

Global Economic Comment

Oiling the wheels

Economics

Global

Supply or demand?

Based on our proprietary surprise index analysis we estimate there is presently a \$15 discount in the price of oil relative to underlying global demand fundamentals. That discount could reflect a number of factors. But for the purposes of our analysis it serves as a useful benchmark for quantifying what impact a supply-driven retreat in the oil price might have on the world economy in the months and quarters ahead.

Modelling a \$15 decline in the price of oil

Simulations on the OEF econometric model suggest that a decrease of \$15 in the price of oil will add around 0.25 percentage points to global GDP growth after one year. Every \$15 per barrel decline in the price of oil typically transfers around 0.5% of global GDP from oil producers to oil consumers. The model assumes—correctly in our view—that the propensity to spend additional income among oil-consuming countries is larger than it is in oil-producing economies.

The winners and losers in the emerging world

Oil-intensive emerging countries that lack any indigenous oil reserves are typically better off in a scenario where oil prices have declined. Our simulation analysis shows that Hong Kong, China, Singapore, the Philippines, India, Korea and Thailand fare relatively well. East European Economies such as Turkey, Hungary and Czech also benefit from lower oil prices. These economies could receive a boost to GDP of between 0.4 and 0.9 percentage points after one year if – against our expectations - oil prices were to remain close to current levels over the next year.

Europe fares relatively well

Our simulation analysis also suggests that European economies, with high oil import intensities ought to benefit more from lower oil prices than the US or Japan. The fact that the European Central Bank explicitly targets headline inflation (which includes energy prices), unlike the Fed which targets core inflation (excluding energy and food), could be an added source of support as the ECB would be likely to reinforce its accommodative monetary policy stance as headline inflation declines owing to weak energy prices.

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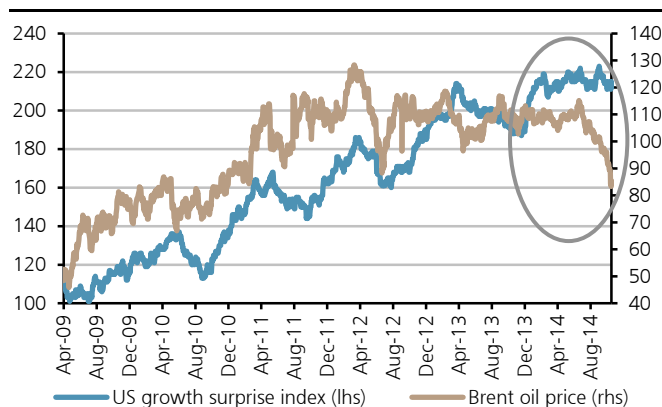
There is always a great deal of circularity in any discussion about the impact of weaker or stronger oil prices. That's because analysts find it extremely difficult to establish whether oil price gyrations are a manifestation of supply- or demand-driven shocks. Many analysts often wrongly assume that large swings in oil prices are driven by supply shocks. Other analysts, in contrast, all-too-frequently assume that large price gyrations are driven solely by demand shocks.

The reality is typically more nuanced. Any sudden shift in the price of oil can usually be pinned on both supply and demand-related factors. And the sharp drop in the price of oil that has unfolded in recent weeks is no exception. On the supply side, much has been written about the impact of the shale fracking revolution in generating additional supplies of energy in the United States. Supply has also held up better than many thought in the Middle East, despite the presence of conflict and political turmoil.

That suggests that increased supply is helping to drive down oil prices, rather than disappointing growth outcomes. That conclusion is reinforced in Figure 1 by the looser correlation between oil prices and our proprietary US growth surprise index over the last year or so.

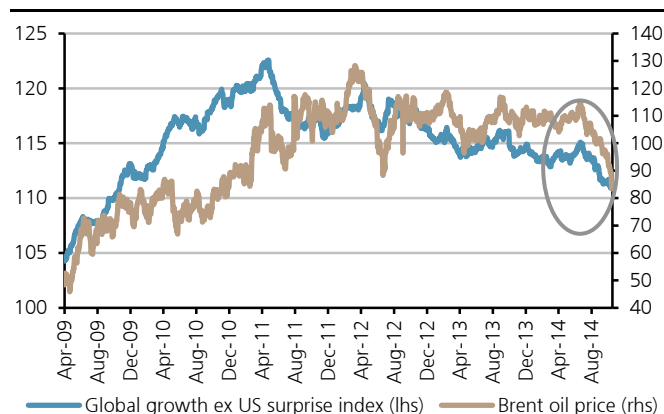
To be sure, on the demand side of the equation disappointing growth outcomes from Europe and various emerging economies (most notably China) have undeniably influenced the price of oil as well. This can be seen in figure 2 below via the still-tight correlation that exists between our global (ex US) growth surprise index and the price of oil.

Figure 1: Oil prices versus UBS's US growth surprise index in the post-crisis period



Source: Haver/Bloomberg/UBS calculations

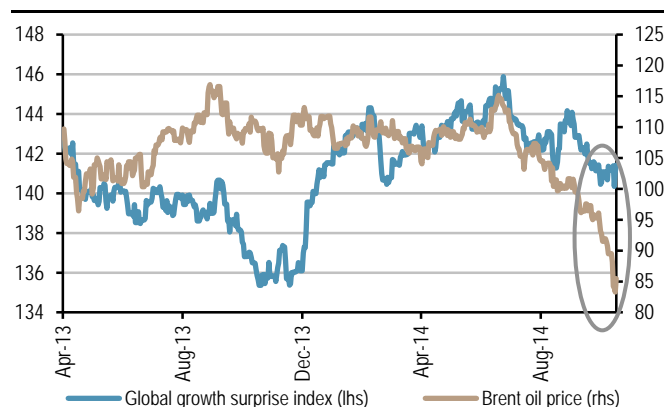
Figure 2: Oil prices versus UBS's global (ex. US) growth surprise index in the post crisis period



Source: Haver/Bloomberg/UBS calculations

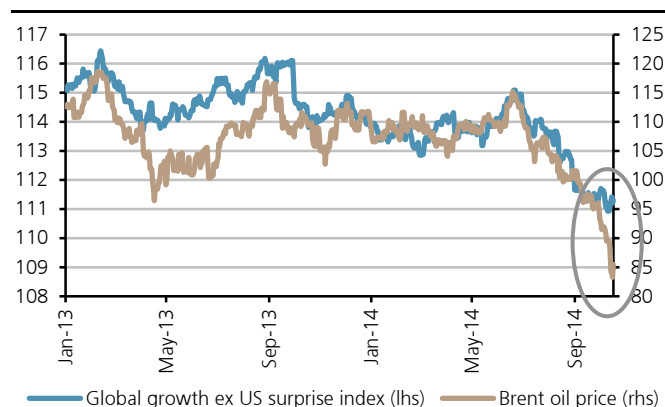
Exactly what portion of the retreat in oil prices can be pinned on demand shocks and what portion can be pinned on supply shocks is still of course very difficult to quantify. Based on the relationships in the charts below (which are drawn off a shorter sample than those above) we estimate there is presently around a \$15 discount in the price of oil relative to previously established relationships with US and global demand fundamentals. Of course that discount could reflect a number of factors, fundamental or technical. But for the purposes of our analysis it serves as a useful benchmark for quantifying what impact a weaker-than-expected oil price might have on the world economy in the months ahead.

Figure 3: Oil prices versus UBS's global growth surprise index – the last two years



Source: Haver/Bloomberg/UBS calculations

Figure 4: Oil prices versus UBS's global (ex. US) growth surprise index

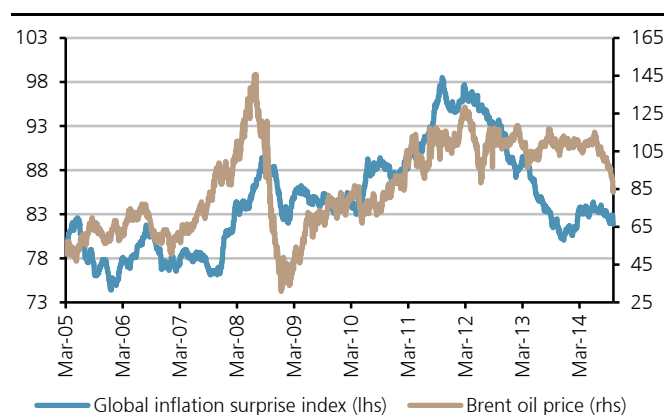


Source: Haver/Bloomberg/UBS calculations

Simulations on the OEF econometric model suggest that a decrease of \$15 in the price of oil driven will add around 0.25 percentage points to global growth after one year. Every \$15 per barrel decline in the price of oil typically transfers around 0.5% of global GDP from oil producers to oil consumers. The model assumes—correctly in our view—that the propensity to spend additional income in the oil-producing complex is lower than it is in the oil-consuming complex. That's why lower oil prices are assumed to benefit global growth.

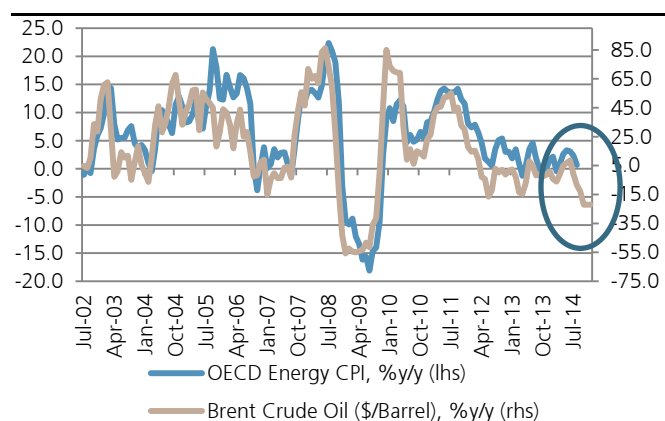
The country-specific winners and losers in this scenario hinge on the dependency of an economy on imported oil and the relative intensity of oil consumption. Lower oil prices typically generate negative inflation shocks and may also convince central banks that looser-for-longer policy settings may be warranted, which can also lift growth (see figures 5 and 6 below).

Figure 5: Oil prices versus UBS's global inflation surprise index



Source: Bloomberg/UBS calculations

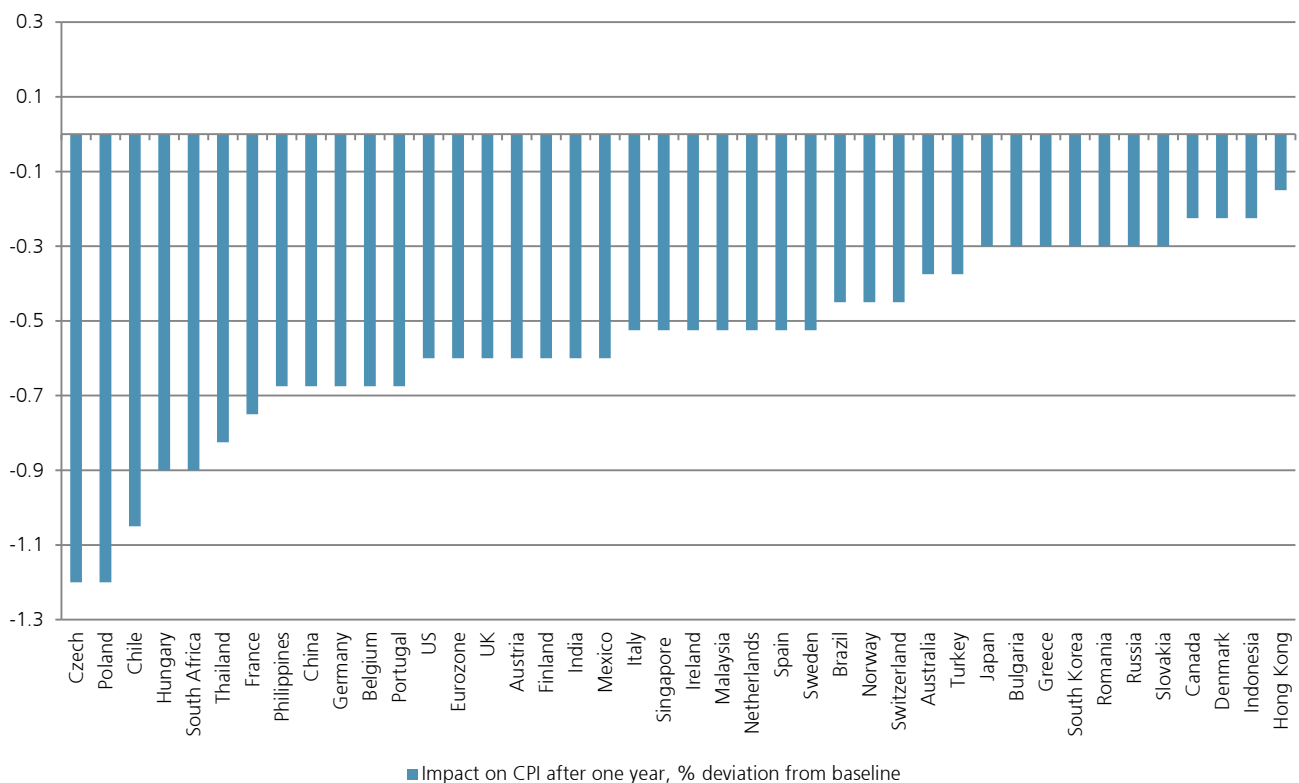
Figure 6: Oil prices versus OECD energy CPI



Source: Bloomberg/UBS calculations

The simulated impact on CPI inflation from a \$15 decline in the oil price is shown in the chart below. There are important nuances to be aware of including the current level of inflation, the current level of spare capacity in an economy and the relative weight of imported energy in that economy's consumer price basket.

Figure 7: Simulated impact on CPI from a permanent \$15 retreat in oil prices after one year

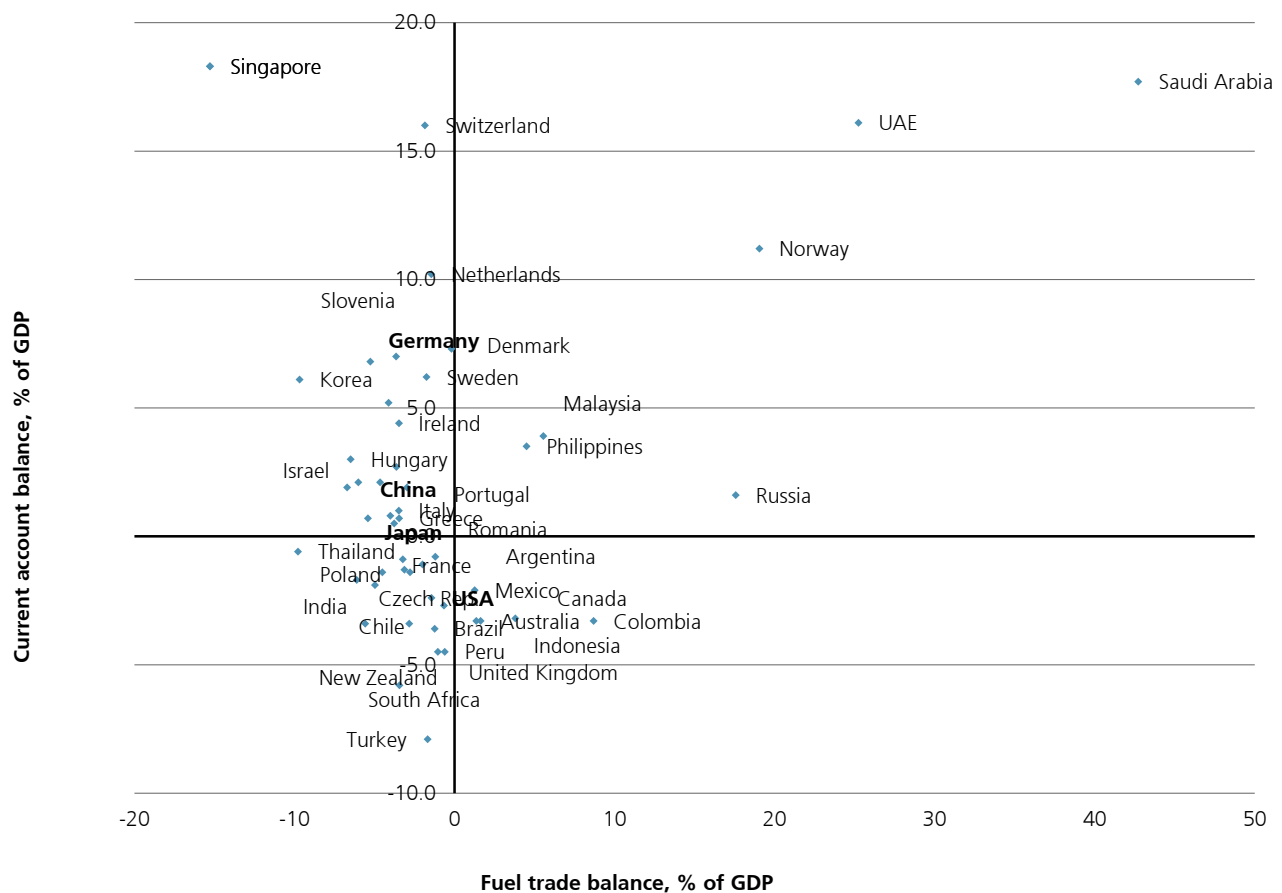


Source: OEF/UBS

Other factors are also important. An oil exporting country in the Middle East, for instance, running a high current account surplus with a decent stock of international reserves will be more insulated from lower oil prices than a country that has that same dependency on oil but with a more precarious balance of payments situation. Venezuela, Russia, Malaysia and Colombia in the emerging world are accordingly more vulnerable to weaker oil prices than the UAE or Saudi Arabia (see figure 8 below).

Equally those economies that stand to benefit the most from lower oil prices will be those that have a high dependency on imported oil and partly because of that dependency have been running up large current account deficits. Thailand, India, Poland, Turkey, South Africa and Chile accordingly look like relative beneficiaries from weaker oil prices in the period ahead using this trade-related approach.

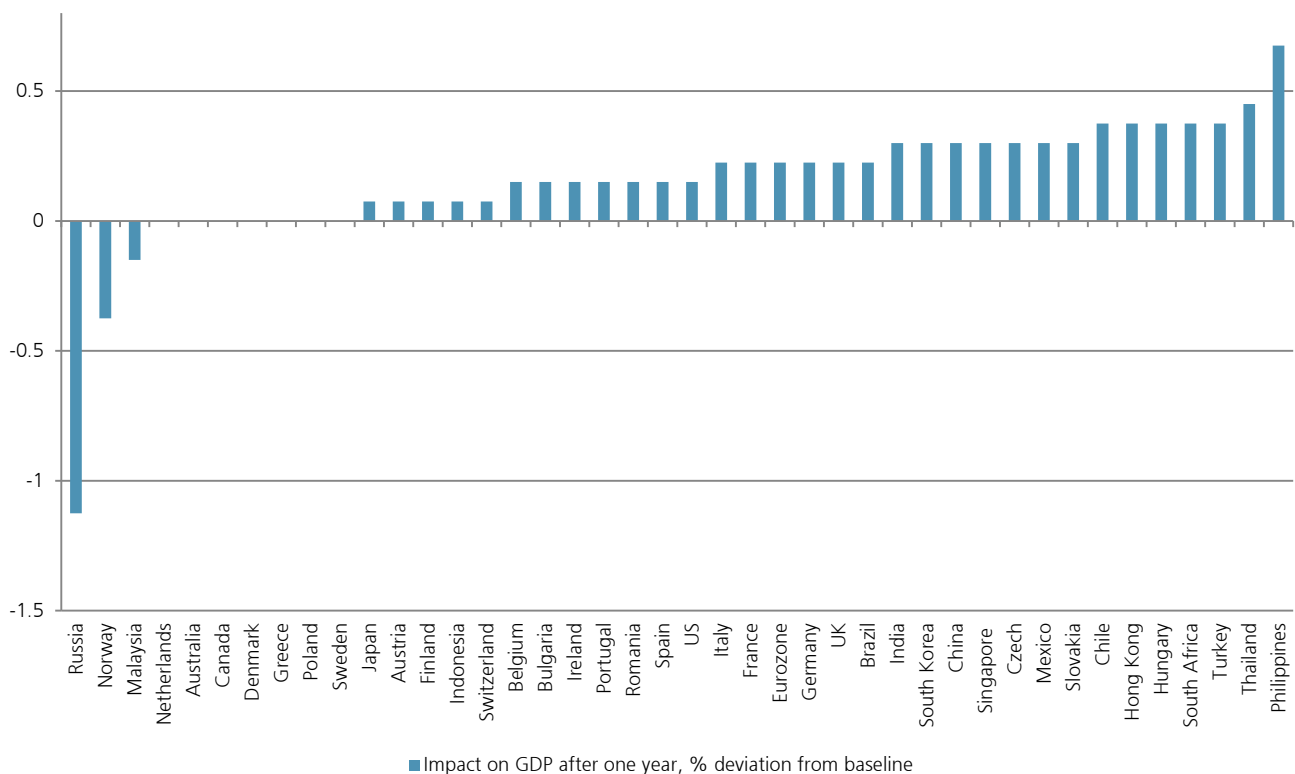
Figure 8: Oil trade and current account balance



Source: Haver/IMF/Comtrade. Based on latest annual data.

With some of those considerations in mind the chart below, which shows the one-year simulated impact on GDP from a \$15 per barrel decline in the price of oil, is worth a glance. Oil-intensive emerging countries that lack any indigenous oil reserves are typically better off in a scenario where oil prices have declined. For instance heavy oil-dependent Asian economies such as Hong Kong, China, Singapore, the Philippines, India, Korea and Thailand fare relatively well in this scenario. East European Economies such as Turkey, Hungary and Czech also benefit from lower oil prices. These economies could receive a boost to GDP of between 0.3 and 0.7 percentage points after one year if oil prices were to remain close to current levels for the next 12 months.

Figure 9: Simulated impact on GDP from a permanent \$15 decline in the price of oil after one year



Source: OEF/UBS

Oil-producing economies such as Russia and Norway clearly lose out when oil prices fall, with the former seeing a simulated impairment of their GDP of up to 1.1 percentage points.

Among large developed economies, the US and Japan are least affected. Although Japan has a relatively high dependency on imported oil the weight of energy products in its consumer price basket is quite low compared with other developed economies. That means that the real income-related benefits for Japan's consumers from weaker oil prices are relatively low compared with elsewhere. The US economy is less affected by lower oil prices than has typically been the case in the past. Prior to the shale revolution model simulations would have suggested a boost of 0.2 to 0.3 percentage points to US growth for every USD 15/bbl decrease in the price of oil. That estimate is now only 0.15%. European economies, with higher oil import intensities, are therefore more likely to benefit from weaker oil prices than the US at least according to these model-driven estimates. The fact the European Central Bank explicitly targets headline inflation (which includes energy prices) unlike the Fed which targets core inflation (excluding energy and food) could act as an additional source of support, given that ECB policy is likely to remain highly accommodative for longer when oil prices fall.

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