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Oil: What's Ahead?

Introduction

After predicting in 2012 what would happen to the world petroleum market because of the growth of world production capacity (ignored by almost all experts at the time), in recent months I have received hundreds of requests asking what will happen now and in the near future.

Exhaustive explanations require very precise, analytical detail, which, to my mind, always starts with a bottom-up analysis of the market. This is very different from the top-down, econometric models generally used by the big agencies (such as the International Energy Agency), by investment banks, and by think tanks. A long, detailed explanation would interest only certain types of readers, so I save such in-depth treatments for specific workshops.

In this new briefing, I will limit myself to sketching the elements that we must watch carefully in the near future, to avoid errors or oversimplifications.

The reality behind the Saudi strategy

Let us start with the event that triggered the collapse of oil prices already in decline. This was the Saudi refusal to cut petroleum production, which many members of the Organization of Petroleum Exporting Countries (OPEC) requested in November 2014.

From several sources inside the Kingdom (which I must hold confidential), I learned that, before making that decision, the Saudis spent several months estimating the effects of two different price scenarios for crude on the Kingdom's accounts.

In the worst case (the only one I will deal on), the Saudis calculated that they needed to draw on their currency reserves to the tune of about USD 10 billion per month, a sacrifice that they could bear for at least a year, according to some. Others considered this prospect disastrous, but they did not dare resist, because it was outlined and shared with King Abdullah by the two men whom the Saudi sovereign trusted most: first, the Saudi Petroleum Minister, Al-Naimi, the true architect of the new Saudi strategy; second, the Finance Minister, Al-Assaf.

Why did the Saudis choose this road? Their logic seems convincing.

By leaving the market uncontrolled, prices could only drop, because of excess production. However, part of this production would be too costly to survive low prices, and would therefore disappear. The Saudis were certain that it would not take much, and that the first to feel the impact of this strategy would be the United States, Canada, and other countries who in recent years have seen their production explode or increase thanks to the high price of petroleum.

However, this line of reasoning presents many weak points. Until a few months ago, Riyadh thought that at just USD 75 per barrel, a good part of the American and Canadian production would be canceled. More generally, the Saudis believed that all unconventional crude production in the world would go into crisis. This did not happen, because of continued improvements in technology, knowledge, and cost savings that made unconventional production much less expensive than anyone expected.

The death of King Abdullah has introduced a new element of uncertainty about the future of the Saudi strategy. As I said, the principal architect of the current Saudi strategy was Petroleum Minister Al-Naimi, who enjoyed the unconditional trust of King Abdullah. Al Naimi's relationship with the new sovereign Salman is not clear. However, Salman's son, Prince Abdulaziz, is the number two man at the Ministry of Petroleum. Experts on Saudi affairs know that he has often disagreed with Al-Naimi. The latter's closeness to the previous sovereign prevented Abdulaziz from having an impact on the petroleum policies of the country. Now things could change, but not easily.

Traditionally, the Saudi Royal family has always preferred not to appoint one of his members as oil minister in order not to alter the difficult internal equilibrium of power among the various branches of the family. What's more, in the short to medium term, Naimi's strategy has no easy alternatives, for the reasons I'm going to explain.

Would cutting production make sense?

First of all, the fact remains that by cutting production, the Saudis (and perhaps all of OPEC) would be giving a gift to the other world producers, who, thanks to a possible rise in prices, could continue to produce at full throttle, filling part of the void left by OPEC .

Secondly, who in OPEC could make significant cuts in production?

Saudi Arabia is already working harder than anyone else not to flood the world with petroleum, holding back production of almost 3 million barrels per day (mbd).

Libya, Iraq, Nigeria, and Iran are producing less than they could, although not by choice. The first three countries are simply paying a high price for their internal problems, which prevent them from extracting crude at a full rate, or to increase production to match their potential. Iran cannot take full advantage of its production capacity, because of international sanctions. Overall, the reduced production from these countries and others is depriving the market of another 2.5 mbd.

And the other OPEC countries? Venezuela has suffered for years from poor political management of its own petroleum industry. Although blessed with significant petroleum resources, it is far from producing the levels it achieved in the past. The United Arab Emirates are in an arm-wrestling contest with the foreign companies to renegotiate the terms for developing or redeveloping the country's deposits, which has frustrated UAE objectives for production growth. The other members of OPEC do not have sufficient maneuvering margin to make significant cuts.

Beyond OPEC, the only country that could make important production cuts is Russia. Moscow could be interested in temporarily joining OPEC in such a move (e.g., cutting production), because its revenues are being devastated by the oil (and natural gas) price collapse. Yet it's more

likely that Russian production decreases over time due the financial problems of the Russian oil industry, rather than because of a voluntary agreement between Russia and Opec. True, Moscow is totally distrustful of Saudi Arabia and other Arab countries, and believes that the current oil price collapse is the result of a secret agreement between Riyadh and Washington.

In any case, even if an agreement on a wide production cut were to be possible, another difficult problem would need to be solved: *How much production would need to be cut to make a significant difference in terms of price?*

Despite the fall of prices for American crude to below USD 45 per barrel, already in the first weeks of January, American production has continued to grow. Production has not stopped in any other country. It has continued to increase even in countries with high costs, such as Canada and Brazil (pre-salt formations). In reality, it seems that investments already made to develop new production capacity are bearing fatal results all over the world.

True, both the industry and the producing countries are now cutting costs and investments, the effects of which will be seen over time. *But watch out.* The cuts mainly involve exploration and development projects that were not already approved. *On the other hand, development projects for new production capacity on which billions have already been spent will not be stopped.*

This inertia of expenditures seems to be unstoppable, because oil companies need to respect three conditions: recover what has been spent as quickly as possible, respect the contract conditions imposed by the producing countries, and replace reserves – particularly oil reserves. Understanding the amount of new production capacity still being developed, it is essential to figure out the structure of the market in the coming years.

As things stand now, the market has an excess supply capacity of more than 2 mbd, that cannot disappear in just one year as a consequence of current spending cuts. By converse, that capacity seems destined to slightly increase. The only possibility for excess supply to be re-absorbed is a significant rebound of demand: But is the latter a real possibility? I will answer this question later on.

The cost of shale (and petroleum in general) will continue to drop

There are other factors that make the petroleum markets structurally weak.

First, the best American shale oil producers can weather the low-price storm by concentrating their operations only on their most productive areas of shale formations. From the data that I have collected, and am still collecting, the breakeven point for these areas is often below USD 35 per barrel.

Second, today's breakeven points are destined to continue to drop.

As I have explained in the past, they have been pushed ever lower by continued improvements in technology and knowledge of the shale formations. This has enabled cost reductions of at least 10% per year, in the face of an enormous increase in the production of the individual wells. Therefore, the unit net cost reduction has been much higher than simply 10%.

The effects of these two factors in 2015 are yet to be felt.

In particular, large-scale adoption of multi-well pad drilling (MWPD), which makes it possible to drill multiple wells from a single surface station, will lower costs even further, while increasing productivity. MWPD will bring about fewer drilling installations, so we must be careful in evaluating the so-called “rig-count”: No longer will the number of surface sites indicate directly the level of shale activity.

At the same time, all shale producers are studying and testing putting wells closer together or, in the oil jargon, a much more aggressive “down-spacing.” This will facilitate more intense exploitation of the shale areas, and further reduce costs. A third option, which will take a little bit

longer to materialize aggressively, it's "re-fracking" – which will allow them to increase production from existing shale wells at a much lower cost.

In addition to the support coming from technology, shale oil will likely be resilient to lower prices thanks to the upcoming fall of service costs, because contractors who actually perform the drilling, fracking, and so forth, will greatly reduce the fees for their services. This process is already underway, driven by the urgent need of the petroleum companies to cut costs and reduce investments.

The convergence of these elements could noticeably change the economics of shale oil for the better.

The speed of shale production as a destabilizing factor

Finally, there is a new element that makes any future market assessment of petroleum uncertain, compared to what we have known up to today.

American production of shale oil and gas has overturned the principles of conventional oil and gas production. The latter requires years of exploration and development before reaching the market. On the other hand, a shale well can go into production in a few weeks, reaching its production peak immediately.

The market implications of this different dynamic are enormous, because they bring about an almost immediate time-to-market, which has been unknown to date in the petroleum industry. In other words, if shale production were to drop in the near future because petroleum prices dropped too low, it would take shale very little time to recover once crude prices started increasing again. The truth is that U.S. shale production can be turned on and off almost immediately, and this represents a dramatic novelty for the oil market.

There are many who could point out that the price crisis will bring about bankruptcies or crises for the oil companies, and a drastic reduction in the credit that financial institutions have granted them in the past, which has sustained them during the boom. In turn, this could make a rapid future recovery of shale production more difficult.

Certainly, this is possible, but not very probable.

The drop in prices for shale gas has knocked off many operators who were overly indebted, but this has not prevented the better companies from prospering and pushing the production of shale gas to unthinkable levels. So beware: A high number of failures among companies operating in shale oil should be analyzed in detail before drawing any conclusions, with an understanding of the size of the production and the quality of the assets of those failing.

Could the demand for oil increase thanks to low prices?

All the phenomena that I have described have taken place or will take place while growth in the worldwide demand for oil remains feeble.

The logic of economics predicts that low prices for oil will push the demand up. This is probable, but there are elements that make it difficult to understand the possible size of any rebound, and there are some structural brakes.

First, wherever adopted, environmental and energy efficiency legislation reduces the elasticity of demand with regard to price, while in many countries of the world, young consumers no longer see the automobile as an object of desire.

Second, the continued strengthening of the dollar against other world currencies is making it more expensive for many countries to purchase petroleum.

Another decisive variable applies to countries that heavily subsidize petroleum consumption, from Asia to the Middle East. These are the countries that have posted the greatest increases in petroleum consumption so far. If the governments of these countries were to take advantage of the low prices to cut price supports, the effect on demand would be dampened.

Conclusions

From an economic point of view, the factors that I have tried to summarize seem to conspire towards a given outcome: Petroleum prices structurally low for a significant period of time. However, there are geopolitical consequences of low crude prices, which must be carefully monitored.

The fall of oil prices could induce political, even violent, instability in areas that are critical for world petroleum production, starting with the Persian Gulf countries, (but not only there). If significant political crises were to strike key countries for world petroleum production, the prices of crude could skyrocket, even in the presence of a weak market.

Like never before, analyses of the petroleum market and possible investment decisions require an analytical organization capable of fully considering all the real variables that influence the evolution of the market itself, field by field and country by country, avoiding considerations based on long-term scenarios (beyond 2030) and the useless models underlying those scenarios.

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Previous Briefings:

1 – The Oil Surprise : Why I Was Right. *October 26, 2014*

2 – Why US Shale Keeps Booming. *November 19, 2014*