



# Market of plastic materials

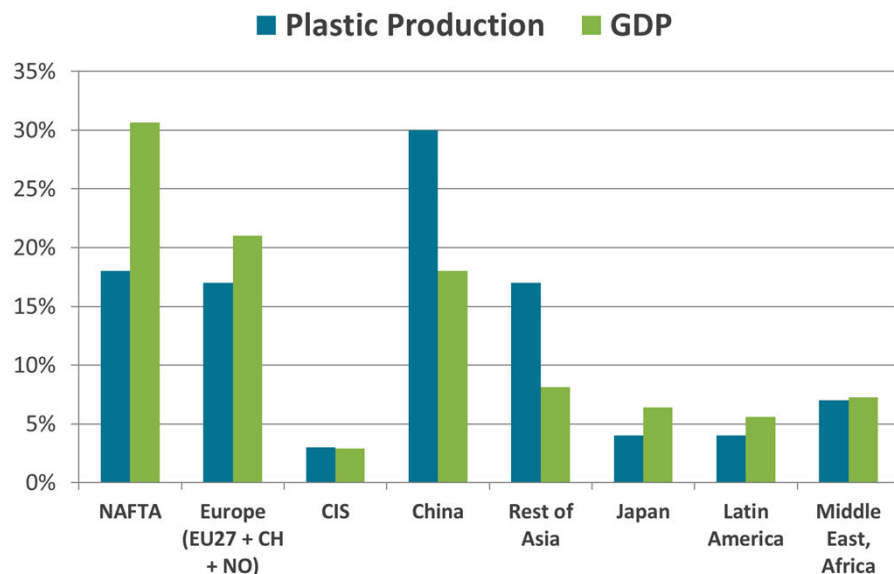
## Purchasing Summit 2020

Ljubljana, 2<sup>nd</sup> October 2020



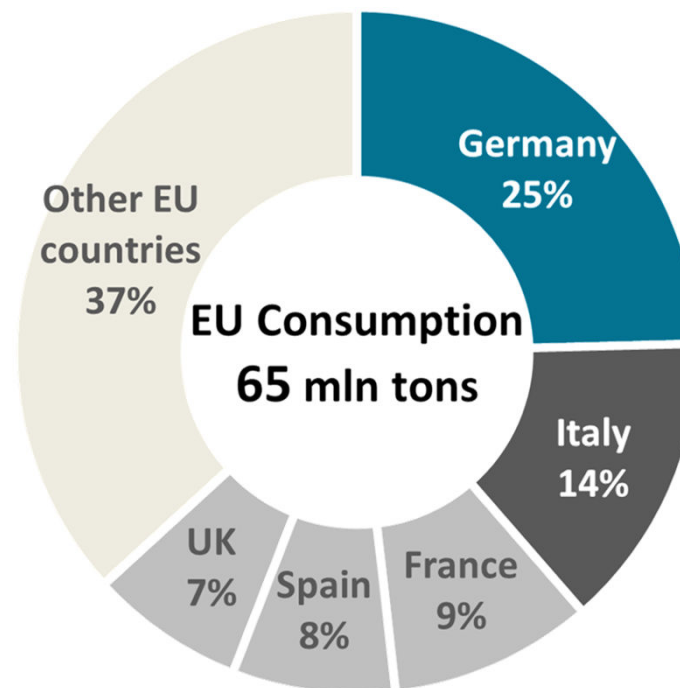
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# GDP and Plastics

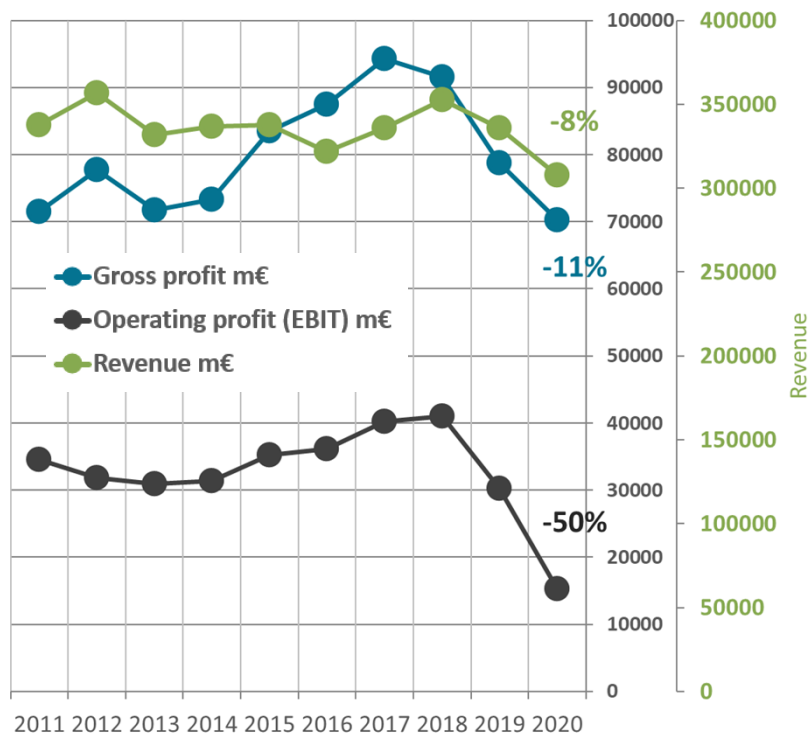


- Here ratios between local production and GDP from main regions. China represents 18% of GDP but takes 30% of global production. Asia is region with higher ratios.
- Global plastic production is **380 millions of tons**.
- Total value (resins and plastic parts converted) is around **650 billions of \$**.

- Germany and Italy are those countries where there is a higher plastic use, and high presence of converters.



# Key-Players Economics



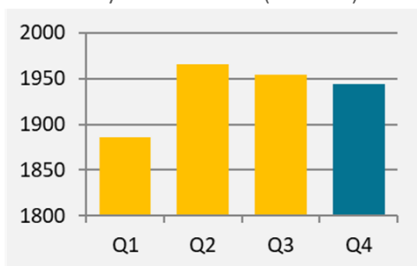
Company	Area	Polymers
Chi Mei	Taiwan	ABS, PS, PC, TPE, EPDM
Formosa Plastics Corp	Taiwan	ABS, PS, PC, PP, SAN, ASA, NY6
LG Chem	South Kor	ABS, PS, PC, TPE, EPDM, PVC
Lyondel Basell	USA	PP, PE, EVA, PBU
INEOS Styrolution India	Europe	ABS, PS, SAN, ASA
Evonik	Europe	NY, PPA, PEEK, PMMA, PBT
Dow Chemicals	USA	PS, PE, PU, PP, EPDM
Clariant AG	Europe	Additives, masterbatches
Sabic	Middle Ea	PVC, EPS, PS, PET, PP, HDPE, LDPE,
Celanese	USA	PPT, PBT, PS, POM
Lanxess	Europe	NY, EPDM, EPM,
Mitsubishi Chemical Hol	Japan	PVC, PPE, PP, EPDM, TPV
Teijin	Japan	PES
Albemarle	USA	Additives, flame retardant
Arkema	Europe	Adhesives, coatings, additives,
EASTMAN CHEMICAL CO	USA	Addives, adhesive, copolyesters , acetalycs, plastizicers, PET, f
Covestro AG	Europe	PC, ABS, PET, PBT, ASA
Sumitomo Chemicals	Japan	PP, PE, caprolattame
TRINSEO SA	USA	PC, ABS, PS, SAN, syntetic rubber
Polyone Corp	USA	acrilici, copoliesteri, flame retardant, ...
Westlake Chemical	USA	PVC, VCM, LDPE, etilene
Mexichem	Messico	PVC
EMS-CHEMIE HLDG	Svizzera	poliammidi, coating PU, PPS
BASF	Europe	SAN, ASA, PPE, PS, PMMA, PP, TPU, ...

After several years with an average operating margin (EBIT) over 10% than year 2020 could sign a brutal slowdown.

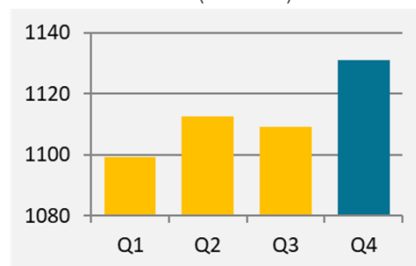
# Seasonality Effect

Average Quarterly Prices over period 2005-2020

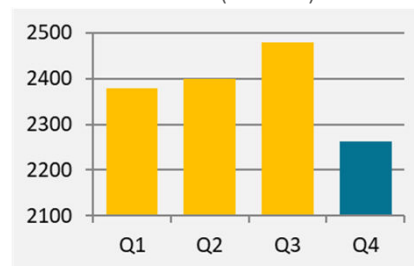
Polyamide PA6 ( $\sigma$  16%)



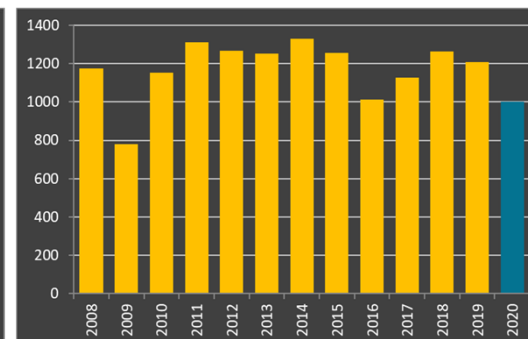
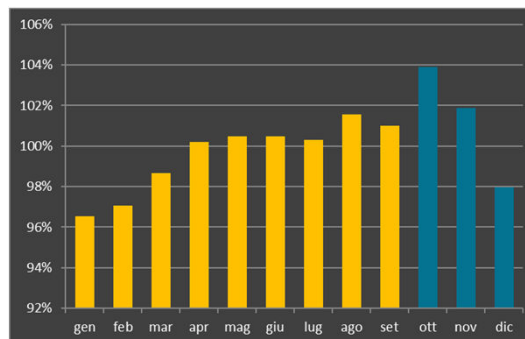
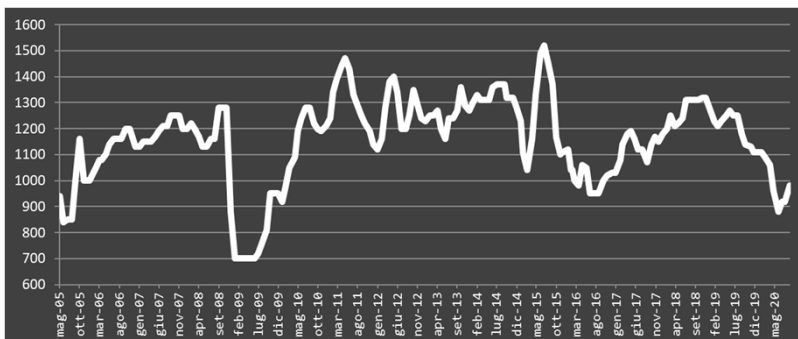
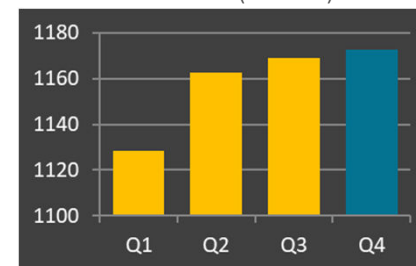
PET ( $\sigma$  14%)



PMMA ( $\sigma$  14%)



PP Homo ( $\sigma$  14%)



Statistical analysis could help to individuate trend and seasonality effects. It's not a golden rule but for large part of polymers in autumn typically prices slow down, and first quarter is period where prices are at their relative minimum.

# Prices Drivers and Forecasts

	<b>Oil price</b>	IEA indicates a forecast for average Brent price over 2020 around 41.9\$ and 49.07\$ in 2021. That means we'd see a oil price in the last quarter a bit higher compared to previous months and later enough stable.	
	<b>Demand</b>	Demand is the big question mark. Up to the end of COVID nightmare we cannot expect a boost in demand level. It's still weak and could be worst, depending on economic situation and labour market.	
	<b>Supply</b>	Supply is balanced. We are moving through maintenance season, and there are some force majeure declaration, but nothing which could affect global supply level.	
	<b>Currencies</b>	Exchange rate USD/€ is helping to import in Europe from Far East and USA. Also Korean WON and Chinese Yuan could generate good prices level from those countries.	
	<b>Seasonality</b>	Usually autumn and winter are seasons where prices tend to keep stable (for commodities plastics, standard thermoplastics).	
	<b>Import duties</b>	Nothing particular to be highlighted.	
	<b>Margins</b>	Players are suffering in volumes and margins. Because of financial nature of these companies than the expectation is a try to recover margins.	

Generally speaking we could expect stable prices up to spring 2021, slightly decrement between December and February, depending on general economic expectation. An increment later, depending on financial results of key-players and oil price position.

# PANEL FORECASTS

Here a recap of prices' forecasts and comparison with previous price predictions.  
 Large part of prices projections are built around the assumption that demand will remain low and supply largely balanced.  
 The increments in prices are justified by manufacturers' willing to recover margins in a oligopolistic market, financial oriented.

Where possible it could be a strategy to close contracts which cover a medium period, a quarter.  
 Statistically October is a good period when to sign contracts in order to protect prices.

