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Oil Prices Crash: The Trillion Dollar Question

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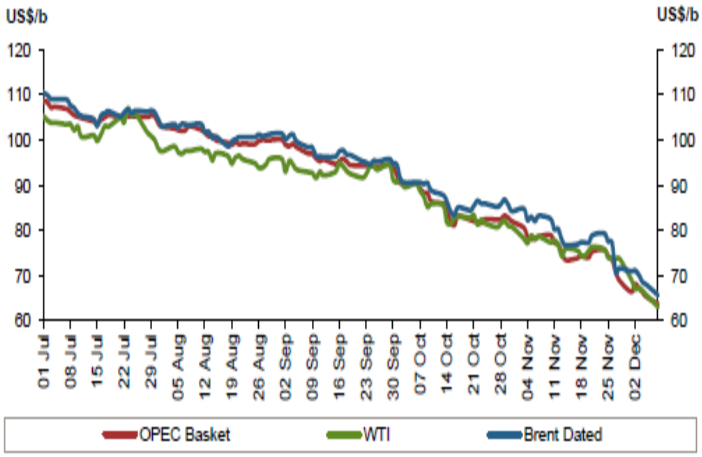
Between June and December 2014, the OPEC basket price of crude oil and other indices of oil prices fell by more than 40 percent. (See Figure 1) If prices remain at their current levels or slide further, the impact on the world economy will be huge. There are two main effects of a fall in the price of oil. The first is the shift in income from producers to consumers. According to the *Economist*, the annual oil import bill for consumers worldwide could fall by over one trillion dollars, a sum that is equal to six percent of the U.S. national income (GDP) or about one percent of world GDP. That is, of course, the sum that oil producers will lose.

Figure 1: Oil Prices in 2014



Source: OPEC, Monthly Oil Market Report, December 2014

The second effect is the stimulus that lower oil prices provide by reducing the cost of everything made with oil and the cost of transportation fueled by oil. The international

distribution of income will change significantly, making consumers better off and producers worse off. According to the International Monetary Fund (IMF), a 10 percent change in the price of oil results in a 0.2 percent change in global Gross Domestic Product (GDP), so a 40 percent change will result in a 0.8 percent change in global GDP, worth some six trillion dollars. This calculation allows for the fall in demand in oil producing countries.

Among the most significant losers is Russia, because almost 60 percent of its exports consist of oil and natural gas and its economy has already been weakened by Western sanctions, resulting from its involvement in the Ukraine crisis. Other losers include Organization of the Petroleum Exporting Countries (OPEC) members, particularly Iran. Insofar as it is a producer, the United States will lose, but as a consumer it will gain much more. Lower gas prices are already reinforcing a rise in U.S. consumer spending, which is the backbone of the largest economy in the world.

Why did prices fall? The simple reason is that demand has weakened because the world economy is growing slowly; also, the use of energy has become more efficient and there has been an ongoing move away from oil to other fuels. Supply is strong despite the turmoil in Iraq and Libya. They are significant oil producers with nearly four million barrels a day combined, but conflict has not significantly affected their output. Meanwhile, the U.S. has become the world's largest oil producer (see Figure 2 below). Although it does not export crude oil, it now imports much less, creating a lot of spare supply on international markets. Finally, economic growth in China has slowed and so have its oil imports.

Figure 2: U.S. Crude Oil Production and Net Imports, 1995-2014

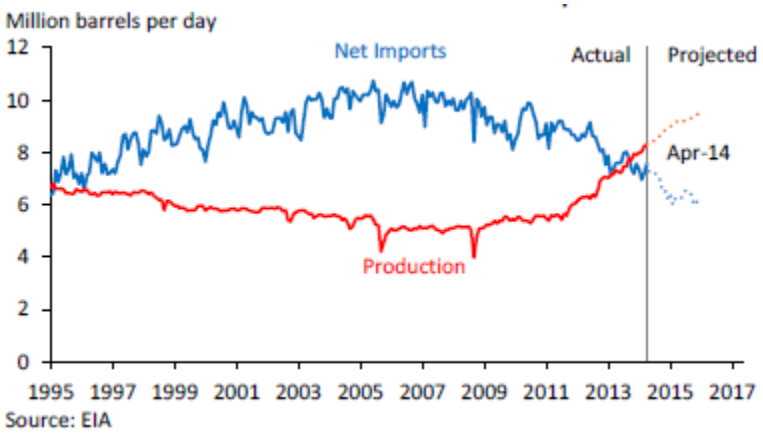
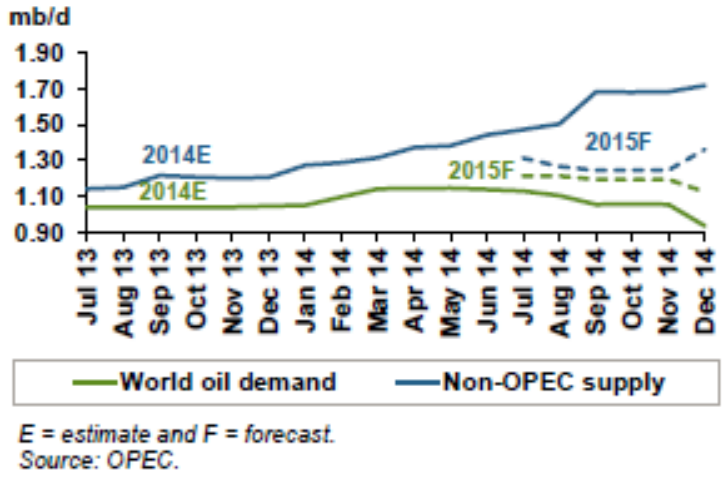


Figure 3, below, shows how the estimates of growth of the world demand for oil have decelerated in recent years and how little it is forecast to grow in 2015. Forecasts for 2015 have been revised downwards with the latest revision coming from the International Energy Agency (IEA). In mid-December 2014**,** it stated that the outlook for global oil demand growth for 2015 has been cut from 1.130 million barrels a day (mb/d) to 0.9 mb/d. Figure 3 also shows how non-OPEC supply has increased. Between 2011 and the 2014 non-OPEC oil supply is estimated to have increased from 52.1 mb/d to 55.4 mb/d, a rise of 6.3 percent. This compared with an estimated rise in OPEC production from 35.7 mb/d to 36 mb/d an increase of only 0.8 percent. OPEC is dominated by Gulf producers. The largest increase in non-OPEC production was in the United States where it rose by almost 44 percent as a result of the fracking revolution. Fracking is the process of drilling for natural gas and oil beneath the ground. Water mixed with other components is pumped into rock to create cracks thus releasing the gas or oil into wells that have been built for collection.

Figure 3: Annual Growth in World Oil Demand and Non-OPEC Supply
(Estimated over 2013-2014)



Source: OPEC, Monthly Oil Market Report, December 2014

OPEC's reaction to falling prices was to do nothing because the Saudis and their Gulf allies decided not to sacrifice their own market share to restore oil prices. At its November 27, 2014 conference, OPEC noted that although world oil demand is

forecast to increase during 2015, it will, once again, be offset by the projected increase of 1.36 million barrels a day (mb/d) in non-OPEC supply. The increase in oil and product stock levels in OECD countries coupled with the on-going rise in non-OECD inventories were indications of what it called an extremely well-supplied market.

OPEC expressed its concern about the rapid decline in oil prices in recent months, and concluded that stable oil prices – at a level that did not affect global economic growth but which, at the same time, allowed producers to receive a decent income and to invest to meet future demand – were vital for world economic well-being. It therefore decided to maintain the production level of 30.0 mb/d, set in December 2011.

OPEC could have curbed production to stop the slide in prices, but the main benefits would have gone to Iran and Russia. Saudi Arabia can tolerate lower oil prices quite easily because it has huge financial reserves; Kuwait and the UAE are in a similar position. Saudi oil costs very little (around $5-6 per barrel) to get out of the ground and so the current low price still yields large income. History suggests most of the gains from any cut in Saudi output would go to other producers, who would sell their oil for more while increasing their market share. Saudi Arabia tried this tactic in the early 1980s, when it cut production by three-quarters from 10 mb/d in 1980 to less than 2.5 mb/d in 1985-6. The result was higher prices, but also a boom in investment, and then production, in places such as the North Sea. It also resulted in technological changes that increased the energy efficiency of production. The combined effect of these factors was to eventually undermine prices. Fracking in the U.S. has replaced the North Sea as the new source of oil. Its development has been encouraged by the high oil prices of recent years and so lower prices will reduce investments, slow production, and thus ultimately strengthen prices. It will not, however, end fracking, and the U.S. is likely to remain a leading producer.

Saudi Arabia dominates OPEC and it was Saudi policies that were implemented at the November 27 conference. In recent years, Saudi Arabia's aim has been to maximize pressure on Iran, its traditional rival in the Gulf and an increasing threat because of its nuclear program. Originally Saudi Arabia tried to put pressure on Iran through political means, encouraging the United States to challenge the latter. Fear of an

agreement on between the U.S. and Iran on the nuclear program, led Saudi Arabia to intensify the downward pressure on oil prices and thus strengthen the hawks in Iran. President Rohani has made improving economic conditions in Iran a key part of his policy and hopes that a deal with the U.S. will encourage this. Thus far only a partial lifting of sanctions has occurred and Rohani has little to show Iranians in terms of economic gain. The Saudis hope that the hawks will prevent an agreement and the U.S. will therefore be forced to act militarily against Iran.

The results of lower oil prices have not taken long to be felt. In Iran, oil income has collapsed. Based on an analysis of its 2015 budget, recently presented to the Majlis, assuming that there will be no major movement in the sanctions regime in the next year, Iran will continue to export about 1.3 mb/d of crude oil and condensates. If the price of oil is $70/barrel (which is not guaranteed) then revenues would come to $33 billion, half of their 2013 level. Gas and condensates exports may yield a further $8 billion. In 2011, Iran's oil export revenues came to $115 million, in 2012 they were $101 billion, in 2013 they fell to $62 billion and in 2014 they are estimated at $47 billion. If Iran sells abroad the same volume in 2015 as in 2014 and prices remain at about $60/barrel, then its oil export revenues could fall to less than $40 billion.

OPEC members, excluding Iran, will earn about $700 billion in revenue from net oil exports in 2014, according to the U.S. government's Energy Information Agency (EIA), a 14% decrease from 2013 earnings and their lowest since 2010. In 2015 revenues are expected to fall to $446 billion (excluding Iran), 46 percent below the 2013 level.

The combined impact of Western sanctions and lower oil prices could reduce Russian oil export revenues from $283 billion in 2013 to $170 billion in 2015. Sanctions and lower oil prices have contributed to a collapse of the ruble and a severe squeeze on the economy that was on a path of decelerating growth before the price of oil declined.

The two powers supporting Assad's regime in Syria – Iran and Russia – have therefore been simultaneously hard hit by developments in the oil markets. Although this will not necessarily force them to change their policies, the burden of supporting Assad will be felt more sharply in both countries.

There are winners and losers in the Middle East. Those countries that import oil such as Israel, Egypt, Jordan, Turkey, Morocco and Tunisia will all gain as their import bill declines. Others will lose, most notably Saudi Arabia, the UAE, Kuwait, Iran, Iraq and the other producers in the Gulf. The producers are divided between those that have the financial reserves to tide them over during a period of low oil prices and revenues, and those that do not. Saudi Arabia, the UAE and Kuwait are in the first group; Iran and Iraq are in the second. The UAE has over a trillion dollars in sovereign wealth funds, Saudi Arabia has between $800 and $900 billion, and Kuwait about $550 billion. Iraq has $80 billion, but Iran's sovereign wealth fund has been partly depleted to fund current needs and was reported to have $62 billion in June 2014.

The United States will, on balance, benefit. According to the White House, the energy revolution has made the United States more energy secure. The decline in net imports has reduced the economy's vulnerability to international oil supply disruptions. Declining gasoline consumption, increasing domestic crude oil production, increasing fuel economy, and increasing use of biofuels enhances the resilience of the economy to these oil price shocks. Although international oil supply shocks and oil price volatility remain risks, reductions in net oil imports will reduce them. Long-term reductions of net oil imports can only come from reduced demand for oil and increased use of biofuels, electric vehicles, natural gas, and other substitutes for petroleum in transportation. In addition, the diversification of energy sources through the growth of natural gas and renewables has weakened the link between world oil prices and domestic energy prices. These changes are strategic as well as economic in that they strengthen the U.S. economy absolutely and relatively. The U.S. is less at the mercy of international oil markets than it was; Russia has become weaker as a result of the declining oil price and increases in U.S. production. Finally, the U.S. has become stronger vis-a-vis China, which remains extremely dependent on imports.

The International Energy Agency (IEA) has summarized recent developments as follows. Supply risks remain extraordinarily strong, and may be exacerbated by falling prices. Iraq and Libya, the two countries responsible for a recent recovery in OPEC supply growth, are both suffering through internal conflicts. Declining oil prices raise new doubts about Iraq’s ability to fund an increase in its capacity to

produce oil, compounding the impact of security risks. Venezuela is suffering from the effects of falling production and prices. Russia suffers from the declining oil price, a currency collapse, as well as pressures resulting from sanctions. Many producer countries' "fiscal breakeven price" is well above current oil prices. While that may not make pumping oil at current or even lower prices unprofitable, it may force public spending cuts thus affecting social stability, and, indirectly, production prospects.

Steep price declines tend to be self-correcting over time as spending is eventually cut or production disrupted. Such cyclical factors take time to unfold, however, and should not blind us to the deep structural changes at work in the oil market. Economic development no longer spurs oil demand growth as it once did, especially in the absence of wage gains. China, which has experienced the largest growth in its demand for oil in recent years, has entered a less oil-intensive stage of development, while years of high prices have encouraged the development of new technologies to unlock untold oil resources in North America and elsewhere. The steeper oil price swings are, the less sustainable the trend tends to be. The IEA does not, as a matter of policy forecast prices, but it makes assumptions about them in its work. Its statement that "a return to previous price highs may not be likely in the near future" is therefore significant, but should, of course, be treated with caution.