## The Telegraph

## Saudi Arabia may go broke before the US oil industry buckles

It is too late for OPEC to stop the shale revolution. The cartel faces the prospect of surging US output whenever oil prices rise



By Ambrose Evans-Pritchard

9:59PM BST 05 Aug 2015



If the oil futures market is correct, Saudi Arabia will start running into trouble within two years. It will be in existential crisis by the end of the decade.

The contract price of US crude oil for delivery in December 2020 is currently \$62.05, implying a drastic change in the economic landscape for the Middle East and the petro-rentier states.

The Saudis took a huge gamble last November when they stopped supporting prices and opted instead to flood the market and drive out rivals, boosting their own output to 10.6m barrels a day (b/d) into the teeth of the downturn.

Bank of America says **OPEC** is now "effectively dissolved". The cartel might as well shut down its offices in Vienna to save money.

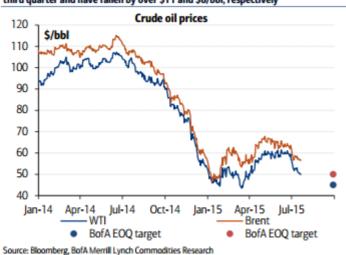


Chart 1: WTI and Brent crude oil prices broke down literally with the start of the third quarter and have fallen by over \$11 and \$8/bbl, respectively

If the aim was to choke the US shale industry, the Saudis have misjudged badly, just as they misjudged the growing shale threat at every stage for eight years. "It is becoming apparent that non-OPEC producers are not as responsive to low oil

prices as had been thought, at least in the short-run," said the Saudi central bank in its latest **stability report**.

"The main impact has been to cut back on developmental drilling of new oil wells, rather than slowing the flow of oil from existing wells. This requires more patience," it said.

One Saudi expert was blunter. "The policy hasn't worked and it will never work," he said.

By causing the oil price to crash, the Saudis and their Gulf allies have certainly killed off prospects for a raft of high-cost ventures in the Russian Arctic, the Gulf of Mexico, the deep waters of the mid-Atlantic, and the Canadian tar sands.

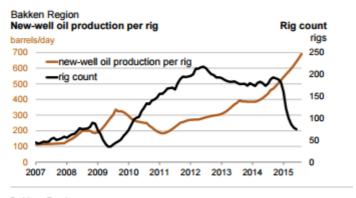
Consultants Wood Mackenzie say the major oil and gas companies have shelved 46 large projects, deferring \$200bn of investments.

The problem for the Saudis is that US shale frackers are not high-cost. They are mostly mid-cost, and as I reported from the **CERAWeek** energy forum in Houston, experts at IHS think shale companies may be able to shave those costs by 45pc this year - and not only by switching tactically to high-yielding wells.

Advanced pad drilling techniques allow frackers to launch five or ten wells in different directions from the same site. Smart drill-bits with computer chips can seek out cracks in the rock. New dissolvable plugs promise to save \$300,000 a well. "We've driven down drilling costs by 50pc, and we can see another 30pc ahead," said John Hess, head of the Hess Corporation.

It was the same story from Scott Sheffield, head of Pioneer Natural Resources. "We have just drilled an 18,000 ft well in 16 days in the Permian Basin. Last year it took 30 days," he said.

The North American rig-count has dropped to 664 from 1,608 in October but output still rose to a 43-year high of 9.6m b/d June. It has only just begun to roll over. "The freight train of North American tight oil has kept on coming," said Rex Tillerson, head of Exxon Mobil.



Bakken Region Legacy oil production change thousand barrels/day He said the resilience of the sister industry of shale gas should be a cautionary warning to those reading too much into the rig-count. Gas prices have collapsed from \$8 to \$2.78 since 2009, and the number of gas rigs has dropped 1,200 to 209. Yet output has risen by 30pc over that period.

Until now, shale drillers have been cushioned by hedging contracts. The stress test will come over coming months as these expire. But even if scores of over-leveraged wild-catters go bankrupt as funding dries up, it will not do OPEC any good.

The wells will still be there. The technology and infrastructure will still be there. Stronger companies will mop up on the cheap, taking over the operations. Once oil climbs back to \$60 or even \$55 - since the threshold keeps falling - they will crank up production almost instantly.

OPEC now faces a permanent headwind. Each rise in price will be capped by a surge in US output. The only constraint is the scale of US reserves that can be extracted at mid-cost, and these may be bigger than originally supposed, not to mention the parallel possibilities in Argentina and Australia, or the possibility for "clean fracking" in China as plasma pulse technology cuts water needs.

Mr Sheffield said the Permian Basin in Texas could alone produce 5-6m b/d in the long-term, more than Saudi Arabia's giant Ghawar field, the biggest in the world.

Saudi Arabia is effectively beached. It relies on oil for 90pc of its budget revenues. There is no other industry to speak of, a full fifty years after the oil bonanza began.

COUNTRY	ESTIMATED OIL PRICE REQUIRED TO BALANCE 2015 BUDGET
Norway	\$40
Kuwait	\$54
Abu Dhabi	\$55
Russia	\$105
Saudi Arabia	\$106
Nigeria	\$122
Iran	\$131
Algeria	\$131
Venezuela	\$160

Sources: International Monetary Fund (2014b), except for Nigeria, Russia and Venezuela (Deutsche Bank, 2014) and Norway (Fitch Ratings, 2014).

Citizens pay no tax on income, interest, or stock dividends. Subsidized petrol costs twelve cents a litre at the pump. Electricity is given away for 1.3 cents a kilowatt-hour. Spending on patronage exploded after the Arab Spring as the kingdom sought to smother dissent.

The International Monetary Fund estimates that the budget deficit **will reach 20pc** of GDP this year, or roughly \$140bn. The 'fiscal break-even price' is \$106.

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Far from retrenching, King Salman is spraying money around, giving away \$32bn in a coronation bonus for all workers and pensioners.

He has launched a costly war against the Houthis in Yemen and is engaged in a massive military build-up - entirely reliant on imported weapons - that will propel Saudi Arabia to fifth place in the world defence ranking.

The Saudi royal family is leading the Sunni cause against a resurgent Iran, battling for dominance in a bitter struggle between Sunni and Shia across the Middle East. "Right now, the Saudis have only one thing on their mind and that is the Iranians. They have a very serious problem. Iranian proxies are running Yemen, Syria, Iraq, and Lebanon," said Jim Woolsey, the former head of the US Central Intelligence Agency.

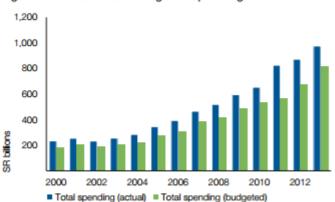
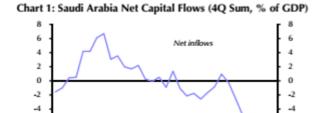


Figure 4: Actual versus budgeted spending

Source: Official data, SAMA

Money began to leak out of Saudi Arabia after the Arab Spring, with net capital outflows reaching 8pc of GDP annually even before the oil price crash. The country has since been burning through its foreign reserves at a vertiginous pace.

The reserves peaked at \$737bn in August of 2014. They dropped to \$672 in May. At current prices they are falling by at least \$12bn a month.



Sources - CEIC, Capital Economics

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Khalid Alsweilem, a former official at the Saudi central bank and now at Harvard University, said the fiscal deficit must be covered almost dollar for dollar by drawing down reserves.

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The Saudi buffer is not particularly large given the country's fixed exchange system. Kuwait, Qatar, and Abu Dhabi all have three times greater reserves per capita. "We are much more vulnerable. That is why we are the fourth rated sovereign in the Gulf at AA-. We cannot afford to lose our cushion over the next two years," he said.

Standard & Poor's lowered its outlook to "negative" in February. "We view Saudi Arabia's economy as undiversified and vulnerable to a steep and sustained decline in oil prices," it said.

Mr Alsweilem wrote in a **Harvard report** that Saudi Arabia would have an extra trillion of assets by now if it had adopted the Norwegian model of a sovereign wealth fund to recyle the money instead of treating it as a piggy bank for the finance ministry. The report has caused storm in Riyadh.

"We were lucky before because the oil price recovered in time. But we can't count on that again," he said.

OPEC have left matters too late, though perhaps there is little they could have done to combat the advances of American technology.

In hindsight, it was a strategic error to hold prices so high, for so long, allowing shale frackers - and the solar industry - to come of age. The genie cannot be put back in the bottle.

The Saudis are now trapped. Even if they could do a deal with Russia and orchestrate a cut in output to boost prices - far from clear - they might merely gain a

few more years of high income at the cost of bringing forward more shale production later on.

Yet on the current course their reserves may be down to \$200bn by the end of 2018. The markets will react long before this, seeing the writing on the wall. Capital flight will accelerate.

The government can slash investment spending for a while - as it did in the mid-1980s - but in the end it must face draconian austerity. It cannot afford to prop up Egypt and maintain an exorbitant political patronage machine across the Sunni world.

Social spending is the glue that holds together a medieval Wahhabi regime at a time of fermenting unrest among the Shia minority of the Eastern Province, pin-prick terrorist attacks from ISIS, and blowback from the invasion of Yemen.

Diplomatic spending is what underpins the Saudi sphere of influence in a Middle East suffering its own version of Europe's Thirty Year War, and still reeling from the aftershocks of a crushed democratic revolt.

We may yet find that the US oil industry has greater staying power than the rickety political edifice behind OPEC.