

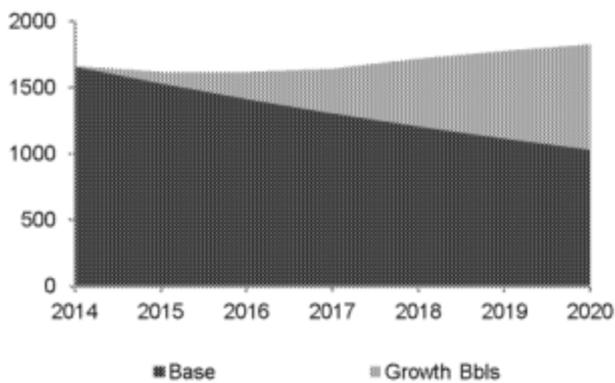


A Country by Country Outlook on Key Players

Angola

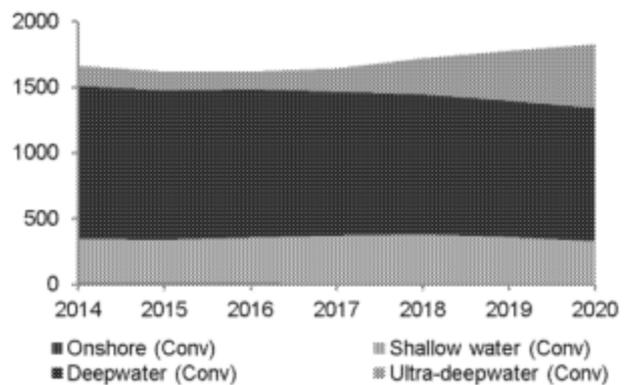
Recent pre-salt drilling activity withstanding, exploration spend in Angola over the last 15 years has been largely concentrated in the Lower Congo Basin. As a result, production growth in our forecast period is chiefly driven by project start-ups in the Lower Congo. However, longer-term production growth will likely shift towards the pre-salt Kwanza Basin (Cameia, Orca, Bicuar, etc). In our view, the key near-term risk to production is a delay in the start-up of complex projects (Kaombo Block 32) while the key long-term risk is a delay in project FIDs in the Kwanza Basin (~250 mbpd of '17-20 incremental growth is from unsanctioned projects)

Figure 67: Angola Production Outlook, 2014-2020e (Mb/d)



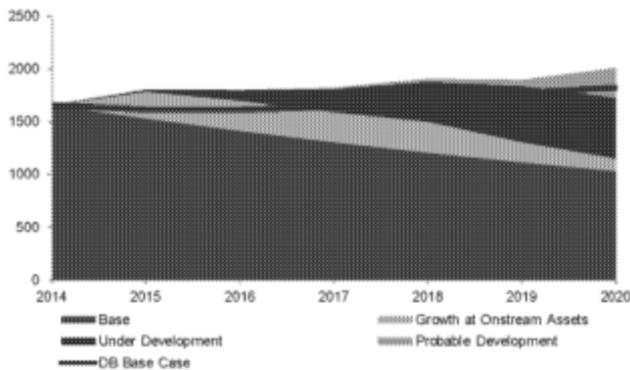
Source: Deutsche Bank, Wood Mackenzie, IEA

Figure 68: Production by type (area chart of onshore vs. shallow vs. deepwater (Mb/d)



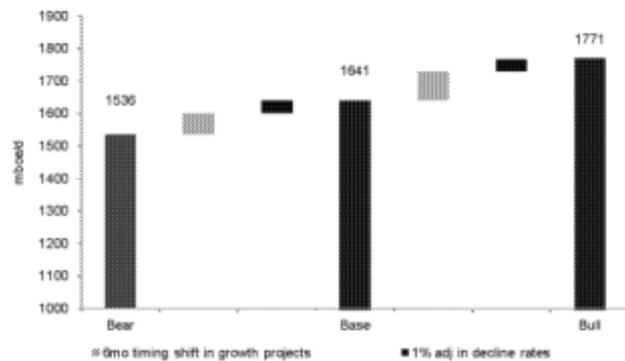
Source: Deutsche Bank, Wood Mackenzie, IEA

Figure 69: Crude volume growth outlook by project status (Mb/d)



Source: Deutsche Bank, Wood Mackenzie, IEA

Figure 70: 2017 Production Swing (Bear vs. Bull) of ~235 Mb/d



Source: Deutsche Bank, Wood Mackenzie, IEA