



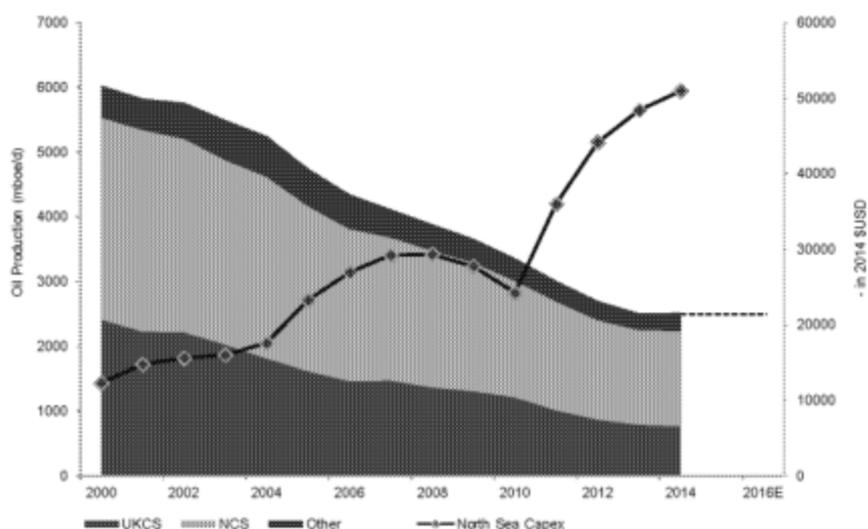
The North Sea: A Case Study On Spend and Decline Rates

In some ways, the Norwegian North Sea is representative on a small scale of larger trends across the industry over the next couple of years. After steadily declining for nearly 14 years, the combination of high oil prices, a ramp in re-investment and a string of large development projects will see the basin hold production flat to showing slight growth through 2017.

The long and winding road down...

The North Sea has been synonymous in recent years with mature, Non-OPEC decline, and for good reason. Since its peak production in 2000, North Sea production has steadily declined from ~6 MMboe/d to current production levels of 2.5 MMboe/d, or an average decline rate of 6%/yr. This happened despite steadily increasing capex levels.

Figure 33: North Sea Oil Production



Source: Deutsche Bank, IEA

Despite multi-year trends, two important things are driving a dramatically different outlook over the next 2-3 years: 1) elevated level of growth barrels due to start from major projects, and 2) moderation in underlying decline rate.

Here come the projects

After years of inconsistent development, aggressive spend on the back of 4-5 years of elevated crude price is now bearing fruit, with ~650 mbpd of incremental crude expected from 2015 through 2017. This is compared to 35 mbpd of average annual "new project" production between 2009-2013. While reduced capital budgets may provide a moderate haircut to base production over the next couple of years, this is more than offset by the scale of new projects starts.