Will shale producers come to the rescue?

- Over the last couple of years, the oil industry has sharply cut its planned investment projects worldwide, and this is pushing up oil prices and weighing on the global outlook more broadly.
- With oil prices well-above USD 80/bbl, investing in the drilling and development of new wells is profitable even for the most expensive and least efficient producers.
- Thanks to a shorter lead time between drilling and production relative to traditional oil projects, there are early signs that US shale producers might take advantage of their flexibility and react to favorable market conditions by substantially increasing their investment projects.
- If this happens, American producers will return to play the role of swing producers, turning their taps on when prices are above their breakeven costs and turning them off when production is no longer economically viable.

2022 has started on a bullish note for the oil market, with Brent prices up more than 10% YTD. The market is discounting the demand losses due to the Omicron variant of COVID-19, which looks more contagious but milder than the Delta variant, while a number of supply outages in Libya, Nigeria, Kazakhstan, the US and Canada are supporting prices in the short term. However, we think it would be a mistake to consider these price moves as vindication of oil super-cycle arguments, which are rooted on the assumption of burgeoning demand outpacing supply. First, current supply disruptions are temporary hiccups that will be reabsorbed soon. Second, and looking at the big picture, oil prices were supported in 2021 not by strong demand but by supply being kept artificially low by OPEC+. At the end of 2021, world spare capacity was 2mb/d above its 2010-19 level, largely driven by the OPEC+ curbs. As we have argued several times in previous issues of our *Oil Update*, the oil market is at a turning point in early 2022 – shifting from a situation of under-supply to one of over-supply as demand gradually stabilizes and the OPEC+ tapering is completed. In turn, oil prices should start to decline, thus easing pressure on central banks to act aggressively in order to counter rising inflation.

In addition, as a recent survey by the Dallas Fed points out, US shale producers could come to the rescue by taking advantage of highly favorable prices to boost otherwise sluggish capital expenditure. The revenue losses for oil producers worldwide that were caused by COVID-19, coupled with an acceleration of the green transition worldwide, have weighed on investment in traditional fossil fuels. Oil and gas investment in 2021 was around USD 600bn – down 20% from about USD 750bn in 2019. This means that once a well is exhausted there might not be a new one ready to replace it, creating supply shortages and pushing prices higher. Last December, Saudi Arabia's energy minister Abdulaziz bin Salman al-Saud stated "we are set for a period that could be dangerous. If there isn't more spending on investments to preserve production capacity and increase it, an energy crisis is coming to the world." However, after having spent 2021 recovering losses from 2020, shale producers are now likely to take advantage of their shorter lead time between drilling and production relative to traditional oil projects, reacting to favorable market conditions. If this happens, they will return to play the role of swing producers, turning their taps on when prices are above their breakeven costs and turning them off when production is no longer economically viable.

Recovering US producers

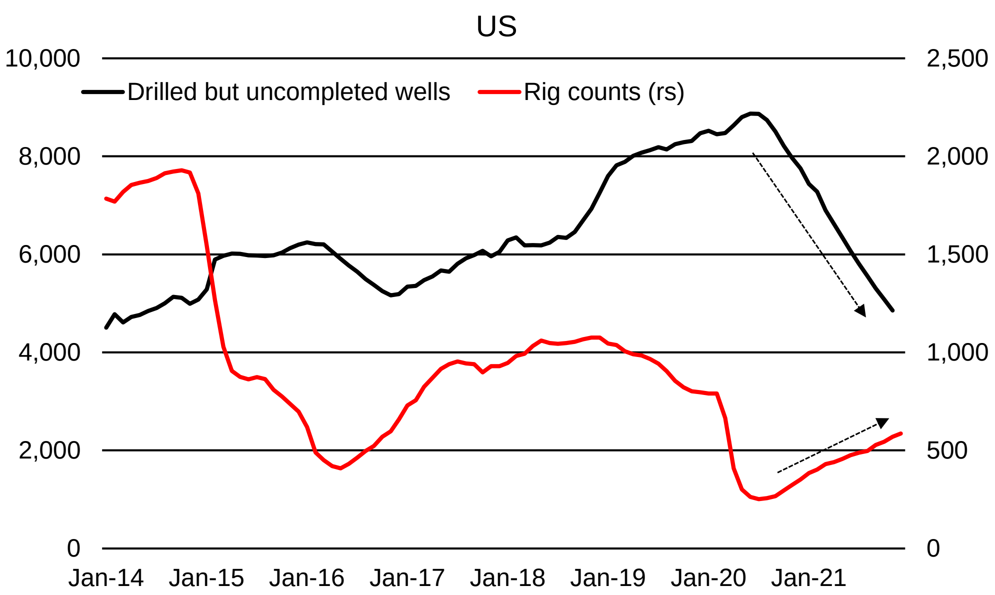
At the end of 2021, US crude production was around 12mb/d, still 7% below its 2019 peak but well above the low point of about 9mb/d that was recorded in May 2019. Chart 1, which reports the rig counts and the number of drilled but uncompleted wells (DUCs), shows that the recovery in production was facilitated by the drawdown of existing wells and not by the discovery of new ones. In order to understand the dynamic, it is important to recognize what it takes to bring an oil well on line. There are essentially two phases. The first is drilling, and it involves dispatching a rig and crew to drill one or more wells on a pad site. The second corresponds to well completion and it is typically performed by a separate crew. It involves casing, cementing, perforating, and hydraulically fracturing the well for production. In general, the time between the drilling and completion stages is some months.

If drilling activity grows faster than completion and production, then the inventory of DUCs increases – creating a sort of spare capacity that can be activated in case of need. Considering that the average life of non-conventional oil wells is around 18 months, with their productivity declining rapidly over this time horizon, DUCs represent an important cushion to adapt to sudden changes in demand. This is what happened between 2016 and 2019, for example. In recent months, instead, the decline in

DUCs reflects more well completions and, at the same time, less new well-drilling activity. The completion of wells is increasing oil production, but it is also reducing DUC inventories. After the huge revenue losses recorded in 2020 as a result of mobility restrictions and the price-war between Russia and Saudi Arabia, last year financially-weak shale companies took advantage of the price recovery to pay down debt and to return cash to shareholders through increased dividends and share buybacks. They shifted, in other words, to an investment maintenance mode from an expansion one.

The consequence of this conservative approach is underinvestment that risks endangering future production and future cash-flows as companies rapidly activate DUCs to compensate for the declining productivity of existing wells. This is certainly one factor supporting oil prices at the moment. Using a simple linear relationship, based on the DUCs drawdown relative to the rig counts that has been experienced since September 2020, and assuming no additional investment, one can infer that shale producers would need to activate around 3,600 DUCs out of 4,855 to bring production back to its 2019 levels. In other words, DUCs would fall to close to 1,000 – a critical threshold that has never been reached. Without a swift increase in capital spending, US production is at risk, and so are global output and prices.

CHART 1. US OIL HAS NOT RECEVOERED FROM THE PANDEMIC YET



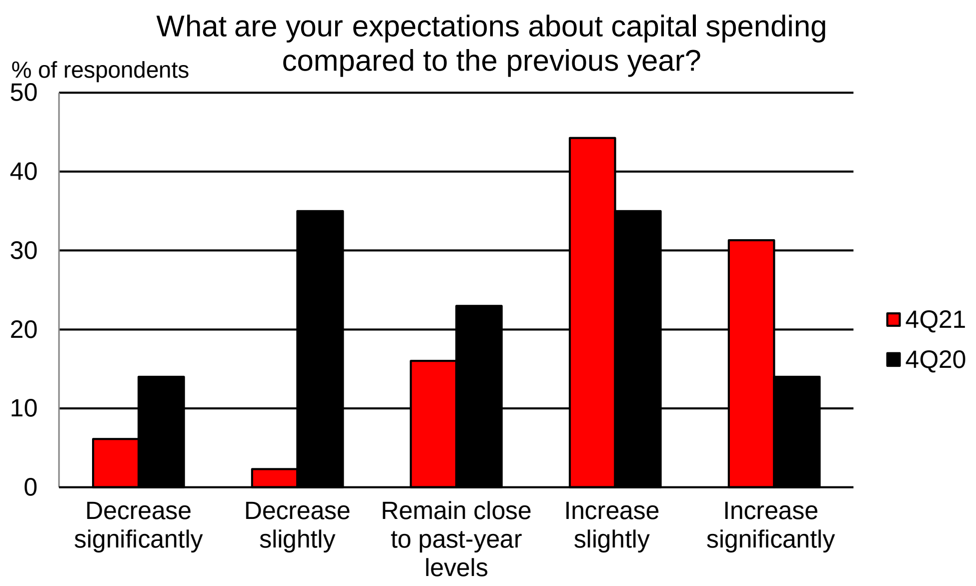
Source: IEA, UniCredit Research

A boost to investment?

A scenario of prolonged underinvestment looks unrealistic. What is at stake is the short-term operability and long-term profitability of shale producers. The need to replenish shrinking well inventories, coupled with very favorable market conditions, is likely to induce them to change investment strategy in 2022. According to Platt Analytics, the Brent-equivalent development costs for a new well in the US is USD 43/bbl. Considering that Brent prices are almost double that amount, there is a strong business case to invest in discovering new wells. This is consistent with the latest Dallas Fed Energy Survey (Chart 2), which involves executives from the oil and gas industry. Around 30% of firms interviewed expect to significantly increase their capital expenditure this year. The outlook is completely different to what companies declared a year earlier.

By taking advantage of the current market conditions, US producers would have the opportunity to normalize their production but also to take market share from their OPEC+ competitors – whose investment-to-production lead times are much longer and, after two years of underinvestment, might not be able to expand their production capacity or to compensate for those oil fields that are depleted. What could weigh on a bolder investment strategy is inflation. Most companies also expect higher service-sector costs, with the majority of oilfield services representatives expecting to increase their rates by at least 10% in 2022. Cost inflation reflects broader trends in the economy, but the service sector is also pushing for higher margins after two years of depressed demand. Even with this caveat in mind, upstream oil investment in the US is likely to increase in 1H22 and its first effects will materialize only towards the end of 2022 or in early 2023. However, rising drilling activity might send a positive signal to the market that, coupled with OPEC+ tapering, should contribute to putting oil prices on a declining path. All in all, while maintaining our expectations for a downward path for Brent prices, we recognize the current price volatility by revising our average forecast for 2022 to USD 76/bbl, up from USD 73/bbl.

CHART 2. INVESTMENT EXPECTATIONS ARE POSITIVE



Source: Dallas Fed, UniCredit Research

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