Green Light: Protecting Pensions and Planet
Evaluating financial risk to oil capital expenditures

July 2014

Background
UK pension funds are significantly exposed to the fortunes of oil companies. 17% of the market capitalisation of the FTSE 100 is attributable to just four oil and gas producers. The FTSE 100 made up around 81% of UK pension funds’ UK equity holdings in 2010. Though UK pension funds’ proportion of equity holdings has declined from 68% in 2003 to 39% in 2012, what remains is still significantly exposed to the oil industry given the composition of the FTSE 100 and other major indices.

Current trends in capital expenditure threaten oil companies’ reliability as high income shares. Unprecedented levels of oil industry capital expenditure have been accompanied by flat share prices and declining returns on equity, even through a period when market oil prices held up at $100 per barrel. The trajectory of global oil prices and the ability of oil companies to maintain both capital expenditure and dividends at their present levels are the subject of strong market debate at present.

Many of the new oil industry projects currently being funded with shareholder capital face high and escalating costs in an environment of uncertain commodity prices. In the face of the end of easily accessible oil and increasing national oil sovereignty, companies are having to increase their exposure to unconventional types of hydrocarbon and to physically challenging environments in pursuit of reserves. These include shale oil, oil sands, ultra deepwater and the Arctic. The technical risks associated with such projects can further increase costs. The economic viability of such projects therefore depends on stable high oil prices in the decades to come which are far from certain. There is an estimated $1.1 trillion of capital expenditure earmarked between now and 2025 for high cost projects needing a market price of over $95 per barrel.

This briefing accompanies a report published by the Carbon Tracker Initiative, “Carbon supply cost curves: Evaluating financial risk to oil capital expenditures”. The report seeks to demonstrate that if oil companies are to create optimum value for shareholders they need to focus on lower cost, lower risk projects which give better returns. The report also sets out actions investors should take to redirect companies towards a smarter capital allocation strategy.

This briefing highlights some of the main findings from that report and suggests questions pension funds may wish to ask their fund managers to check that they are alert to these issues and engaging with oil companies to ensure the creation of optimum shareholder value.
**Ever increasing expenditure**

Capital expenditure by the largest oil companies is now five times the level it was in 2000.

Combined capex data for BG, BP, COP, CVX, ENI, OXY, PBR, RDS, STO, TOT, XOM

Yet the production of the companies has barely increased. This continuing fall in productivity has been masked by the annual average Brent oil price rising to four times the level in 2000. The cost of producing the marginal barrel of oil is increasing. According to Goldman Sachs, over the past two years, no major new project has come onstream with a per barrel cost below $70, with most in the $80-$100 range.

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**The debate on demand**

In allocating shareholder capital to high cost long-term projects, oil companies make assumptions that future market conditions will be such as to ensure an adequate return on investment; that sustained high prices will justify production costs; that production costs will not increase; and that current industry demand projections are accurate. However, analysts and investors are increasingly querying those industry assumptions, in particular those around demand for oil and sustained high oil prices.
Capital expended now in the oil sector will deliver production in 2020 and beyond, when oil companies could be in a very different market and operating context. Oil demand and price in this market will depend in part on highly unpredictable technological changes in transportation efficiency and the manner in which governments address global climate change.

The assumed inevitability of strong and growing demand for fossil fuels for several decades is increasingly being challenged by investment analysts. Citigroup points to the twin trends of gas switching and increasing energy efficiency in predicting a ‘plateau for global oil demand’ by 2020. HSBC Likewise predicts that ‘oil demand could be reduced relatively quickly’ owing to fuel efficiency measures. Moreover assumptions underlying ever increasing energy demand are now being debated. For example Chinese economic growth is already falling short of the rates that are built into many energy demand models.8

These more cautious demand projections are independent of any global deal on climate change. Any such agreement would undermine current industry demand projections further. Preventing highly disruptive climate change will necessitate reducing oil demand and will result in lower oil prices. These changes would likely undermine extraction from expensive, remote and marginal oil fields.

Oil Prices
The trajectory of global oil prices is currently subject to much debate. While the unprecedented rise in prices during the first decade of the twenty first century led to expectations of relentlessly climbing oil prices for years to come, a different scenario is emerging in the second decade. Since 2010, global oil prices have stagnated, albeit at a historically high level. The price of Brent has been generally hovering around the $100-$105 per barrel mark since the beginning of 2011.

In line with its projections for peak oil demand by 2020, Citigroup is of the view that by the end of the decade Brent prices are likely to be within a range of $80-90. It projects break-even prices for projects such as Canadian oil sands near $90 per barrel. Goldman Sachs estimates that over half of listed oil companies need oil prices above $120 to be cashflow neutral.

It is therefore unsustainable for companies to maintain the high levels of capital expenditure seen recently and to maintain dividends unless the oil price continues to rise. In this environment, Morgan Stanley has argued that reining in capital expenditure would have a positive effect on European oil majors’ share prices and allow dividend cover from cash flows to increase.11
Ensuring a resilient business model

In light of all of these factors it seems prudent that oil companies stress test their portfolios against a range of possible oil demand and price projections. The assumptions on which oil companies are spending shareholder capital should also be more transparent and subject to debate. This lack of disclosure makes it difficult for investors to accurately assess the risk associated with capital expenditure.

**Recommendation for Pension Funds**

Ask your fund manager to engage with investee oil companies to:

1. Improve transparency of demand and price assumptions underpinning their capital expenditure strategies.
2. Publish stress tests of their project portfolios against a range of oil price and demand scenarios.

**At risk projects**

**The Carbon Cost Curve**

The Carbon Tracker Initiative has identified two bands of high risk potential projects:

- Oil projects requiring a market price of at least $95 per barrel. These are the most exposed in terms of economic and carbon viability.
- Oil production requiring a market price of $75-$95 per barrel are also at risk if low oil demand/price scenario plays out – i.e. where steps have been taken to give an 80% probability of limiting global warming to 2°C, how projects move on the cost curve and the contribution of carbon capture and storage.

As political factors and energy security concerns will also impact on the oil ultimately brought to market, the Carbon Tracker Initiative recommends that investors focus their engagement efforts on potential production requiring a market price over $95.

The Carbon Tracker Initiative report shows that there is a total of around $21trn potential capital expenditure to 2050 for oil projects which require more than a $95 oil price, of which $1.1trn could be expended in the next decade.

**At risk oil projects**

$1.1trn of potential capital expenditure out of 2025 for projects which require a market price of at least $95 oil price with the most significant oil provinces including:

- Alberta, Canada
- Gulf Coast, USA
- Gulf of Mexico deepwater
- Rio de Janeiro, Brazil
- Western Siberia, Russia
- Atlantic Ocean
- Caspian Sea, Kazakhstan
- Antsiranna, Madagascar
- Barents Sea, Norway

**Recommendation for Pension Funds**

Pension funds should ask their fund managers to:

1. Identify investee companies with significant capital expenditure planned for projects requiring a market price of at least $95.
2. Articulate to the pension fund how the risk to the fund's portfolio of exposure to high cost projects is being managed.
3. Ensure remuneration policy at oil companies is consistent with shareholder return objectives, not just rewarding reserves replacement or spending capital.
4. Make it known to oil company management that as investors they are seeking improved value rather than volume of reserves.

“Carbon Tracker Initiative recommends that investors focus their engagement efforts on potential production requiring a market price over $95.”
Company exposure

The largest companies have large absolute exposure to high cost projects, but this is offset to varying degrees by exposure to lower cost projects. For oil majors, exposure to such projects represents between 18-28% of their indicated capital expenditure out to 2025. Therefore, there are opportunities for the oil majors to reduce their exposure to high cost projects and improve value for shareholders rather than chase volume. Investors need to monitor that capital expenditure is not sanctioned for high cost projects which don’t make economic sense.

The companies with the highest total capital expenditure exposure over to 2025 for projects requiring a market price of at least $95 per barrel.

<table>
<thead>
<tr>
<th>Company</th>
<th>High cost capital expenditure (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrobas</td>
<td>83,452</td>
</tr>
<tr>
<td>ExxonMobile</td>
<td>73,346</td>
</tr>
<tr>
<td>Rosneft</td>
<td>69,686</td>
</tr>
<tr>
<td>Shell</td>
<td>63,392</td>
</tr>
<tr>
<td>Total</td>
<td>56,193</td>
</tr>
<tr>
<td>Chevron</td>
<td>55,774</td>
</tr>
<tr>
<td>BP</td>
<td>46,014</td>
</tr>
<tr>
<td>Gazprom</td>
<td>44,724</td>
</tr>
<tr>
<td>Statoil</td>
<td>36,634</td>
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<tr>
<td>CNRL</td>
<td>38,555</td>
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</tbody>
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Cutting capital expenditure at the upper end of the oil projects cost curve could be a positive process rather than a painful one. Reducing exposure to high cost, high risk projects does not mean that the oil majors will go out of business. Indeed the market has reacted positively recently to companies which get out of expensive projects.

Total’s Joslyn oil sands project:

Total announced at the end of May 2014 it was suspending its Joslyn North oil sands mine due to unfavourable economics. Quotes from Total:

“Costs are continuing to inflate, when the oil price — and specifically the netbacks for the oil sands — are remaining stable at best, thus, squeezing the margins. We see that this situation cannot be sustainable in the long term.”

“We know that mining projects are challenging. New mining projects are all megaprojects and they are very capital intensive... There is a clear shift now from the industry on cost discipline and return on investment versus the pace of development.”

This is an example of how the longer pay-back periods of these capital intensive projects mean that companies cannot gamble on rising oil prices anymore.
An analysis by Bernstein showed that unconventional projects take much longer to provide returns for the company (i.e., positive cashflow) than the conventional projects that have been done in the past.

There are a number of smaller listed companies who are significantly exposed to high cost projects concentrated in one particular region or oil type, e.g., oil sands. Such companies are most vulnerable to cost increases and oil price falls. The Carbon Tracker Initiative report identifies a number of companies with 50% or more of total capital expenditure in projects requiring a market price of at least $95. These include:

<table>
<thead>
<tr>
<th>Company</th>
<th>% of total capital expenditure in high cost projects (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Famfa Oil</td>
<td>100%</td>
</tr>
<tr>
<td>Rocksource</td>
<td>100%</td>
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<tr>
<td>Barra Energia</td>
<td>100%</td>
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<tr>
<td>Queiroz Galvao E &amp; P</td>
<td>100%</td>
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<tr>
<td>Teck Resources Limited</td>
<td>100%</td>
</tr>
<tr>
<td>OSUM</td>
<td>99%</td>
</tr>
<tr>
<td>Value Creation</td>
<td>99%</td>
</tr>
</tbody>
</table>

**Recommendation for Pension Funds**

Ask your fund managers to confirm whether the fund has exposure to any of the above companies or other smaller oil companies with over 50% of total capital expenditure allocated to projects requiring a market price of at least $95 per barrel to break even.

**Conclusion**

A well-judged capital expenditure strategy is essential if oil companies are to deliver shareholder value. Projects sanctioned now must be resilient to oil price and demand scenarios decades into the future. The Carbon Tracker Initiative report highlights that $1.1tn of capital expenditure over the next decade may not be so resilient – requiring a market oil price of at least $95 to break even – thereby creating uncertainty over oil companies’ ability to maintain dividend payments into the future. Pension funds, as long-term stewards of capital, need to ensure that their fund managers are focused on these risks and are redirecting oil companies onto a suitable capital allocation trajectory.
Endnotes

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About ShareAction

ShareAction (Fairshare Educational Foundation) is a registered charity that promotes responsible investment practices by pension providers and fund managers. ShareAction believes that responsible investment helps to safeguard investments as well as securing environmental and social benefits.

About Carbon Tracker Initiative

Carbon Tracker Initiative is a non-profit organisation working to align the capital markets with the climate change policy agenda. Carbon Tracker provides an innovative research framework able to integrate the financial markets and the climate change sector into a comprehensive and consistent perspective.