

A different view to fiscal break-even oil prices

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Summary

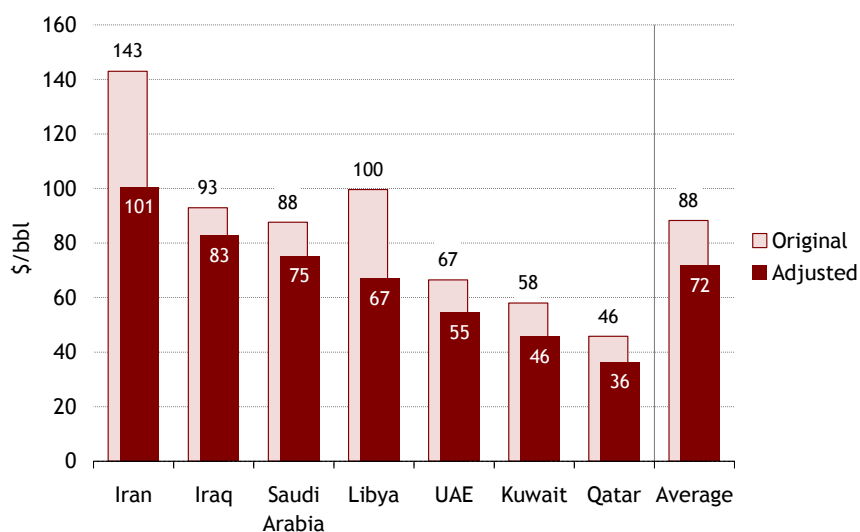
Higher oil price level is one of the big factors that may negatively affect the fragile global economy. OPEC, which accounts for 40% of the global oil supply, may prefer higher oil prices and could influence the prices by changing production quota and by inducing market participants' expectations of a floor price.

The Middle East governments have been steadily increasing their spending in an attempt to avert people's discontent regarding the lack of sufficient job opportunities, the high inflation, the political regime, etc. They seek to increase their oil-related revenues through higher oil prices in order to secure the necessary funds to support social spending.

Growing social demand leads to a substantial rise in the required fiscal break-even oil price. As governments' spending are paid in local currencies while oil-related revenues reflect international oil prices, the relative depreciation of the dollar – strictly speaking, oil in the dollar – to local goods contributed to the need for a higher break-even price. The depreciation of the dollar, rather too strong local currencies, especially since the mid-2000s, comes from a fixed exchange rate system and high inflation rates for many of the Middle East countries.

Given that the fiscal revenue of each country is in proportion to oil prices expressed in the local currency, a re-evaluation of the exchange rate would induce a similar change to the break-even price. If the currencies were adjusted and depreciated to their relative PPP levels, the average break-even price would be lower by \$16/bbl.

Original and adjusted break-even prices for selected countries (2014)



As it is not clear whether current exchange rates are reasonable or not, re-evaluating the

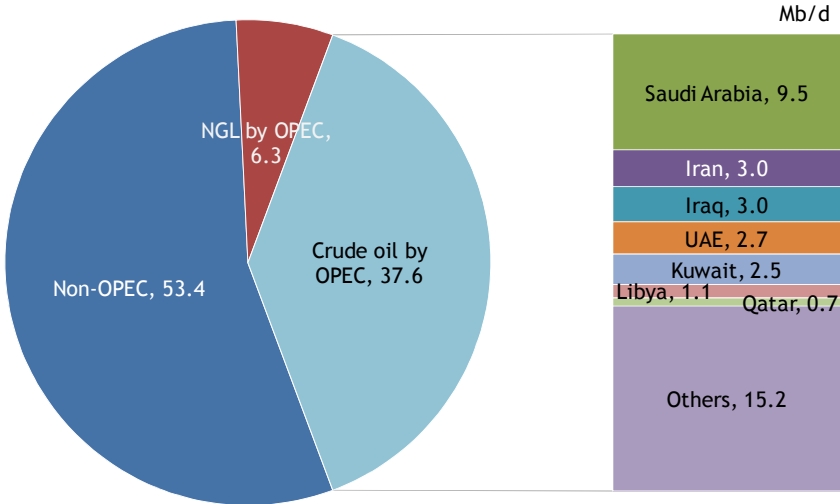
currencies of oil-exporting countries should not be detrimental to oil-exporting and oil-importing countries. Sensible and realistic exchange rates should be adopted.

Keywords: Fiscal break-even oil price, exchange rate, purchasing power parity, inflation

The Middle East seeks higher oil prices

High oil price is one of the big factors that may negatively affect the fragile global economy. Although oil prices are determined in and by the market, they do not simply depend on the supply and demand balance for oil but also reflect, to a certain extent, other financial factors contributing to higher prices. Additionally, the Organization of the Petroleum Exporting Countries, or OPEC, which accounts for 40% of the global oil supply, has expressed its preference for higher oil prices (Figure 1). The Organisation could influence prices by changing production quotas and by inducing market participants’ expectations of a floor price.

Figure 1: Oil supply (2012)



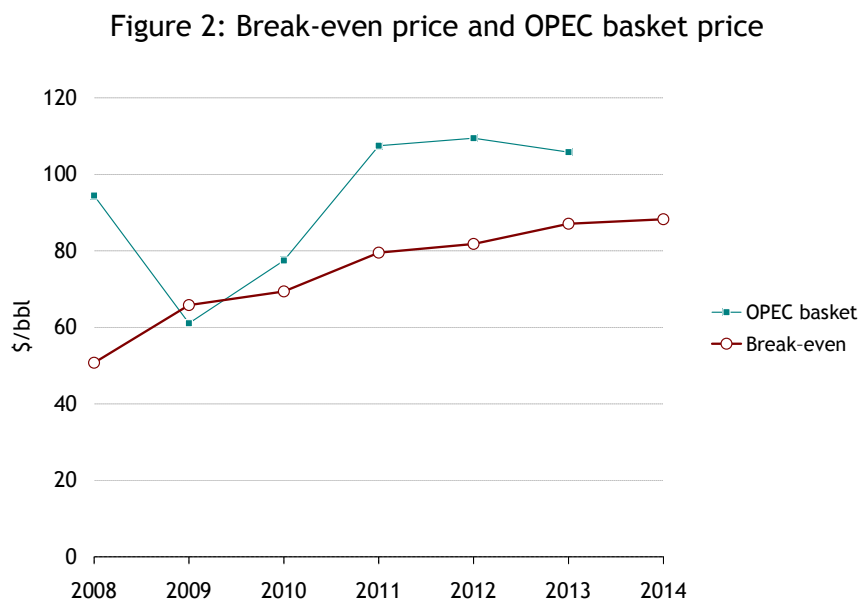
Note: Non-OPEC includes processing gains and biofuels.

Source: IEA "Oil Market Report," October 2013

Only ten years ago, OPEC was setting a price band ranging from \$22/bbl to \$28/bbl (nominal) for its basket of oil. The Organisation expects a much higher level of prices today. Even Saudi Arabia, a “moderate” on price within the cartel, currently quotes \$100/bbl as a target price. The higher price not only reflects a steady oil demand, but also reflects the domestic situation of oil-exporting countries in the Middle East and other regions. The Middle East governments have been increasing their domestic spending to avert people’s discontent regarding the lack of sufficient job opportunities for its increasing young generation, the high inflation, the political regime, etc. They seek to increase their oil-related revenues through higher oil prices in order to secure the necessary funds to support social spending.

High break-even prices and too strong local currencies

Fiscal break-even oil price (hereafter, break-even price), is the oil price at which the fiscal balance is zero for the oil-exporting countries in the Middle East and North Africa. According to an International Monetary Fund's analysis, the break-even price has been rising steadily in the last few years (Figure 2).



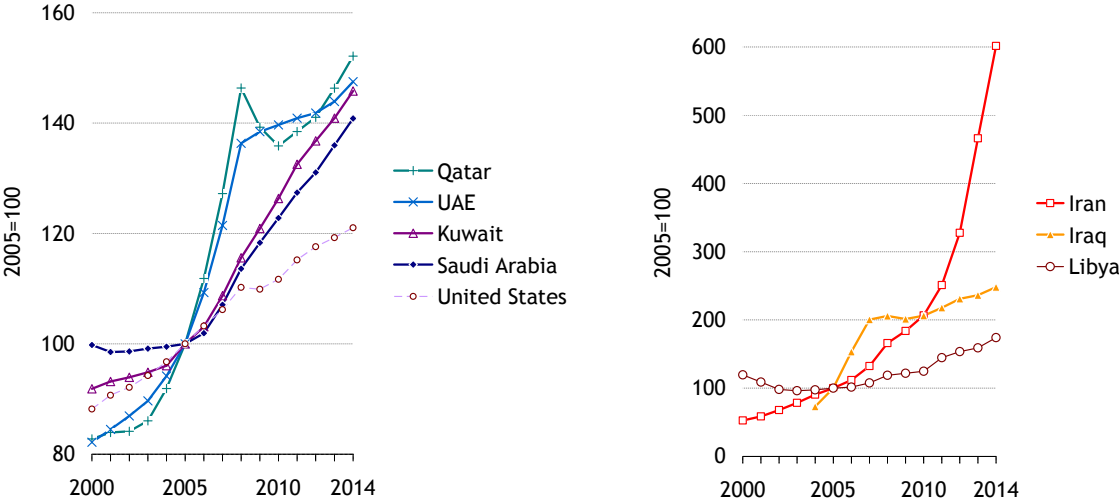
Note: The Break-even price is the average of those of Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and United Arab Emirates weighted by annual oil production. The weights for 2013 and 2014 reflect oil production from 1Q2013 to 3Q2013. The OPEC basket price in 2013 is for January to October.

Source: Compiled from IMF "Regional Economic Outlook Update: Middle East & Central Asia," May 2013, IEA "Oil Market Report," October 2013 (break-even price); OPEC (OPEC basket price)

Ever growing social demand leads to a steady rise of the required break-even prices. The relative depreciation of the dollar – strictly speaking, oil in the dollar – to local goods also contributes to a required increase in the break-even prices, as oil-related revenues are directly affected by the international oil price while most of the governments' spending is paid in the local currencies.

Many countries in the Middle East continue to peg their currency using a fixed exchange rate to the dollar though they face higher inflation rates, especially since mid-2000s (Figure 3).

Figure 3: Consumer price indices in selected countries



Source: IMF "World Economic Outlook," October 2013

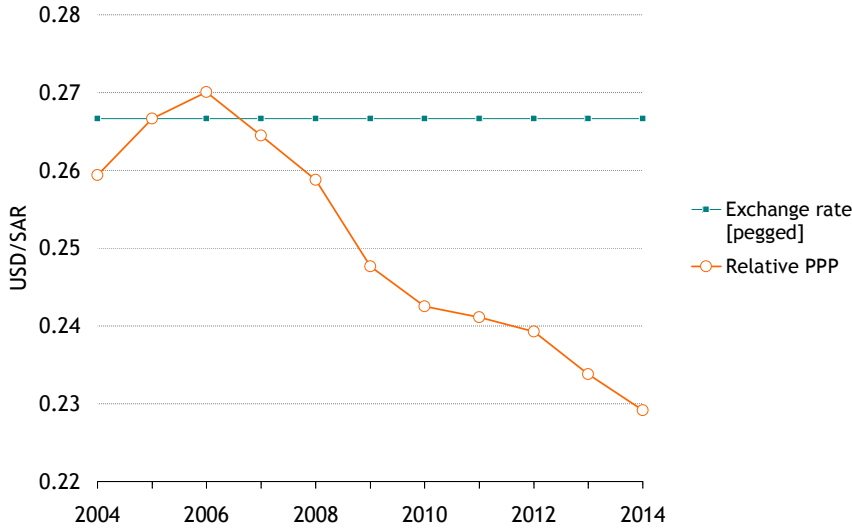
This situation results in a decline of the purchasing power of oil in the dollar to local goods for many countries in the Middle East (Figure 4). For example, from the point of view of Saudi Arabia, the dollar seems to have lost about 12% of its purchasing power on average since 2005; another view would be that the Saudi Riyal is priced too strongly relative to the dollar, considering the high inflation rates in the country.

Figure 4: An example of reduction of purchasing power of oil in the dollar by price rise of local goods



From a relative purchasing power parity (PPP) view point, a floating exchange rate system would be regarded as reflective of inflation rates in the medium and long term, though the rate might, at times, fluctuate a lot in the short-term. Saudi Arabia has pegged its currency at SAR3.75 against \$1, or \$0.267/SAR since 1986, but following the relative PPP theory, a much weaker than the official exchange rate would be expected. An exchange rate of \$0.234/SAR for 2014 would reflect the inflation rates of Saudi Arabia and the United States since 2005 (Figure 5).

Figure 5: Exchange rate and relative purchasing power parity of Saudi Riyal



Notes: Relative PPP is based on the 2005 exchange rate and on changes in consumer price indices.

Source: Compiled from IMF "World Economic Outlook," October 2013

Unless the exchange rates are re-evaluated, the oil-exporting countries seek higher oil prices to keep the same level of utility ([1] in Figure 6). Required oil prices in the dollar, however, could stay unchanged if the local currencies are depreciated properly following changes in inflation rates ([2] in Figure 6).¹

Figure 6: An example of compensation effect by re-evaluation of a local currency to price rise of local goods



Effects by re-evaluation of currencies of oil-exporting countries

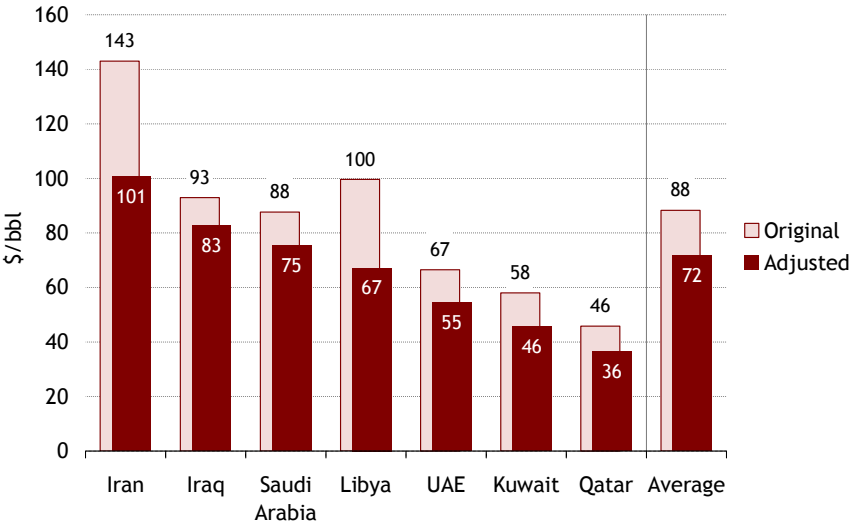
It is hardly probable that Middle East countries would abandon the (de facto) pegged exchange rate system with the dollar in the near future. It is not clear that the exchange rates would converge quickly on the relative PPPs, even if those countries moved to a floating exchange rate system. However, estimating the extent of the market distortion resulting from

¹ There is another option: 1.2 bbl of oil at \$100/bbl and SAR3.75/\$. The oil-exporting countries, however, do not prefer this option usually.

the current exchange rate, despite the high inflation rates, provides some useful information and suggestions.

Given that the fiscal revenue of each country is in relation with oil prices expressed in the local currency, the change in the break-even price would be proportional to a re-evaluation of the exchange rate.² If the currencies were adjusted and depreciated to their relative PPP levels, the average break-even price in 2014 would be lowered by \$16/bbl, from \$88/bbl to \$72/bbl (Figure 7).³

Figure 7: Original and adjusted break-even prices for selected countries (2014)



Notes: The Break-even prices are the average of those of Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and United Arab Emirates weighted by oil production from 1Q2013 to 3Q2013.

Source: Compiled from IMF “Regional Economic Outlook Update: Middle East & Central Asia,” May 2013, IEA “Oil Market Report,” October 2013

If the fall in break-even prices were to lead to an actual decline of \$16/bbl in oil prices, the oil-importing countries’ economy would be expanding by between 0.3% and 1.1% (Yanagisawa (2012) “Impact of Rising Oil Prices on the Macro Economy”). Asia, which makes use of oil-linked LNG prices, can also expect additional benefits resulting from lower LNG prices. Increases in GDP in those countries would result in more oil demand and the oil-exporting countries would gain more oil export revenues.

It is not clear whether the current exchange rates of oil-exporting countries are reasonable to stick on. Re-evaluating the currencies of oil-exporting countries should not be detrimental to oil-exporting and oil-importing countries. We wish a sensible approach to exchange rates would be adopted.

² Some additional social spending may be required to compensate for an acceleration of inflation due to rise in import prices.

³ Relative PPPs are based on exchange rates in 2005 (2009 for Iraq) and changes in consumer price indices. The results are broadly in line with a case using domestic demand deflator.

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