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WASTE-BASED FEEDSTOCK AND BIODIESEL

Looking back at the waste-based biodiesel market in 2017

2017: a bearish year

UCO / UCOME

In 2017, both UCO and UCOME experienced a downwards price trend, contrary to what happened the year before. However, **the average price for UCO went up** from 652 USD CIF Europe to 715 USD per ton and the **average price of UCOME also increased** from 1012 to 1049 USD per ton FOB ARA.

TALLOW / TME

2017 was a really bearish year for TME producers and suppliers of animal fat cat 1. Yet, similarly to the situation on the UCOME market, **the average price of TME went up** from 886 to 915 euros per ton FOB ARA. The **average price of animal fat cat 1 grew** from 513 to 590 euros per ton DDP NWE.

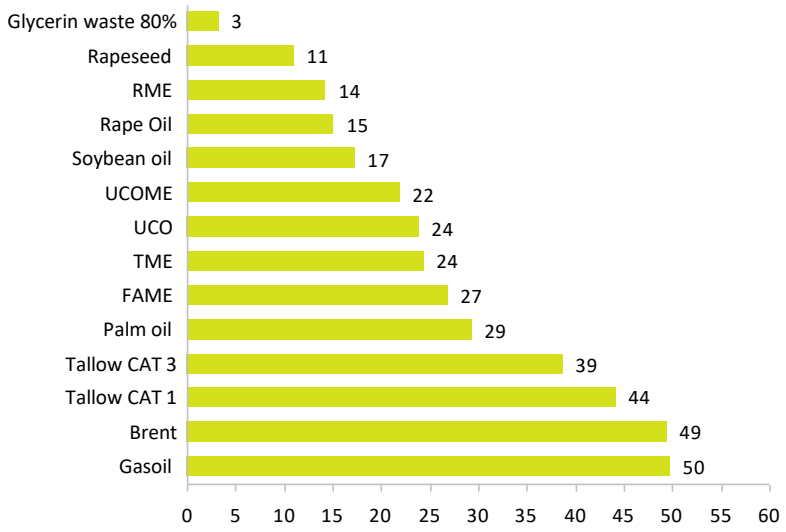
VEG-OILS

Favourable weather conditions in 2017 brought **record harvests** of soybean and recovery of palm oil supply. At the same time, **limited demand** for palm oil from Asia and Europe put pressure on the prices and reversed the bullish trend from the year before.

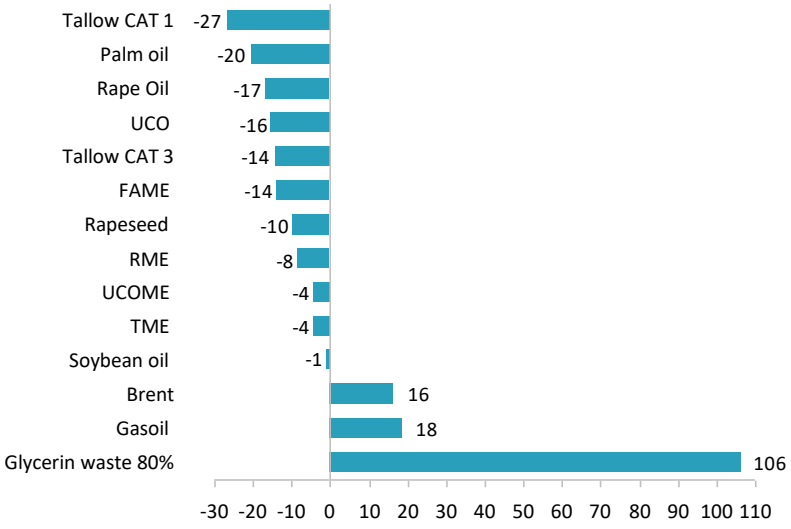
GLYCERINE

2017 saw a **constantly increasing demand** for glycerine worldwide which put pressure on the prices pushing them up. Some price stabilization was seen only at the end of the year.

Evolution of key indices (31/12/2015 – 30/12/2016) in %

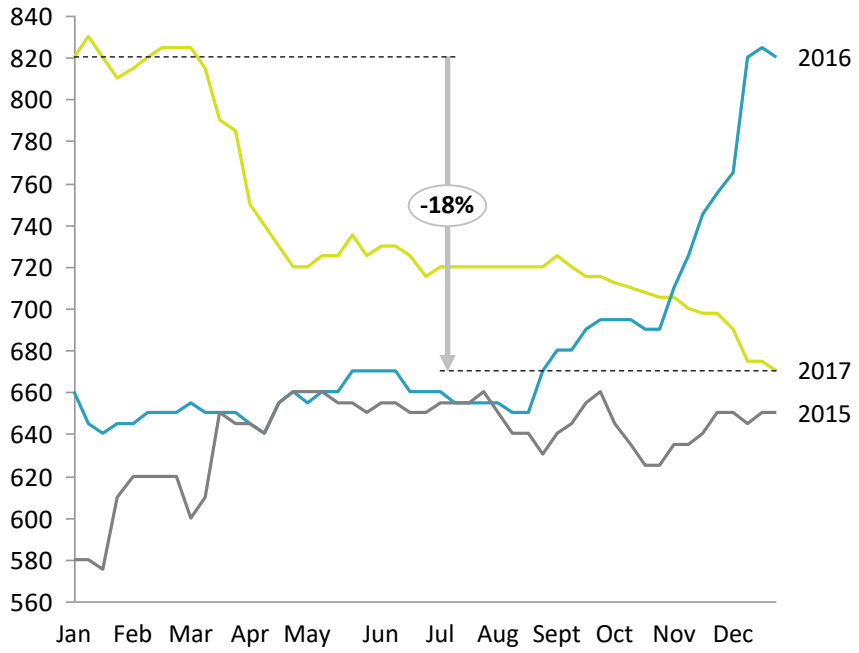


Evolution of key indices (31/12/2016 – 30/12/2017) in %



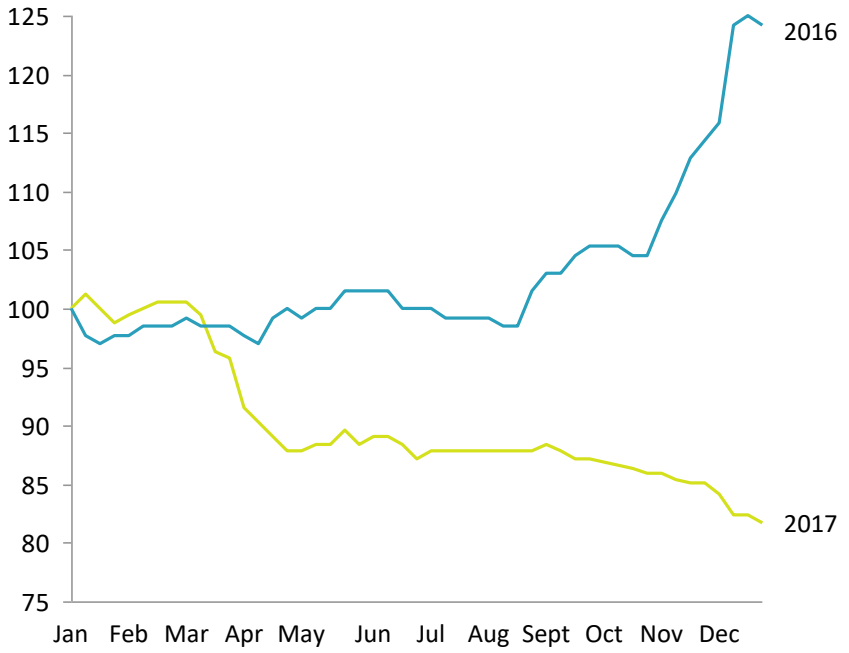
On the local EU market, 2017 erased all UCO price gains

UCO prices DDP NWE (Euros per ton)



- FAME 0°C fundamentals remain bearish (-14% in 2017) which drives down the price of both, UCOME & UCO.
- Increased UCO import from China (also in bulk) is pressuring the prices in Europe.

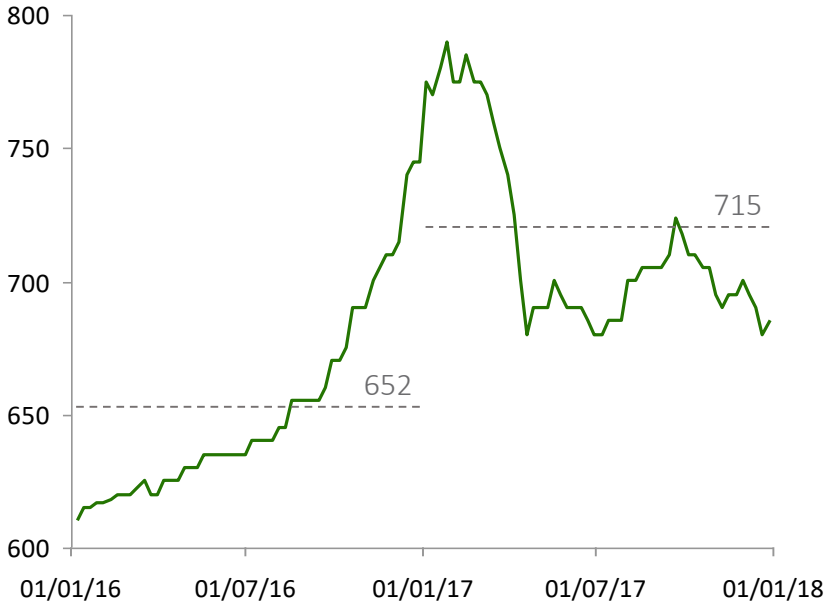
UCO price trend DDP NWE (base 100)



- After a record year (2016), the European market has been steadily declining throughout 2017.
- The opening of the Argentinean market and, if confirmed, Indonesian, will pressure the prices further.

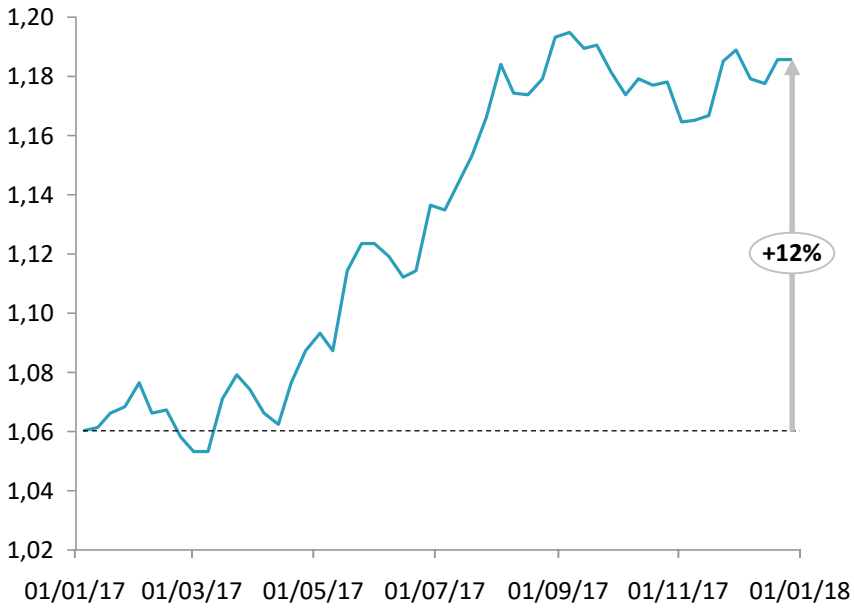
UCO import: stronger Euro made foreign product more competitive

UCO price CIF Europe (in USD per ton)



- Fall in UCOME prices in Europe in the first half of 2017 dragged UCO prices down.
- Increasing supply of UCO from China lowered the UCO shortage in Europe and limited the price increase.

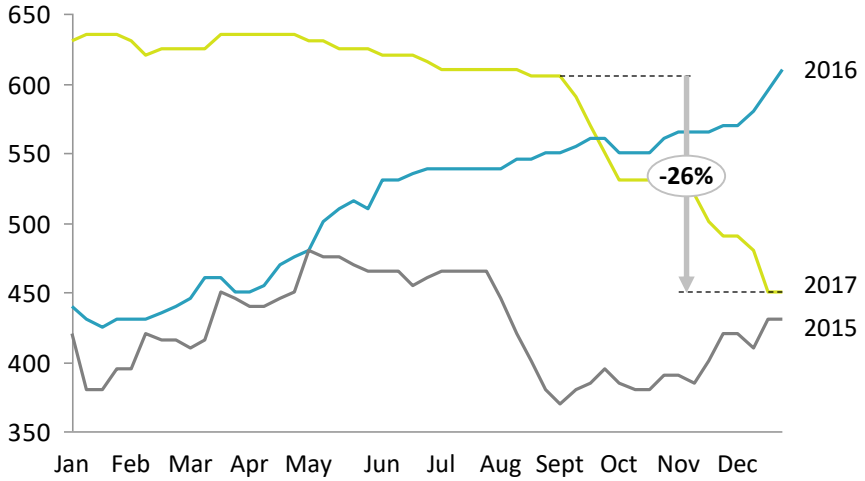
Euro / USD exchange rate



- Strengthening of the Euro helped to give some support to the UCO prices in Europe, especially in the second half of the year.

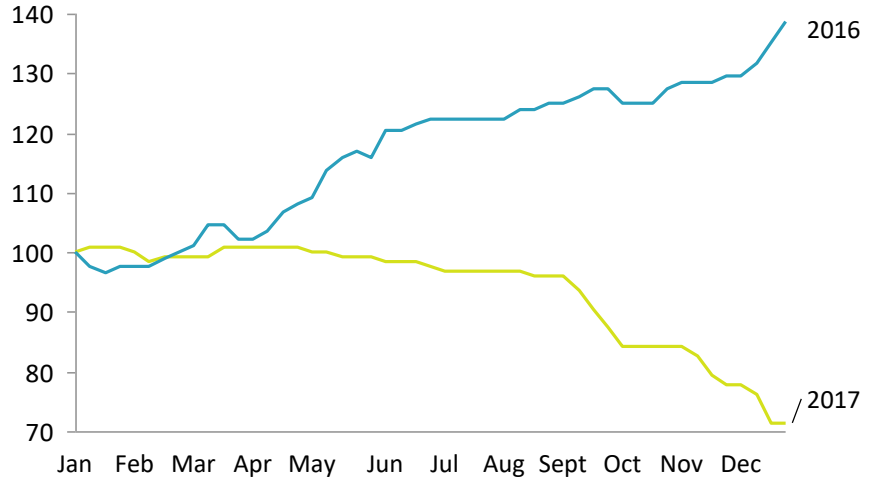
2017, bearish year for animal fat cat 1 and poor forecast for 1h of 2018

Animal fat cat 1 DDP NWE (in euros)



- Q4 2017 was a difficult period for animal fat producers with cat 1 price down by 26%.
- After a strong downwards correction of the TME market in Q2, the prices went even lower in Q4 due to a sharp increase in CFPP point value (from 2.6 in 2016 to 4.3 in 2017), lack of demand and fierce competition from UCOME whose prices went down in September.

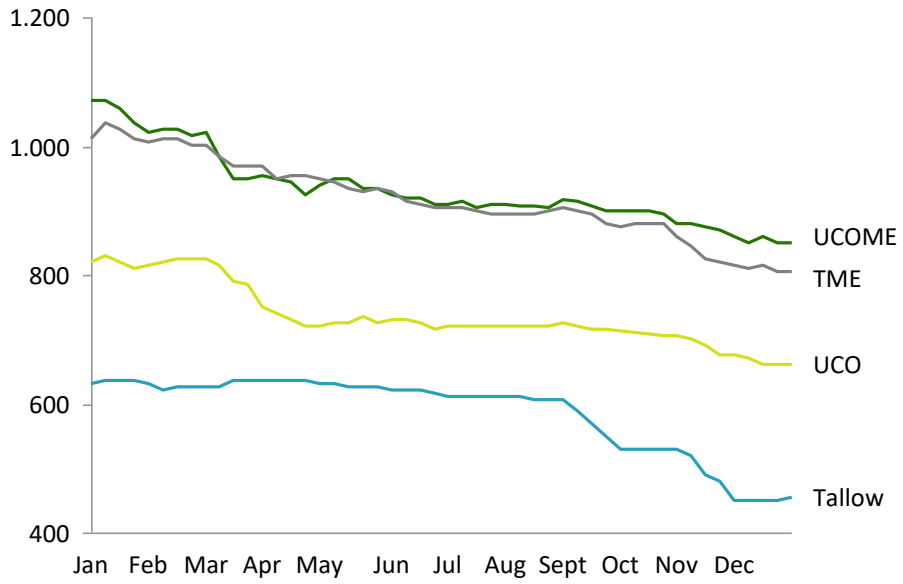
Animal fat cat 1 price trend (base 100)



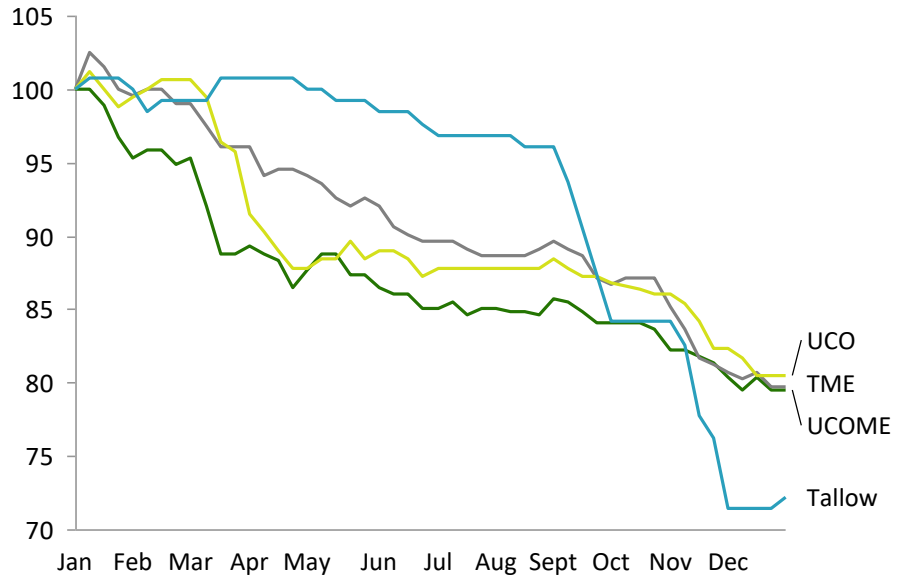
- Price forecast for Q1 remains unchanged and only the opening of the US market may bring some support to the prices.
- The evolution of the animal fat cat 1 trend within the year is very unpredictable. In Q1 2018, the weak demand for TME, veg oils and FAME 0°C will continue to weight on the prices. It is important to remember that animal fat is negotiated quaterly which impacts the price trend.

Waste-based biodiesel market saw a downwards trend in 2017

Waste-based biodiesel and feedstock prices FOB ARA in 2017
(in euros per MT)



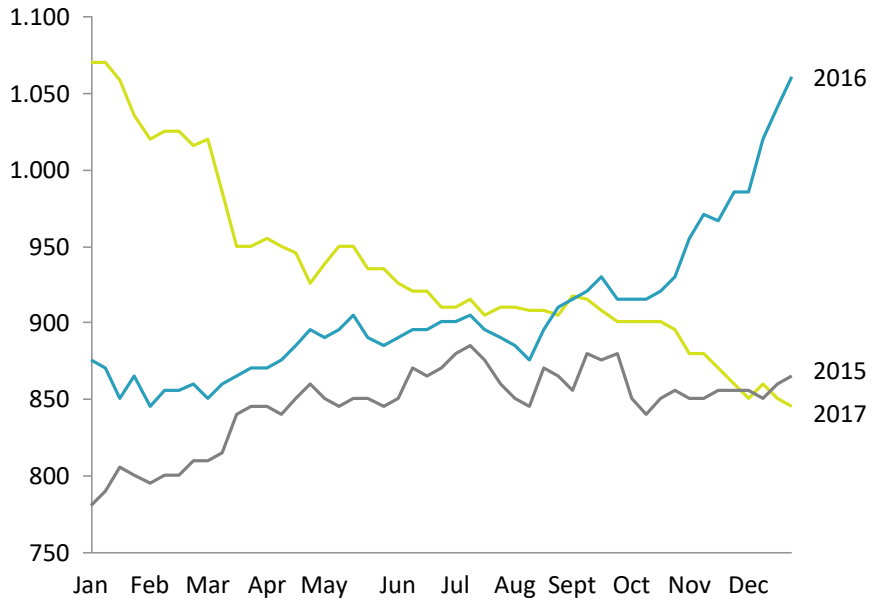
Waste-based biodiesel and feedstock prices FOB ARA in 2017
(base 100)



- Even though the legislative and economic landscape evolve favorably for the waste based biodiesel sector, there is a strong uncertainty about the evolution of FAME 0°C, a key driver for TME and UCOME.
- Increasing investments in UCOME production in Asia and growing number of Asian producers certified ISCC will continue to put pressure on EU biodiesel prices.

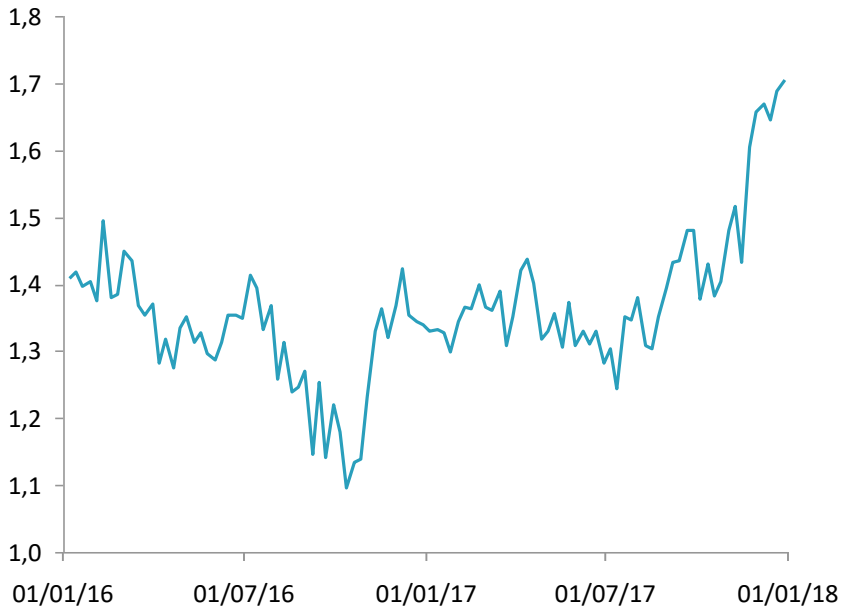
In 2018, will UCOME prices go up or down?

UCOME FOB NWE (Euros per ton)



- The price difference between end of 2015 and 2016 was +195 euros per ton while between 2016 and 2017 it was -220 euros. This makes it difficult to forecast what will happen in 2018 as the market can move quickly up or down by 20%.

UCOME incentive over FAME 0°C

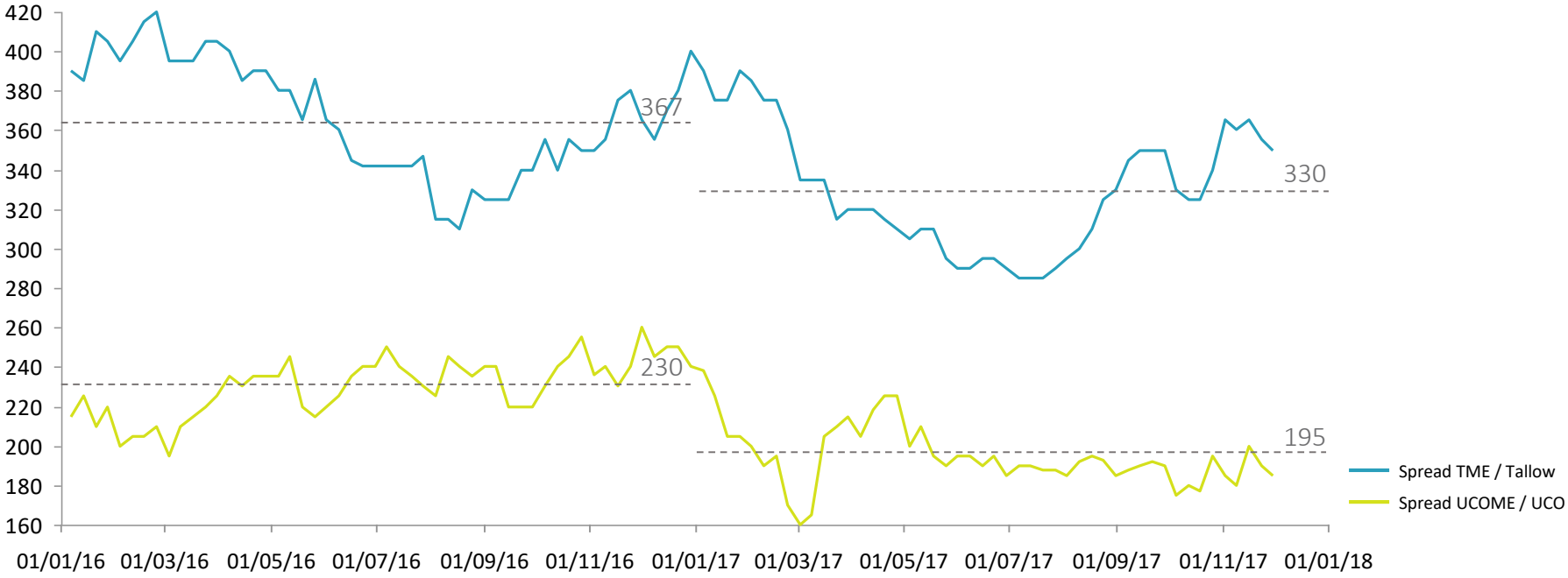


- The incentive is a ratio showing how interesting pricewise the UCOME is against FAME 0. Above 2, there is no more advantage to blend UCOME.
- Constant increase of the DC value over FAME 0°C penalizes the blending. We are approaching the historic values from the beginning phase of the DC market in 2014.

*Prices for UCOME with high GHG, CFPP 0°C, and all UK/FR/DDC options

Production margins under pressure

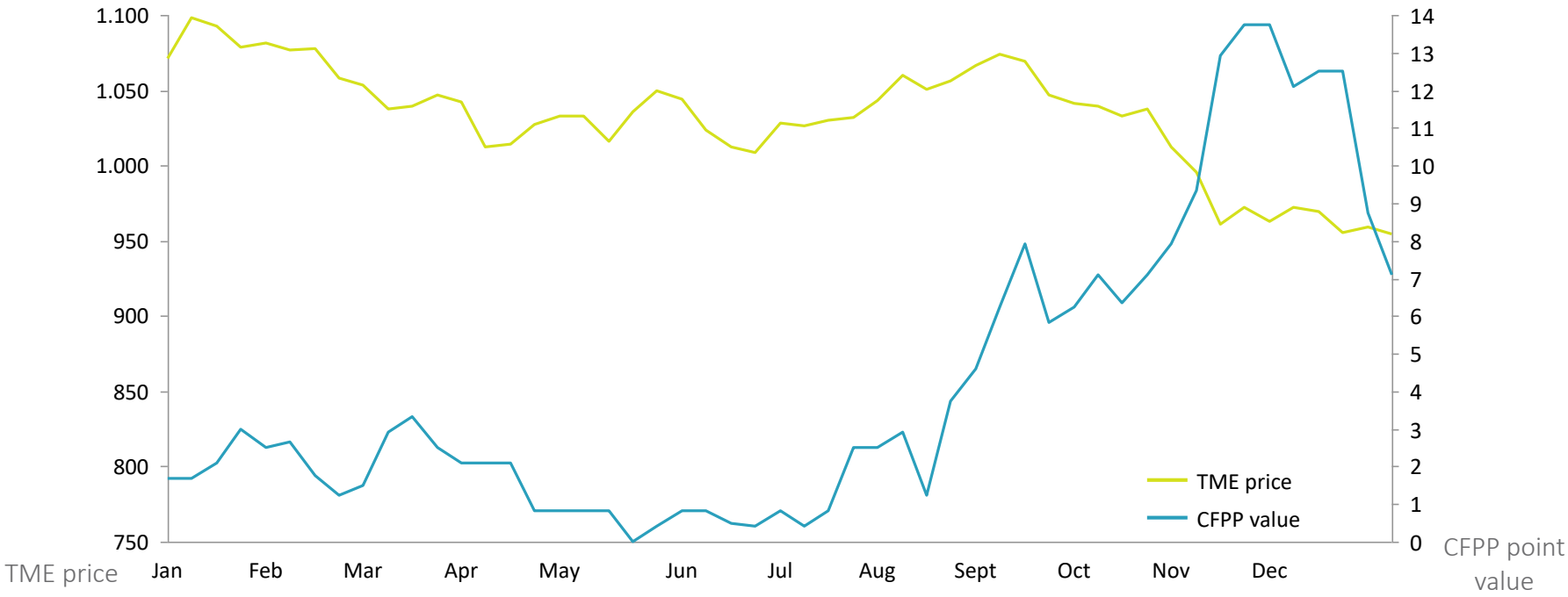
Waste-based biodiesel and feedstock spread (euros per MT)



- There is high pressure on the margins of UCOME and TME producers as the drop in feedstock price is lower than that of biodiesel and comes with a delay.
- With the increased demand for UCO coming from UCOME plants in Asia and HVO producers, the forecasted margin of UCOME may not go above 200 euros per ton seen in the previous year.
- The UCOME and TME sector is entering maturity stage, the downward margin trend is thus justified and could also lead to market consolidation.

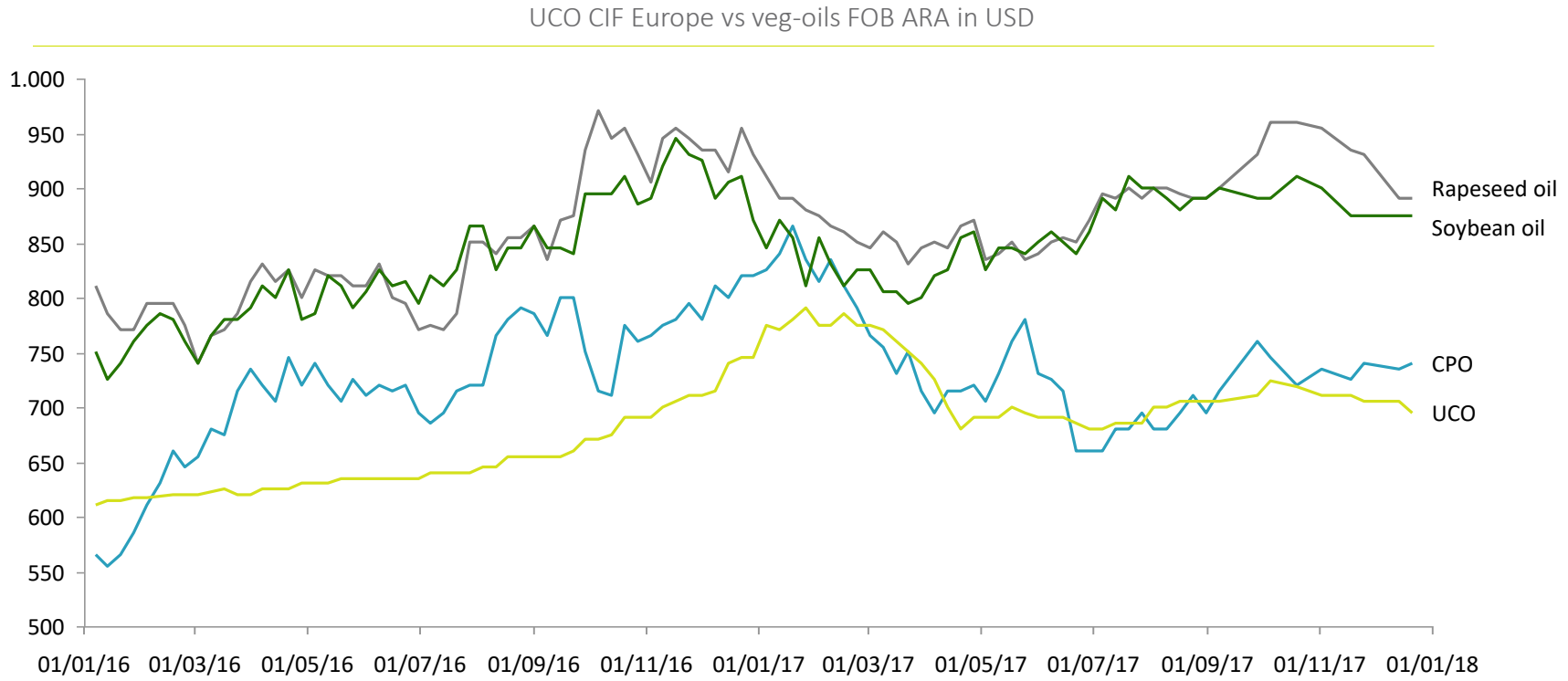
TME price is sensitive to CFPP value

2017: value of CFPP point vs. TME price (in USD)



- Contrary to the UCOME market, the margins of TME producers are not influenced by competition from overseas. The prices of TME are sensitive to CFPP value (TME CFPP point is around 11).
- CFPP point cost is a seasonal value, increasing with lower temperatures. Winter season always drives up the spread between RME and FAME 0 due to higher specification requirements. This year, though, this spread went even wider because of really low interest for FAME 0. The CFPP point went up to 14 USD pressuring the price of TME at the end of the year.
- In 2018, the pressure on TME prices will persist also due to new investments and increased production capacity in the EU.

UCO is influenced by veg-oil trend

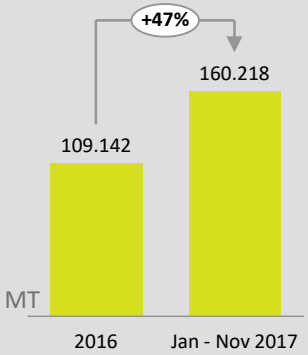


- After a bullish 2016 due to El Nino, palm oil prices were under pressure in 2017, which was caused by favourable weather and thus a recovery in production. At the same time, the demand fell down due to limitations on palm oil use in the EU and import tax on veg-oil introduced by India. Record-high soybean harvest and ample supply of rapeseed in Europe limited the price growth seen in 2016. The price trend in 2018 will again depend on the weather conditions.

- Q1 2017 saw a sudden narrowing of the spread between UCO and the veg-oil complex. It can be justified by UCO prices still staying strong at the beginning of 2017 and, at the same time, a visible bearish trend on the veg-oil market dragging the prices down.

Asian market depends on new rules

CHINA: UCO AND UCOME EXPORT IS BOOMING

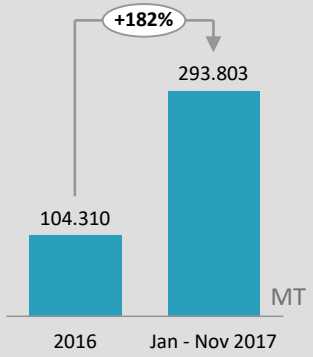


UCOME EXPORT FROM CHINA

- Growing number of UCOME producers in China equipped with distillation column allows for higher supply of good quality BHO. This should have an impact on the EU BHO market where the product quality is not very high.

UCO EXPORT FROM CHINA

- The growth of UCO export should slow down as more product will be used locally by new UCOME plants.
- Increasing number of UCO offers for bulk shipments.



PME: CLOSING OF THE US MARKET

- **US** confirmed the introduction of countervailing duties against biodiesel imported from Indonesia. They were set at 34.5% for Wilmar International and 64.7% for Musim Mas.
- WTO's decision about the anti-dumping duties imposed by the **EU** on Indonesian CPO in 2013 (from 22 to 25.7%) is expected any day now. Indonesia complained to WTO that the ADD were unfairly imposed.

PALM OIL: DEMAND KEEPS FALLING DOWN

- **European Union's** RED II proposal wants to exclude palm oil from the transport fuel mix starting from 2021. Individual EU countries also introduce limitations, e.g. in France, some buyers in 2018 tenders for FAME already asked for "no palm oil" clause.
- **India**, the biggest veg-oil importer, introduced import tax on palm oil which negatively influenced the demand. Crude palm oil tax: 30% and refined palm oil 40%.

2018: WHAT CAN WE EXPECT?

Looking ahead to 2018

- Global economy is growing at its fastest pace since 2010. However, **agricultural commodities seem to be supported only by the oil market and will evolve in the context of oversupply** that will weight on the prices. Only significant weather-related disruptions might reverse the forecasted bearish trend. Thus, the markets of grain and veg-oils should be under pressure throughout 2018.

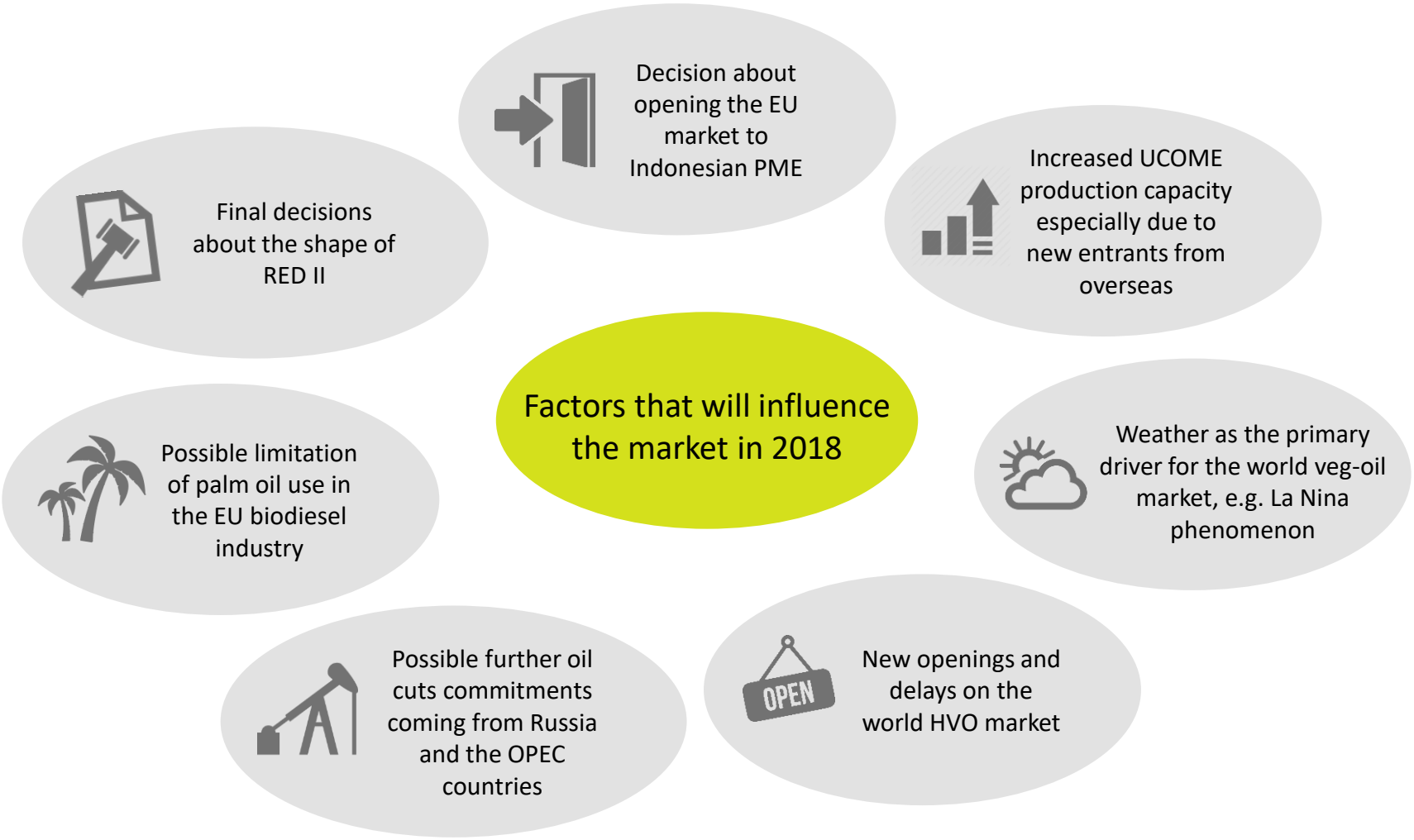
- Opening of the European market to Argentinian SME since the end of 2017 and possibly also to Indonesian PME will put pressure on FAME 0°C. The **increased supply, at competitive prices, of SME** and, in case of opening the market to Indonesia, also of PME, will put pressure on the EU biodiesel market.

- The EU market should see an **increase in demand for UCOME and TME due to the evolution of mandates** in several Member States. The waste-based biodiesel consumption is forecasted at more than 400,000 MT in 2018. Moreover, the expected change of rules in Italy excluding PFAD as well as development of Greenhouse Gas emission savings will also give strength to the DC market.

- At the same time, the **UCOME supply is becoming more ample**. In 2018, we will see increased supply coming from Asia. In fact, this is the region that has a potential of becoming the leader in UCOME production in the future.

- With **the downward pressure on the FAME 0°C and an increasing competition coming from Asia**, 2018 will be a challenging year for the European biodiesel market. If this turns out to be true, there are two possible scenarios. Either waste-based feedstock market will experience bearish trend, or there will be high pressure on the margins of UCOME and TME producers.

What to watch in DC market in 2018



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