



Commentary: Welcome Back to Boom-Bust Oil Prices

By Robert McNally¹

December 17, 2015

Conventional wisdom holds that OPEC's decision to abandon market management, revealed at the November 27, 2014, meeting and reaffirmed on December 4, 2015, signifies a new policy direction. This view is misplaced: OPEC abdicated the role of market manager over ten years ago, and we have already seen the results in a boom (2004–2008) and two busts (2008, 2014–2015) in oil prices. The one brief exception in which OPEC acted to stabilize markets—emergency cuts in 2008 following the fastest price plunge in modern times—was crisis management, not market management, and proves the rule that other than in extreme cases, OPEC has long given up on the role of market stabilizer. The oil market has entered the era of boom–bust price cycles (history's third, as discussed later). And with Saudi Arabia—much less OPEC—talking and acting as if it is unlikely to play the swing producer role to stabilize prices, this new era of wild price volatility could last for some time. Given oil's vital role in the global economy, financial markets, and policymaking, coping with elevated price volatility will require the sustained and smart attention of business and government leaders.

No OPEC, No Peace?

At the outset it is important to distinguish between OPEC producers—mainly Saudi Arabia—making *emergency cuts* after shock lows such as in 2008 or 1998–1999 or small, temporary adjustments up and down based on seasonal or market factors, on the one hand, and the willingness to surrender substantial and sustained market share in response to structural oversupply, on the other. When we speak of Saudi Arabia or OPEC managing the market, we mean the latter.

The main evidence of OPEC's weakened ability to act as the market stabilizer is the persistent, superlow level of spare production capacity. (The level is difficult to quantify as data are fuzzy and spare capacity could actually be near zero.) Spare production capacity is quickly producible oil that is held off the market by officials for the purpose of stabilizing prices in the event of disruptions or supply-demand imbalances. Playing the swing producer role is no fun, especially when the oil market is in surplus and discretionary

¹ The author would like to thank Jason Bordoff, Antoine Halff, and Matthew Robinson for reviewing this note and making helpful contributions and edits.



production cuts are needed. Holding back producible oil is expensive and nettlesome for industry in particular; drillers do not like being ordered to shut down wells in fields where they have spent large amounts of capital up front. Ask Texas operators, who were compelled by regulators to cut production from 76 percent of the state's maximum capacity in 1951 down to 27 percent in the early 1960s to keep prices in the United States stable and high in the face of massive new oil gushing from massive new discoveries in the Middle East.² But for the better part of the last one hundred years, officials and the industry have regarded supply management as a necessary burden to prevent ruinous price instability.

The first and most successful "OPEC" was composed of US oil-producing state regulators, particularly the Texas Railroad Commission that issued "market demand prorationing orders"—basically, mandatory quotas—to producers (during a period I will refer to as the Texas Era), while major international oil companies (the so-called Seven Sisters) jointly managed most global production, holding back excess supply from concessions in the Middle East. As the historical chart shows (Figure 1), in the 1950s Texas and other oil state regulators, along with the Seven Sisters, held back up to 30 percent of world demand and thereby succeeded at keeping oil prices relatively stable. While building spare capacity was not a policy objective per se, as a mathematical reality, as regulators forced wells to restrict production, spare production capacity went up.

While neither oil state officials nor oil companies enjoyed not producing from fields they had developed, the resulting ample spare capacity provided a buffer against supply-demand imbalances or disruptions. Indeed it helped stabilize prices and offset periodic, large disruptions—such as those associated with the Iranian nationalization in 1951, the Suez Crisis in 1956–1957, and the Six-Day War in 1967—that would have otherwise triggered economically damaging oil price spikes. But in the 1960s and early 1970s, spare capacity levels began to dwindle as US production (which peaked in 1971) failed to keep pace with growing demand. In March 1972, the Texas Railroad Commission ran out of spare capacity, a milestone its chairman called a "damned historic occasion," as it signified loss of US control over the global oil market and, with it, insulation from supply cutoffs.

OPEC effectively took control of pricing and supply from the commission and the Seven Sisters during the 1970s. While not as effective at stabilizing oil prices as the United States and Seven Sisters had been, the organization achieved some success as long as Saudi Arabia, its top supplier, was willing to play the swing producer role, as it did, for instance, from 1982 to 1985. During most of the 1990s, OPEC held about

² Robert L. Bradley Jr., Oil, Gas, and Government: The US Experience, Volume I (Rowman and Littlefield Publishers, Inc., 1996), 164.



5 percent of total world demand in spare. During that period, crude prices were relatively stable, generally ranging between \$18 and \$22 per barrel.

There is no scientific formula for how much spare capacity is needed to keep oil prices stable. But history shows what is required for price stability is for the spare capacity manager to act as the swing producer by adjusting production to balance the difference between demand and supply available from other producers and inventories. In a surplus market, the swing producer must order production cutbacks, causing spare capacity to go up. Conversely in a tight market, the swing producer must be able to increase production to cap upward price pressure, which naturally results in a decline in spare capacity.

OPEC began to lose its grip on oil prices after 2003, as its spare capacity dwindled and prices embarked on a steady and strong upward climb. The group lost control completely in July 2008, when oil prices roofed to \$147 a barrel before they plunged spectacularly to hit \$33 a barrel just six months later amid the Great Recession. The price surge of 2008 showed OPEC *could not* impose a ceiling on prices, and the 67 percent price collapse since the summer of 2014 indicates it *would not* put a floor under them. Low spare capacity means all producers are pumping all-out; there is no swing producer able to balance the market. Without a swing supplier among them, Saudi Arabia and other OPEC members are just large producers, like the United States and Russia, selling into a market notorious for boom–bust price cycles. If, as seems probable, OPEC spare capacity remains low, oil prices are more likely to exhibit traditional boom–bust cycles—like the ones last seen between the end of World War I and the Great Depression—than remain at their current low level for many years. Given how traumatic oil price volatility is for economic planning and geopolitical stability, oil producers, consumers, and governments may soon conclude the only thing worse than OPEC controlling the oil market is OPEC not controlling the oil market.

Historical Attempts to Rein in Oil Price Volatility

Patterns of oil supply and demand have changed dramatically since Drake's first commercial well in 1859, but one feature has remained constant: oil is prone to boom and bust price cycles. Oil demand and supply remain insensitive to price changes in the short run, as oil is a must-have commodity with no scalable substitutes and most supply has lead times measured in years. Once new projects are sanctioned or begin operating, they rarely stop, as upfront sunk costs are high and operating costs are low. The resulting oil price volatility is bedeviling for consumers, producers, and governments alike.

Since the beginning of the modern oil market—and especially over the last one hundred years when oil dominated transportation—producers, consumers, and governments have struggled with price volatility because of oil's paramount importance in the economy and for national security. The history of the oil



industry can be seen as a herculean struggle by industry and officials to suppress price volatility. In the early days, drillers in the Western Pennsylvania oil regions tried to form cartels to rein in production, which invariably collapsed due to cheating and new supplies. John D. Rockefeller and Standard Oil Trust for a time succeeded in bringing stability to the oil market and prices through a monopoly on refining and integration with railroads and pipelines. Boom–bust oil prices returned, however, after the Supreme Court dissolved Standard Oil in 1911. Oil price volatility during the period between the end of World War I and the Great Depression was exceptionally vexing. The period started with high prices (triggering the first full "peak oil" scare) and ended with Texas and Oklahoma governors deploying state militia to stem rampant production in the early 1930s. In response to wild oil price volatility during this period, US officials and major oil companies established the most effective system for oil price stability ever seen during the previously described Texas Era.





Source: The Derrick, API, St. Louis Fed, and The Rapidan Group.







Figure 2: Oil Disruptions, OPEC Spare Capacity, and Crude Prices

Source: ELA, BP, St. Louis Fed, ExxonMobil, and The Rapidan Group.

Recent Spare Capacity Questions

In contrast to earlier periods, OPEC spare capacity has been unusually low for over ten years, and in 2004 and 2008 OPEC nearly ran out completely. Official data indicates OPEC spare capacity fell below 1.0 million barrels per day in 2004 and 2008, but it is possible and widely believed by some in the private sector that OPEC was effectively tapped out. Generally, market participants tend to think official estimates of spare capacity, such as those used above by EIA, are overstated. The main differences between private and official estimates have centered on two main factors: whether other OPEC producers besides Saudi Arabia hold spare capacity, and the level of maximum sustainable Saudi production capacity. In 2004, demand proved particularly strong, especially in emerging Asia and China, and supply growth outside of OPEC proved weak.

After this unexpected tightening of the oil market in 2004 and 2005, Riyadh responded in 2006 by announcing the Khurais megaproject to boost the kingdom's total crude production capacity by 1.2 million b/d, from 11.3 million b/d to 12.5 million b/d by 2009. But the global oil balance remained tight in the meantime, and Saudi Arabia, which held the bulk of OPEC spare, had to throw every barrel into the market.



The summer of 2008 was analogous to March 1972, when the then-market manager Texas Railroad Commission ran out of spare during a time of peace. OPEC spare capacity briefly rose in 2009 and 2010 as OPEC implemented emergency cuts in the wake of a spectacular price collapse from \$147 a barrel in July to \$33 a barrel in December 2008. But thereafter OPEC spare capacity began to dwindle again as demand outpaced supply, partly due to large losses in Libyan and Iranian exports starting in 2011 and 2012, respectively. While at first glance it may appear that OPEC was deftly managing the market during these years, a closer look indicates oil price stability stemmed from several factors, not the least of which was soaring production from US shale producers.³ OPEC was running on a thin margin and got lucky.





Source: ELA Short Term Energy Outlook January 2015.

Saudi Arabia Has Refused to Swing since 1985

While 2008 demonstrated OPEC was unable to cap oil prices, events over the past year have shown it is also unwilling to surrender market share to put a floor under them. Saudi Arabia's refusal to swing alone—to reduce oil production to support prices—in 2014 came as a shock to many market observers and participants, and is being described as a shift toward a new market-share strategy. This is wrong. Riyadh has consistently telegraphed for many years it would never play the swing producer role again. Saudi Arabia's aversion to playing the swing producer stems from the kingdom's history, geopolitical predicament, and the advent of

³ R. McNally and M. Levi, "Vindicating Volatility: Why Fluctuating Oil Prices Are Here To Stay," *Foreign Affairs*, November 4, 2014, https://www.foreignaffairs.com/articles/global-commons/2014-11-04/vindicating-volatility.



shale oil production in the United States. Again, by "swing" we mean surrender substantial market share to prop up prices, not lead OPEC in emergency cuts to address shock price lows or minor seasonal or marketbased supply adjustments.

Historically, Riyadh has had a very negative view of the oil policy of the early 1980s, when Saudi Arabia last played the swing producer role. Since 1986, Saudi officials have consistently and publicly stated they would not act as a swing producer again. In 1987, Saudi Oil Minister Hisham Nazer, "firmly and definitively rule[d] out any prospect Saudi Arabia might be ready to resume the role of swing producer under any circumstances."⁴ In 2000, Oil Minister Naimi said: "Saudi Arabia is willing to use its capacity to moderate the price. Not as a swing producer—and I want to clarify and emphasize that. We are not in the business of being swing producer."⁵ In 2013, Minister Naimi again clarified that the only way Saudi Arabia would swing alone is *up*:

Saudi Arabia fulfills any demands when the oil supply decreases anywhere. This is different from taking any production step when the price decreases. When this happens, OPEC countries must be serious and reach a real collective agreement regarding the decrease. History stands witness that whenever it is agreed to reduce production, the only countries which abide are Saudi Arabia, Kuwait, Qatar and the UAE. Why, then, are we holding them responsible for maintaining the price, while the other countries are not willing to participate?⁶

The second reason Saudi Arabia decided not to cut oil output unilaterally stemmed from commercial and geopolitical considerations. Were Riyadh to have cut production in 2014 and 2015, Saudi Arabia would have handed over market share to its commercial and geopolitical rivals Russia, Iran, and Iraq. These producers sell the same type of heavier oil and target the same growing markets in Asia. Russian supplies to Asia via the ESPO pipeline are increasing, cutting into Saudi Arabia's share of the critical and growing Chinese market. Iraqi production is steadily rising after postwar disruptions.⁷ The nuclear deal agreed in July 2015 between Iran and the P5+1 nations will enable Iran to resume oil exports, which had dropped by some 1.0 million b/d due to sanctions. Iranian Oil Minister Zanganeh, who in 1998 and 1999 had cooperated with Minister Naimi, is now following a more adversarial line. Angered by the loss in exports due to sanctions, Minister Zanganeh has promised to return Iran's oil exports to previous levels in a matter of months after

⁴ I. Seymour and W. Khadduri, "Nazer Rules Out Swing Producer Role For Saudi Arabia," MEES, September 14, 1987, https://mees.com/opec-history/1987/09/14/nazer-rules-out-swing-producer-role-for-saudi-arabia/.

⁵ G.Butt, "OPEC's Caracas Summit Seeks Stable And Fair Prices, Closer Dialogue With Consumers," MEES, October 2, 2000, https://mees.com/opec-history/2000/10/02/opecs-caracas-summit-seeks-stable-and-fair-prices-closer-dialogue-with-consumers/.

⁶ R. Takieddine, "Saudi oil minister affirms OPEC's production targets," Al-Hayat via Al-Monitor, December 6, 2013, http://www.al-monitor.com/pulse/business/2013/12/saudi-arabia-oil-minister-opec.html#.

⁷ In June 2014 Brent surged and peaked to \$115 a barrel after the so-called Islamic State militants stormed Mosul, Iraq. But paradoxically, the new IS threat helped spook the quarrelsome Kurds and Baghdad into cooperating together to export oil and share revenues.



sanctions are lifted (likely in the first half of 2016). And while he does not intend to crash oil prices, he has warned OPEC to make room for Iran. Tensions between the governments in Tehran and Riyadh are much worse now than they were in the late 1990s, when both last cooperated in cutting supply.

Third, Saudi Arabia believed it need not swing alone, partly because new US shale oil producers might do the swinging for them, or at least a good deal of it. Because of its relatively high operating costs, capital intensity, financing needs, and steep decline rates, shale oil production was expected to react to price changes within months of a collapse in oil prices, instead of the years associated with traditional projects. Thus Saudi Arabia regarded US shale oil as a quasi-member of OPEC, in that producers would have no choice but to adjust production in response to market imbalances. Saudi's "invitation" for US shale producers to swing by no means amounts to a "war on shale," as it has been described by some oil market watchers. Saudi Arabia's attitude toward shale is more nuanced. It does not see shale as only a competitor but also as a welcome incremental and unusually flexible source of supply. In a speech in Washington in March 2013, Minister Naimi said:

The US energy scene is witnessing a remarkable evolution. Newly commercial reserves of shale oil or tight oil are transforming the energy industry in America. And that's great news. It is helping to sustain the US economy and to create jobs at a difficult time. I would like to put on the record here today that I welcome these new supplies into the global oil market. I hope these additional resources will add depth and bring increased stability to global oil markets. I believe these reserves will lead the US into a much deeper engagement in world energy markets. And this is good news.⁸

In March of 2015, he stressed, "Some speak of OPEC's 'war on shale'...they are all wrong," adding that "new oil supply growth—much of it coming from the US—is a welcome development for world oil markets."⁹ Saudi officials want shale oil to survive and thrive, in large part because it can adjust relatively quickly—up *and* down.

Thus, when global oil oversupply developed in the late summer of 2014, Riyadh expected shale to again help stabilize prices as it had in recent years when it helped counter global supply losses, but this time by putting a floor under them with supply cuts. In September 2014, Saudi Arabia's Oil Ministry spokesman Ibrahim al-Muhanna soothingly predicted "the high cost of producing shale oil has put a floor under oil

⁸ "A Conversation with His Excellency Ali al-Naimi, Minister of Petroleum and

Mineral Resources, Kingdom of Saudi Arabia," Center for Strategic and International Studies, April 30, 2013, http://csis.org/files/attachments/133004_TS_Al_Naimi.pdf.

⁹ B. Faucon and S. Said, "Saudi Oil Minister Denies Price War With U.S. Shale," *The Wall Street Journal*, March 4, 2015, http://www.wsj.com/articles/saudi-oil-minister-denies-price-war-with-u-s-shale-1425479624.



prices...It means the price of oil will not go to less than \$90, and even if it goes below that for whatever reasons, it would be for a short time before going back to the level of around \$110."¹⁰

For historical, commercial, geopolitical, and operational reasons, Saudi Arabia was and remains unwilling to play the swing producer role. But the reasons for Saudi Arabia's aversion to unilateral cuts were not widely understood prior to November 2014. In the past, market participants tended to assume Riyadh's promises not to swing were not credible. After all, since 1985 Saudi Arabia has adjusted its production and led the cartel in supply cuts several times. Riyadh has been willing to do the former, for example, in the late 1990s and 2008–2009, but has not willingly surrendered market share since 1985. Leading forecasts in 2014 showed clearly that based on expected demand trends and known upstream investments, oil markets could only balance if Saudi Arabia agreed to resume its role of swing producer. For example, BP's 2014 World Energy Outlook forecasted OPEC spare would rise from 4.3 million b/d in 2015 to 6.4 million b/d in 2020 by the end of the decade. IEA projections were directionally similar.¹¹

Figure 4: OPEC Spare Capacity



Source: BP World Energy Outlook 2035 (January 2014).

Estimates by The Rapidan Group suggest, based on EIA and BP data and projections, that had Saudi Arabia decided to resume the role of swing producer, it would have had to cut production by at least 2.0 million b/d (more if Riyadh were to offset supply increases by other OPEC members such as Iraq). This

 ¹⁰ Margaret McQuaile, "Saudis Say Oil Won't Fall Below \$90/b Because of Shale Costs," *Platts*, September 30, 2014.
 ¹¹ IEA's 2014 Medium-Term Oil Market Report projected implied and effective measures of OPEC spare capacity would increase by around 1.5 million b/d between 2013 and 2019.



implies a decline in its market share within OPEC from around 30 percent today to the mid-20 percent range, a level not seen since the last time Saudi Arabia swung in the early 1980s.



Figure 5: Saudi Arabia's Share of OPEC Production

When forecasters projected OPEC spare capacity would increase, they had implicitly forecasted *Saudi spare capacity would rise*. To the extent that readers assumed a healthy market and no price crashes that could galvanize emergency OPEC cuts, they implied Saudi Arabia would resume the multiyear, market-share-surrendering, swing producer role it last played in 1985 and deeply regretted since. Cutting production in a healthy market, handing over market share to Iraq (and likely Iran), while supporting high oil prices so shale could flourish, was not in the cards for Riyadh. Thus, whereas some readers of consensus forecasts might have assumed a declining call on OPEC crude would be offset by Saudi Arabia cutting production, what these forecasts were actually signaling was a price collapse as a result of a supply glut.

US shale oil production has proven more resilient than Saudi Arabia anticipated, and while it is relatively flexible, it will not replace OPEC or the Texas Railroad Commission as swing producer. Shale's resilience to current low oil prices stems from falling costs of drilling and completion, hedges, continued

Source: Rapidan Group estimates based on EIA data and the BP Energy Outlook 2035 (January 2014)



capital availability, a shift in production to higher productivity wells, and confidence among industry and many financial market participants that the price collapse is unsustainable and short-lived, thus shale will soon again be in the money. The number of oil drilling rigs has collapsed by nearly two-thirds since last year, but Lower 48 oil production was down only 1 percent in October versus year-ago levels, and down only 6 percent since its April 2015 peak.

Since April 2015, Saudi Arabia and Iraq *alone* have increased supply by roughly three times the amount that shale has cut.





Source: US Energy Information Administration.









Data: ELA Short-Term Energy Outlook.

While US shale production's response to lower prices is taking longer than expected, the other two factors that have prevented Riyadh from adopting a swing policy—historical aversion and geopolitical, commercial rivalries—are likely to keep Saudi Arabia's policy in place.

Boom Will Likely Follow Bust

As Saudi Arabia's Vice Minister for Petroleum Prince Abdulaziz recently noted, the current low price environment is not likely to last as long as the one experienced after 1986.¹² Back in the 1980s, there had been structural demand destruction due to fuel substitution (especially the displacement of fuel oil in electricity generation and space heating) and permanent efficiency gains. Now, oil demand is expected to grow robustly

¹² Remarks by Prince Abdulaziz bin Salman Al Saud, Vice Minister of Petroleum and Mineral Resources, Saudi Arabia, to the Sixth Asian Ministerial Roundtable, Doha, November 8–10, 2015. Vice Minister Abdulaziz estimated spare capacity to be closer to 2 percent of demand. <u>https://www.ief.org/_resources/files/events/6th-asian-ministerial-energy-roundtable/vm-prince-abdulaziz-amer6-speech.pdf</u>. The estimated used in the text is based in EIA data. My estimate would be closer to 0.5 percent of demand. See also IEA World Energy Outlook 2015, p. 156.



in China and other emerging Asian nations, as well as in fast-growing countries in the Middle East, Latin America, and Africa. OPEC spare capacity was also much higher back in the mid-1980s (17 percent of world demand compared with around 1.5 percent today). Spare capacity, Vice Minister Abdulaziz noted, "is key to maintaining oil price and global economic stability,"¹³ and the oil industry "is one of the few industries in the world that is operating at such a thin cushion."

There are other signs that the current low oil price environment is not sustainable over the medium term, roughly through the end of the decade. While shale oil production was hit first, oil companies are now canceling or delaying investment in other, longer lead time projects. In July, Wood Mackenzie reported oil and gas companies have delayed some \$200 billion of investment in more than forty-five projects, exclusive of US shale, due to the price slump.¹⁴ More than half of affected reserves are in deep-water projects, and nearly 30 percent are in Canadian oil sands. In September, Wood Mackenzie predicted 140 of the 330 fields in the UK North Sea could close in the next five years, even if oil prices recover to \$85 a barrel.¹⁵ Saudi Vice Minister Abdulaziz estimated some 5 million b/d of supply has been deferred or canceled.¹⁶ This means supply that had previously been expected to become available in 2018 or 2019 will not be there.

Project delays and cancelations will likely continue, and even accelerate, if oil prices fall more than expected in 2016—a good likelihood given record inventories and persistent oversupply widely projected to continue through next year, as well as the impending return of at least 500,000 b/d of Iranian exports once sanctions are lifted.

Thus toward 2020, barring a deep global recession, global oil demand growth will eventually whittle away the inventory surplus and then collide with meager, insufficient supply capacity growth. Should world GDP grow anywhere close to the IMF's medium-term forecast in the high 3 percent range, oil demand growth, by The Rapidan Group's reckoning, will rise by closer to 2 million b/d than 1 million b/d. Healthy demand will take a year or two to whittle down swollen oil inventories, but thereafter demand growth will be met mainly by whatever limited Saudi spare capacity exists, other troubled producers like Iraq and maybe Iran can add, and uncertain contributions from US shale companies, whose executives, lenders, and workers will

¹³ Remarks by Prince Abdulaziz bin Salman Al Saud, Vice Minister of Petroleum and Mineral Resources, Saudi Arabia, to the Sixth Asian Ministerial Roundtable, Doha, November 8–10, 2015.

https://www.ief.org/_resources/files/events/6th-asian-ministerial-energy-roundtable/vm-prince-abdulaziz-amer6-speech.pdf.

¹⁴S. Bierman, "Oil Majors Delay \$200 Billion of Spending, Wood Mackenzie Says," Bloomberg News, July 27, 2015, http://www.bloomberg.com/news/articles/2015-07-27/oil-majors-delay-200-billion-of-spending-wood-mackenzie-says.
¹⁵ B. Jamieson, "We Can't Ignore Oil Price Collapse," The Scotsman, December 5, 2015,

http://www.scotsman.com/business/companies/energy/bill-jamieson-we-can-t-ignore-oil-price-collapse-1-3967397. ¹⁶ "Oil investment cuts at \$200 billion as Saudi prince sees rally," Bloomberg via The National, November 9, 2015, http://www.thenational.ae/business/energy/oil-investment-cuts-at-200-billion-as-saudi-prince-sees-rally.



have been burned by the price implosion still underway. In this scenario, expect soaring crude prices toward the next decade—a classic bust–boom cycle with which the oil industry was all too familiar one hundred years ago but may have since forgotten.

Will OPEC Restore Oil Price Stability?

Since its formation in 1960, OPEC as an organization has never been cohesive or disciplined. Almost all the hard cartel work, including cutting supply to shore up prices—as Saudi Arabia's officials rightly complain—has been done by Saudi Arabia and a few other Gulf producers. So when market observers ask if OPEC will restore control, they are really asking if Saudi Arabia will restore control. For Saudi Arabia to restore control of the market, two things need to happen. First, to put a floor under short-term prices Riyadh must resume playing the swing producer role. This, as argued above, is unlikely. If oil prices tumble into the \$20 range or lower, could we see emergency cuts led by Saudi Arabia as in 1998–1999 and 2008–2009? Certainly. But this would not constitute deft market stabilization by Saudi Arabia or OPEC but instead crisis management in reaction to a price collapse that has already occurred.

Second, to credibly impose a ceiling on oil prices for the future when demand recovers but non-OPEC supply will have been ravaged, Saudi Arabia needs to increase upstream production capacity in order to create more spare capacity. Saudi Arabia's position is that it will hold at least 1.5 million b/d in spare capacity that could become available within ninety days after moving rigs.¹⁷ Since boosting total crude production capacity from 11.3 million b/d to 12.5 million b/d in 2009, Saudi Arabia has made no plans to increase total production capacity beyond that level and in recent years has prioritized downstream investment. Setting aside debate among barrel counters about the credibility of the 12.5 million b/d level, 1.5 million b/d to 2.0 million b/d is a thin margin, amounting to about 2–3 percent of total demand. Private estimates would be about half as much. That is a tight margin to run in a 94 million b/d oil market that is expected to grow by over 1.0 million b/d per year. It is a tighter margin than seen in the 1990s, which was a period of relatively stable prices.

So far Saudi Arabia has not announced any plans to increase the amount of spare capacity it holds, either by cutting production sustainably or increasing total production capacity. The Saudi state-owned oil company Aramco is prioritizing investment dollars into building downstream refineries and petrochemical facilities, as well as natural gas resources. In June 2015, Oil Minister Naimi was asked by a reporter whether

¹⁷ R. El Gamal, "UPDATE 1-Will Saudi boost oil capacity? Naimi's retort: Show me 10 pct return," Reuters, June 5, 2015, <u>http://www.reuters.com/article/opec-meeting-saudi-capacity-</u>

idUSL5N0YR0Y820150605#gKZ7UXmeiaem31bX.97. After Saudi Minister Naimi clarified Saudi Arabia would require ninety days to activate spare, the IEA changed its definition of spare capacity available within thirty days to ninety days. EIA retains the thirty-day definition.



Saudi Arabia needed to raise its production capacity now that it was pumping at the highest rate in three decades to meet resurgent demand. With casual banter, Naimi responded, "Is there demand for Saudi crude? Can you guarantee it? If I go and put a dollar, will you guarantee that I would get 10 percent on that dollar? I don't want 16 percent, just 10—can you guarantee that?"¹⁸

Again, as in 2009 and 2010, it is possible spare capacity could rise *temporarily* if OPEC members respond to a price collapse with emergency cuts. But longer term, ample, structural spare capacity is unlikely to return unless Riyadh decides to play the swing producer role and backstops that commitment by increasing total production capacity to, say, 15 million b/d, as it has considered in the past.

Crude Predicament

Prolonged tight spare production capacity implies market prices will have to do more of the work equilibrating oil supply and demand. Oil's short run demand and supply inelasticity portends prolonged boom–bust oil price cycles. The absence of an effective short-term price stabilizer will increase investor uncertainty about longer-term prices that factor into major consumption, investment, and government planning decisions. Prolonged oil price volatility will present new and significant challenges to industry, investors, consumers, and governments. As we see daily now, global equity, bond, and currency markets are being roiled by violent oil price moves; oil is the tail that is wagging several macroeconomic and financial dogs.

Over the years, OPEC's management of the oil market has brought complaints from many directions, from policymakers to oil companies to consumers at the pump. OPEC wins no popularity contests in the West. But we may be about to learn that the only thing worse than OPEC managing the oil market is OPEC not managing the oil market. Energy companies and investors will have to adapt their business models, as will industries heavily exposed to oil price fluctuations. Government officials ranging from central bankers, budgeters, and military planners will have to contend with more uncertainty and risk stemming from wildly gyrating oil prices.

Robert McNally, fellow at Columbia University's Center on Global Energy Policy, is the founder and president of The Rapidan Group, an independent energy consulting and market advisory firm based in the Washington DC area. From 2001 to 2003, Mr. McNally served as the top international and domestic energy adviser on the White House staff, holding the posts of special assistant to the president on the National Economic Council and, in 2003, senior director for international energy on the National Security Council. He is the author of the forthcoming book Missing OPEC: The History and Future of Boom-Bust Oil Prices, from Columbia University Press, 2016.

18 Ibid.