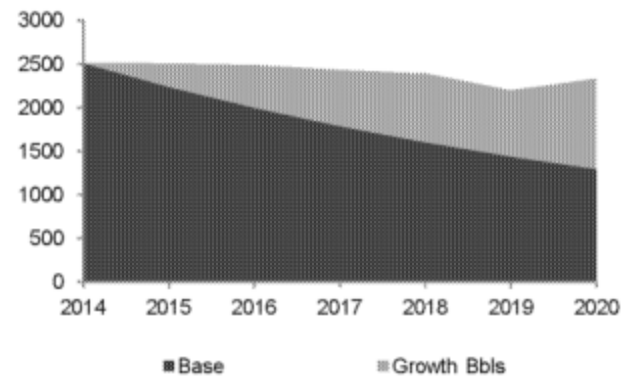
North Sea

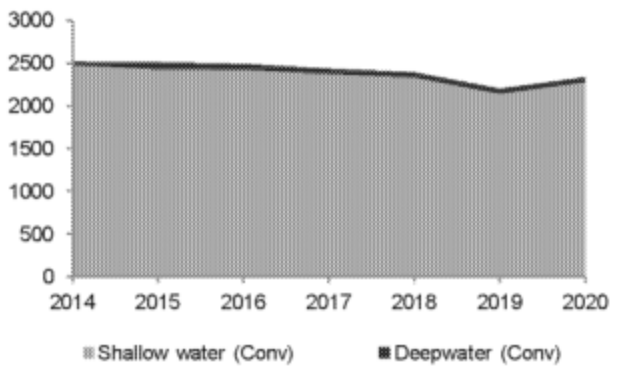
The North Sea has been synonymous in recent years with mature, Non-OPEC decline, and for good reason. Since its peak production in 2000, North Sea production has steadily declined from ~6 MMboe/d to current production levels of 2.5 MMboe/d, or an average decline rate of 6% YoY. This happened despite steadily increasing capex levels. Despite multi-year trends, we expect North Sea production to hold broadly flat through 2016 as several growth projects are brought on-stream and significant re-development spending over the last couple of years softens the decline of several key fields. The longer-term outlook is most strongly correlated with the successful (i.e. timely) development of the massive Johan Sverdrup field and the management of declines across the broader mature asset base. On our base case assumes declines of 12%, and estimate a 1% revision to the assumed decline to result in a swing of ~ 125 Mb/d to our 2017 outlook.

Figure 115: North Sea Production Outlook, 2014-2020e (Mb/d)



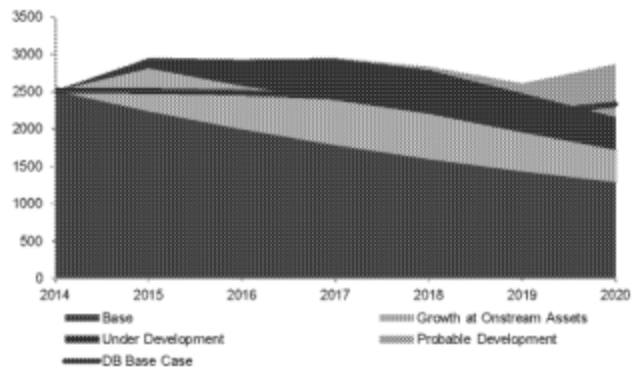
Source: Deutsche Bank, Wood Mackenzie, IEA

Figure 116: Production by type (area chart of onshore vs. shallow vs. deepwater (Mb/d)



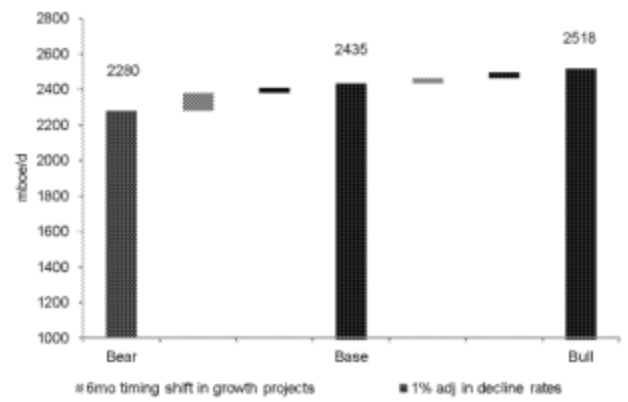
Source: Deutsche Bank, Wood Mackenzie, IEA

Figure 117: Crude volume growth outlook by project status (Mb/d)



Source: Deutsche Bank, Wood Mackenzie, IEA

Figure 118: 2017 Production Swing (Bear vs. Bull) of ~240 Mb/d



Source: Deutsche Bank, Wood Mackenzie, IEA