European Commission

April 2015

Impact of lower oil prices on the EU agricultural market outlook

Introduction

At the end of 2014, the oil price plunged and available forecasts anticipate lower crude oil price levels for the coming years than those earlier assumed by the same forecast providers; and which were also assumed in the projections published on the 5th December 2014 by DG Agriculture and Rural Development: Medium-term prospects for EU agricultural markets and income 2014-2024.

This important revision of a key macroeconomic assumption like oil price has wide implications for the rest of the economy and for agriculture, given the importance of the energy nexus in agriculture, which is the most energy intensive sector. Therefore, an analysis of the impact of lower oil prices on EU agricultural markets has been carried out.

Scenarios

Although experts seem to agree on very low crude oil prices in the short-run compared to 2013, the views on the oil price ten years from now are diverging. This is why two alternative scenarios have been simulated:

- IHS-scenario: latest macroeconomic forecasts by IHS which include relatively low oil prices in the next few years and a return above 120 USD/barrel by 2020.
- World Bank scenario: based on the latest World Bank Commodity market outlook of April 2015, this scenario is featuring much lower oil prices throughout the projection period with a maximum around 100 USD/barrel in 2024.

The two scenarios include updated GDP, inflation and exchange rate forecasts. It is worth mentioning the lower EUR/USD exchange rate in the short-term (Figure 1) and the deteriorated outlook for the Russian economy compared to those assumed in EU projections published in December (referred to hereafter as 'baseline').

These two scenarios remain broadly in the range of macroeconomic uncertainties accounted for in the December publication. The stochastic analysis[1], quantifying the range of possible outcomes around the central baseline value, consisted in close to 600 alternative scenarios with e.g. an oil price ranging between 50 and 200 USD/bbl for the 10th and 90th percentiles (Figure 2).

[1] The partial stochastic analysis covers the uncertainty surrounding selected macroeconomic variables (GDP, GDP deflator, CPI, exchange rates and the oil price) and crop yields. The analysis is only partial as it does not capture variability stemming from factors other than those selected.

Figure 1 Exchange rate (USD/EUR)

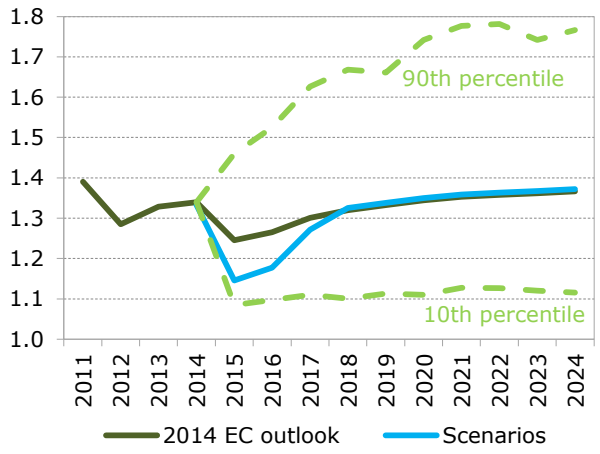
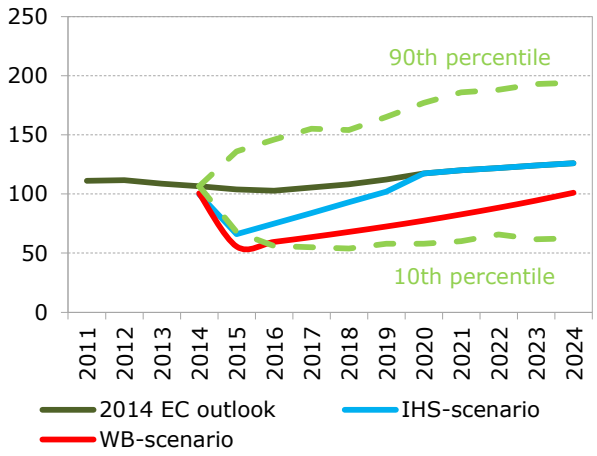


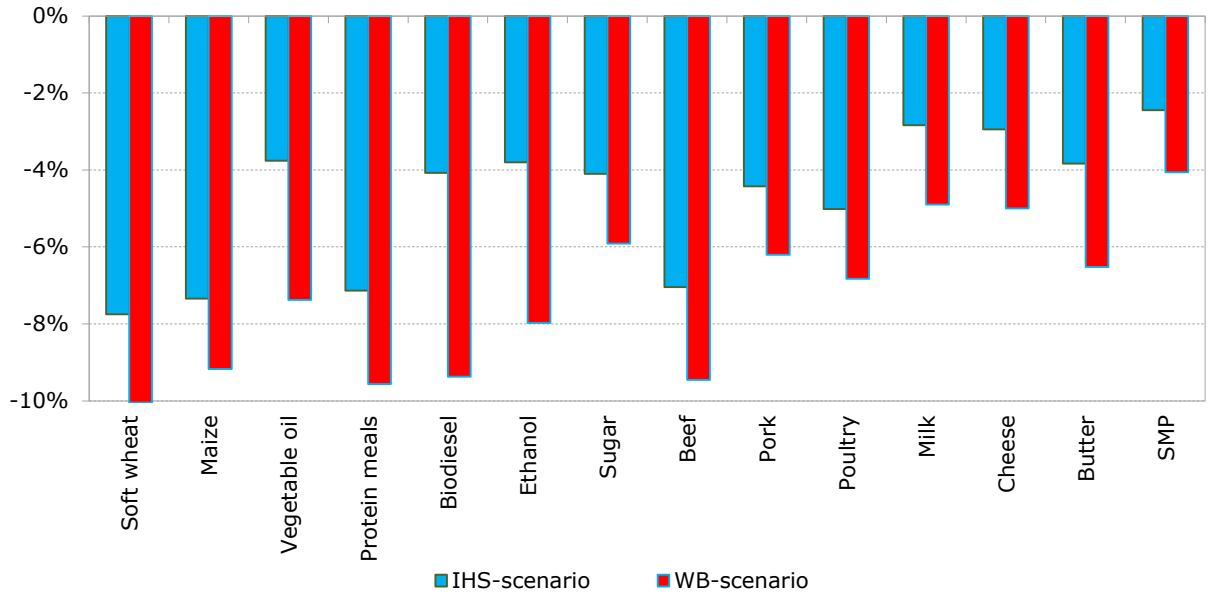
Figure 2 Brent crude oil price assumptions (USD/bbl, nominal)



Main impacts

- World and EU prices of agricultural commodities are lower compared to baseline projections. This is due to the reduction in production costs allowing farmers to lower their selling prices and stimulating crop production worldwide which results in lower output prices. EU price decline is ranging between 5% for milk to 10% for wheat on average compared to the baseline in the World Bank scenario where the reduction in oil price lasts throughout the whole projection period and leads to stronger declines in commodity prices.

Figure 3 Average change in EU producer prices compared to the baseline, 2015-2024



- Given the lower oil price, production costs, in particular energy and energy-related costs but also feed for animal products, contract to a larger extent than output prices resulting in slightly improved income at sector level, in particular in the longer term.

- The depreciation of the Euro compared to the US Dollar in 2015-2017 has two main effects: an increased EU competitiveness stimulating higher exports in the short-term, but at the same time it limits the positive impact of cheaper imports (in particular energy prices) compared to our competitors. Therefore the decrease in EU producer prices is lower than observed worldwide in 2015-2017.

- In the two scenarios, despite the major macroeconomic shock, commodity prices remain broadly within the 10th and 90th percentiles range, illustrating the possible price developments around the expected baseline caused by yield variability and different macroeconomic environments.

Figure 4 Milk price development (EUR/t)

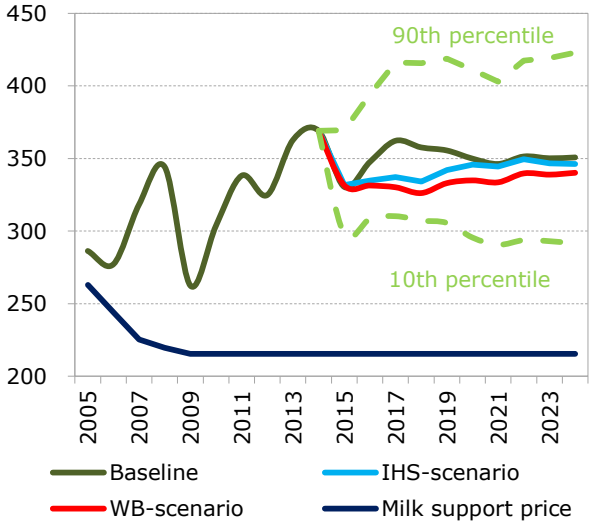
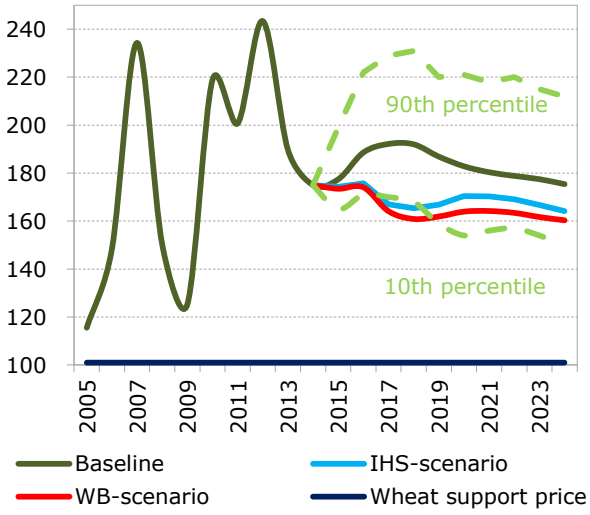


Figure 5 Wheat price development (EUR/t)



- The worsening of the Russian economy and the strong deflation of the Ruble contributes to the price decline in the EU with lower import demand (even under the assumption that the August 2014 import ban will last only one year).

Commodity level results

- ***Crops:*** Wheat sees the biggest effects in the EU with both initial production increases and a continued increase in demand, mainly from feed and bio-ethanol. The wheat area expands mainly at the cost of oilseeds. Coarse grains production remains stable despite significantly reduced prices and only slight consumption increases.

- ***Biofuels:*** Total EU biofuels consumption remains constant (mandate driven[2]) but a shift from biodiesel to ethanol takes place because biodiesel domestic production is less competitive when oil prices decrease. The prevalence of ethanol is due mainly to increased imports, especially from Brazil. Ethanol consumption increases to 27% of total biofuel use.

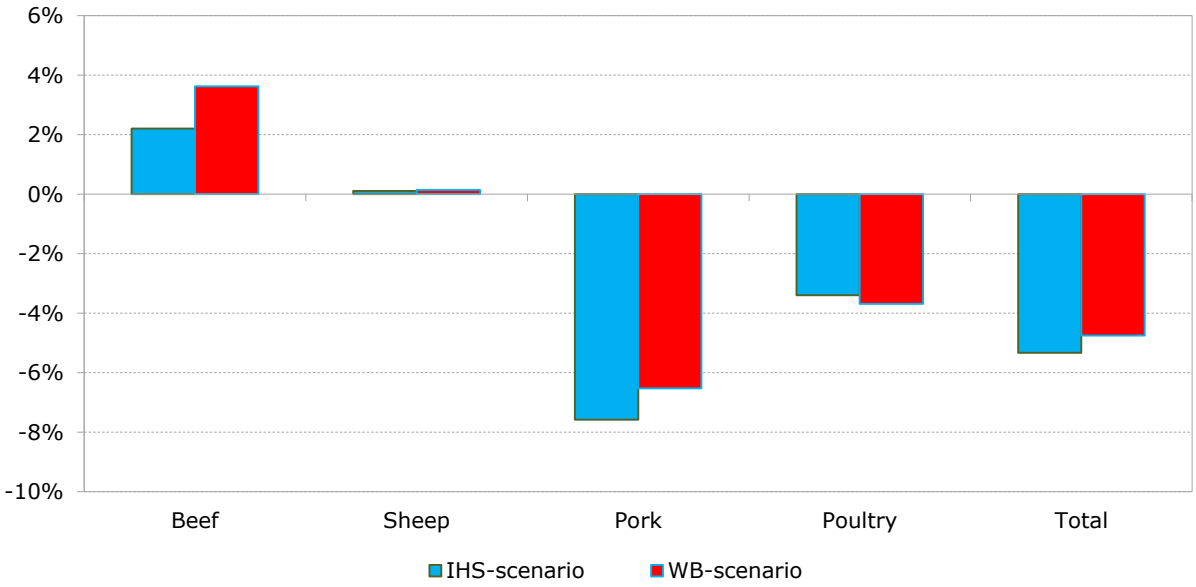
- ***Sugar:*** Although sugar used by the ethanol sector increases in the EU, the total sugar production decreases following the lower prices. The decrease in ethanol competitiveness relative to oil drives Brazilian consumption close to 20% down despite higher ethanol exports. Therefore, more sugar cane is transformed into sugar weighting on world market sugar price levels. EU exports are reduced because of a lack of price competitiveness compared to Brazil. Consumption however increases slightly leading to higher sugar imports.

- ***Meats:*** Lower production costs and a decline in EU exports, especially to Russia, result in lower producer prices. This would lead to a slight increase in meat consumption in the EU and a reduction in exports, except for beef.

  The lower GDP growth forecast for Argentina implies a decrease in its beef production and exports leaving room for some additional EU exports on world markets.

[2] In the EU, by 2020, 10% of transport fuels should originate from renewable energy.

Figure 6 Change in EU meat exports over 2015-2024

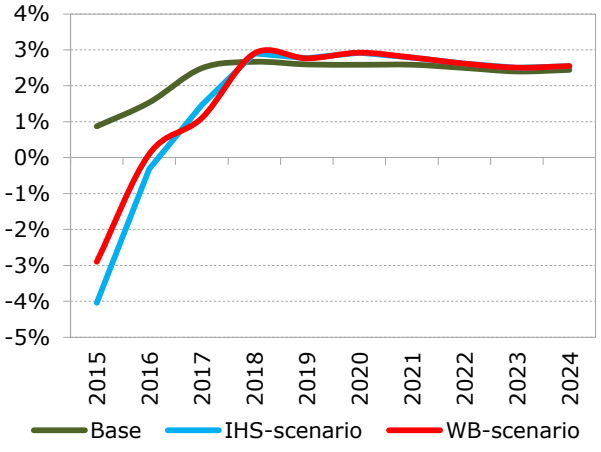


The EU poultry sector, with the highest share of feed in total costs, benefits the most from the decline in input costs and increase production at the expense of pig meat.

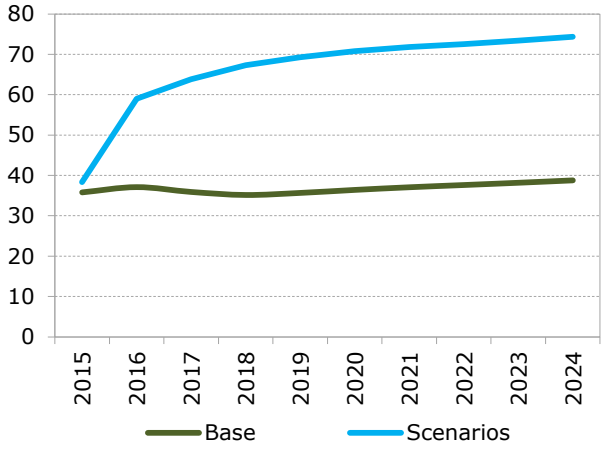
Russian meat imports decrease by 25% on average compared to the baseline. Russian ability to import is strongly affected primarily by the devaluation of the Ruble. Consumption of meat and cheese decreases as a result of higher consumer prices (up by 18% in 2015). The increase in domestic production stimulated by greater producer prices is limited by the lack of investment capacity in Russia.

Figure 7 Deterioration of the Russian economic situation

Lower economic growth (%)



Further depreciation of the Ruble exchange rate (Ruble/USD)



- ***Dairy:*** Lower oil prices and the deterioration of the Russian economic environment contribute to a lower import demand in main export markets and lead to lower milk prices compared to the baseline projections. Average EU milk prices are now projected to remain around 33 cents per litre in the first years, recovering only on the medium-term. However, over the medium term, cheaper feed and lower energy input costs allow for maintaining or even improving producers' margins as milk price declines to a lesser extent than input costs. As a consequence milk production remains almost unchanged.

While Russian cheese imports are strongly reduced for the same reasons as meat imports, in China the lower GDP growth implies a slower development of milk domestic production which benefits mainly to exports from New Zealand to China.

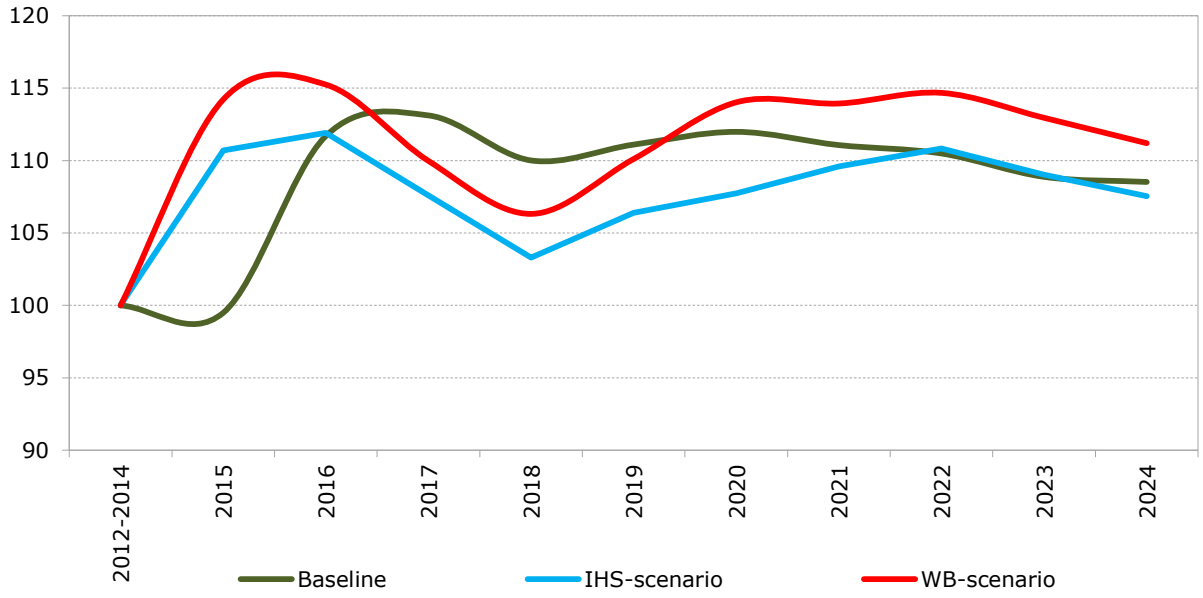
Income

- In the short run (2015), in both scenarios, the real income per worker is around 15% higher than in the baseline projections because of the strong decrease in energy and fertilizer costs (-30% in the World Bank scenario). This decrease might be over-estimated given fertilizer prices depend mostly on natural gas prices which are much less connected with oil prices than in the past. So far gas price paid in Europe declined far less than oil prices.

- In the medium run (2018), real income deteriorates compared to baseline due to a lower value of production driven by reduced producer prices, which decline more than energy and fertilizer costs in both scenarios.

- From 2020, in the World Bank scenario, income gets higher than in the baseline because EU prices recover while energy costs remain low. In the IHS-scenario, the income is back at the baseline level from 2022.

Figure 8 Real income per AWU (2012-2014 = 100)



Conclusion

The collapse in oil prices since autumn can be regarded as a severe shock to the world economy, especially combined with other macroeconomic developments like slower growth and strong exchange rate fluctuations. This is especially true when assuming the shock to last for more years. In spite of that, the simulated commodity price impacts remain within the ranges of the stochastic projections included in the outlook published in December 2014.

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