

## FOCUS · Shale production: the end of the golden age?

Brent crude recently topped USD 70 a barrel for the first time since June 2015 as OPEC announced it would restrain oil output until the end of 2018. Nevertheless, there is still some scepticism over just how high prices will go, in spite of the cartel’s apparently strong commitment to reduce excess supply. Such doubts are partly due to the uncertainty hovering over the shale oil industry. As happened in 2014, a possible spike in shale production could push crude prices down.

Although there is no precise estimate of the breakeven point for shale producers, the different estimates published by the sector suggest this is USD 50-60 per barrel. This means that any price above this range would cover the high production costs, encouraging shale producers to continue increasing their supply in the international market. Such expectations are already reflected in the latest oil supply projections by various analysts. The International Energy Agency (IEA) expects production to almost double, from 6.5 million barrels per day (bpd) in 2015 to almost 12 million bpd by 2025. At the end of 2017, even OPEC considerably raised its shale production forecasts, up by 56% compared with its previous projections. Nevertheless, the chances that the sector will continue to experiment significant productivity gains seem to have declined notably, after several years in which technological changes had led to significant increases.

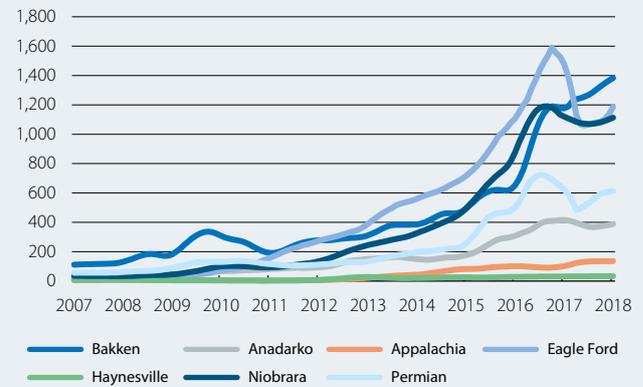
One of the factors limiting productivity gains is the time required to drill a well, a variable that appears to have levelled out recently after falling sharply between 2013 and 2016 (helping to boost production).

But the time required to drill wells is not the only variable that seems to be stabilising; this is also the case of the drilling method used. At the beginning of the shale production boom, a large proportion of productivity gains came from a change from vertical to horizontal wells, which are much more productive. Today most wells are drilled horizontally, so there is very little margin left for productivity gains via the drilling method.

Finally, there are also signs that fracking is reaching its limit, the technique that had helped to significantly increase well yields. According to Kayrros, an energy research firm, productivity adjusted for well length in the Permian basin, the most productive zone in the US, stopped growing in 2016 and even started to drop in 2017.

### Shale production per rig\*

(Million barrels per day)



Note: \* New-well oil production per rig at the main shale production sites.  
Source: CaixaBank Research, based on data from the Energy Information Administration.

In short, beyond OPEC’s actions, which will be crucial in realigning the market, shale producers’ reaction to higher oil prices will also have to be monitored closely. At present, doubts regarding how much shale producers can increase their output mean that the future trend in the price of crude oil is likely to remain uncertain.