Nigeria/Saudi Arabia/USA economy: A structural shift in oil markets?

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Falling US imports of crude oil have potentially substantial implications for international oil markets, and could herald a structural shift as the US over time becomes less dependent on imported supplies. Among the features of such a shift—driven by the increase in US "tight oil" production—would be that the US could eventually (although perhaps not as quickly as many envisage) lose its position as the world's largest oil importer; that oil-exporting countries would adjust to a more China- and Asia-centric market; and that the US itself could start to export more refined petroleum products.

While more subdued US demand for foreign oil partly reflects domestic economic difficulties, a chief cause of the decline in imports is that the country is simply producing much more oil of its own. We estimate that total production in 2012 was 9.1m barrels/day (b/d). This marked an increase of 12% on the previous year's output, and is the result of the boom in production of what is popularly called shale oil (more correctly, "tight oil"). The advent of advanced drilling techniques to extract oil embedded in tight rock formations is revolutionising the oil industry and allowing companies to tap previously inaccessible or commercially unviable fields. The US has been at the forefront of "fracking" (as hydraulic fracturing—a key element in the extraction of tight oil—is popularly called).

How big is the impact of this production boom on international markets? According to the Energy Information Administration (EIA), a government agency within the US Department of Energy, US imports of crude oil in December 2012 fell to 7.6m b/d. This was their lowest level in almost 16 years and was 30% below the peak in June 2005, when imports reached 10.8m b/d. Also, the amount of oil imported in December 2012 (the last month for which EIA data are available) was 13% lower than a year earlier. Although tight oil's transformation of the US energy landscape has been under way for some time, it has further to run.
As a consequence, the US market is becoming more challenging for oil-exporting countries, particularly those that specialise in the light, sweet, easy-to-refine grades of oil similar to those commonly produced in the US. According to the EIA, US imports of Nigerian crude in December 2012 were 54% down on the same month a year earlier, and 82% below their 2006 peak. (A caveat: such data are hard to interpret definitively. Imports from any given country show large monthly variations, and political tensions or technical difficulties such as oil-well repairs often explain a country’s sudden drop in exports. Still, in Nigeria’s case, the picture of a declining trend is inescapable.) It is a similar story for Angola, which exported 68% less oil to the US in December 2012 compared with a year earlier, and for Algeria.

The implications for Arab Gulf oil producers are less clear. Imports from Saudi Arabia—typically the US’s second- or third-largest oil supplier—have also declined. However, the Gulf states export heavier grades of crude that compete less directly with US-produced oil, and are less easily substituted by US product. Saudi ownership stakes in US-based refineries may also insulate the kingdom from the worst effects of any fall in US import demand. The time and cost involved in recalibrating refineries to accept a different grade of oil can provide buyers with a commercial rationale for not switching to local suppliers.

How will the markets adjust?

Despite uncertainties surrounding the future of tight-oil production, our core forecast is that US output will continue to rise more rapidly than demand in the next few years. In 2017 we expect US production (including other liquids such as natural gas liquids) to reach 10.9m b/d, 20% higher than in 2012. This is despite the fact that tight-oil extraction is expensive and environmentally controversial, and that investment in further capacity will therefore rely on oil prices staying high. The tight-oil revolution could become a victim of its own success, as any increase in US production associated with the rise of unconventional drilling techniques ought naturally to depress prices (all other factors being equal). A significant spread has emerged in the past two years between the price of a widely quoted US benchmark, West Texas Intermediate (WTI), and other benchmarks such as Europe’s Brent—which has become much costlier than WTI. In the past, not only was there much less price difference between the two, but WTI actually traded at a slight premium to Brent by virtue of being a lighter, sweeter grade of oil.
The full picture is more complex, as the current spread between Brent and WTI also reflects other factors: bottlenecks at the landlocked US transportation hub where WTI prices are calculated; increased supplies of oil from Canada's tar sands; and the impact of sanctions against Iran on "seaborne" benchmarks (that is, those measuring prices for oil normally shipped by sea). Further, the fact that most exports of crude oil are banned by law in the US has some potential to lower US prices as domestic production increases—although the ban does not apply to refined products such as petrol, so would-be exporters can circumvent the restriction if necessary.

Nonetheless, whether or not the tight-oil revolution realises its full potential, the global market faces further change. Although US self-sufficiency in oil is a distant dream, the prospect of somewhat reduced reliance on foreign oil is significant. It suggests that the secular shift towards Asia—and towards China, in particular—as the centre of gravity of global oil markets could accelerate. For example, Nigeria, Africa's largest oil producer, is selling a lot of oil to India, which is now close to overtaking the US as Nigeria's largest export market. There is no sign, for now, that Nigeria is having difficulty replacing US demand with orders from other buyers—even though its West African location is potentially disadvantageous in terms of the logistics of shipping oil eastwards to Asia. (That said, there is the possibility of greater competition in the longer term should East Africa emerge as a larger oil producer.) China's footprint in many parts of Africa is expanding rapidly. Sub-Saharan Africa's second-largest oil producer, Angola, has very extensive economic links with China. This insulates against weak oil demand in Europe and the US, although increased exposure to China carries its own risks should growth in the world's second-largest economy slow sharply.

Team USA – still a force to be reckoned with

The longer-term implication is that the US should, eventually, make way for China as the world's largest oil importer. Yet the change is not as imminent as some might imagine. China was recently in the headlines, with the publication of data indicating that it had apparently overtaken the US as the world's largest net importer of crude oil and petroleum products in December 2012. However, this news was deceptive. First, the data were based only on one month; the US remained well ahead of China as an oil importer in 2012 as a whole. Second, China's imports were boosted by unusually high refinery activity in
December as refiners bet on a surge in demand that has not materialised. This will not be sustained.

Perhaps as significant for global markets as a reduction in US imports of crude oil is the prospect that the US itself might become a bigger exporter, boosting international supply and putting downward pressure on prices. We do not believe that Congress will repeal the country’s ban on crude-oil exports—such is the political high profile of oil security in the US—but it is certainly possible that the US could start exporting refined petroleum products in much greater volume (such exports have already increased substantially in the past five years). The extent to which this occurs may depend on the impact of the fracking boom on refinery investment in the US. If oil prices in the US—despite being lower than international benchmarks—remain at relatively high historic levels, this could encourage a renaissance of investment in refinery expansion that would enhance export prospects. But if increased tight-oil production led to a glut that lowered prices, the incentive to invest could diminish.

In addition, for all its success in tapping new sources of domestic oil, the US will remain exposed to international markets. At about 19m b/d, the country still consumes far more oil than it can produce. The usual array of geopolitical and market-driven factors—from OPEC quota decisions to political turbulence in the Middle East—will continue to affect supply and prices in the US, and thus the investment decisions of oil exploration companies. In short, tight oil will remain just one component in a complex web of interlinked market forces, and only a part of the answer to the US’s energy needs.

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