LOWER FOR LONGER:
SAUDI ARABIA ADJUSTS TO THE NEW OIL ERA

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Saudi Arabia, with the largest economy in the Arab world, is deeply dependent on oil exports (approximately 75-80 percent of total revenues). Largely due to high oil prices during most of the last decade, Riyadh was able to establish itself as one of the strongest and fastest-growing economies in the Middle East. According to a recent report by McKinsey Global Institute, the Saudi economy in 2003 was the twenty-seventh largest in the world; by 2014, it had risen to number 19. This economic expansion also eliminated national debt, accumulated huge reserve assets, raised average household income by about 75 percent, and created more than 1.7 million jobs.¹ This astonishing economic performance was driven, almost exclusively, by public spending. The government and the public sector served as the engine of the rapid economic growth.

Though for years this fiscal policy and economic structure were seen as unsustainable, high oil prices provided few incentives to initiate serious economic reform. The sharp drop in oil prices since mid-2014, however, means that the day of reckoning has arrived. Fiscal surplus has turned into deficit, and the need for structural reform has become urgent. The huge stock of assets the state has accumulated makes the kingdom relatively better able than most other producers to alleviate the impact of the price drop. These assets are, unfortunately, rapidly eroding. Within this context, the government launched its Vision 2030 in late April and a National Transformational Plan (NTP) in early June. The main goal of these initiatives is to reduce the kingdom’s heavy dependency on oil revenues and create a diversified and balanced economic structure.

The next section examines the dynamics of the global oil market in both the short and long terms. I argue that this cycle of low oil prices is different from previous ones. For one thing, low oil prices are projected to last for a long time. A return to a $100-dollar-per-barrel price range is not likely any time soon. The analysis proceeds to discuss the Saudi government’s efforts to cope with persistent low prices and overcome the evolving economic challenges. Different options have been tried or are under consideration: borrowing from...
local and international markets, drawing down foreign reserves, introducing various forms of taxes, and rationalizing government expenditures by scaling back capital projects and cutting subsidies.2

THE NEW OIL ORDER

Volatility has been an underlying characteristic of oil prices in the last several decades, due to several factors. As in the case of other commodities, the price of oil reflects the equilibrium between supply and demand. Equally important, given that oil is considered a strategic commodity, geopolitics has always had a significant impact on production, demand, trade and pricing. Finally, oil companies are among the richest in the world and have always allocated substantial resources to improving and developing exploration and production technology.

The soaring oil prices that followed the 1973 Arab-Israeli war were driven by political developments in the Middle East. Arab exporters, led by Saudi Arabia, cut production and imposed an embargo on the United States and a few other countries for their support to Israel. A second oil shock in 1979-80 was triggered by the Iranian revolution and the Iran-Iraq War. Concerned about the stability of the Middle East and the interruption of supplies, major oil companies have invested heavily over the last four decades in developing other sources, such as the North Sea and the Gulf of Mexico. They have also invested in a new technique: hydraulic fracturing (fracking) combined with horizontal drilling.

The use of horizontal drilling and hydraulic fracturing in the United States has greatly expanded the ability of producers to profitably recover natural gas and oil from complex geological plays.

Generally, under the combination of these technologies, water, sand and chemicals are injected into a horizontal borehole of the well at very high pressure to crack the shale rock and release the gas. This has allowed wider access to oil and gas in shale and tight formations where the density of the rock has blocked the migration of hydrocarbons to conventional oil and gas reservoirs. Although experimentation dates back to the twentieth century (the first well was fracked in the United States in 1947)3, efforts were intensified in the mid-1970s with a partnership of private companies, the Department of Energy and research institutions. This partnership facilitated the commercial production of gas and oil from shale rock. One of the earliest successful applications was led by the Mitchell Energy and Development Corporation in Barnett Shale and North Central Texas. Since the mid-2000s, this combination of hydraulic fracturing and horizontal drilling has been widely recognized in the United States and around the world as a “game changer.”4

This technological innovation has fundamentally altered the U.S. energy outlook; production has substantially increased, and dependency on imported oil has been drastically reduced. In addition to the impressive rise in production, this technological innovation has key characteristics that fundamentally differ from “conventional” oil extraction. The exploration and development of tight oil requires a much lower investment of time and money. Accordingly tight-oil production is more responsive to price changes. In other words, persistent low oil prices are likely to slow investment and production, but once prices start recovering, investment and production will accelerate. In the next few years, most of the non-OPEC supply

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will likely come from U.S. shale, Brazilian deep water and Canadian oil sands.

Similarly, projections within OPEC point to additional supplies. With the signing of the nuclear deal between Iran and global powers, some sanctions have been lifted and Iran has re-entered the global market. Iranian authorities have insisted on raising production to the pre-sanctions level, categorically rejecting demands to freeze output. Oil Minister Bijan Zanganeh has recently argued that an “oil freeze would equal fresh oil sanctions.” Since the implementation of the nuclear agreement in early 2016, the volume of Iran’s oil production and export has steadily increased. In May, Mohsen Ghamsari, director of international affairs at the National Iranian Oil Company, stated that in the first half of 2016, the Islamic Republic had been able to increase its production to more than 3.8 million barrels per day (b/d) and raise its market share by 900,000 b/d. Similarly, Iraq is redeveloping its oil reserves after years of sanctions and war. Its crude-oil production grew by almost 1.5 million b/d over the past five years, from 2.6 million b/d in 2011 to almost 4.1 million b/d in 2015.

These extra barrels from both OPEC and non-OPEC members mean that the global oil market has been over-supplied in the last few years. Saudi Arabia has adamantly refused to cut production in order to restore the balance between supply and demand — something it used to do routinely — instead raising production to protect its market share. In the 1980s, the kingdom decided to protect prices. Other oil producers (both OPEC members and nonmembers) did not cooperate and kept raising production. As a result, the demand for Saudi oil declined from 10.2 million b/d in 1980 to 3.6 mb/d in 1985. Since the collapse of oil prices in 2014, Riyadh has instead sought a strategy to protect its long-term market-share interests. In the last few years, the kingdom’s export volume has witnessed a steady expansion. Exports to the United States have declined, but this has been compensated for by increases to Asia (mainly India and China), Africa and Europe. It appears that Saudi officials are convinced this strategy of maintaining market share will ultimately pay off and benefit the kingdom. Persistent low prices, the argument goes, are likely to retard investment and production in high-cost non-OPEC producers. With its large spare capacity, Saudi Arabia is likely to maintain and even expand its share of the global market in the medium and long terms.

The current saturated oil market means that prices are likely to stay low for a number of years, followed by a gradual recovery. The World Bank projects that oil prices will be in the $40 range in 2016 and 2017 and will stay between $60 and $70 in the medium term. These low prices are the main driver behind the severe cuts in capital expenditures (capex) in global oil exploration and production, which fell by 24 percent in 2015 and are forecast to fall by another 17 percent in 2016. In March, ExxonMobil announced plans to cut its capital spending by 25 percent in 2016. Low investment means slow supply growth. The Energy Information Administration (EIA) projects that global supply growth will fall from the 2009-15 level of 11 million b/d in 2009-15 to 4.1 million b/d in the period from 2015-2021. This combination of slow production growth and robust demand suggests that the global oil market is likely to begin rebalancing in 2017. In its latest Energy Outlook, British Petroleum concludes that the oil market will “gradually rebalance, with the current
low level of prices boosting demand and dampening supply.”\textsuperscript{14}

The significant slowdown in U.S. oil production seems to validate the optimistic projection that recovery is imminent and prices will climb. These projections should not be taken at face value. The glut in the oil market over the last two years has prompted consuming countries to accelerate building their crude-oil storage capacity and national strategic reserves. In December 2015, the Chinese government announced that it had doubled its national oil stockpiles.\textsuperscript{15} Similarly, taking advantage of cheap prices, member states in the Organization for Economic Cooperation and Development (OECD) have accelerated building their commercial crude stocks, and the United States is moving close to full storage capacity. These enormous stocks in Asia, Europe, North America and elsewhere will act as a dampener on the pace of recovery in oil prices when the market starts rebalancing and the gap between supply and demand tightens.

Finally, how low oil prices are likely to affect the U.S. shale-gas/tight-oil revolution is an open question. Technology is not static; oil companies will keep enhancing it, making it cheaper and more efficient. It is likely that the projects put on hold due to low prices will be re-evaluated and might see the light of the day at lower costs. As an energy analyst argues, “the short-run responsiveness of shale oil to price changes is far greater than that for conventional oil.”\textsuperscript{16} As prices fall, investment and drilling operations will decline and production will soon follow. But as prices recover, investment and production can be increased relatively quickly. In short, the global oil market is going through fundamental structural changes driven by technological innovations and geopolitical shifts. The old cycle of lower prices triggering high consumption and low investment, eventually pushing prices up, is not necessarily applicable.\textsuperscript{17}

### ECONOMIC ADJUSTMENT

As the world’s largest crude producer and exporter, Saudi Arabia’s oil sector has been the driving force behind the kingdom’s economic growth and political development for several decades. Petroleum and petroleum products provide the


<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP Growth</th>
<th>Inflation</th>
<th>Gov’t. Lending/Borrowing % of GDP</th>
<th>Gov’t. Revenue % of GDP</th>
<th>Current Account Balance % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-12</td>
<td>4.3</td>
<td>2.1</td>
<td>8.2</td>
<td>40.4</td>
<td>16.7</td>
</tr>
<tr>
<td>2013</td>
<td>2.7</td>
<td>3.5</td>
<td>5.8</td>
<td>41.4</td>
<td>18.2</td>
</tr>
<tr>
<td>2014</td>
<td>3.6</td>
<td>2.7</td>
<td>-3.4</td>
<td>36.9</td>
<td>9.8</td>
</tr>
<tr>
<td>2015</td>
<td>3.4</td>
<td>2.2</td>
<td>-16.3</td>
<td>24.6</td>
<td>-6.3</td>
</tr>
<tr>
<td>2016</td>
<td>1.2</td>
<td>3.8</td>
<td>-13.5</td>
<td>23.5</td>
<td>-10.2</td>
</tr>
<tr>
<td>2017</td>
<td>1.9</td>
<td>1.0</td>
<td>-11.8</td>
<td>24.2</td>
<td>-6.1</td>
</tr>
</tbody>
</table>

Source: IMF, Regional Outlook: Middle East and Central Asia, April 2016
lion’s share of public revenues and gross domestic product (GDP). Not surprisingly, the fluctuation of oil prices has always had a significant impact on economic structure and performance. The prolonged period of high oil prices in the early 2000s transformed the Saudi economy into one of the world’s largest and the kingdom into one of among the top performers (large fiscal surplus, low external debt and inflation rates, and substantial reserves). The sharp drop in oil prices since 2014 has dealt a heavy blow to the economy, exerting pressure on all indicators. In April 2016, the kingdom took out a $10 billion loan from a consortium of global banks, its first sovereign loan since 1991.18 Cuts in public spending are planned in 2016, for the first time since 2002.19 Reduced government spending will most likely have a negative impact on business activities.

This year, oil revenues are projected to fall to their lowest levels since 2003. This will further expand the deficit accumulated in 2015.20 Faced with this gloomy outlook, the authorities have started reviewing existing government projects. The 2016 budget has witnessed only a slight decline in public spending, suggesting that low revenues have not substantially reduced the key role the government plays in the economy. The top sectors receiving public spending are military and security services, followed by education, health and social development.21

Shortly after ascending to the throne, King Salman created the Council of Economic and Development Affairs, chaired by his son Prince Mohammed bin Salman. This development suggests that the Saudi leadership understands that persistent low oil prices have created new dynamics that urgently must be addressed and that major changes are needed. In late April 2016, Prince Mohammed bin Salman introduced Vision 2030, a broad national strategy; and in early June, the NTP was revealed. As to the main goals of these initiatives,22 the prince stated, “We will not allow our country ever to be at the mercy of commodity price volatility or external markets.”23 The plan calls for (among other things) increasing efficiency, diversifying the economy, cutting public spending, reducing subsidies, increasing the role of the private sector, and privatizing major public assets.24

### TABLE 2. Saudi Arabia’s Oil Economy and Reserves (2000-17)

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude Oil Production Millions of b/d</th>
<th>Crude Oil Exports Millions of b/d</th>
<th>Official Reserves Billions of $</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-12</td>
<td>8.64</td>
<td>6.70</td>
<td>265.2</td>
</tr>
<tr>
<td>2013</td>
<td>9.63</td>
<td>7.57</td>
<td>718.4</td>
</tr>
<tr>
<td>2014</td>
<td>9.71</td>
<td>7.15</td>
<td>726.8</td>
</tr>
<tr>
<td>2015</td>
<td>10.16</td>
<td>7.46</td>
<td>611.9</td>
</tr>
<tr>
<td>2016</td>
<td>10.22</td>
<td>7.35</td>
<td>520.0</td>
</tr>
<tr>
<td>2017</td>
<td>10.34</td>
<td>7.30</td>
<td>458.7</td>
</tr>
</tbody>
</table>

Source: IMF, Regional Outlook: Middle East and Central Asia, April 2016.
Saudi Aramco

A major part of Vision 2030 involves selling off about 5 percent of the state-owned national oil company, Saudi Aramco, and transforming it into a holding company with subsidiaries listed via an initial public offering (IPO). As the company holds the world’s largest proven oil reserves, its listing could become one of the largest IPOs ever. Saudi Aramco is widely considered the best-managed company in the kingdom and one of the most efficient national oil companies in the world.

It enjoys a distinguished status in the kingdom’s history and economic policy. In 1933, King Saud Ibn Abd al-Aziz, the founder of modern-day Saudi Arabia, gave Standard Oil Company of California (SOCAL, later Chevron) a 60-year exclusive right to explore for oil in the eastern part of the kingdom. The Californian-Arabian Standard Oil Company (CASOC) was formed to exploit the concession. In 1944, CASOC was renamed the Arabian American Oil Company (Aramco). In 1980, it was amicably agreed that Aramco should become 100 percent Saudi-owned, with ownership backdated to 1976. Nine years later (1989), the last American to preside over Aramco, John J. Kelberer, handed over power to its first Saudi boss, Ali al-Naimi, who later became the kingdom’s oil minister.

Transforming Saudi Aramco into a holding company would involve several challenges, one of them fiscal transparency. The company publishes information about its history, mission, vision, culture, leadership and operations, but accurate data on annual revenue, profit and debt is largely missing. More public accountability will be required. Second, Saudi Aramco is, by far, the most valuable national company in charge of managing the most important source of national income. Making such a historical transformation requires building consensus among the country’s political and economic elites and policy makers. It is not clear that broad public and official support is behind the public listing of Saudi Aramco.

Public Investment Fund (PIF)

In April, Prince Mohammed told Bloomberg that Saudi authorities plan to restructure the PIF and make it one of the wealthiest sovereign wealth funds (SWFs) in the world: “We believe there is a great opportunity to increase profitability through introducing new assets, the most important of which are Aramco and some huge real-estate assets.” In the last few decades SWFs, also known as oil funds, have accumulated substantial financial assets and established themselves as major players in the regional and global financial systems. They are government-owned investment entities, set up for a variety of purposes.

The general justification is that “some share of government revenues derived from the exploitation of a non-renewable resource should be put aside for when these revenues decline.” Such a decline might come about through fluctuation of prices or depletion of resources (or both). Thus, generally speaking, oil funds are classified into two categories: stabilization funds and savings funds. The former are designed to reduce the impact of volatility in revenue flows on government and the economy. When oil prices are high, the fund receives resources; when prices are low, the fund pays into the budget. Savings funds are intended to ensure that not only current but also future generations enjoy the benefits of oil wealth by saving and in-
vesting a proportion of oil revenues. Most oil funds seek to achieve both purposes (stabilization and saving) simultaneously. They commonly take the form of the long-term investment of foreign-exchange assets in overseas holdings. Their portfolios typically involve more diverse and riskier asset allocations than traditional reserve holdings. The list of the largest SWFs in the Gulf region includes the Abu Dhabi Investment Authority, the Kuwait Investment Authority and the Qatar Investment Authority.

Unlike most of the other large oil exporters, Saudi Arabia has not rushed to set up an oil fund. The kingdom’s portfolio of foreign assets is largely held by the Saudi Arabian Monetary Authority (SAMA), the country’s central bank. It was established in 1952 and has since been entrusted with performing several functions: minting and printing the national currency; managing foreign-exchange reserves; promoting the growth of the financial sector; and supervising commercial banks and cooperative insurance companies. SAMA’s Foreign Holdings (FH) Fund has primarily invested surplus oil revenues in low-risk assets (i.e., cash deposits, fixed income instruments and equities). Investment policy has been conservative and largely limited to investment in bonds, especially U.S. Treasury bonds, and shares.

In 1971, the Public Investment Fund (PIF) was established by royal decree. The goal is to provide financing support to productive projects of a commercial nature that are strategically significant for the development of the national economy and cannot be implemented by the private sector alone, either because of insufficient experience or inadequate financial resources or both. Since its inception, the PIF has established a number of state-owned entities: the Saudi Railway Company, Tadawul (the Saudi Stock Exchange), the Saudi Agricultural and Livestock Investment Company, and Saudi International Ports. In June 2016, the PIF invested $3.5 billion in Uber.

The growing tendency of oil funds in other GCC states to make more aggressive investments was finally echoed in Riyadh. In July 2008, the Saudi government approved the creation of a state investment vehicle called Sanabil Al-Saudia, with an initial capitalization of 20 billion Saudi riyals ($5.3 billion). Sanabil Al-Saudia is wholly owned by the PIF and acts as a portfolio manager with a focus on maximizing long-term returns through investment across various sectors in Saudi Arabia and overseas.

Subsidies

In most countries in the Middle East, subsidies for fuels, electricity and water constitute a significant share of government spending. Along with the public-sector wage bill, energy subsidies have been a huge drain on public finances in Saudi Arabia and other oil producers. A subsidy can be defined as “the difference between market price and the real opportunity cost of the commodity.” The argument for energy subsidies in Saudi Arabia (and elsewhere) is based on several grounds, both economic and political. Low energy prices have been a central element of the implicit social contract between the rulers and the citizens and are seen by many as a key method of wealth distribution. They have also been a central part of initiating and promoting energy-intensive industries. Low energy, food and water prices provide a safety net for low-income households. Finally, low energy prices help keep inflation under control. On the other hand, a
growing number of economists and energy analysts have recently argued that energy subsidies have long outlived their usefulness.\textsuperscript{39} Low prices are indiscriminate; all energy consumers, rich and poor, benefit from the availability of cheap electricity and petroleum products. They also encourage over-consumption and waste, reducing incentives to invest in and develop alternative energy resources.

Saudi Arabia (like almost all its neighbors) has recently implemented policies to reform energy prices. Energy subsidies are estimated to have cost the Saudi government around $61 billion dollars in 2015 (9.3 percent of GDP).\textsuperscript{40} The kingdom generates more than half its electricity by burning expensive oil and diesel fuel because natural gas is in short supply. Electricity generation represents a significant cost to the kingdom; around 1.6 million b/d of oil and refined products are consumed to meet domestic demand. The Electricity Co-Generation Regulatory Authority forecasts a rise in electricity demand by 25 percent between 2015 and 2020.\textsuperscript{41} The 2016 Saudi budget included price increases for domestic energy products. The prices of gasoline, diesel, crude oil, natural gas, fuel oil and electricity all were raised.\textsuperscript{42} Despite this, energy prices in Saudi Arabia are among the cheapest in the world. Much more reform is still needed.

THE WAY FORWARD

For decades, Saudi officials have talked about the need to diversify the economy away from oil revenues, reduce the dominant role the government plays in the economy, empower the private sector and attract foreign investment. The reality is that little has been done. The country remains deeply dependent on and vulnerable to the fluctuation of oil prices. The current key changes in the oil market and industry can be seen as an opportunity to seriously implement structural reform. Investments in two major areas are likely to contribute to a successful economic transformation — investment in human capital and regional stability.

For a long time, there has been a mismatch between the private sector’s needs and the educational system. Most university graduates lack the necessary skills for employment in the private sector. As part of its agenda for embracing a knowledge-based economy, Saudi Arabia launched its first National Science and Technology Policy in 2003.\textsuperscript{43} King Abdulaziz City for Science and Technology (KACST) is a good illustration of these official efforts to support research and higher education.\textsuperscript{44} In 2011, the government launched a program called Nitaqat (Categories), under which firms employing high ratios of Saudis receive preferential treatment from the labor ministry. The scheme has had only limited success. In May 2016, Labor Minister Mufrej al-Haqbani announced that the government would introduce a more ambitious form of Nitaqat in the coming months.\textsuperscript{45} The goal is not only to provide incentives to private companies to hire nationals, but also to make young Saudis more employable, armed with the necessary training and skills. In short, a serious reform of the educational system would greatly facilitate the transformation from an economy heavily dependent on oil revenues to a knowledge-based one.

Finally, domestic structural reform and economic prosperity cannot be pursued in isolation from regional developments. Due to the civil wars in Syria and Iraq and serious economic and political challenges in Egypt, Saudi Arabia has emerged as the de-facto leader of the Arab world. In recent
years, the strategic rivalry between Saudi Arabia and Iran has intensified and become a major force behind the ongoing fighting in Iraq, Syria, Yemen and elsewhere. Accordingly, the kingdom’s military spending has skyrocketed. The country has one of the highest military budgets in the world, both in absolute terms and per capita.46

The American experience in Afghanistan and Iraq underscores the negative correlation between assertive foreign policy and military adventures, on the one hand, and economic prosperity, on the other. The zero-sum proxy war between Riyadh and Tehran needs to be transformed into a healthy win-win economic competition.

13 Ibid.
companies-stevens.pdf.


20 “Oil Prices Are Going to Be Lower for Longer,” Quarterly Oil Market Update (Jadwa Investment, January 2016).

21 Saudi Arabia’s 2016 Fiscal Budget (Jadwa Investment, December 2015).


28 This information is available at Aramco’s website (www.aramco.com) as of May 2, 2016.


38 Fattouh et. al., “Striking the Right Balance?”


40 Saudi Arabia’s 2016 Fiscal Budget, Jadwa Investment.

41 Ibid.

42 The Saudi Economy in 2016, Jadwa Investment.


44 For more information see www.kacst.edu.sa/eng/pages/default.aspx.
