About Carbon Tracker
The Carbon Tracker Initiative (CTI) is a team of financial specialists making climate risk visible in today’s financial markets.
Our research to date on unburnable carbon and stranded assets has started a new debate on how to align the financial system with the energy transition to a low carbon future.

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ExxonMobil

Key Points

1. ExxonMobil has announced that it expects 2014-2017 capex to be significantly below that in 2013, on average. We regard its commitment to capital discipline as sensible.

2. However, it is currently moving ahead with certain projects that could be considered to have high break evens and thus could end up wasting investment in a low demand scenario.

3. This is particularly true for its interests in various Canadian oil sands projects, which also carry additional risks relating to, for example, transport issues and their high carbon intensity.

4. Investors may wish to question whether Exxon should be pressing ahead with such relatively high-risk projects.

Introduction

CTI has demonstrated in its research the mismatch between continuing growth in oil demand and reducing carbon emissions to limit global warming. Our most recent research with ETA to produce the carbon cost supply curve for oil indicates that there is significant potential production that could be considered both high cost and in excess of a carbon budget. We have focused our research on undeveloped projects that, allowing for a $15/bbl contingency, would need a $95/bbl market price or above to be sanctioned (i.e. a market price required for sanction of $95/bbl is equivalent to a project breakeven price of $80/bbl), as they are the marginal barrels that could be exposed to a lower demand and price scenario in the future.

This note examines ExxonMobil’s potential future project portfolio looking at production and capex using Rystad Energy’s UCube Upstream database (as at July 2014). “Capex” and “production” in this note (amongst other terms) are thus based on Rystad’s analysis and expectations of the company’s potential projects. ExxonMobil’s planned or realised capex and production may differ from these projections. Where possible we have sought to verify the status of the projects at the time of writing.

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1 ExxonMobil press release, “ExxonMobil to Start Production at Record Number of New Oil and Gas Projects in 2014”, 5 March 2014.
ExxonMobil

Potential future oil production

- ExxonMobil’s potential future project portfolio (2014-2050 production) is mid-range compared to other majors on cost grounds, with 44% requiring a market price of at least $75/bbl for sanction including contingencies and 29% (9.0bn barrels) at least $95/bbl.
- In the medium term, over the next decade, 21% of ExxonMobil’s production will need oil market prices over $95/bbl for sanction.
- But by the end of 2025, projects with a break-even price of $95/bbl or more will have risen to 35% of the company’s potential future production leaving ExxonMobil at greater risk from price or cost volatility, especially in a low-carbon scenario.

Capex

- Turning to capital spend in the nearer term, on Rystad’s data, ExxonMobil has potential capex of $286bn earmarked for oil projects during 2014-2025.
- Potential capex is generally flat over the period, although with a rise in expenditure over 2021-2024 before returning to the levels seen previously.
- $111bn (39%) of the potential capital budget is on projects with market price requirements over $95/bbl. 17% of capex is on projects requiring over $115/bbl for sanction.
ExxonMobil

- Focusing on currently undeveloped future projects, of the $111bn of capex for projects requiring an oil price of $95/bbl or higher, $56bn (50%) is on projects that are yet to be developed.
- “Undeveloped” in this sense comprises fields where a discovery has been made (“discovery” in the chart opposite) and where no discovery has been made (“undiscovered”)
- As high-cost, undeveloped projects, these could represent a hit list for investors demanding cost savings from the company, either to be cancelled or deferred.

ExxonMobil’s potential capex for undeveloped projects requiring over $95/bbl covers a diverse range of potential projects, with a bias towards deep water projects; 45% of is on deep water projects and 17% on ultra-deep water projects.
- 13% is for conventional projects (onshore and continental shelf).
- Oil sands (mining) and Oil sands (in-situ) account for 10% and 4% respectively of the potential budget.
52% of the $56bn potential capex on higher-cost new development is attributable to the 10 largest discovery stage projects, which have individual capex requirements ranging from c.$1.5bn to c.$7.9bn. The market oil prices required for sanction of these projects are shown below. Some of the projects the above table are not yet on ExxonMobil’s list of likely developments and so may be deferred to avoid value destruction.

### Highest risk undeveloped projects

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Country</th>
<th>Region</th>
<th>Category</th>
<th>2014-2025 capex* ($m)</th>
<th>% of total 2014-2025 capex (%)</th>
<th>% of total capex on undeveloped projects requiring $95/bbl (%)</th>
<th>Required market price** ($/bbl)</th>
<th>Status***</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aspen, CA</td>
<td>Canada</td>
<td>Alberta, CA</td>
<td>Oil sands (in-situ)</td>
<td>2,039</td>
<td>1%</td>
<td>4%</td>
<td>147</td>
<td>Approval sought</td>
</tr>
<tr>
<td>2</td>
<td>Syncrude Mildred Lake Oil Mining, CA</td>
<td>Canada</td>
<td>Alberta, CA</td>
<td>Oil sands (mining)</td>
<td>1,495</td>
<td>1%</td>
<td>3%</td>
<td>140 - 152</td>
<td>Under study</td>
</tr>
<tr>
<td>3</td>
<td>Kearl, CA</td>
<td>Canada</td>
<td>Alberta, CA</td>
<td>Oil sands (mining)</td>
<td>4,316</td>
<td>2%</td>
<td>8%</td>
<td>134</td>
<td>Ongoing</td>
</tr>
<tr>
<td>4</td>
<td>Bosi, NG</td>
<td>Nigeria</td>
<td>Atlantic Ocean, NG</td>
<td>Deep water</td>
<td>7,885</td>
<td>3%</td>
<td>14%</td>
<td>126</td>
<td>Under study</td>
</tr>
<tr>
<td>5</td>
<td>Aktote, KZ</td>
<td>Kazakhstan</td>
<td>Atyrau, KZ</td>
<td>Conventional (sand/sheet)</td>
<td>2,191</td>
<td>1%</td>
<td>4%</td>
<td>116</td>
<td>Not disclosed</td>
</tr>
<tr>
<td>6</td>
<td>Bonga, NG</td>
<td>Nigeria</td>
<td>Atlantic Ocean, NG</td>
<td>Deep water</td>
<td>2,032</td>
<td>1%</td>
<td>4%</td>
<td>115</td>
<td>Under development/study</td>
</tr>
<tr>
<td>7</td>
<td>Snorre, NO</td>
<td>Norway</td>
<td>North Sea, NO</td>
<td>Deep water</td>
<td>1,868</td>
<td>1%</td>
<td>3%</td>
<td>102 - 109</td>
<td>Under study</td>
</tr>
<tr>
<td>8</td>
<td>Bakken Shale, US</td>
<td>United States</td>
<td>Midwest, US</td>
<td>Shale Oil</td>
<td>1,463</td>
<td>1%</td>
<td>3%</td>
<td>100</td>
<td>Ongoing</td>
</tr>
<tr>
<td>9</td>
<td>Bass Strait, AU</td>
<td>Australia</td>
<td>Bass Strait, AU</td>
<td>Deep water</td>
<td>2,140</td>
<td>1%</td>
<td>4%</td>
<td>97 - 125</td>
<td>Not disclosed</td>
</tr>
<tr>
<td>10</td>
<td>MTPS, CG</td>
<td>Congo</td>
<td>Atlantic Ocean, CG</td>
<td>Ultra deepwater</td>
<td>3,486</td>
<td>1%</td>
<td>6%</td>
<td>96 - 108</td>
<td>Not disclosed</td>
</tr>
</tbody>
</table>

- Total Top 10 Discoveries: 28,956 (10% of total capex) 52% of total capex on undeveloped projects requiring $95/bbl
- Other projects: 26,862 (9% of total capex) 48% of total capex on undeveloped projects requiring $95/bbl
- Total: 55,818 (100% of total capex) 100% of total capex on undeveloped projects requiring $95/bbl

*company share of capex requiring $95/bbl shown only

**market price required for sanction includes $15/bbl contingency on top of project breakeven price

***as understood based on company disclosures

### Questions Arising

1. Should Exxon’s oil sands projects from the list above be deferred, given the high costs which are causing cancellation of other companies’ projects?

2. Is the company concerned that its returns will continue to be diluted, with such a large proportion of potential capex requiring high oil prices?

3. Which projects does the company intend to delay/defer/sell in order to deliver the forecast reduction in capex?
For further information about Carbon Tracker please visit our website
www.carbontracker.org