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‘PEAK OIL’ TO ‘PEAK DEMAND’: IMPLICATIONS FOR GLOBAL INVESTORS

Many of the entrepreneurs and philanthropists of the early 20th century made their fortunes from oil. The impact of cheap energy on society, productivity and ultimately living standards cannot be overstated; in fact, civilisations have waxed and waned on the back of the rise and fall of cheap energy.

In the 21st century, of course, our children are more likely to seek their fortune in technology, following business heroes such as Mark Zuckerberg or Elon Musk. Technological developments are having a profound impact on our lives, including how we communicate, seek entertainment and even drive. A good example is the proliferation of LED TVs. Although my children laugh when I show them a picture of what TVs used to look like, the mass market uptake of LEDs is not even 15 years old. And yet LED technology isn’t that new. It was first demonstrated in1977 by James P Mitchell but took another 32 years before Sony launched its XEL-1 OLED screen, effectively consigning the cathode ray tube to the bin.

We tend to think of energy markets as antiquated and slow-moving. However, it would be wrong to think that technology hasn’t played a role in the development of the industry. In fact, it was another Mitchell (George P) who was heralded as the founder of ‘fracking’, a technology that has had a major impact on all energy markets—most notably as a contributor to the industry’s current downturn. As a transportable and fungible commodity, oil is impacted by changes in technology at the margin. Despite US shale accounting for only a small portion of global supply, fracking technology has significantly affected energy market pricing.

The current energy downturn is a supply issue, which is in the process of rebalancing as natural decline rates, record cuts in capex spending and tightening credit conditions force cuts in supply. Although it is tempting to join the ‘peak demand’ bandwagon and banish oil markets to the ‘cathode ray bin’, as investors it is important to understand the impact that different technologies (and their timing) have on energy prices. In this low price environment and to protect downside risk, we believe it makes sense to invest in ‘future quality’ companies with low cost resources, strong balance sheets and quality management teams.

The impact of technology on supply

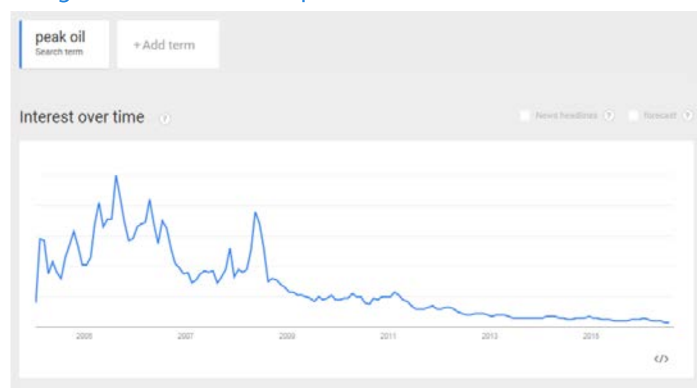
You could argue that fracking isn’t a technology, but instead the confluence of a number of developments such as multi-directional drilling, hydraulic pressure pumping and improved geo-steering that have led to an explosion in the industry as it continues to outstrip expectations. Undoubtedly, cheap finance and high oil prices have helped stoke these developments.

The potential of fracking was initially realised in the US onshore gas markets. As a result, the US now has a supply of more than 90 years of cheap gas and the impact on Henry Hub pricing has been dramatic. Initially, the implications for energy companies were not obvious. After all, like the LED industry, the technology wasn’t new. The new millennium has ushered in a different way of thinking about energy. The rise of the emerging markets, particularly China, led to what is commonly referred to as ‘peak oil’. Most believed that gas would be in significant demand as the world scrambled for energy. The large integrated energy companies were desperate to replace their depleting reserves with long-term contracts, such as the high cost LNG (liquefied natural gas) work carried out on the Australian coast. In a world of perceived energy shortages, management teams were convinced that commodity prices, and with them returns, would rise into the future.

However, the certainty of rising global gas prices started to be questioned once US Henry Hub prices started to materially diverge from oil-linked LNG pricing. Gas molecules around the globe were being priced differently and it was only a matter of time before financial markets and energy practitioners would find ways to arbitrage away the market’s inefficiencies.

The chart below shows the amount of Google searches for the term ‘peak oil’ over time, highlighting just how mainstream it had become. Ironically, the Ichthys LNG project is still to reach completion, highlighting the long lead time and difficulty that management teams have when considering investments.

Google searches for term ‘peak oil’



Source: Google

The key to investing wisely has been understanding the significant impact that fracking would have on gas markets and the timing of the unwind of the Henry Hub to LNG gas arbitrage. The transportation of gas is difficult and expensive and hence the flood of molecules in the US were temporarily

landlocked, providing a unique cost benefit for US manufacturers and consumers.

Technology at the margin

As a transportable and fungible commodity, oil is impacted by changes in technology at the margin. Despite US shale accounting for only a small portion of global production, fracking technology has had a significant impact on energy markets. This continues today as shale exploration & production (E&P) companies reduce their breakeven levels at a faster rate than their more conventional counterparts.

It is likely that when prices start to rise again, the US shale industry will react the quickest and take market share, effectively placing a 'cap' on future prices. A subject of great debate by management teams and analysts alike is the oil price level required by US onshore E&Ps before they restart their drilling programmes. This will depend on many factors, such as the quality of the rock, availability of finance, hedging policies and the scale of inventory held in 'drilled but uncompleted' wells (DUCs).

A recent study by IHS has tried to analyse this issue. It suggests that although drilling and completion technologies have continued to drive costs down, "the majority of cost savings have resulted from operators negotiating better rates with service providers". Recent commentary made by Schlumberger and Halliburton management teams reinforces this view.

Fracking technologies have reduced shale breakevens each year since US oil production started growing again. Like all good technologies, this has placed significant deflationary pressure on costs across the industry. However, high decline rates, significantly reduced global capex spend and tightening credit markets should help rebalance oil markets over the coming quarters. Once balanced, the shale industry will be in a strong position to compete with the very lowest cost operators. Those in the best shale regions, such as the Permian, should be able to grow even in a low price environment until prices once again peak, probably later in the decade.

Technology and future energy demand

Despite an impressive impact on the supply side of energy markets, technology is likely to have an even greater impact on future demand. Developments in renewables, e-vehicles and battery storage look like combining to drastically reduce demand in future years. These changes are already having their impact, whether it is the largest crowd-funding event with the launch of Tesla's model 3, the scale of the investment and hype in Lithium-ion battery manufacturing, or the continuous fall in solar costs. The impact for some energy companies will be nothing short of catastrophic.

Management teams are unlikely to tell us that 'oil is dead', but the signals from management actions are already very clear. Within the last few months alone, we have learnt that the Saudis want to list Saudi Aramco; Total has acquired one of the world's largest battery makers; and Volkswagen's costs to put right its emissions failure will be to invest heavily in the development of e-vehicles.

As investors, we must ask ourselves when fossil fuels and in particularly oil demand will peak? Is it 2020, 2030 or 2040? And if you are a holder of significant long-dated, expensive resources, what should you do? The obvious answer is to dig. When that happens, the pressure to produce will only intensify and for some 'the game will be up'.

Targeting 'future quality' companies

Although it is tempting to join the 'peak demand' bandwagon and banish the oil markets to the 'cathode ray bin', it is important to understand the impact that different technologies (and their timing) have on energy prices. The current oil recession is driven by excess supply and not falling demand. Yes, peak demand is approaching and in 20 years' time, the world will look materially different to today. However, demand today remains strong as highlighted by accelerating car sales in China or the continuous upgrading of demand by experts, such as the IEA. Before peak demand is reached, we are more likely to see a further tightening in the oil markets as high natural decline rates, record cuts in capex spending and tightening credit markets combine to create supply shortages by the end of the decade.

In the scenario of a rebalancing market where breakevens are unlikely to go much lower, we believe it makes sense to invest in companies with low cost resources, strong balance sheets and quality management teams. This way, downside risk is protected and value will be created as the company delivers production growth even in a low price environment. Adding to such companies when investors fear the worst should bear fruit in the medium term and allow us to own 'future quality' companies— businesses with, or with a path to, high and sustainable returns, which are underappreciated by the market.

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