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The global recession and energy markets

By Leonid Grigoriev

The business cycle, the global financial crisis and the future of oil markets are currently the three most popular topics of discussion. Since the start of the recession, the international media has been quick to bring many new theories and revelations, brilliant in their simplicity, to light. Hope is the mother of invention, and amidst the crisis they cannot be disproved. However, in two or three years time 99% of this verbal chaff will have been blown away and only serious analytical work will remain.

Given the immensity of the topic, several key points should be highlighted. First, the global economic boom of 2003-2008 overstressed energy markets, especially given the insufficient levels of investment during the preceding two decades. Second, supply and demand are still the main dynamics of markets. The effect of financial speculation was important in the particular conditions developed between August 2007 and August 2008, but it did not overturn the laws of the market. Third, during the peak of the crisis in the fall of 2008, the drop in oil demand was much steeper than the natural market processes of supply reduction. However, the Organization of Petroleum Exporting Countries (OPEC), a cartel which has repeatedly been pronounced dead, managed to stabilize prices on the oil market. At this stage of the recession, a price increase from $40 to $60 per barrel could be considered a success. Finally, the long-term oil price must allow for production and investments (in particular) to recover at levels necessary to stabilize markets and prevent wild fluctuations. This price appears to be $70-$90 per barrel – rather high considering the difficult economic environment predicted for 2010.

From Boom to Bust

After 15 years of underinvestment, at prices of $20 per barrel, investment in energy capacity was being outpaced by a rapidly growing global economy from 2003 to mid 2008. Moreover, the structure of global growth shifted from developed to developing countries due to an increase in energy-intensive industries and private consumption, the result of an emerging new middle class. This applies not only to China and India, but also to Latin America, the Middle East and other developing markets. The global growth of primary energy consumption exceeded 2.5-3% per year. In developing countries the figure reached nearly 6%.

The business cycle accounts for most of the fluctuations in global demand for energy resources, particularly oil and gas. The question is: what are the trends in developing countries and how energy- and oil-intensive are they? As world economic growth accelerated from 2.5% in 1998-2002 to 3.5%, energy elasticity increased from 0.4 to 0.65, but the figures for oil remained virtually unchanged. In fact, by 2005 the global economy was left without reserves of capacity, both upstream and downstream.

In the summer of 2007, the U.S. mortgage crisis restrained the stock market. This pushed speculative capital into the commodities market, particularly oil, and helped oil prices to surge. The financial markets had a huge impact on oil prices from the summer of 2007 to the summer of 2008. The price of $50-$60 per barrel, the level to which prices fell in the winter of 2008-2009, was similar during Q1 2007. That level was supported by fundamentals, while the spike in prices to $147 per barrel was artificial and short-lived. Of course the laws of supply and demand have not been abolished from the oil markets; they just need the time and effort to work – through capital investment. However, in the current situation speculators turned out to be convenient scapegoats for both OPEC and Organization for Economic Cooperation and Development (OECD) countries, allowing them to avoid the mutual accusations on price matters that were typical of the past.

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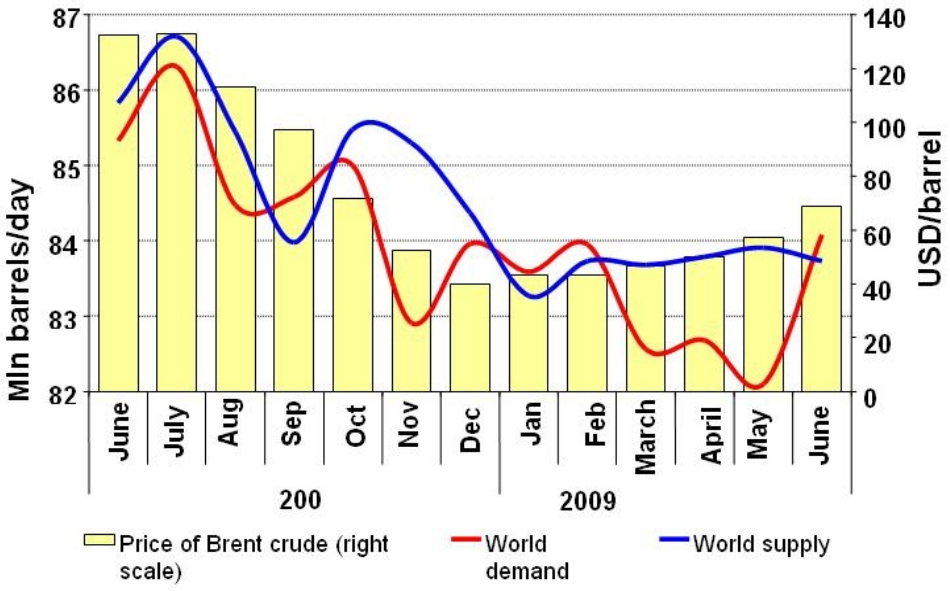
Falling Demand

As a result of the crisis, world oil consumption fell through mid 2009. Although it is still holding up in the E.U. and BRIC countries, demand has plunged in Japan and the U.S. In order to understand the mechanisms of the oil market, it's worth looking at the dynamics of supply and demand during the most severe period of the crisis, June 2008 to June 2009. Overall, it is clear that the reduction in oil supply (by OPEC) after November 2008 gradually helped to stabilize prices (see Diagram 1).

Diagram 1: Supply, demand and prices on the world oil market, June 2008-June 2009



Source: U.S. Energy Department

The role of supply and demand, the OPEC cartel and commercial reserves has again become evident in the course of the current crisis. China is supporting world crude prices somewhat with domestic demand. In forecasting post-crisis developments, it is reasonable to assume a future reduction in the elasticity of demand for energy in GDP growth as a result of government measures and technological progress, particularly after 2020.

The price shocks of the 1970s decreased the oil intensiveness of the global economy by about 50%. This did not happen instantly back then, and it will most likely not be instant now. But this is inevitable given the main trajectory of the technological and economic policies of leading countries (including efforts to combat climate change). The only question is how quickly they will be implemented. Certainly they will not be carried out during the current crisis.

A Fair Price for Oil?

Serious problems in the old system of financing long-term capital investments, which includes the energy sector, slammed the brakes on investment activity by the end of 2008. This raised the question of who will provide future funding for energy infrastructure development (which can no longer be financed by traditional means). Most likely, there will be a greater role for corporate self-financing, including for those banks and financial institutions that managed to survive, as well as various government entities, development banks and the like.

Once new methods of financing are established, what is a "fair price" for oil? Paradoxically for the crisis phase, $70-$90 per barrel is a "politically balanced" price, i.e. the price at which oil exporters do not earn excessive windfall profits (from the point of view of the consumers). Even at the height of the crisis there were no intensive international complaints against OPEC that $60 was too expensive. This price level meets the interests of both international energy corporations and national companies, as well as secures the economics behind the majority of oil investment projects. It also meets the interests of those who would like to see greater energy conservation, as this price does not undermine programs to reduce the energy-intensiveness and use of renewable energy sources.

In the current environment, developed countries can still continue a long-term policy of reducing their dependence on Middle Eastern oil and perhaps Russian gas. This appears to be an important political factor. At the same time, current prices provide exporters with certain resources for modernization, assuming that financial resources are used effectively. However, at

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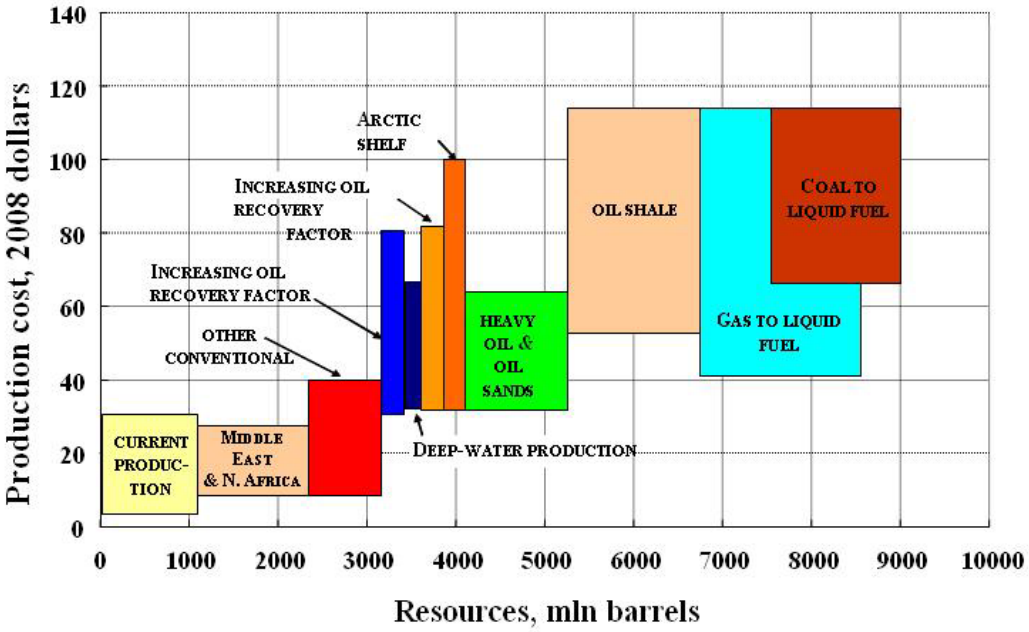
$60-$70 per barrel offshore projects are becoming problematic. Diagram 2 shows the results of IEA calculations regarding the price levels necessary to develop various types of hydrocarbons.

Diagram 2: Long-term costs of oil supply



Source: International Energy Agency

New projects in the Canadian oil sands, considered to be the foundation of America's long-term energy security, were suspended in 2009. Even if costs fall by about 25%, new projects still need a price of about $90 per barrel to be profitable.

One should also take into account the excess supply of relatively cheap liquefied natural gas (LNG), which is putting pressure on markets in the U.S., Asia and the E.U. Some LNG stockpiled under Japanese and other Asian contracts in the Pacific is now going to the Atlantic. In addition, there has been a sharp decline in oil and gas drilling around the world, and field service companies are reporting a 20-30% drop in demand for their services.

The situation on the world oil market in the short-term will, as before, depend on demand, the size of reserves and the policies of OPEC. As a result, one can expect that a certain balance will be maintained on the market over the next two years (2010-2011), until there is new demand growth. Since oil production (within older fields) in OECD countries is dwindling by 7% per year, while in OPEC countries it is falling by 3% per year, one could essentially say that developed countries are growing more dependent on oil exporters.

For instance, in terms of its balance of payments, Russia's economy is relatively well positioned with a price of $70-90 per barrel. In the crisis phase, it is probably also sufficient for oil companies. But the Finance Ministry, of course, would like to see higher prices, as revenues are not quite high enough to ease the government's fiscal burden. On the other hand, we must understand that prices in the range of $80-$100 per barrel will inevitably push the world to gradually reduce its dependence on fossil fuels. This will not happen immediately, not in the next five to ten years, but after 2020 there will probably be a relative decrease in demand.

Long-term outlook

Let's assume a scenario of moderate technological progress and strong economic growth, fueled by the revival of growth in China and other emerging markets. With global GDP growth of 2.5%, the problem of rapid growth in primary energy supplies will remain. If there is more rapid technological progress and slow economic growth, prices could plummet. However, due to the energy sector's low investment outlook over the next few years (even for a short period), there could again be a shortage in supply. We should note that the IEA Report for November 2010 forecasts the absolute increase in oil supplies.

Long-term trends will depend to a great extent on the effectiveness of energy programs in the U.S., the E.U. and China. It is unlikely that President Obama's program will be implemented easily and quickly, and it is equally unlikely that the 20-20-20 program in the E.U. will be implemented in full (especially for renewable energy), at least not by 2020. The world cannot expect to solve its energy problems, curb climate change, and

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achieve its Millennium Development Goals (including energy poverty) by spending only 1-1.2% of GDP on investment in the energy sector.

Russia produces up to 11.5% of the world's primary energy, which is five times more than its share of global GDP or population. This is equivalent to four times demand in Germany, which consumes about 2.8% of the world's primary energy. Russia exports about half of its energy and uses the other half domestically. The country also invests about 4.5% of GDP in its energy sector, not including investments abroad. International energy policy, conservation, climate preservation and development of global energy resources depend to a great extent on Russia's future choices, its effectiveness, as well as on how the country reinvests its export earnings.

The next two years will be very difficult, especially since Russia will have to adapt to a world oil price of $70-$80 per barrel and begin to effectively invest in the sector. Russia's new official Energy Strategy, approved in 2009, and lasting until 2030, also aims to change the structure of its primary energy source (away from its overdependence on gas) in favor of nuclear energy and coal, though in both cases less than has been projected over the last two years.

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