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Oil Prices: Energy Investment, Political Stability in the Exporting Countries and OPEC's Dilemma

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SUMMARY POINTS

- The oil market currently suffers serious contradictions. In terms of supply and demand, it is possibly oversupplied. This is not least because higher prices to final consumers are beginning to bite. At the same time prices since June 2012 have increased by around 30 per cent, driven by geopolitical concerns.
- The future price trajectory depends upon politicians. Failure to manage the eurozone crisis could lead to much lower oil prices while an Israeli attack on Iran would cause a major price spike.
- A key outcome of the Arab uprisings has been a significant increase in the prices needed by the producers to manage their fiscal position. This is a serious indictment of producers' failure to diversify their economies away from dependence on oil revenues over the last 20 years.
- If the oil price goes much lower, three scenarios could ensue sequentially: a price war forcing prices even lower, a period of internal repression as revenues fail to buy compliance among populations, and internal unrest among producers, which could lead to supply disruption followed by prices bouncing back.
- Underlying all this is a fundamental dilemma for OPEC. Its members need higher prices, but these will cause demand to fall and other supplies, including unconventional resources, to increase. This will force prices lower. Thus OPEC members need the golden eggs at a rate that may well kill the goose that lays them.

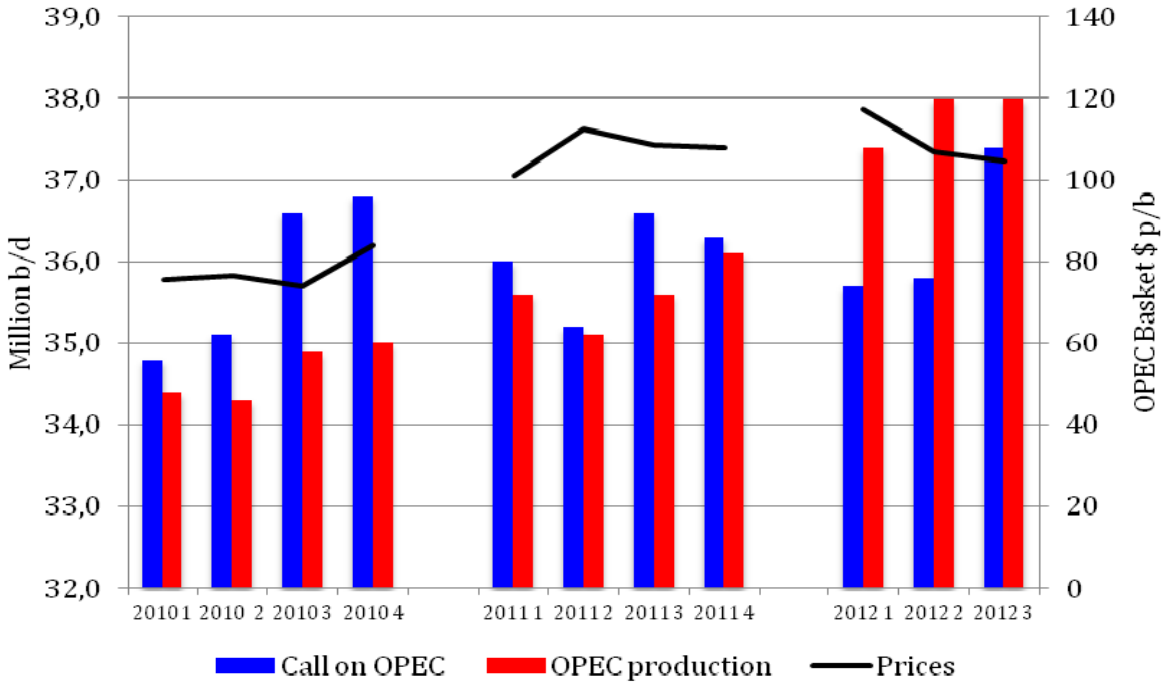
PROSPECTS FOR OIL PRICES

During the summer of 2012, there were growing concerns that, faced with global economic upheaval originating in the problems of the eurozone, there was increasing oversupply in the oil market, which threatened prices. At the same time, geopolitical concerns in the context of the Iranian nuclear programme were helping to provide upward support for prices. This paper attempts to consider possible future paths for crude oil prices and their implications.

Before considering future prices it is worth trying to explain recent price history. Figure 1 provides an analytical framework to do so. Based upon data from the International Energy Agency's *Monthly Oil Market Report*, it shows on a quarterly basis the call on OPEC-12 crude, OPEC-12 production and the average price of the OPEC crude basket.[1]

Figure 1: World oil market, 2010–12

Source: International Energy Agency.



The figure tells a clear story of oil prices. During 2010, global demand grew strongly and the call on OPEC responded accordingly. However, OPEC did not increase output. The reason was that, during 2010 and for a number of quarters earlier, oil inventories had been at record five-year-high levels. OPEC's concern was that if this stock overhang came to market, then prices would fall dramatically, as had happened in 1998.[2] This failure to increase output by OPEC caused the markets to tighten and prices to rise in the second half of 2010. At the start of 2011, the events of the Arab uprisings began to unfold, starting in Tunisia. This led to rising prices as a result of fears in the paper barrel markets that the major oil producers of the Gulf Cooperation Council (GCC)

1 Oil market data are generally poor and there is inevitably much debate and discussion over the accuracy of the figures. The IEA data are no exception but they are as good as anybody else's numbers

2 During the period of stock overhang, the forward price curve was in contango, meaning the future price was above the current prompt price. In such a market, people are willing to hold physical inventories providing the cost of storage is less than the higher future price. However, should the forward curve switch the backwardation, i.e. the future price becomes lower than the current prompt price, then the physical inventories become involuntary and holders will try to sell them into the market, causing prices to fall.

countries would suffer contagion, with serious consequences for prices.[3] There were also losses of supply from Yemen, Egypt, Syria and Sudan, and then of greater importance from Libya.[4] However, as can be seen from Figure 1, OPEC production began to increase in 2011. This first effectively placed a ceiling on prices and then began to cause them to decline. In the second half of 2011, there were growing concerns over the state of the global economy, in large part as a result of the eurozone crisis. While these dampened price increases, growing concerns that Israel might attack Iran over its nuclear programme provided a degree of geopolitical concern to support prices.

At the start of 2012, the EU announced it was to introduce an (extremely ill-advised) embargo against imports of Iranian oil.[5] The immediate result, as can be seen from Figure 1, was that prices rose. This was created by transitional friction as European importers of Iranian crude tried to find alternatives, pushing up prices in the Mediterranean markets.[6] However, in the first half of 2012, OPEC increased production, led by Saudi Arabia, which by May was producing 10 million barrels per day (mbd). Meanwhile, although Iran was hit by the EU embargo, its production by no means collapsed. At the same time there were clear concerns that the growth in Asian oil demand, which was at the core of demand growth since 2010, was slowing. It was this combination of increasing supply and weaker demand that caused many analysts to conclude that the market was in danger of being oversupplied for the rest of the year. This fed the discussion of the possibility of much lower oil prices.

There was also further downward pressure on prices following growing concern over demand destruction. Figure 2 illustrates the path of prices since the start of 2009. The inexorable rise in prices will clearly encourage the demand destruction as energy users move away from oil on a permanent basis, with improved efficiency being the most obvious route. This role of prices is often underestimated. For example, the IEA's 'New Policies Scenario' from its *World Energy Outlook 2011* identifies the Middle East, India and China (the MICs) as accounting for 68 per cent of the oil demand growth in the non-OECD countries between 2009 and 2035. All three of the MICs have had a long history of highly subsidized oil prices to their consumers. This is undergoing significant change, beginning in India in 2002 and in China in 2009. Many Middle Eastern countries are also looking closely at ways to slow growth in domestic consumption as it eats into their ability to export oil.[7]

3 The oil market has two components. The wet-barrel market, where traders trade real physical barrels of crude oil, and the paper markets, where paper promises are traded. The linkages between the two markets are complex and controversial. See Paul Stevens, *The Coming Oil Supply Crunch*, Chatham House Report, 2nd edition, 2009.

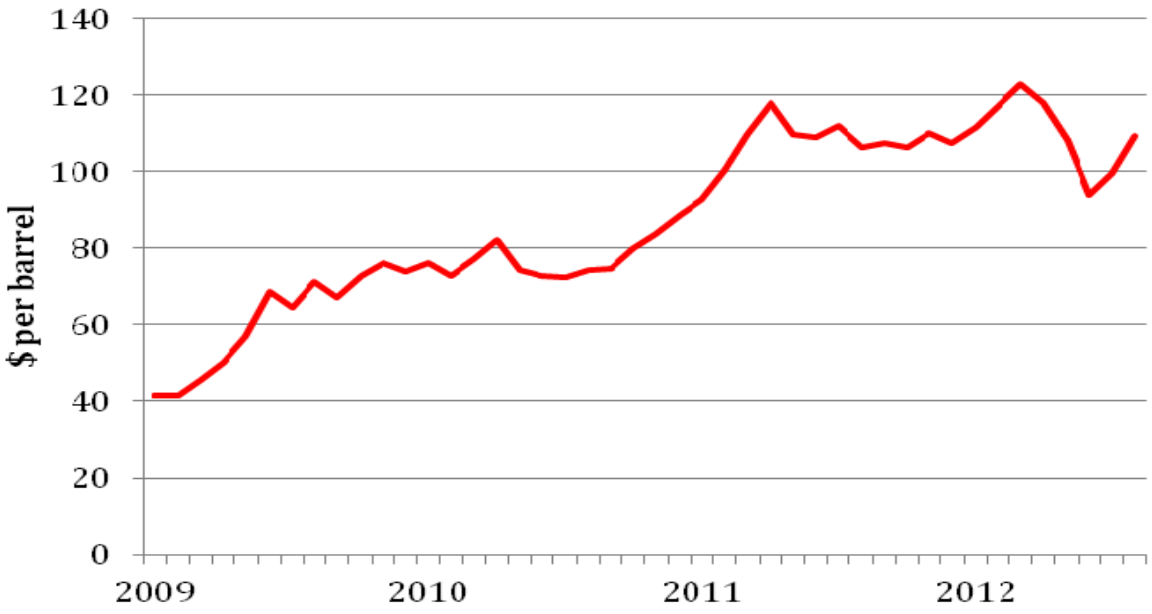
4 The Syrian outage followed an EU embargo and the Sudan outage followed a transit pipeline dispute between Sudan and South Sudan.

5 Those who formulated the embargo failed to consult oil market experts and were surprised, when they did, that the consensus view of the experts was that an embargo would increase oil prices.

6 For greater detail see Paul Stevens, 'An Embargo on Iranian Crude Oil Exports: How Likely and with What Effect?', Chatham House Programme Paper, January 2012.

7 See Glada Lahn and Paul Stevens, *Burning Oil to Keep Cool: The Hidden Energy Crisis in Saudi Arabia*, Chatham House Report, Chatham House, London, December 2011.

Figure 2: OPEC basket monthly price, 2009–September 2012

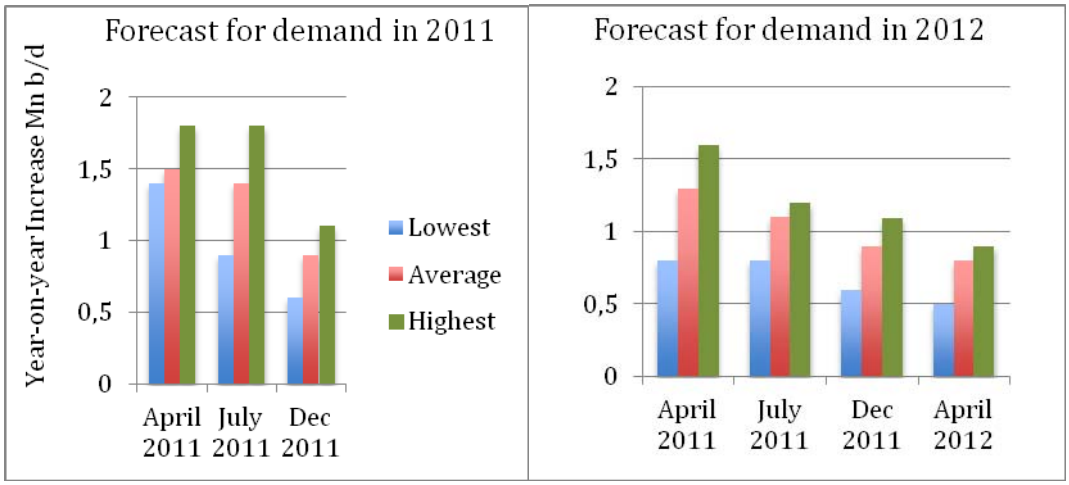


Source: OPEC,www.opec.org.

CURRENT OIL MARKET UNCERTAINTIES

In many ways demand is key to the current state of the oil market. Forecasts of world oil demand for 2011 and 2012, made by eight independent forecasters at different points in time, are summed up in Figure 3.

Figure 3: Forecast for world oil demand, 2011–12



Source: Authors.

The later the forecast, the lower the average of the eight projections. Thus for 2011 it falls from 1.5 mbd in the April forecast to 0.8 mbd in the December forecast. Similarly the forecast falls for 2012 from 1.3 mbd made in April 2011 to 0.8 mbd made in April 2012. This clearly reflects the growing concern that oil demand will weaken throughout the period of the forecasts.[8]

Nonetheless, the current market signals are confusing. While demand has weakened, non-OPEC supply has also disappointed. The IEA's estimate in April 2011 that non-OPEC supply would increase by 53.9 mbd in the third quarter of 2012 and by 54.3 mbd in the fourth quarter have been reduced to 52.8 mbd and 53.7 mbd, respectively, in August 2012. Overall, OPEC has eventually succeeded in absorbing the stock overhang described earlier. By August 2012, OECD oil inventories were well below the average for the preceding five years. Prices also started to pick up as the geopolitical uncertainties associated with Israel's response to Iran's nuclear programme began to attract attention. Indeed this price strength began to cause alarm and the August G7 summit hinted at the possibility of a release of stocks by the IEA, although this was not welcomed by the IEA itself, which regarded it as a political ploy with the US presidential election looming.[9] There were also signs in August that Iran's exports had started to pick up again as many Asian customers began to find ways to sidestep EU and US sanctions.[10]

By the beginning of September, it looked very much as though the future of oil prices depended upon the behaviour of two groups of politicians. The first were the eurozone leaders, whose ability to sort out their financial crisis is still questionable. The eurozone crisis begins to resemble the film *Groundhog Day*' as each attempted rescue quickly leads the EU back to the original state of affairs. Quite simply, eurozone leaders have consistently underestimated the magnitude of the crisis and

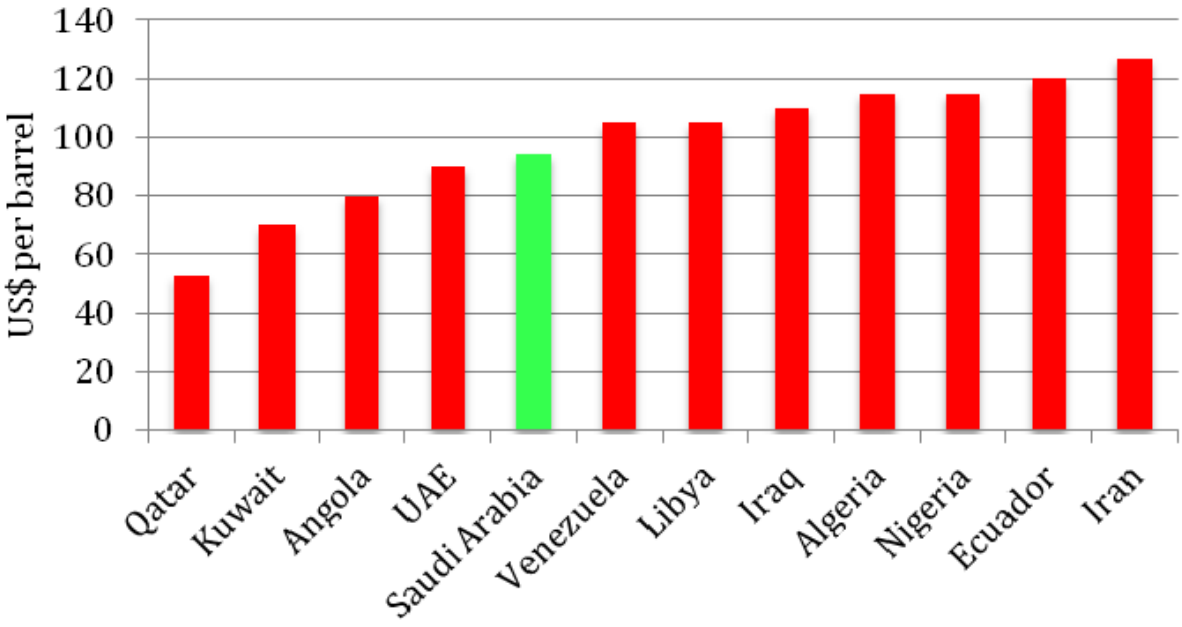
8 It is perhaps also worth pointing out that the very large differences between the highest and lowest forecast confirm the poor quality of oil-market data.
9 Shortly before the election of 2000, President Clinton announced a release of strategic petroleum reserve (SPR) stocks in response to concern over the low level of distillate stocks in the northeastern United States. At the time this was widely seen as a ploy to try to assist Al Gore in his election campaign.
10 The impact of EU sanctions on Iranian exports, not surprisingly, has been a contentious issue, with various numbers, claims and counter-claims being bandied around by the interested parties. If evasion is illegal and avoidance is legal 'avoision' is a good description of what is happening to sanctions against Iran.

failed to act quickly enough or with enough determination. Second, much will also depend on whether Israel launches a military strike against Iranian nuclear facilities. There has been much speculation that, because Israel is unlikely to have the capacity to act without at the very least US logistical support, an attack may come just before the US presidential election in a bid to force President Barack Obama's hand into providing support. There are few votes in the United States for those appearing to be supportive of Iran. It is a sad reflection that the price of oil is therefore dependent upon the behaviour of two groups of politicians who seem to exude either incompetence or unwarranted aggression, or both, compounded by indecision.

THE ISSUE OF PRICE TARGETS

Whatever the outcome of this uncertainty – prices staying the same, rising or falling – one thing is now a given: producers need relatively high prices to survive politically.[11] While it is far from clear how the Arab uprisings may end, one result is already clear: the surviving Arab regimes and the new ones both need to keep their populations if not happy, then at least under control. This requires spending on a lavish scale to provide jobs, incomes and subsidies. The result has been that for many producing governments there has been an increase in the price at which the suppliers are willing and able to supply. A variant on this 'supply price' is the 'fiscal breakeven price', which is the price needed to generate the revenue to cover government expenditure. This can be calculated in a very simple manner by taking a government's expenditure plans for any year plus an assumed level of production/exports, and then computing the price level required to cover the expenditure while taking account of tax revenue from non-oil sources. There are more sophisticated calculation methods, and the results of a recent attempt by Ali Aissaoui of Apicorp are shown in Figure 4.[12]

Figure 4: OPEC median budgetary breakeven price



Source: Ali Aissaoui, *Apicorp Economic Commentary,* Vol. 7, No. 8–9, August–September 2012.

On the face of it, OPEC should be sitting very pretty. Brent prices averaged historic highs of $114/b per barrel (/b) in the first half of 2012, but unless median ranges continue to hold up over $100/b, as Figure 4 implies, financing gaps will start to show – and not just in terms of a significant correction towards $50–60/b, but even at benchmarks around $80–90/b.[13] That is a staggering indictment of how the producers have failed to reduce their dependence on oil revenues over the past decade. To keep producer states in the political black, '$100/b' is the new '$30/b', compared with the early 2000s. Despite enormous downside macro-economic risk embedded in the global

11 As will be discussed below, there is much debate as to what this level of prices should be. Also some producers who have managed to accumulate large financial surpluses can survive for some time.
12 The figures are estimates of the modal price read from a range of breakeven prices.
13 An alternative measure of political sustainability would be to look at the record of changes to financial surpluses in the context of expenditure on the non-oil sector.

economy, Iran, Russia and Venezuela still have their budgetary books balanced at over $110/b breakeven points. In Africa, Nigeria, Angola and Algeria are looking towards $100/b marks, while in Latin America, Ecuador, Bolivia, Argentina and Mexico are in similarly precarious positions. The Caspian states are all 'out of the money' at anything less than $100/b, while Libya and Iraq need all the receipts they can muster to rebuild their shattered states.

The key player here is Saudi Arabia, given its dominant market position. The fiscal breakeven price of $94 compares to estimates of a 'supply price' in 2008 from a variety of sources of between $40 and $50 per barrel. The substantial increase is explained in part by the rising wage bill for the public sector. During the 1990s, the Saudi government tried to reduce the growth of employment in this sector, looking to the private sector to solve the growing problem of youth unemployment in the kingdom through various policies under the heading of 'Saudi-ization'. This policy failed and around 2001–02 it was decided to start hiring Saudis again in the public sector. The result was a significant increase in the public-sector wage bill. As the Arab uprisings began to unfold during 2011, in an effort to pre-empt any unrest the Saudi government announced a series of measures to improve the lot of citizens. This consisted of two packages of extra spending – $32 billion in February and $97 billion in March. These included an across-the-board increase of 17 per cent in public-sector wages. Clearly it would be very difficult to reduce government spending by tampering with wage bills.[14] Thus all the OPEC producers need higher prices.[15] For most of the smaller GCC countries, the breakeven price is below existing prices, while most OPEC members need higher prices.[16]

14 One possible area for reducing government spending in the kingdom is defence and security. Traditionally this has always been around one-third of total expenditure. In 2011, estimates suggest it was only 31%, which would be the lowest since 1984. However, given the need to keep the defence forces on-side, this would also be a sensitive area for cutting.
15 See Chatham House MENA Programme Workshop Summary, 'Future Trends in the GCC', May 2012, http://www.chathamhouse.org/sites/default/files/public/Research/Middle%20East/0512gcc_summarytwo.pdf.
16 Jane Kinninmont of Chatham House has pointed out that Bahrain now needs $112. To date, the average OPEC basket price for 2012 is $110 per barrel; for 2011 it was $108.

WHAT IF PRICES GO LOWER?

If oil prices were to fall in an oversupplied market, producers would be put in an awkward position. Obviously they would have to try to push prices higher, or would need to run down financial surpluses and/or cut expenditure, but assuming we are entering a *sustained* period of lower prices, this could lead to what we see as three sequential developments. The first will be an international price war across all producer states to force Saudi Arabia to take assertive action to tighten the taps and firm prices. That could be a difficult prospect given that Riyadh has its own strategic objectives, based upon a sustained period of moderate prices. Once petro-hawks realize that this pricing war is lost, their political bluster will subside, and a far cruder secondary trend of reduced spending, and sharpened repression of domestic populations will take hold to retain notional stability. Neither will be a politically pretty process, and neither is sure to work. That ultimately leaves a third, more daunting prospect: any floor price will be set by producer states folding under the weight of political pressure when new crises hit. The flat price of crude could be influenced more by political unrest clipping production rather than active supply restraint. Obviously this is not an 'iron-clad' theory, but a group of initial observations that should raise serious questions for policy-makers and market participants.[17]

Prelude to pricing peril

The standard response when things get tough is to look towards the GCC states, and in particular Saudi Arabia, to cut supplies and set a price floor. That is what happened in 2009. Riyadh reined in its production by up to 35% to get the global economy going (at the same time as a massive $2 trillion demand-side stimulus was being implemented in China). This 'Chirabia' combination worked to good effect; a widely proclaimed commodity 'super-cycle' was instantly back, and traders went long on oil, which culminated in a price spike at $128/b in March 2012. To be fair, as indicated earlier, the traders certainly had no lack of supply-side outages to support such a position, given the impact of the Arab uprisings in 2011. But the underlying demand-side doubts have never been fully banished. Heading into 2013, the parallels with 2008 are becoming clear: There has been another commodity market boom in the midst of extreme financial and economic uncertainty. But unlike in 2008, when it was assumed that sovereign balance sheets could support private-sector failures, things are considerably worse this time because it is the solvency of central banks that the markets are (in)directly testing. There is no obvious lender of last resort and no safety net to fall back on for advanced economies.

The eurozone remains fundamentally broken, the United States is (ironically) rebuilding its economy on its own energy gains and whatever excess cash sovereign wealth funds in the Middle East and North Africa once had is staying at home. But the market that has oil traders most worried is China. The vital relationship between Beijing and Riyadh that worked so well for producers in 2009 is simply not going to be reproduced on the same scale in 2013. Despite China's slender (25 per cent) debt-to-GDP ratio and enormous $3.2 trillion foreign reserves, its rulers are well aware that their previous cash injections in the economy resulted in a major misallocation of capital that has required enormous write-downs. Beijing has belatedly moved to ease credit constraints in money markets through short-term liquidity injections, but remains remarkably cautious about launching another round of stimulus measures, with a mere Rmb1 trillion being put into infrastructure projects recently. While China will tweak its economy where needed to try to keep growth at 8 per cent in a year that will see the transition of power from President Hu Jintao to Vice President Xi Jingping, analysts should not expect miracles, particularly with Beijing focusing on regional and domestic demand. Relying on worn-out export channels via cheap money is not where China's future rests. It has already reduced its dollar holdings to around 54 per cent, compared with 65 per cent in 2010, according to US Treasury data.

17 An abridged version of this argument has been made in the *European Energy Review* (July 2012)

Step One: Price War[18]

Perhaps more importantly on the supply side of the equation, Saudi Arabia has no short-term interest in slashing production. From a 'global' perspective, cheaper oil would give consumer countries a useful economic boost and central banks more room to print money without inflationary headaches. There was a glimpse of this in June 2012. Despite the price falling by 31 per cent in the space of three months to $90/b, OPEC quotas not only remained unchanged at the last OPEC meeting in Vienna in June at 30mbd, but Saudi Arabia actually kept OPEC production far closer to 32mbd. That was despite strong dissent from Iran, Venezuela, Nigeria and Algeria to pull back on output. Cheaper import bills are warmly received in Europe and the United States. As long as Saudi Arabia keeps oil at reasonable prices, global demand destruction might just be averted.[19] At the very least, an oil price spike is not likely to be the major threat to the global economy; new debt instruments are far more disruptive these days.

No doubt Saudi Arabia has a better appreciation of global demand destruction than most, but it is the 'selfish' motives for letting prices slide that are far more compelling. Riyadh accumulated over $155 billion in the first half of 2012, and is believed to have built up $550 billion in cash reserves to alleviate domestic pressures. Saudi Arabia can therefore afford a period of prices around $75–80/b without being too worried: when pumping over 9.5mbd, whatever it loses on three-figure prices, it can still cover with volumes. That will win it considerable plaudits across consumer states, but more importantly leave it with total control over producer states. For all the hype of OPEC price hawks, none of them would be willing to make cuts, and all of them would continue to cheat on quotas wherever possible. Everyone wants a free lunch, and everyone expects Saudi Arabia to pay the bill.

Alas, Saudi Arabia has no intention of pandering to price hawks. It is more than happy to put pressure on Iran in a lower price environment, at least for as long as its financial reserves last. This is not just to put pressure on Tehran's nuclear posture, but to wrest back political influence in Lebanon, Iraq and the Gaza Strip. The battle for influence between Sunni and Shia is being fought accordingly, and nowhere more so than in Arab nationalist republics.

Saudi Arabia is far less concerned about Venezuela or Iraq continually talking up their reserves, but it considers Russia to be another petro-state that needs putting in its place. The latter has been a real thorn in Saudi Arabia's side in the Middle East by offering diplomatic support to Iran and military hardware to Syria. Given Russia's serious depletion problems on key fields, it is entirely possible that it will retort by trying to strike bilateral agreements with OPEC members outside formal cartel meetings, as it did in 2008, but a lower price range is doubly concerning for President Vladimir Putin. It not only leaves the Kremlin with a serious financing gap (Moscow pledged $320 billion in revised social spending measures by 2018), it also makes new Arctic plays increasingly difficult to develop to stave off production falls in awkward regions spanning the Barents Sea, East Siberia and the Kara Sea. That is the third and final string to Saudi Arabia's 'pricing bow'. Lower prices are not just about showing fellow petro-states who is in charge, but fighting a bigger battle over the next decade – to retain 40 per cent of OPEC market share in the midst of supposedly huge non-OPEC unconventional supply growth.

At $100/b prices, unconventional plays ranging from the Russian Arctic to US shale (and tight) oil, Canadian tar, Australian coal seams and Brazilian pre-salt all look highly attractive prospects. Once prices are back to $90/b the profits are less appealing – at $80/b marginal, and at $75/b few investors would be willing to take on that kind of risk over long and arduous project cycles. Canadian tar becomes distinctly dirty, Brazilian pre-salt horribly deep and technically challenging; Australian trains get stuck in their tracks, Russian Arctic plays become simply impossible. Even lower-cost US plays (those are the ones that Saudi Arabia fears most, given 14-year production highs in America from Bakken, Utica, Eagle Ford and other new liquid plays, could come into question, alongside a raft of conventional developments. Hence, Saudi Arabia's more intricate price point is one that gives the global economy some breathing space; it has the upper geopolitical

18 The following section provides a number of speculative scenarios intended to provoke thought and discussion. The only accurate thing to be said about any forecast is that it will be wrong.
19 A major problem in considering falling demand is to decide how much lower demand is the result of recession and how much is attributable to demand destruction as the result of substitution and improved efficiency.

hand over *all* petro-states, and one that scrubs unconventional plays off global balance sheets. Wherever possible, Saudi Arabia wants to avoid killing its supply-side monopoly goose that lays OPEC's golden egg. That might be good for OPEC's long-term health, but currently it is a bitter (some might say, lethal) pill for some members of the cartel to swallow. They can be expected to fight very hard (within and beyond) the cartel through 'tough talking' and political bluster to get Saudi Arabia to budge and drive prices up.

But as desperate as all that sounds for petro-hawks, they still see some light at the end of the Saudi tunnel, with regard to the price targets mentioned earlier. As indicated, even Riyadh needs to increase prices to around $98/b to finance the current $129 billion of social spending unless it is to start running down the financial reserves. That inevitably reduces its room for pricing manoeuvre, given that the costs of social appeasement will continue to rise inexorably in future. Domestic social spending has increased fourfold in less than a decade across the Middle East, according to Invesco numbers, while HSBC estimates that Saudi Arabia will need $100/b in 2013 to break even, let alone generate any kind of surplus. More importantly, Saudi Arabia also needs to consider the proximate position of its fellow GCC states. Qatar can go lower than anyone at $58/b thanks to its tiny population and vast resource riches, but Kuwait is likely to find anything less than $85/b very difficult. Even the United Arab Emirates needs to take a serious look at its budgets, given that they are currently balanced at $107/b in Abu Dhabi. As these are the only prospective allies Saudi Arabia has left in OPEC, it will tread carefully to make sure they are not exposed to tumbling prices (for too long). It is more than clear that the Arab uprisings are still very much ongoing. Salafist gains are one part of the debate, but serious questions remain as to whether future succession can be internally managed across the remaining monarchies, or whether popular political pressures would mount in the Gulf states. So, as tempting as a full-scale pricing war might be for Saudi Arabia to bring Iran and Russia into line and put a spanner in unconventional works, defending price bands closer to $90/b than $80/b would be welcome news across the Gulf.

Step Two: Crude Repression

Obviously there is a far broader debate in play as to how far Saudi Arabia will be able to control prices if the global economy takes a serious turn for the worse anyway. A eurozone breakup, renewed US debt brinkmanship, or a Chinese bumpy landing could see far more severe correction than $80–85/b scenarios. Some would say Saudi Arabia is already playing with fire by not trying to defend a $100/b price band in the first place. But the fact that there can be such a detailed discussion about seemingly trivial differences – whether $100/b or $85/b is the new floor – is a clear indication of just how much of a knife-edge producer states are living on. Small economic margins will have dramatic political effects. That is particularly true if downside corrections rapidly overshoot when investors exit positions and release liquidity.

Yet it is only once all these 'abstract' numbers are translated into political realities that the scale of the producer challenge becomes clear. It is also where the second trend of sharpened repression kicks into the equation, as a crude coping mechanism to weather any cyclical storms, once petro-hawks realize a price war will not be easily won. Unfortunately this is not just a case of petro-states needing increasingly expensive social spending programmes to appease restive populations; they have to pay off bureaucrats, oligarchs, security services and, most importantly the military to shore up the political situation. Just as happened in 2008–09, rather than engaging in constructive 'reform to preserve', it is the repressive element that will become far more pronounced. The key lesson most petro-states have taken from the Arab uprisings is to make sure they have paid off the right institutions to cover their backs.

Initial signs of this can already be seen. Beyond the obvious ploy of tightening the regime's grip over the resources sector, President Putin has not only created parallel governance systems for upstream investments in Russia, he has also passed a law 'banning' all domestic protests. Central Asian states, too, are no strangers to pushing through snap elections (or constitutional changes). Military exercises in the Caspian Sea have also been on display amid growing frictions between Turkmenistan and Azerbaijan. In the Americas, Hugo Chávez has now succeeded in his bid for re-election as president of Venezuela, not only fermenting internal 'Chavista' support in a deeply

divided country, but taking any opportunity he can to needle the United States overseas. Argentina is likely to follow an increasingly bellicose path in relation to the United Kingdom over the Falkland Islands. In the Middle East, if the Iranian regime fails to galvanize broad public support through its nuclear programme, it will have no problem in quelling the any protests surrounding the June 2013 presidential elections, just as it did with the Green Revolution in 2009–10.

Saudi Arabia, which is keeping a very close grip on its Eastern Province, has made it clear that revolution is not going to work in Bahrain, where the authorities continue to imprison political opponents wherever possible. Kuwait has proved very effective in drowning domestic dissent (albeit under cover of democratic trappings). The UAE even drafted in a private military company for 'counterterrorism' and internal security purposes during the Arab Spring, just in case its own soldiers refused to put down protests. In North Africa, it remains far from certain which way the Transitional National Government will develop in Libya (and especially after the recent fatal attacks on US officials in Benghazi), while Algeria continues to purge its state oil company whenever this is deemed politically useful. Even where elections have taken place recently, be it in Egypt, Nigeria or Indonesia, the military remains an underlying powerful presence.

Given that this is supposed to be the relative calm before a pricing storm, it is clear that the tighter budgets get, the more likely it is these types of 'coping mechanisms' will kick in. It is no coincidence that more than half of the $66 billion of military equipment exported by the United States in 2011 went to Saudi Arabia. Military hardware remains the last line of political resort, and in some cases the first. A similar dynamic also applies to international sabre-rattling, which can be expected in the Caucasus, the Middle East and North Africa and the Americas to further paper over petro-cracks.

Step Three: The New Floor via Producer Unrest

The far bigger problem faced by producer states in a low-price world is that internal repression is no guarantee of success. It failed to work for Muammar Gaddafi in Libya, and it is unlikely to work for Bashar al Assad in Syria in the long term. As fierce as the rearguard battles have been, they have not been militarily conclusive; nor have they been conducive to ongoing hydrocarbon production. Following that argument, if the bulk of producer states were struggling to remain fully stable in a $125/b world they would face a very difficult time in an environment of $80/b (or less). The third step, and arguably the logical conclusion of the argument so far, is that the lower prices go, the more likely it is that political unrest will create serious disruptions affecting physical supplies and concomitant effects on paper markets. That obviously puts a radically new spin on what 'cyclical' means as far as price and political instability is concerned. But it is hard to identify any major producer states that are not sitting on a powder keg of political risk. Supply-side detritus still litters the bulk of Middle Eastern and North African states, Eurasian countries are in political difficulty, and resource nationalism will not prove to be the answer in Latin America.

More likely than not, it will be smaller producers that get caught in the crossfire first. In the Middle East, Saudi Arabia is already deeply concerned about Bahrain in the light of problems with its own Eastern Province. State implosion in Yemen is seen by Saudi Arabia as an issue it has to deal with, while the serious deterioration in Iraq is becoming an increasing cause for concern. Libya could rapidly see any post-war oil gains wiped out, and Sudanese production has already fallen prey to serious internal disputes.[20] A lack of external pull has left Kazakhstan exposed in Central Asia, while Boko Haram confronts Nigeria with new civil strife problems. That is before considering intractable problems in Central Africa or the Horn of Africa, if the financing gaps arising from lower oil revenues fail to be closed.

Some of the largest producer states share the same structural problems. At any sign that they might be losing political control, prices would rapidly rise. As a last resort, Russia might even talk up internal unrest in the Caucasus to lift market sentiment. Nigeria has the ability to stir domestic turmoil (not to mention riling Angola), just as Venezuela is no stranger to dragging up border disputes at times of its choosing. Iraq hardly needs an excuse to further disrupt Kurdish oil

20 An agreement has been reached between Sudan and South Sudan but it remains to be seen how effective it will prove.

developments to ensure that business is done in Baghdad, not Erbil. Iran similarly has no compunction about playing maritime brinkmanship through exercises in the Strait of Hormuz or fanning Shia flames in its neighbourhood.

That might be welcome news for producer states lucky enough to ride the price wave and remain intact, but it is a very dangerous game to play, given that controlling 'market prices', let alone 'gradations of instability', is a leap of faith even for the most oligopolistic of actors. It does, however, flag up the core problem: assuming Saudi Arabia does not step in to save petro-states' embarrassment, the gap between the geological costs of production and the geopolitical cost of survival is simply too wide for producers to cover without falling back on draconian measures. There is no instant remedy for dependence on oil revenues. If a 'self-correcting' mechanism between price and political unrest starts supporting an informal price floor, then so be it. Wet-barrel outages might be relatively small, but the perception of political turmoil in producer states would no doubt lift paper prices. However, analysts should not be fooled into thinking that would serve anyone's interests – on either side of the consumer–producer ledger.

If certain producers struggle to adapt to rapidly shifting economic conditions arising from oil price volatility, this will help to firm prices, but a situation of more and more producer states hitting political problems as prices slip will merely cement the 'too big to fail' status of the very largest producers, Russia and Saudi Arabia. Seeing petro-states fall offline as prices correct is in no way a proper 'solution' for a floor. This is not only because prices will rebound when markets tighten; it makes the market even more dependent on a handful of key suppliers. As has been seen from previous problems in Iraq (3.2 mbd), Iran (2.9 mbd), Libya (1.5 mbd), Nigeria (2.4 mbd) and even Venezuela (2.7 mbd), once things go politically wrong, it takes a very long time – if ever – to get back to optimal production levels. It marks the antithesis of where consumers want to be in terms of sourcing plentiful and fungible supplies.

What certainly does not help in this regard is the binary debate that has developed around future energy supplies. For many the unconventional genie is out of the bottle, and it has already transformed the energy world. It is entirely true that the ratio of 80 per cent of oil and gas sitting in OPEC and Russia, with 10 per cent in OECD states and 10 per cent in China, has been rewritten towards a far more expansive list of energy players. But the problem is that many politicians (and analysts) think that a new world of vast energy abundance is already a production reality across OECD states. Huge production gains have certainly been made, but the Middle East will still account for the vast majority of incremental supply growth over the next decade. Any transition from a relatively tight market today to one of 'total abundance' will therefore be anything but linear.

If nothing else, the idea that North America (including Mexico) will be churning out around 22 mbd of liquid production by around 2020 creates serious problems in terms of security of demand for traditional producers. The Americas sit on larger unconventional reserves than there are conventional barrels to be found in the Middle East and North Africa. Couple those numbers to the US energy independence narrative, and it creates serious doubts over new upstream investments across OPEC states: from Saudi Arabia as the swing producer, to Kuwait sitting in the middle of the cartel, to Ecuador at the bottom. Some will see this as a cause for celebration, others as a cause for concern. The West can be more selective about how much heavy lifting it does for global oil supplies through external security guarantees, just as OPEC will continue to tilt towards the East. But proponents of a new energy order are going to have to match their rhetoric with actual production if non-OPEC supply is to balance the market. Just as Saudi Arabia is the only producer state that could take sustained economic pain in a lower price environment, it is also the only market player with the ability to try to moderate prices at the top. That blunt fact is highly unlikely to change markedly over the next decade.

What is more, such a dynamic will probably only become more pronounced if the barrel price falls under three figures for a sustained period of time. Petro-states will be in serious political trouble. Internal conflict will rage as to who should set a price floor and where, with sharpened repression the most likely tool to be used to try to weather any cyclical storms. Some unconventional production might be lost along the way, just as prices might firm in the short to medium term if producer states went offline amid the turmoil. When the dust finally settles, the chances are that a highly dysfunctional energy system between two opposing narratives – global abundance or global

scarcity – will have been reinforced. That not only makes a $50–150/b outlook eminently possible, but swings well beyond that 'price band' – albeit probably unsustainable – are all too likely.

HIGH PRICES AND OPEC'S DILEMMA

This is far from being the end of the story. As indicated at the start of this paper, producer states need higher prices to survive politically without serious changes in their economies' dependence on oil revenues. If they manage to achieve this, either by prices staying at current levels or by a rebound following a period of low prices, this gives rise to what might be called 'OPEC's dilemma'.

A new relevant dimension to the oil market concerns the impact of new and improving technology on the supply side. The technologies that have underpinned the US 'shale gas revolution' – horizontal drilling and hydraulic fracturing (fracking) – are increasingly being applied to shale oil and fallow oil fields.[21] There are also significant developments in other unconventional oil such as tar sands and a whole new set of oil provinces based upon deepwater operations. The result is that there is potential for dramatic increases in oil production beyond the traditional areas associated with OPEC. In 2011, the in-joke among oil analysts was that the US state of North Dakota would be the next member of OPEC, and by the end of that year it was producing more oil than Ecuador.

However, the significance of these developments is that all will require relatively high oil prices. This has two dimensions. First, the price must be high enough to induce the initial capital investment to be sunk into the project. However, with conventional oil, once this capital investment has been sunk, because variable costs are so low relative to fixed costs, even low prices would still persuade the project to producer oil by virtue of the economists' 'bygones rule' (that even if an operation were making a loss, the owner would be advised to continue operating so long as variable costs were covered and some contribution was being made to fixed costs). The second dimension is that unconventional oil has very much higher variable costs, reflecting a mixture of more rapid decline rates, greater energy use with fracking, and in some cases what amounts virtually to a manufacturing process. Thus as unconventional oils increase in importance in liquids production, supply is much more responsive to price in the short term. High prices will induce and maintain higher production.

It is this new dimension to the oil market that creates OPEC's dilemma. Its members need higher prices now and in the near future to forestall domestic unrest. However, at the same time, higher prices, by virtue of creating demand destruction and encouraging non-OPEC supplies (both conventional and unconventional), will lead ultimately to lower prices. Thus while OPEC needs the golden eggs, it needs them at a rate that will ultimately kill the goose.

The timing between high prices and market responses is of course uncertain. This is compounded by the greater role of paper markets in recent years. This is new territory. Previous experience revolved around the price collapse of 1986, which was triggered by the first oil shock of 1973, then compounded by the second oil shock of 1979–80. It was not until 1981 that demand destruction really got under way with non-OPEC supply making itself felt a year later; both reflected a time lag from 1973 of some 13 years. Today, arguably markets respond more quickly. The sort of price defence mounted by OPEC in 1982, which eventually failed in 1986, would now happen very much sooner. OPEC's dilemma may become a reality much sooner than many believe.

21 It is worth pointing out that these are not new technologies. Horizontal drilling was developed in the 1930s and the first well was fracked in 1947.

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