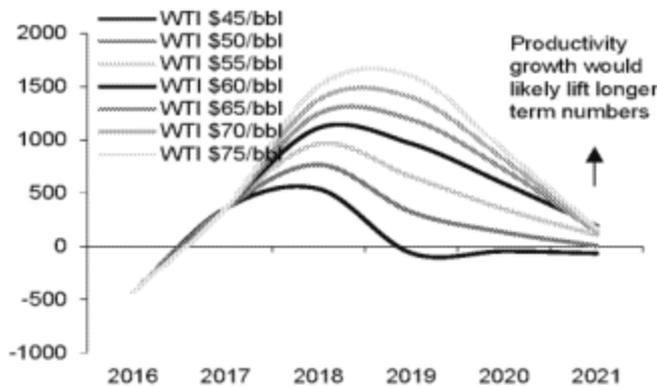




Figure 10: Tight oil growth scenarios (kb/d yoy)



Source: Deutsche Bank

Pre-FID breakevens falling

- With upstream project economics under pressure and oil industry capex suppressed, it is no surprise that full-cycle breakevens of prospective projects would be coming down.
- To quantify just how much, we look at pre-FID upstream projects where recoverable reserves are at least 50mboe, and where liquids reserves constitute at least half of the resource. We also limit the survey to projects outside of OPEC; we include Alaska and Gulf of Mexico but exclude US tight oil assets.
- Comparing the Q4-16 dataset against Q3-17, we see that breakevens on a 10% discount rate have fallen from USD 53/bbl to USD 46/bbl. We also observe that deepwater reserves still contribute the most reserves by resource theme, and that USD 65/bbl could still be considered a marginal cost of new supply from oil sands projects.

Figure 11: Changes in break-even by type – conventional through sands

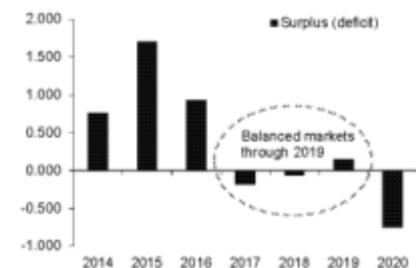
	Low	High	Avg	Liquids reserves (mmbbl)
Q4-2016				
Conv. onshore	35	61	52	2,792
Conv. shelf	22	102	50	2,650
Deepwater	28	68	49	6,998
Oil Sands	63	95	70	2,466
Q3-2017				
Conv. onshore	26	55	45	3,047
Conv. shelf	27	70	42	3,209
Deepwater	26	76	43	18,522
Oil Sands	53	67	63	3,290

Source: Deutsche Bank, Wood Mackenzie

A balanced market

- Broadly speaking, oil markets look to be in relative balance after three years of oversupply. However, we expect some retracement of H2-17 strength owing to first quarter oversupply and a resurgent US tight oil sector.
- The Q1 surplus is modest at +541kb/d in comparison to the 2015 full-year surplus of +1.7mb/d, but this breaks the string of two quarters of undersupply and further progress in eliminating the last 140mmbbl of OECD liquids surplus.
- According to the relationship between cumulative quarterly supply-demand imbalances and price, this would suggest weakness of -5% on the quarterly average price.

Figure 12: Global supply demand balance (mb/d)



Source: IEA data from Monthly Oil Data Service © OECD/IEA 2017, www.iea.org/statistics, Licence: www.iea.org/t&cs; as modified by Deutsche Bank