

## Historic drop in the oil price: how will it affect the Spanish economy?

- Early March saw the biggest fall in the price of oil since 1991, something which, under normal circumstances, would have significantly favoured net crude oil importing economies such as Spain.
- The positive effects on economic activity of this drop in the oil price will be deferred by the negative shock posed by the COVID-19 pandemic. However, when economic activity begins to return to normal, the lower oil price will provide additional support for the recovery.

Last March, Saudi Arabia and Russia took investors and analysts by surprise by initiating a price war in the oil market.<sup>1</sup> This war, coupled with the fall in demand that will stem from the economic impact of the COVID-19 pandemic in the coming months, caused a historic decline in the price of crude oil: on Monday 9 March the barrel of Brent plummeted 10.91 dollars, down to 34.36 dollars (-24.1%, its biggest drop since 1991), and its descent continued throughout the month until it temporarily approached 20 dollars. Thus, we went from an environment in which the barrel of Brent was priced at around 60 dollars at the beginning of the year to fluctuating around the 20-25 dollar range. Moreover, these lower oil prices seem set to continuity (for instance, the 3- and 6-month futures price of a barrel of Brent stood at around 32 and 36 dollars at the end of March, respectively).

### How does the oil price affect economic activity?

A fall in the price of oil provides a boost to the economy of countries that are net importers of crude oil, as is the case for Spain. Cheaper oil equates to an increase in the real disposable income of households, such that it also supports aggregate consumption. In addition, companies' production costs decrease, which favours investment. Finally, since the capacity for consumption increases not only at the national level but also at the international level, and in the short term imports (in terms of volume) are relatively unaffected by changes in the oil price, a lower price favours the trade surplus.

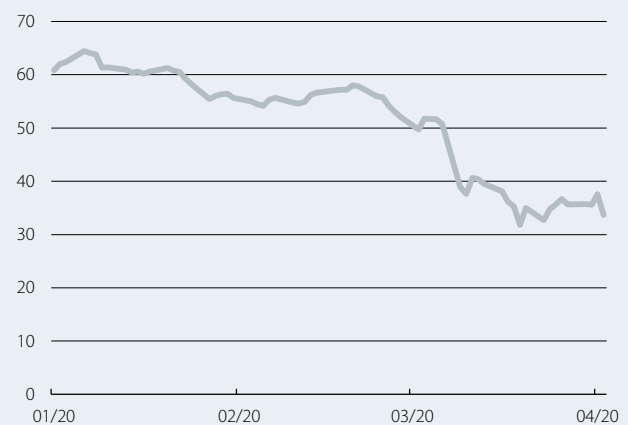
However, the health crisis that has gripped us following the COVID-19 outbreak will result in this boost derived from a lower oil price not being reflected in the economy, at least for the time being. The containment measures have led to a stagnation in industrial activity and in the movement of vehicles,<sup>2</sup> so the demand for energy will

1. For instance, the oil company Aramco decided to increase its daily production by 1 million barrels from 1 April.

2. The data from the Polytechnic University of Valencia (Universidad Politécnica de Valencia) show that, during the first week of the lockdown, nitrogen dioxide pollution fell by an average of 64% in Spain's major cities compared to the previous week. Furthermore, according to Spain's General Traffic Directorate (DGT), on Monday 23 March access to major cities and long distance journeys undertaken by individuals decreased by 64% and 61.9%, respectively, while the movement of lorries fell by 24.6% compared to the level of traffic in the days prior to the start of the lockdown.

### Brent oil: futures price for Q3 2020

(Dollars per barrel)



Source: CaixaBank Research, based on data from Bloomberg.

show very little sensitivity to the fall in prices while economic activity and mobility remain restricted. In fact, our growth forecasts for Spain indicate a significant contraction of GDP in 2020, greater than those experienced during the Great Recession and the sovereign debt crisis, which will be particularly concentrated in the first and second quarters of the year.

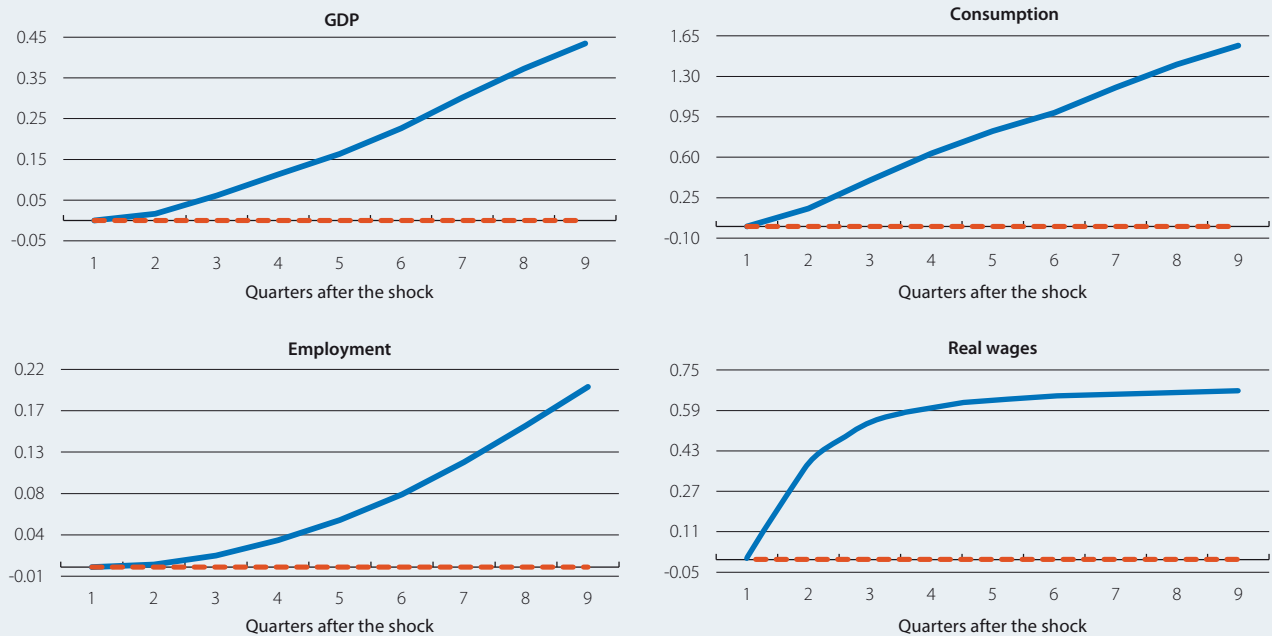
### The tailwind provided by oil will be felt when economic activity begins to return to normal

When the containment measures are finally lifted, the low oil prices may provide an additional tailwind to spur the recovery. CaixaBank Research's macroeconomic model for Spain<sup>3</sup> allows us to quantify how much a lower oil price will contribute to the economic recovery through the channels mentioned above (consumption, investment and the foreign sector). To carry out this analysis, we introduce into the model an exogenous reduction of 26.3 dollars in the price of a barrel of Brent, which corresponds to the difference between the futures price of a barrel of Brent for Q3 2020 that was registered in January (60 dollars) and that registered in early April (33.7 dollars), as shown in the first chart. In addition, we assume that the price will stand at 41 and 44 dollars at

3. This is a semi-structural general equilibrium model of the Spanish economy, which in the short term is determined by aggregate demand, while in the long term aggregate supply and demand are equal.

### Spain: macroeconomic response to a fall in the price of oil

Deviation relative to the scenario without a shock (%)



**Note:** The horizontal axis represents the number of quarters after the shock. The shock occurs in period 2, so the impact after 1 and 2 years corresponds to periods 5 and 9, respectively. The vertical axis represents the percentage deviation relative to the baseline level (scenario without a shock).

**Source:** CaixaBank Research.

the end of 2020 and 2021, respectively, in line with the futures price for these two periods quoted at the beginning of April. The results of this simulation show that GDP would be 0.16% and 0.43% higher after 1 and 2 years, respectively. Other variables of interest, such as consumption, employment and real wages would be 1.57%, 0.20% and 0.66% higher after 2 years, respectively (see second chart).<sup>4</sup>

Thus, the persistence of oil prices at around the 30-dollar mark could combine with the normalisation of mobility, the rebuilding of stocks and the materialisation of pent-up demand to drive the rebound in economic activity in Spain in the second half of 2020.

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4. To put our findings into context, we can use the model of the US Federal Reserve (known as the FRB/US model) as a benchmark, which is similar to ours as far as the type of model is concerned. Their simulations (performed in 1999, long before the US became the largest exporter of crude oil thanks to fracking) show that a 10-dollar decline in the price of oil translates into an increase in US GDP of 0.20% and 0.40% after 1 and 2 years, respectively. One of the key differences between these estimates and ours is the behaviour of the real interest rate, given that the FRB/US model implicitly assumes that the Fed adjusts nominal interest rates so that the real rate is not affected by

the fall in the oil price. Without this adjustment, the real rate would increase and thus dampen the response of economic activity, which explains why the estimates of the FRB/US model are somewhat higher than ours. If we keep the real interest rate constant in our model, the estimate for Spain indicates that, for a fall of 10 dollars, the impact after 1 and 2 years is 0.18% and 0.32%, respectively. For more information on the characteristics of the FRB/US model, see D. Reifschneider, R. Tetlow and J. Williams (1999). «Aggregate Disturbances, Monetary Policy and the Macroeconomy: the FRB/US Perspective». Federal Reserve Bulletin.