

Refining restructuring and realignment

Following the recent economic uncertainty, the refining industry is not only entering a period of significant restructuring, but is also facing a distinct global realignment. A rising oil price leading up to, and combined with, the economic crisis in 2008 led to a fall in worldwide oil products demand. These factors – coupled with continued investment in refinery capacity additions – have led to the collapse of refining margins and the start of efforts to rationalize the industry around the globe.

The rising oil price leading up to the financial crisis was one of the largest contributors to the downfall of demand. In economies where exposure to the international oil price is high, such as the US, demand fell sharply. Between 2007 and 2009, US oil demand fell by nearly 2mn b/d. Developing countries such as India and China, which in any case were relatively unaffected by recession fared better as controlled pricing structures and subsidies softened the impact. Demand continued to expand in these nations, although at a much lower rate than in previous years. Overall, global demand fell by 2mn b/d over the two – year period.

With demand falling, new capacity additions are hard to justify. However, many projects which were conceived during the ‘golden era’ of high refining margins and strong demand have continued to come on-stream. Across 2008 and 2009, new refineries, including Jamnagar in India and a number of projects in China, added 1.5mn b/d of capacity, whilst expansions to existing sites – primarily in China, Europe and the US – added a further 1.1mn b/d.

Illustrates the imbalance created between supply and demand during this period and the predicament the refining industry is now facing. Demand fell by close to 2mn b/d whilst refinery supply grew by 2.6mn b/d. Non – refinery supply, principally bitumens and GTLs (gas – to – liquids), added a further 0.8mn b/d. The resultant supply demand imbalance is a staggering 5.4mn b/d.

Despite this imbalance, Wood Mackenzie believes that new refining capacity will continue to be added. Between 2008 and 2015, an estimated 9mn b/d of capacity will come on stream. The vast majority of this capacity, close to 75%, will be located in Asia and the Middle East. The bulk of this capacity will satisfy growing domestic demand; however, there will also be a significant amount of export capacity which will look to find markets principally in the Atlantic basin.

With supply significantly outweighing demand, refinery utilization rates have reduced across the globe, although some regions have been affected more than others. In 2010, utilization rates in North America and Europe dropped on average by 7% when compared to 2007 average rates. In Asia, utilization also fell, but by slightly less. Wood Mackenzie believes that, in both North America and Europe, refinery utilization will remain depressed out to 2015 and possibly beyond. The recovery in demand in these regions will be slow, which, with an increased supply push from other regions – especially the Middle East – will keep utilization rates depressed.

Industry rationalization

So, what will this mean for refinery economics? Margins have been on a rollercoaster in recent years, as shown. The tightening of refining capacity from 2003 was a major contributing factor to the very strong refining margins. These margins, as already mentioned, attracted significant investment in the refining industry. However, this all ended in 2009 as a result of the global financial crisis. Now, with the slowdown in demand and overinvestment in refining capacity, the industry is facing a long period of

oversupply and weak refining margins. This, combined with lower utilization rates, means rationalization of the industry is inevitable.

Rationalization is already taking place in various forms. Numerous assets have been announced 'for sales' and others have closed permanently. Within Europe, Shell's Gothenburg refinery in Sweden has recently been sold and the Hamburg refinery in Germany is still up for sale. In the US, Valero's Memphis refinery is currently been sold to PBF Energy Company. Some other refineries have closed completely (Teesside, UK) or are scheduled for closure, such as Total's Dunkirk facility in France. More than ever, an understanding of refinery competitive position is key to remaining profitable in an ever – changing marketplace.

It is the mature markets, like Europe and North America, which will be hit hardest. Refineries in these regions will have to be increasingly vigilant of the threat of export and elsewhere. The structural competitive advantage of many of these export refiners means that, provided they have the necessary gateways into their targeted markets, largely through coastal storage and other non – refinery infrastructure, they can apply additional supply pressures on these markets.

Some export refiners, such as Russia, may prefer to place semi – finished products into the market, via existing refineries where there is likely to be spare capacity, egg for further hydro – desulphurization. However, most export recently, having been constructed more recently, are able to manufacture products to the most stringent specifications and will be able to compete directly with refineries in end – user markets.

In some instances, export refiners may acquire coastal refinery sites and operate them principally as import terminals, to serve the hinterland formerly supplied by locally refined products (egg Essay is in discussions regarding Stan low, UK). Such moves are unlikely to have a large negative impact on other nearby terminals.

Infrastructure and trade flows

The oil terminal sector is more likely to benefit from export refiners seeking routes to consumer markets, either through purchase (egg Lucile affiliate LITASCO's recent acquisition in Barcelona) or long –term lease. The growing regional imbalance between supply and demand for oil products in Europe and elsewhere is a key driver of the recent strength in the oil terminal sector.

Oil terminals, pipelines and other types of energy infrastructure play a crucial role in facilitating global trade flows and supporting a range of other core activities, including compulsory or strategic holding of oil reserves and continuo – driven trade stockholdings. In the coming years, the demand for oil infrastructure is set to increase substantially with growth in oil product trade flows and other factors, including blending, to meet verging international market products specification.

The increased inclusion of befouls in transport fuels – mandated to include 10% renewable on an energy basis by 2020 in Europe and to 36bn US gallons in the US by 2022 – will bring new handling requirements to the storage industry. As befouls use grows, methods of penetrating areas that are more remote from befoul supply will need to be found.

Driver fro increased oil infrastructure storage is the changing requirements for strategic stockholding by consumer governments. The EU is proposing to tighten its regime, requiring at least one third of 90 days

' import coverage to be in the form of products, with potentially 14 specific categories, and encouraging the formation of national stockholding agencies. China, India and Korea are all building strategic stocks, sometimes in cooperation with producer governments.

A bias towards crude market continuo (the discount in spot prices versus forward levels that encourages stockholding) would also contribute to increasing demand for oil storage infrastructure. Such a bias seems likely given OPEC's readiness to cut output to defend crude oil prices of around \$60/b and its less apparent will to cap price.

At present, a number of integrated oil companies are withdrawing selectively from the oil product sector. Wood Mackenzie believes this is likely to lead to greater fragmentation of the downstream oil market and value chains, with ultimately a greater number of different players in the refining, infrastructure and fuels marketing sectors.

From the perspective of a financial investor, investment in oil infrastructure assets can be relatively low risk; providing exposure to the energy sector without oil price or manufacturing margin risks. Longer tenure, ship or pay contracts are increasingly available to provide revenue assurance. Oil infrastructure assets have historically provided growing earnings.

Following Vitol's recent transaction with PETRONAS, in which it sold a 50% stake in its petroleum terminals and storage business to a subsidiary of Malaysia's national oil company there could be further potential for investors to acquire stakes from oil trading companies. The most likely targets are those that have already acquired significant portfolios of terminals to support their international arbitrage activities and give them access to niche markets. These companies generally keep terminals under their sole control, but may seek backing from minority investors in order to release capital for their trading operations as they look to expand, especially if oil prices rise sharply again.

A key issue for all potential investors in refining and oil storage infrastructure assets is to have a clear insight into the future outlook for oil trade flows and other drivers of business for these sectors. Wood Mackenzie is applying its detailed proprietary insights into these issues to help investors reach a view on medium to long – term revenue potential for their projects, the gateways of the future.