



The Need for Cooperation between Consumers & Producers

- and the lessons not learnt

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Abstract

Oil price volatility has always created pressure upon both developed and emerging economies. High oil prices have been blamed for economic downturns in the global economy. Oil producers have suffered widely fluctuating incomes. Price volatility has worsened since 2000 for a variety of factors such as geopolitics, speculation, terrorism, natural disasters, revolutions, economic growth, recession, and accidental disruptions to supply. Price volatility makes planning for both producer and consumers difficult and results in an inefficient allocation of resources in the industry creating bottlenecks in production. It heightens the investment risk putting off much needed capital investment.

J.M. Keynes³ advocated intervention in commodity markets claiming that it was in the interest of both producers and consumers and would improve the allocation of resources. In the current dynamic world the increased uncertainty of oil prices is detrimental to economic development and growth.

The growth in supply and the emergence of the possibility of Iraq becoming an additional swing producer begs the question is it now time for price stabilisation to be implemented?

This paper looks into the theory of commodity markets stabilization, accounts for the increased price volatility via highlighting the emergence of more demand and supply variables during 2000-2012, and examines the possibilities of having producers and consumers cooperating in their common interests; also to evaluate the possibility of financing spare capacities to stabilize prices.

³ John Maynard Keynes, British Economist (1883 –1946).

Introduction

Significant oil price fluctuations have considerable economic impact upon the world economy. The oil price shocks have been quickly followed by an economic downturn in the major economies. Oil producers are often seen as the economic priors of economic recession. At each oil shock and at the onset of a following recession we see a renewed call and interest in international cooperation to regulate energy markets as both producer and consumer countries suffer. The fact that the volatility of oil price fluctuations has increased since 2000 creating further economic instability via fluctuating costs of production, rates of inflation and investment risk is of increasing concern. Oil producing nations suffer widely fluctuating incomes disrupting their economic development. Therefore the case for oil price stabilisation seems to be stronger than ever before. The possibility of creating buffer stocks from emerging spare capacity has never been stronger with the low cost producers of Saudi Arabia, Kuwait and UAE likely to be joined by Iraq in the near future. Therefore, the reality of putting economic theory into practice is now upon us. The recognition of the problem of price volatility in commodity markets and the possible solution is far from new it is just that neither producer nor consumer have recognized their common interests and have failed to learn the lessons of economic theory.

Keynesian Theory

J M Keynes suggested in a series of writings in the 1920s/ 1930s that countries whose incomes were largely dependent upon the export of primary commodities would experience undesirable fluctuations in incomes due to price fluctuations just as he did himself from investments in such commodities. Such income instability was undesirable to the economic wellbeing of primary producers and their populations and to industrial economies as it amplified the fluctuations in the trade cycle. Keynes advocated government intervention via buffer stocks to stabilize price fluctuations as the incentives for the private holdings of sufficient stocks were negligible due to high costs of holding stocks and the risk factor of predicting future prices.

Keynes claimed that the excessive price fluctuations interfered with production planning for both the producers and the consumers of primary commodities highlighting the need to regulate supply to dampen down such price fluctuations. These volatile free markets were in fact operating against the interests of both producer and consumer.

“When prices rush up, uneconomic and excessive output is stimulated and the seeds are sown of a subsequent collapse... Assuredly nothing can be more inefficient than the present position by which the price is always too high or too low and there are frequent meaningless fluctuations in the plant and labour force employed. “(JMK Economic Journal September 1938 The Policy of Government Storage of Foodstuffs and Raw materials P459,460). The

recent experience of the high cost oil producing fields such as the tar sands of Alberta Canada springs to mind here.

The Call for Oil Price Stability

The call for oil price stability comes from across the world from both producers and consumers alike. Commentators in the USA blame oil producers and high oil price hikes for their economic recessions and often call for energy independence to insure against price fluctuations. In Africa both producer and consumer nations call for stable oil prices to enable viable economic planning. Commentators reiterate Keynes' observations.

“The present boom and bust paradigm is not healthy for oil trade for it not only discourages investments in the oil industry but also inhibits research and development in the industry. Most importantly, the introduction and application of high technology and scientific innovations in the industry will slow down and significantly decline. When the market is not steady with regard to price and production, the marketers including the producers and buyers cannot make long term planning and commitments to the industry. This encourages capital flight from the industry and makes it difficult to attract fresh capital needed for investment and innovation.

In Africa price instability does not only affect oil producers but it impacts upon non producers in the continent. The non-oil producers will tell you outright that energy takes the lion share of their budget and they would be able to make realistic budget and economic planning if they were able to predict the market. Therefore oil price stabilisation is good for all in the continent. (Emeka Chiakwelu Modern Ghana 15.6.2009).

Oil price volatility has increased since 2000 according to Tom Therramus. His statistical studies not only show the increased volatility but also show a degree of correlation and causation to fluctuating rates in inflation and investment. It is hardly surprising that many developing countries attempt to protect themselves from oil price fluctuations via price controls.

Extensive price controls and subsidies on refined product prices across most of Asia and the Middle East ensure that households and firms are insulated from the rise in oil prices but in the major economies of Asia the high cost of such price controls have now become prohibitive due to large increases in consumption and as they have been gradually removed or reduced and the call for oil price stability has coincidentally increased. However, as Darbouche & Fattouh (2011) have pointed out the Arab uprisings will make it even more difficult for MENA oil producers to rid themselves of price subsidies on oil and gas products for fear of inciting more uprisings.

OPEC 's High Price Collaboration

The call for price stabilisation grows but in reality for the more than fifty years attempts have been made to try and ensure price stability. OPEC's constitution of 1960 states in article 2B *"The Organization shall devise ways and means of ensuring the stabilisation of prices in international oil markets, with a view to eliminating harmful and unnecessary fluctuations."* Has OPEC therefore failed in its mission to maintain price stability or have geopolitics, war, the rise of non OPEC producers, speculative investment and the pressure to maintain a high and increasing oil price from both inside and outside of OPEC led to price fluctuations and a general rise in the price of oil?

Undoubtedly, the major fluctuations in price have usually been beyond of the control of OPEC created by geopolitical conflicts, regional wars and latterly speculative financial investment. Although OPEC has been labeled a cartel by western commentators as Chalabi points out it has failed to act as one. It has failed to maintain its market share allowing self-defeating pricing and production policies to reduce its influence upon the market. It has allowed the price to rise at the behest of high cost non OPEC oil producers such as the USA leading to the development expensive offshore oil fields such as the North Sea and Gulf of Mexico. Even expensive and environmentally sensitive fields such as Alaska have become potentially viable under such policies. On shore expensive techniques such as tar sands oil and shale oil have come on stream whilst Middle Eastern low cost fields remain neglected and underdeveloped as high prices and increasing revenues from current capital investment have been sufficient to satisfy OPEC members and their fiscal budgets. Resources have been wasted as large amount of gas has been flared and waste management techniques ignored leading to environmental damage.

Incentives to plan to meet long term demand trends have been few for OPEC members as revenue surpluses have been large and political sensitivities have encouraged a high price strategy.

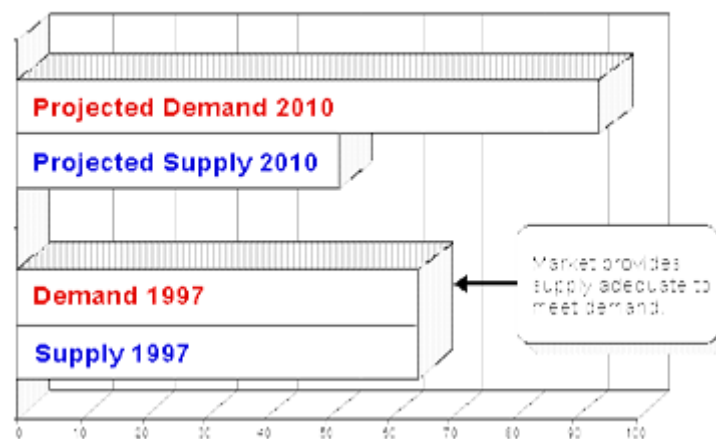
OPEC members have until recently failed to take seriously long term investment to increase production capacity looking instead to maximise short term revenue from existing capacity especially as OPEC members have many different goals and interests at stake. Disparate goals have usually made negotiation of any agreement extraordinarily complicated and often adversarial leading to the maintaining of a status quo rather than looking for solutions to the instability of the market by expanding investment in capacity building. Chalabi is critical of this situation claiming that *"with the exception of Saudi Arabia, OPEC has done nothing to reinvest its colossal oil revenues in drilling activities, which have remained stagnant if not in perpetual decline, ever since OPEC first took over the industry from the oil companies in 1973."* (Chalabi, 2010)

It is quite apparent that OPEC has failed to act as a cartel, losing market share to higher cost producers when it has the potential to keep prices low via expanding production and the

arrival of new producers with lighter oil has only served to reduce its market influence and share. In a tight market with many disruptions to the supply chain due to geopolitics and wars, Saudi Arabia has maintained its position as the market's swing producer attempting to dampen price fluctuations by altering supply but even this role became redundant in the price speculative investment bubble of 2008 when high prices were driven up by speculators in the futures market drunk on peak oil theory. The Arab spring has also led to Saudi Arabia being much more conservative about its role as a swing producer.

Forecasting or just guessing?

Oil economists and market commentators have been surprisingly accurate at predicting long term demand for oil but spectacularly wrong at predicting supply. The industry has virtually displayed a long term price elasticity of supply that is unitary as supply has kept up with the increases in demand. A fact that seems to be lost on peak oil theorists.



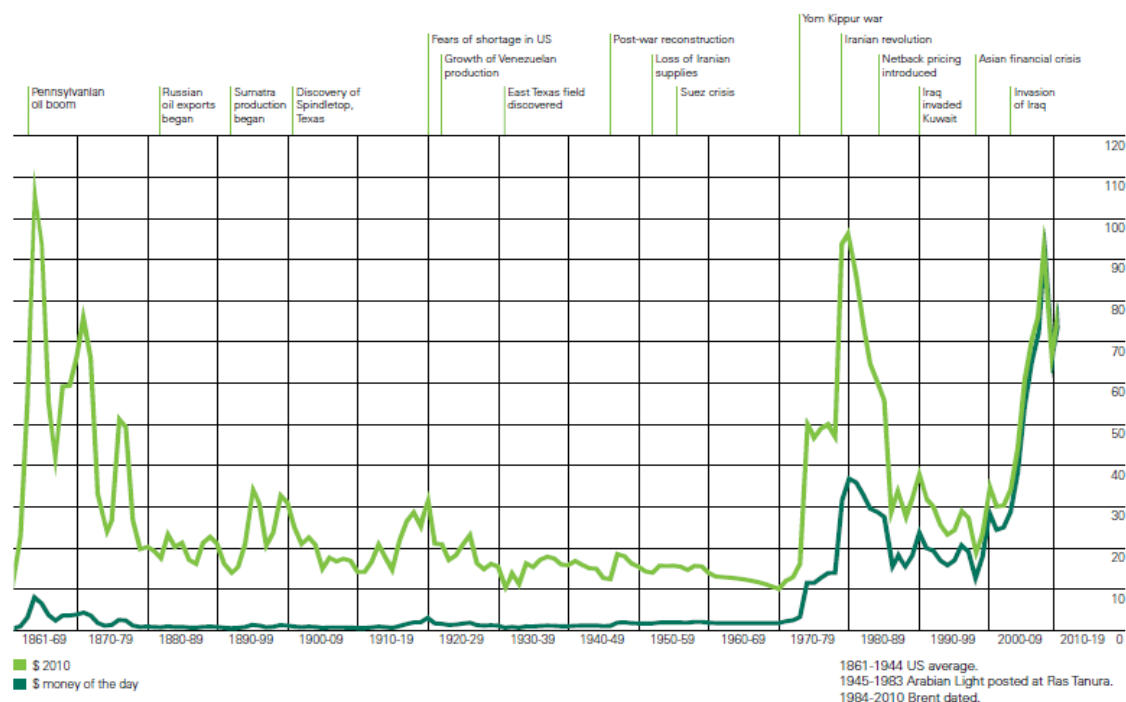
1997 Oil Predictions and 2010 Projection, source: www.iraqenergy.org

The failure of many economists and market commentators to predict with any accuracy the price or the capacity to produce stems from a failure to understand how commodity markets work despite extensive writings on the subject by J.M.Keynes in the 1920/30s. Keynes highlighted the need for intervention because of the adverse effects of price fluctuations upon both the producer and consumer. Market analysts can be so spectacularly wrong yet they often influence the short term pricing adding to volatility. Eminent economic commentators in the 1980s were confidently predicting that North Sea oil revenues would wipe out the UK's National Debt by 2010.

Oil Price Volatility

Recent studies show that oil price volatility has increased since 2000 and the chart above both confirms that and highlights price volatility from the 1960s when OPEC came to the

scene within a few years the system was moving from the posted price of the cartel of the major oil companies to referencing oil prices with Arabian light, with OPEC setting up and determining reference prices of Arabian light, the system was still volatile resulting in the price hikes of the late 70s and early 80s, and the collapses of the mid-80s. Price variations from \$20 from month to month and from year to year, sometimes \$30-40 dollars were common; and the really damaging hike took place in 2008 when prices went up to 147 USD (the graph shows average of nearly 100 dollars, that's the early average not the weekly or monthly which went up to 140) and then fell down to under 40 dollars with a variation of almost \$100. Calculating that on the bases of traded oil in the market which is more than 50mln barrels daily that's a huge number, and the result is disastrous for consumers and producers together.



Oil Price Volatility – BP Statistics, 2011

Despite the fact that the surplus capacity of Saudi Arabia is used to determine prices as a method of a stabilizing market, fluctuations still occurred as speculators gambled when surplus capacity available to KSA is sometimes reduced to low levels when it goes below 4mln barrels/daily. Speculative forecasting based on inventory levels is common place in the industry as Ye, Zyren and Shore (1997) pointed out “Because petroleum inventory levels are a measure of the balance, or imbalance, between petroleum production and demand, they reflect changing market pressures on crude oil prices, and thus provide a good market barometer of crude oil price change in the short run. “ Over the years, various models have been developed to forecast price and even price volatility (Sharma 1998). “Forecasting volatility is fundamental to the risk management process in order to price derivatives, devise hedging strategies and estimate the financial risk of a firm’s portfolio of positions.” (Sharma 1998) Models based on future price options and autoregressive conditional heteroscedasticity (ARCH) have usually failed to predict with any accuracy the oil market and those who defend these models claim

the market has fat or thick tail which in layman's terms means that there is a wide distribution of possible events and variables which make the market difficult to predict.

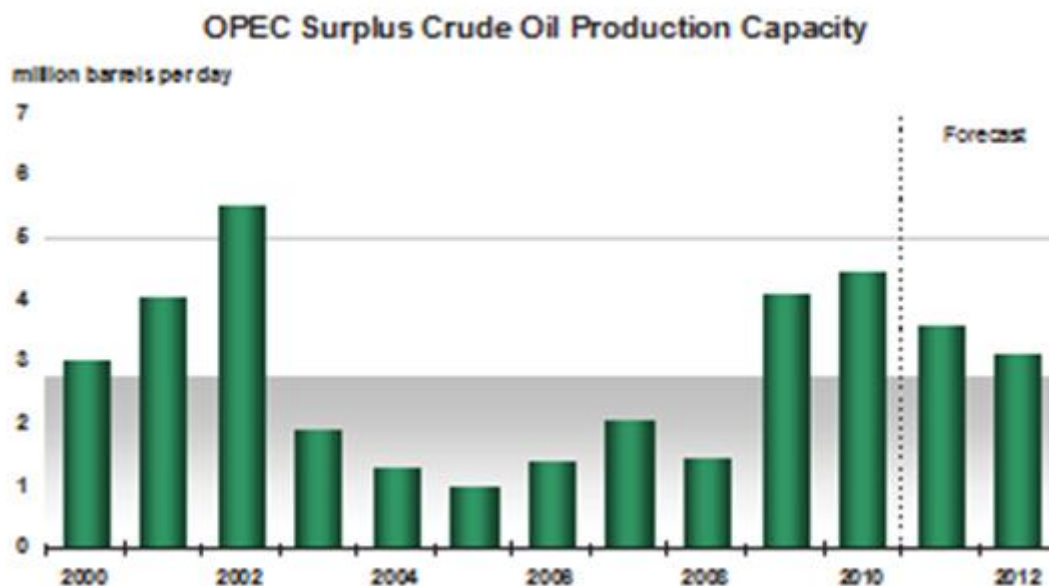
Studies in the 1990s such as Verlekar (Adjusting to Volatile Energy prices 1994 Institute of International Economics) refuted Keynes' proposition "schemes to establish permissible bands for price movements are rejected as costly and impractical, as is the concept of a buffer stock." Support for Friedman's traditional speculative stabilizing theory (1953 from) Verlekar who claimed that the development of the futures market and hedging was bringing about a degree of price stability and further development of the futures market would ensure a degree of price stability as future prices would regulate supply and investment in the industry. His free market approach allied to carbon trading was deemed to be the way forward. Empirical data would suggest that the futures market had a relatively stable long term equilibrium price of \$20-\$22 in the early part of the century but after 2004 uncertainty grew prices rose and long term prices reflected the rising spot prices. (Bassam Fattouh, March 2011 Uncertainty, Expectations, and Fundamentals: Whatever Happened to Long-Term Oil Prices?)

Long term lower future prices became a thing of the past as commentators and speculators advocated a buy now philosophy. Irrational speculators and the herd mentality appeared justifying the views of Lux (1995) and others who claimed that self-fulfilling prophecies of irrational behaviours distorted commodity markets creating speculative bubbles that were far representative of the fundamentals of supply and demand. Theories of the noisy speculators and the herd mentality seemed to be acted out in the oil market between 2004 and 2008. Other studies such as those of Bahattin Buyuksahin support Friedman's view "that speculative activity does not affect prices. In addition, that speculative activity actually reduces volatility". Regardless of whether speculative activity reduces volatility or not the level of volatility experienced in the oil market has seemingly widespread economic consequences that impinge substantially upon the world economy.

From 2005 to 2008, herd speculators fed on a diet of peak oil theory and doomsday scenarios of oil shortages due to the insatiable demand from China and India saw only one way positions on the futures market forcing up the oil price to unprecedented highs. Though, the collapse was seen by even free marketers as inevitable as investment markets adjust to overcome speculation in the long term, the damage had been done bringing on the onset of economic recession as aggregate demand fell and rising energy and transport costs reduced purchasing power.

Once again, Keynes' predictions on the workings of commodity markets and their damaging speculation and time lag effects rang true. He claimed that in markets where prices were rising purchasers would accelerate their purchases expecting further future price rises and therefore stoking demand. In falling markets the opposite was true with purchasers postponing purchases expecting prices to fall further and they would be vindicated by their own decisions reducing demand. The scenario only led to widening price fluctuations in the commodity markets. The resulting fluctuations would dissuade producers from increasing investment in the market due to the higher risk factors of wide swings in revenue.

The evidence is strong the chart below shows surplus production capacity declined drastically after 2002, and when 2004 it was almost less than 2mb/daily, there was the attack of speculators on the price. Speculators are not refiners, they don't produce oil they don't use oil, they speculate on paper money; and they think when prices could go up they play the market, and when spare capacity is declining that's the time when they choose to show themselves up in the market, and more or less they drove the prices up – it went up during early 2008, and we see this repeated time and again when spare capacity is reduced below 4mb/daily – here it went below 2mb/daily. Every time spare capacity is reduced in the past it was followed by a price hike which is either real buyer demand of more often also speculation and hedging against possible price rises. But more often than noticed the speculators.



EIA: Short-term Energy Outlook, April 2011

Consequently, the case for intervention grows as oil price volatility impacts upon world economic growth. Since 2000 Saudi Arabia's swing producer role has seen significant adjustments in OPEC supply, sometimes several times in a year. OPEC had deemed to keep spare capacity at some 6mbd; but as demand grew spare capacity was often less than half this figure. Shortages in a tight market have been averted by judicious action by Saudi intervention, increasing output due to the appearance of new producers, increasing output from non-OPEC producers and growth in demand from China and India being partially offset by falling demand in Europe and North America due to fuel efficiency measures and the adoption green energy policies. Bottlenecks in production began to appear in Asia where refineries were close to capacity at times whilst European and American refineries had spare capacity which occasionally took up some of Asia's demand. It would seem that more by luck, allied to some judicial intervention, than good judgement and planning that

the industry has kept up with demand especially when China's demand virtually doubled in the first five years of the century.

Supply & Demand now less predictable

The case for intervention is further strengthened by the increased number of demand and supply variables in the market which can only increase the price instability and uncertainty creating further obstacles to long term capital investment. On the demand side predicting economic recovery given the current Euro Zone crisis and the slowdown in Asia makes forecasting demand difficult. Added to this demand factor are the growth rates in alternative energy adoption given the uncertain changing energy policies of the major economies, the impact of the removal of price subsidies in Asia and other developing countries and alternatively the tax increases upon carbon fuels in developed economies, alternative transport technologies such as the electric car and innovative public transport developments are just some of the major factors effecting demand. Not only is total demand difficult to predict but there is now a much higher demand for lighter oil for refining because of stricter environmental rules which has created a second scramble for Africa as more of its oil becomes available at the expense of the sour Middle Eastern oil. However, capital investment in desulphurisation plant could alter this situation.

On the supply side there are significant developments in Africa with increasing amounts of light crude been found and new fields being developed such as Ghana and Uganda, new technologies are being applied to both new and current fields to increase productivity, but human and capital deficits exist as bottlenecks in the supply of skilled workers and equipment occur, new operational challenges in unfamiliar environments are being undertaken, the development of the extensive low cost oil fields of the politically volatile Iraq allied to the geopolitics of other MENA countries and especially the recent concern over Iran all contribute to the uncertainty of supply.

With the most conservative forecasts of demand being 104mbd by 2020 security of supply becomes a priority for world economic growth. Four fifths of the demand increase is predicted to come from developing countries as transport becomes more accessible to their populations. Analysts are more positive about meeting demand as peak theorists are replaced by plateau theorists but they are more uncertain about costs and therefore price. High cost producers will undoubtedly wish to see prices remain high but new African producers and the low cost new Iraq will be looking to increase production at any price to increase their revenues. Analysts claim that \$80 to \$90 a barrel is an acceptable fair price to pay and receive if current and the predicted demand is to be catered for. Other claim that marginal costs are rising and that they have reached \$90 outside of OPEC and Russia . However, price fluctuations have been considerable above this level in 2012 as once again geopolitics impacts upon the market and will probably delay economic recovery in the developed world. The need for Keynesian buffer stocks has never been more apparent than today.

The uncertainty in the market has been reflected in growth of countries around the world building up their strategic reserves of oil. According to EIA statistics global strategic reserves

have risen to 4.1 billion barrels. The 28 member countries of the IEA have built up 90 days of stocks and even some of the oil exporting nations of IEA such as Denmark and the UK have built up reserves. China has increased its reserves. Previously such reserves were built up to cope with an energy crisis leading to shortage in supply but now countries have an additional objective of protecting their economies from the speculative over pricing of oil.

The market has remained tight with little spare capacity and the nature of the many recent disruptions which have been unpredictable have led to further speculation about future supply and price. The Arab spring, the Libyan conflict and American attempts to isolate Iran have driven the price upwards once again yet economic recovery and oil demand have yet to show a significant increase. Bassam Fattouh Oil Market Dynamics in Turbulent Times (April 2011) rightly claims that changes in the price reflect changes in perception of future geopolitical disruptions, macroeconomic data flows and commentaries, speculative investment rather than current demand and supply conditions. Buffer stock intervention would eliminate such market price speculation.

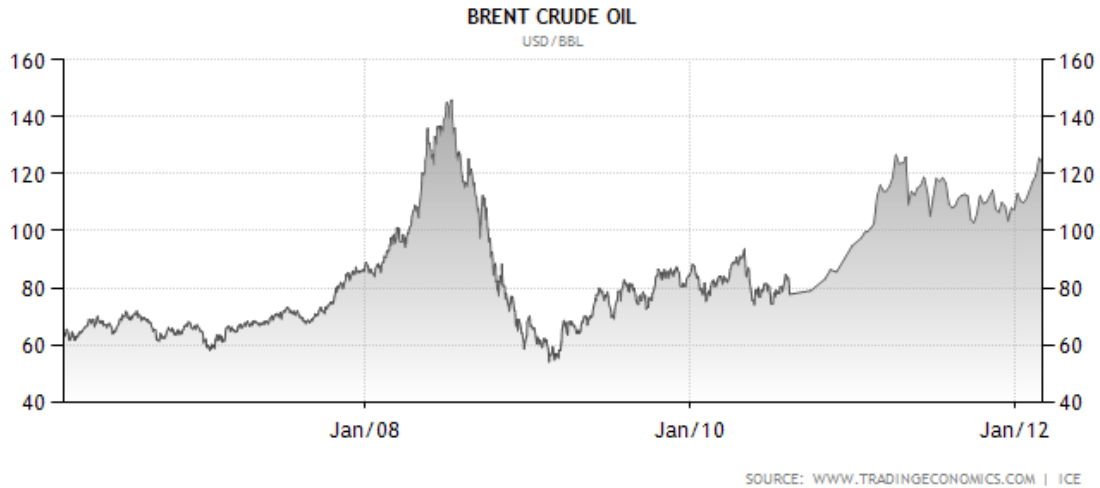
2011/2012 Events Strengthen the Case for Intervention

Events of 2011/12 highlight even more the need for intervention in the market. The Arab Spring and in particular the Libyan crisis again created abnormal market conditions. In a year of relatively static demand due to poor economic growth in North America and Europe prices rose considerably due to a shortage of light oil due to the Libyan crisis, geopolitical speculation and a reluctance for Saudi Arabia to act as a swing producer due to probably not wishing to lower the price which might have undermined the financial position of fellow Arab nations who were facing possible uprisings from buying off uprisings by increasing public expenditure. Furthermore, Saudi Arabia was in need of higher revenues to maintain its fiscal budget expansion. Global oil insights estimated the following scenario:

	\$bn	\$/bbl
To cover current expenditure (less other income) amounting to ...	120	53
... as above, but including capital expenditure of \$70bn reaching ...	190	79
all of the above plus a contingency reserve of \$10bn to reach ...	201	83

OPEC: The set of OPEC basket prices needed by KSA in 2011

With some Arab neighbours wishing to see a price even higher than \$83 to maintain their fiscal expenditures it is easy to see why the Saudis were reluctant to intervene in the market especially as action might have triggered a price collapse due to the speculative nature of the market which has often seen large readjustments such as 2008 and 2009 with the price falling by more than \$100 from the peak of \$147 to \$40 within a few months.



Allied to this were large differences in market analysts’ predictions during 2011 about economic recovery in North America and Europe, China’s demand for oil and whether or not the oil market was oversupplied. The latter was certainly untrue in the case of light oil as the Libyan output ceased and lower than expected production in Nigeria led to shortages. It also became clear that price speculation based on often dubious geopolitical forecasts had returned to the market pushing prices up especially as seasoned OPEC analysts were claiming that the market, with the exception of light oil, was well supplied.



OPEC: Oil Price Volatility – Monthly OPEC Basket

Falls in both Non –OPEC (February & March) and OPEC production (March & April) only seemed to heighten speculation rather than convince a market that demand was static and supply was adequate. Prices remained some \$15 over even the highest marginal cost

producer. This was despite forecasts of Non-OPEC production to be increasing later in the year and production was already up on the previous year. It is widely recognised that the majority of Non –OPEC producers produce as much as they physically can regardless of market conditions as they pursue revenue. The increasing price made economic recovery uncertain and was deemed by some analysts at a level that choked demand. In June the IEA intervened in the market releasing 60mb at 2 mbd over thirty days justifying the move by the inability of OPEC member countries to offset the loss of light, sweet Libyan crude oil and OPEC’s failure to respond to the expected rise in demand. This was only the third time the IEA had ever intervened in the market and previous interventions. Previous interventions were agreed by IEA member states only to fill lost supplies in 1991 at the outbreak of the first Gulf War following Iraq's invasion of Kuwait, and in 2005 after Hurricane Katrina damaged offshore oil rigs, pipelines and oil refineries in the Gulf of Mexico.

	2012	2011											
	Jan	Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan
Algeria	1,230	1,250	1,250	1,270	1,280	1,290	1,290	1,280	1,280	1,280	1,280	1,260	1,250
Angola	1,720	1,770	1,770	1,700	1,700	1,620	1,650	1,520	1,580	1,500	1,700	1,650	1,640
Iran	3,500	3,520	3,550	3,570	3,590	3,580	3,580	3,610	3,630	3,600	3,610	3,630	3,640
Iraq	2,766	2,852	2,842	2,775	2,783	2,854	2,788	2,796	2,731	2,672	2,519	2,717	2,717
Kuwait*	2,700	2,730	2,690	2,650	2,600	2,550	2,500	2,500	2,490	2,480	2,480	2,350	2,300
Libya	1,100	825	600	365	110	10	30	40	60	150	300	1,380	1,540
Nigeria	2,100	2,050	2,130	2,000	2,250	2,300	2,350	2,250	2,300	2,200	2,100	2,220	2,280
Qatar	790	795	795	800	800	810	810	810	810	790	810	800	790
S Arabia*	9,650	9,800	10,047	9,500	9,450	9,800	9,700	9,350	9,050	8,770	8,600	9,125	8,900
UAE	2,540	2,500	2,490	2,450	2,450	2,550	2,510	2,490	2,450	2,500	2,510	2,470	2,400
Venezuela	2,350	2,350	2,350	2,370	2,370	2,350	2,350	2,300	2,280	2,210	2,210	2,210	2,210
Ecuador	495	495	495	495	500	490	480	480	480	490	500	480	500
Total	30,941	30,937	31,009	29,945	29,883	30,204	30,038	29,426	29,141	28,642	28,619	30,292	30,167
OPEC 11	28,175	28,085	28,167	27,170	27,100	27,350	27,250	26,630	26,410	25,970	26,100	27,575	27,450

MEES Estimates: OPEC Crude Oil Production Jan 2011 – Jan 2012, ‘000 B/D

Though the intervention was small equal to 17 hours of global consumption or 3 days of US consumption its impact upon the market was immediate. Dated Brent dropped \$5.65/b on the day to \$108.14/b and then a further \$3.25/b the next day. ICE Brent futures flipped from backwardation to contango, only for the Aug/Sep spread too narrow to parity when the IEA said a higher proportion of refined products as oppose to crude would be released in Europe. For physical, as of June 27, cash markets remained backwardated, but the IEA release slashed the Jul/Aug and Aug/Sep spreads from \$70-74 cts/b to just 12-15 cts/b.

Half of the intervention stock came from the US SPR which had reached record levels and had been used in the past to help with stock shortages and even budget deficit management. This intervention was the first time price consideration had been the driving force though the IEA claimed that it was making up a supply deficit. “Today, for the third time in the history of the International Energy Agency, our member countries have decided to act together to ensure that adequate supplies of oil are available to the global market,” Mr. Tanaka said. “This decisive action demonstrates the IEA’s strong commitment to well-supplied markets and to ensuring a soft landing for world energy markets.”

The intervention sent a message to OPEC that IEA could also intervene quickly in the market and that over inflated prices were not in the interest of the world economies especially with so many of them in a fragile state of economic recovery. Though some members of OPEC saw this as a challenge:

Iran's OPEC Governor Ali Khatibi said June 27 that the International Energy Agency's decision to release 60 million barrels of oil from emergency stocks over 30 days was "a dangerous game" and accused the US of trying to put pressure on some Middle Eastern countries. He described the IEA's move as interference in the global market and said it would have no long-term impact on market direction. *Energy Economist / Issue 357 / July 2011*

In a period of relatively static demand the average price of Brent oil has risen from \$94 average price in 2008 to \$109 in 2011 as supply constraints emerged from the Arab Spring, the Libyan crisis and lower than expected Nigerian supply.

2012 began with a further surge in price due to concerns over the Arab spring and imposition of trade sanctions on Iran. Recovery in demand began to appear adding to pressure upon price creating even more volatility and commentators speculating that oil would never return to below \$100 especially as the marginal cost of a barrel of oil in non-OPEC producers apart from Russia had risen to nearly \$90. Several research institutions in America in 2011 have quoted \$90 being representative of the high cost oil fields such as the tar sands of Canada (Bernstein Research & Macquarie Research) This further volatility in price in 2012 only enhances the case for price stabilisation.

The Need for Price Stabilisation

Price stabilisation would definitely benefit the mono-commodity economies of OPEC and the new African producers. Avoiding Dutch disease would be possible as they could plan to build up sovereign wealth/rainy day funds abroad preventing the over valuation of their exchange rates and avoiding damage to other domestic industries. The wealth funds would secure their futures enabling future generations to benefit from the development of these resources. Oil producers have suffered from widely fluctuating incomes due to price volatility Anshasy & Bradley (2009) found "that oil price changes have a direct and material impact on government spending growth. In addition, higher oil price volatility can induce government prudence, reducing the growth rate in government spending, especially in inflationary periods." With oil price stabilisation fiscal break even prices could be determined and assured for oil producers making planning government expenditure and domestic capital formation more certain. Tentative estimates by Ali Aissaoui (2011) of current fiscal break even prices for OPEC members range from \$30 to \$100. Currently, many OPEC members wish for higher prices than the break even to ensure a surplus to cover uncertainties in oil prices and in the geopolitics of the region. Therefore the likelihood of oil being over priced for the remainder of 2012 is high further damaging global economic recovery.

IOCs and NOCs would be in a better position to plan long term capital investments to coordinate the development of the industry creating more job opportunities rather than the current hand to mouth strategies which sees NOCs scrambling to increase capacity when fiscal deficits appear on the horizon due to the wide price fluctuations on the world market. Commentators such as Bassam Fattouh are concerned about the tight conditions in the market, the low level of spare capacity and the slowdown in investment in both OPEC and non OPEC producers and are predicting oil supply shortages. Intervention means that IOCs and NOCs would be in better position to develop high cost production methods as return on capital employed though relatively lower would be more certain. The reduction in risk according to Keynes was the key to stabilising commodity markets and encouraging investment in the industries and thereby aligning the interests of both the producer and the consumers to the benefit of both.

Producer-Consumer Cooperation

However, analysts such as Darbouche & Fattouh suggest “there is a perception that producer-consumer relations cannot be relied upon to smooth the oil markets adjustment’s to disruptions; indeed their actions could exacerbate price volatility.” Though this view may be held by some there has yet to be significant cooperation between producers and consumers to make such judgements. The varied interests of producers may seem an impossible obstacle to overcome but prices are well above the marginal costs of even the highest cost producers setting a market price band with the emergence of a new swing producer should not be impossible given the desire for economic recovery. Spare capacity exists in the Gulf Cooperation Council (GCC) states of Saudi Arabia, Kuwait and the UAE. As Darbouche & Fattouh point out “Their reserves are probably the cheapest in the world (with the exception of Oman) to find develop and produce.....according to IEA (2005) estimates of only \$3 to \$5 a barrel”. Though these cost estimates are somewhat dated the principle holds true, the cheapest producers have the capacity to build up stocks which could give the world stable oil price at the lowest possible cost.

The potential production capacity of the new Iraq allied to Saudi Arabia’s swing producer experience and reserves creates an opportunity to increase spare capacity and creates the possibility of building up sufficient buffer stocks to enable price stabilisation. . Falah al-Amri, director of the State Oil Marketing Organization, showed the audience at the Alwiyah Club the potential of Iraq in the next few years showing that it could well become a swing producer stating that "Our plan is not to flood international markets. This is not our goal. If we have a spare 2 or 3 million barrels per day, then so be it," This swing capacity allied to that of Saudi Arabia, Kuwait and the UAE could be foundation to stabilising oil price and ensuring that production kept up with demand in boom times.

Other producers such as Iran, Libya, Venezuela, and Russia may also be in position to contribute to building up spare capacity. Past experience has shown that once spare capacity falls below 4mbd speculation sets in. Successful market stabilization will probably require probably 6 mbd at all times or more. A viable model of financing the spare capacity stocks needs to be developed which is acceptable to both producers and consumers.

Consumers should invest in developing spare capacity in high reserve low oil cost producers rather than spend billions more dollars building up inflated high price strategic stocks.

A degree of regulation is required. Free markets never worked in commodities especially oil. The world did cooperate in accepting the necessity for regulating banks and financial institutions after the collapse of the boom. It should accept that the paper market of speculators in the oil industry should be also accepting some degree of regulation, because without that we cannot manage the system.

A possible mode for stabilization is to have a substantial fund which does the following things:

First, invest in sufficient surplus capacity to manage the market to encourage countries like Iraq, KSA, Venezuela and others oil reserves holders who want to contribute to spare capacity fund. Whether this capital is a joint venture between producers and consumers needs to be decided upon. The swing producers/investors need to keep their revenues earned in the tight period to service their spare capacity capabilities and gain a suitable return on their investment.

The second corollary of this stabilization fund is that this fund buys paper barrels when there is surplus in the market and prices are going down meaning that they pay money to the producing countries so that that country does not produce. They buy paper barrels when prices are going down buying on the cheap side, and when the prices go up when demand increases and the pressure is on production they sell those paper barrels and actually use that spare capacity in a timely fashion to stabilize the market. Therefore, the fund is buying cheap and selling high and making a profit to pay for the cost of the finance capital and gaining a return for the producers/investors.

Thirdly, to answer the worries of free marketers, who say that these markets help us to indicate where future prices may go and that expected future higher prices are needed to attract long term capital investment into the industry. Stabilization will turn the uncertainty of the current market into known measured risk enabling returns on capital to be forecasted more accurately. From exploration to production can often take seven years of more, and in the current fluctuating climate returns are much less predictable than under a system of stable prices. Nevertheless, there will be a need to devise and establish a system to indicate long term price trajectories.

Whatever model is used to manage the market there is undoubtedly a need for greater cooperation between producers and consumers as it is morally wrong in this globalized world to work as conflicting parties or to promote an antagonistic environment. Keynes pointed out in the 1920s that both parties have an interest in stabilizing the markets and prices. Key producers and consumers need to begin to talk to each other and cooperate, and the place that where it could start is the International Energy Forum (IEF) in Riyadh. To conclude, there is now a need to call upon the IEF to bring together the OPEC, IEA and the

various key countries like China and India to have an early discussion on devising a workable model to reduce price volatility and secure supplies, thereby stabilizing oil markets and promoting planned global economic growth. Keynes' buffer stock model could well be the recipe for future market stability. Though it would seem we are still waiting, some 85 years later, for the lessons of Keynes to be learnt.

Conclusion – main messages

- Oil price volatility since 2000 has increased and forecasting has become more difficult due to the increased number of demand and supply factors making economic and investment planning riskier.
- Keynes' predictions that the commodity markets often work against the interests of both producers and consumers is clearly apparent. The fact that we have already seen market intervention by both producers and consumers highlights the need for them to work together rather than have knee jerk reactions to price instability.
- Both OPEC and the IEA have the capacity to stabilize the market by devising a suitable intervention model in the common interest of price stability. There are up and coming opportunities for both producers and consumers to meet to begin to implement a stabilisation strategy.
- The case for building up Keynes' buffer stocks is undeniable and achievable. The return of oil from Libya, the emergence of new African producers, increased output from Russia and Venezuela along with the Gulf Cooperation Council and Iraq make it possible to build up substantial spare capacity which can be achieved at a relatively low cost from the producers with probably the lowest costs in the world. It is now time to put theory lessons learnt into practice.
- This system provides budget stabilization during price declines, and a moderating effect during price rises. Producing countries are tempted to increase production to compensate income loss creating a "positive feedback" and injecting even more volatility in the system.

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