith Optimedia, September 2017 report



## Digital advertising and medium continues to gain ground

- Although at a slower pace, digital advertising still gains against other forms and hits traditional media financing options
- Print media is on the front line when ad spend choices are made by publishers
- Still, quantity does not always mean quality



## ... but traditional printing in volume still is a big part of the total

**TABLE 3.1 European printing output by print product, 2013–23 (€ million, current prices & exchange rates; € million, constant 2017 prices & exchange rates; million A4 prints or equivalent)**

	2013	2016	2017	2018	CAGR (%), 2013–18	2019	2023	CAGR (%), 2018–23
<b>Million A4 prints or equivalent</b>								
Books	526,102	459,284	449,330	441,012	-3.5	433,801	413,155	-1.3
Magazines	2,014,579	1,587,174	1,535,081	1,489,426	-5.9	1,446,353	1,290,537	-2.8
Newspapers	5,513,913	4,918,992	4,685,099	4,479,047	-4.1	4,289,341	3,658,446	-4.0
Advertising	1,310,019	1,223,429	1,200,542	1,187,702	-1.9	1,174,817	1,143,723	-0.8
Catalogues	357,114	335,840	326,667	318,238	-2.3	310,071	280,559	-2.5
Commercial	1,863,342	1,621,503	1,568,015	1,526,054	-3.9	1,478,695	1,335,908	-2.6
Directories	274,964	229,485	216,115	204,464	-5.8	193,892	159,942	-4.8
Security	43,612	42,962	41,949	40,278	-1.6	39,422	36,987	-1.7
Transactional	92,836	84,658	83,555	80,976	-2.7	78,665	70,724	-2.7
Packaging	2,592,079	2,723,897	2,784,124	2,848,195	1.9	2,909,612	3,175,743	2.2
Labels	230,896	247,316	254,247	261,656	2.5	271,696	304,319	3.1
<b>Total</b>	<b>14,819,456</b>	<b>13,474,541</b>	<b>13,144,725</b>	<b>12,877,049</b>	<b>-2.8</b>	<b>12,626,366</b>	<b>11,870,042</b>	<b>-1.6</b>

~50%

Notes: totals may not add up due to rounding

Source: Smithers Pira



# Technology Trends

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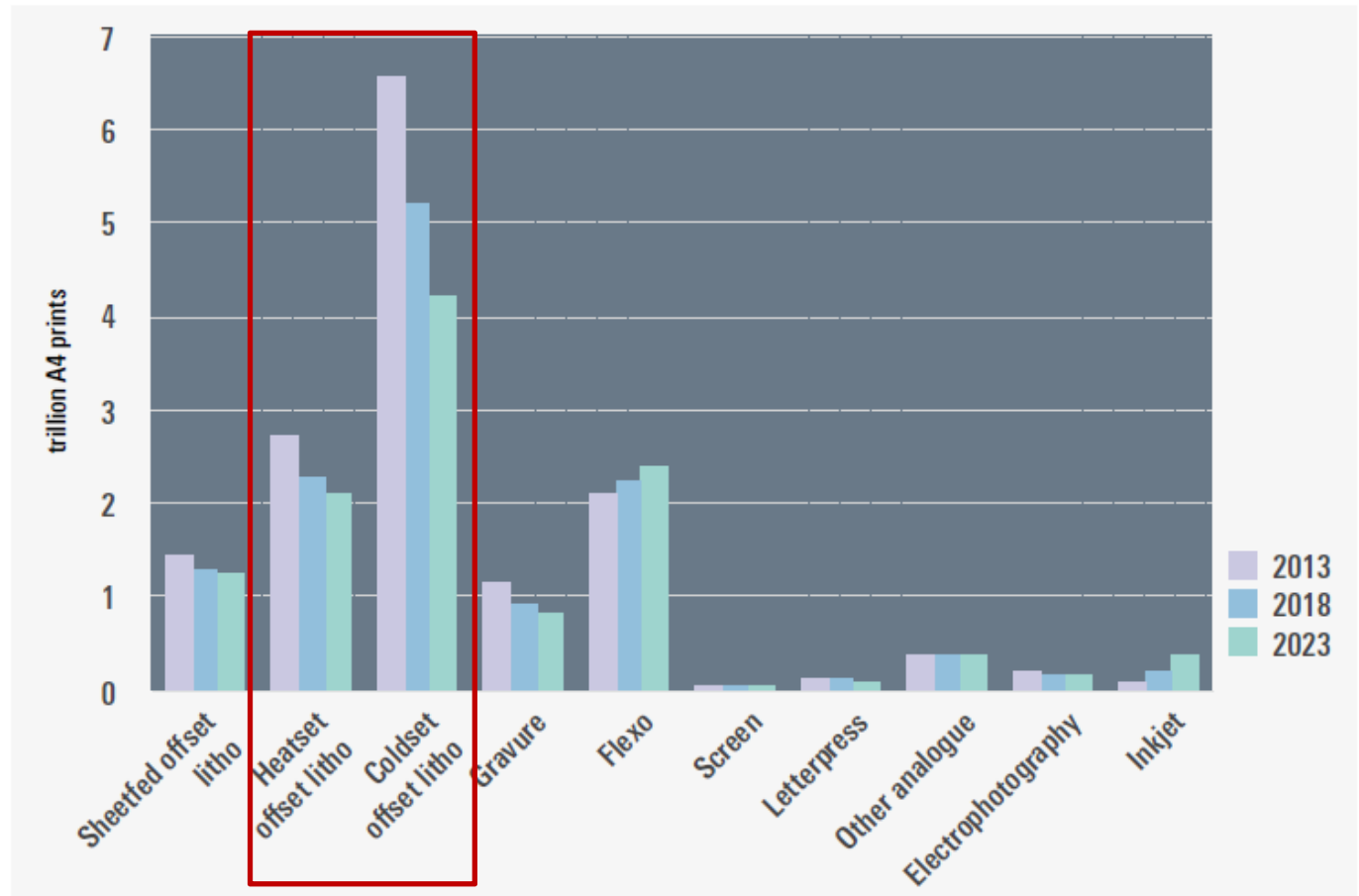
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## Print process trend

- Clearly, the biggest hit expected on coldset web offset
- Heatset, also will decline, but not as much

FIGURE E.13 European printing output by print process, 2013–23 (trillion A4 prints or equivalent)



Source: Smithers Pira

## Global printing output by process

<b>Billion A4 prints or equivalent</b>	<b>2010</b>	<b>2014</b>	<b>2015</b>	<b>CAGR (%), 2010-15</b>	<b>2016</b>	<b>2020</b>	<b>CAGR (%), 2015-20</b>
Sheetfed offset litho	6,970	7,082	7,165	0.6	7,258	7,515	1.0
Heatset (web) offset litho	9,274	8,884	9,003	-0.6	9,035	8,924	-0.2
Coldset (web) offset litho	21,751	19,918	19,643	-2.0	19,216	17,650	-2.1
Gravure*	3,706	3,877	3,937	1.2	4,010	4,367	2.1
Flexo	4,877	5,067	5,163	1.1	5,284	5,812	2.4
Screen	385	352	342	-2.3	332	298	-2.7
Letterpress	715	656	644	-2.1	627	544	-3.3
Other	1,889	1,940	1,954	0.7	1,984	2,086	1.3
Electrophotography	703	772	792	2.4	832	928	3.2
Inkjet	248	401	456	13.0	523	860	13.5
<b>Total</b>	<b>50,518</b>	<b>48,948</b>	<b>49,100</b>	<b>-0.6</b>	<b>49,100</b>	<b>48,983</b>	<b>0.0</b>

*Note: totals may not add up due to rounding*

*Source: Smithers Pira*

\* includes gravure packaging

## Printing technology developments

- In heatset, nearly all recent investment in presses are with 80pp, 96pp or 160pp (2x80pp), a majority being installed in Germany
- This allowed heatset to take traditional publication gravure high volume printing jobs
- In Publication Gravure, no more laser engraving system is being used
- Digital presses installations are gaining ground too, putting pressure on narrow-web mainly, but also screen printing

# Raw Material Trends

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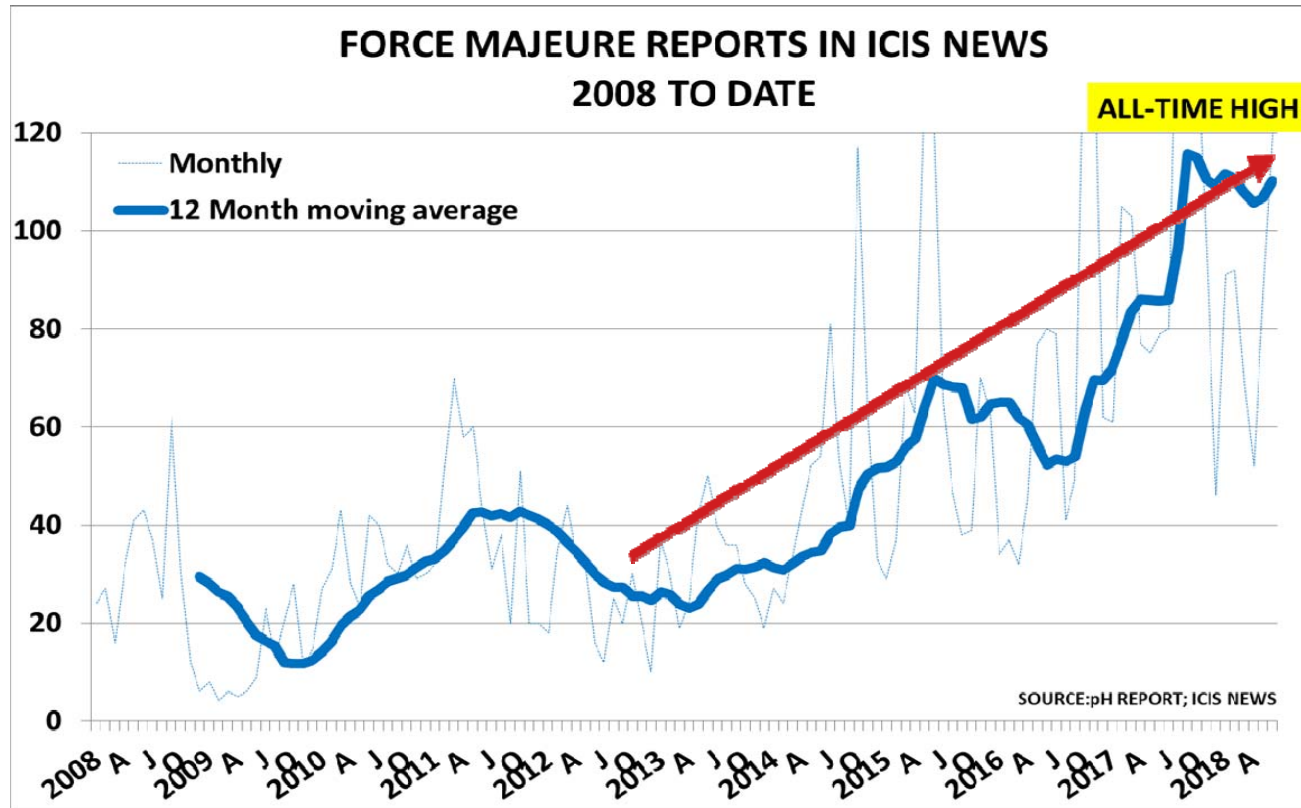


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## Current Market Realities

- Oil price volatility
- Force Majeure declarations in the chemical industry at an all time high
  - Both our direct suppliers and their suppliers impacted
- Severe shortages on some basic chemical building blocks
- Regulations driving supply restrictions
  - China government mandated manufacturing shutdowns
- Geopolitical uncertainty (policy, trade, e.g. changing duty status between countries, tariffs implementation)
- Weather-related supply issues
- Raw material costs are increasing as suppliers push for profitability
- Supply security getting more difficult within tighter markets

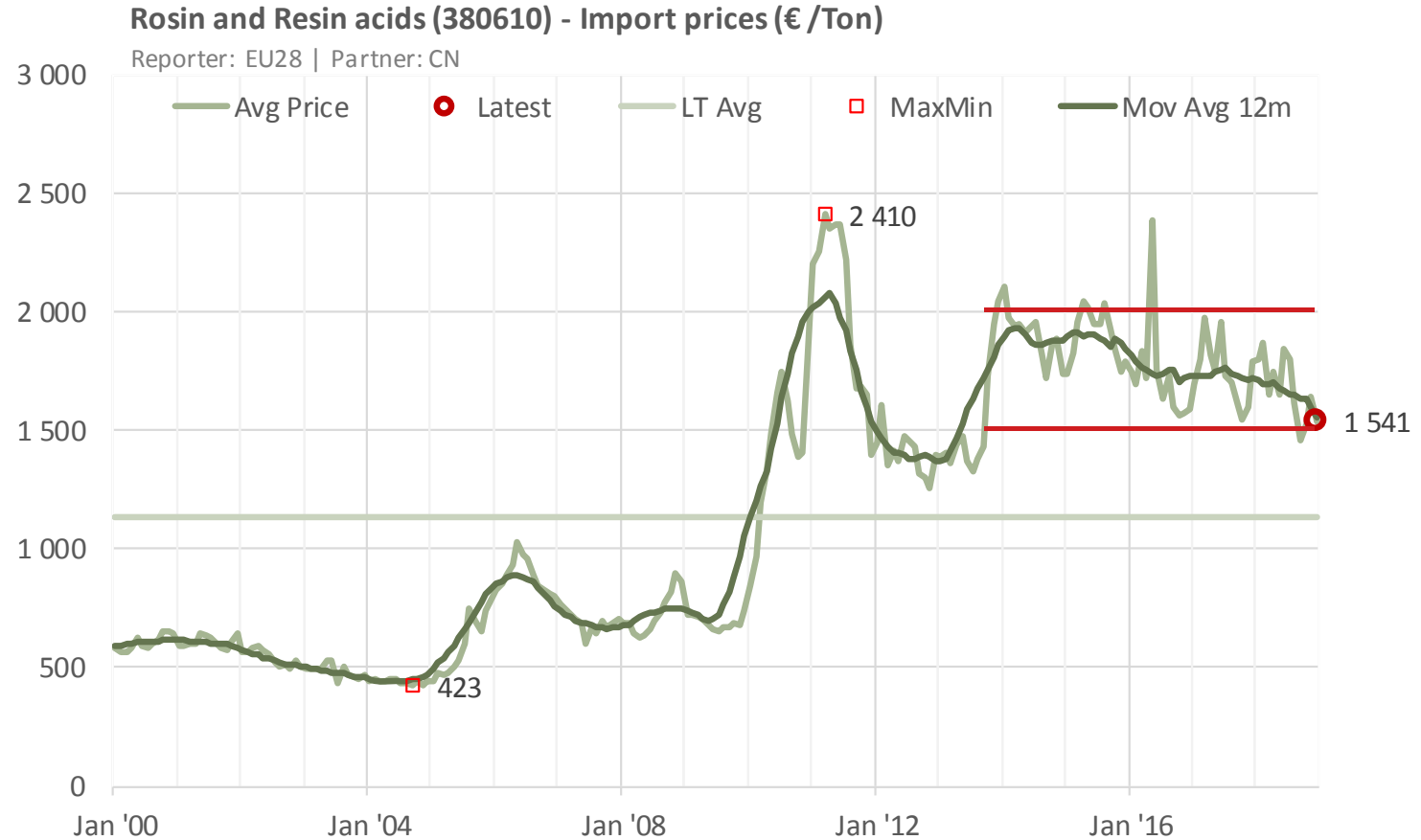
## Supplier Force Majeures Remain at an All-Time High



- The number of force majeure declarations have increased almost 8X since 2010 and has been a major factor in raw material supply shortages and price escalation over the past two years.
- 18 months ago the factor was 4X since 2010.

## Resin prices

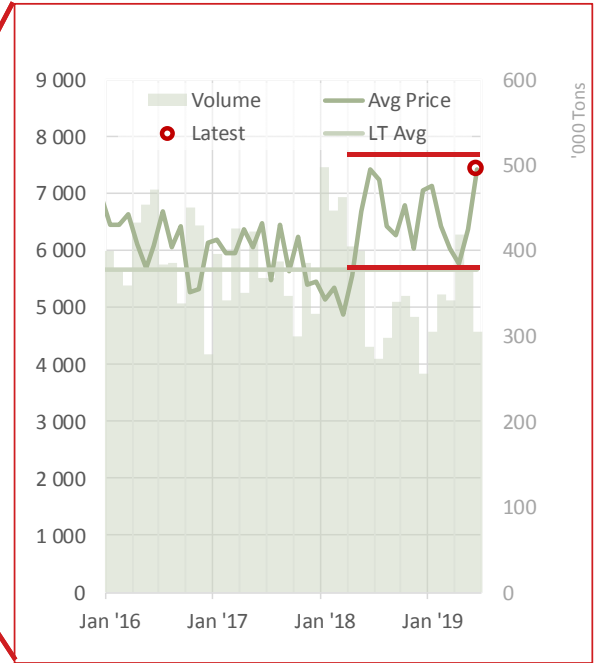
- Rosin resins are still at high prices compared to the long term average by about +35%
- Prices fluctuate between 1500 and 2000€/MT with higher volatility



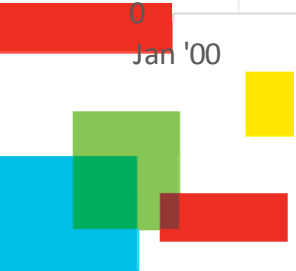
# Pigments prices

**Pigments (320417) - Import prices (€/Ton)**

Reporter: EU28 | Partner: CN



- There was again a sharp increase early 2018
- Since, prices are very volatile and supply of many pigments is short, this is a very demanding market <sup>24</sup>





## Environmental Inspections Implemented in China – Current Situation

In 1<sup>st</sup> half of 2017 only



-  First Round  
June 2106
-  Second Round  
Nov.2016
-  Third Round  
July 2017
-  Fourth Round  
Aug 2017

	Province		
	Zhejiang	Jiangsu	Shandong
Environmental violation cases	17 077	5 615	10 228
Penalty (Mio RMB)	500 Mio RMB	340 Mio RMB	484 Mio RMB
Plants limited or closed	347	490	306
Plants relocated	1 407	-	-
Cases registered administrative detention	591	-	629
Cases registered criminal detention	640	80	167

As China becomes more environmentally focused this will continue to be an issue – along with other developing countries like India.



# Printer - / Enduser - Trends

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# Publication Gravure printing Europe consolidation

## Historical Publication Gravure markets

- Austria
- Belgium
- Czech Republic
- Denmark
- Finland
- France
- Hungary
- Germany
- Italy
- Netherlands
- Poland
- Russia
- Slovakia
- Spain
- Sweden
- Switzerland
- United Kingdom

## Publication Gravure markets today...

- Austria
- ~~Belgium~~
- ~~Czech Republic~~
- ~~Denmark~~
- Finland
- France
- ~~Hungary~~
- Germany
- Italy
- ~~Netherlands~~
- Poland
- ~~Russia~~
- ~~Slovakia~~
- Spain
- ~~Sweden~~
- ~~Switzerland~~
- United Kingdom

## Environmental concerns, opportunities and threats

- Environmental aspects are increasingly important for governments, publishers... and NGOs like Food watch, WWF...etc
- These concerns circle mostly around deinkability because of residues in carton (public health)
- There is already a tax on publication products paper tonnage in France which might increase depending on the type of ink used
  - Mainly offset inks would be affected, also UV inks are already getting a malus
  - It is unclear presently what kind of inks will get exemption from this additional tax (aromatic free, mineral oil free...)
  - Could this lead to shifts in printing method choices from publishers ? (Heatset and Coldset to PubG)
  - What will happen with the residual toluene content of publication gravure produced prints?
- Will the French governmental initiative spread further accross Europe?

## Packaging industry environmental market drivers

- Supermarkets and distributors are pushing for less plastic packaging
- EU and local governments plan different initiatives to reduce usage of plastic based packages
- NGOs raise concerns concerning pollution of micro-plastics
- ...
- Solutions are :
  - Compostable inks
  - Inks based on renewable materials
  - Functional coatings to avoid migration into food
  - Put virgin fibers back into the carton sourcing system



# Thank you for your attention



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