



Figure 5: Leverage and Funding Gap – Forecasts by DB Credit Research

2017 Net Debt to EBITDA Forecast

		Avg. 2-yr Brent Price (USD/bbl)						
		40	45	50	55	60	65	
2017 USDBRL	3.5	4.6	4.5	4.4	4.4	4.3	4.2	
	3.7	4.8	4.7	4.6	4.5	4.4	4.4	
	3.9	5.0	4.9	4.8	4.7	4.6	4.5	
	4.1	5.2	5.1	5.0	4.9	4.8	4.7	
	4.3	5.4	5.3	5.2	5.0	4.9	4.8	
	4.5	5.6	5.5	5.3	5.2	5.1	5.0	

2016-17 Funding Gap Forecast (USDbn)

		Avg. 2-yr Brent Price (USD/bbl)						
		40	45	50	55	60	65	
2017 USDBRL	3.5	18	18	18	18	17	17	
	3.7	19	18	18	18	18	17	
	3.9	19	19	18	18	18	17	
	4.1	19	19	19	18	18	18	
	4.3	20	19	19	19	18	18	
	4.5	20	19	19	19	18	18	

2020 Net Debt to EBITDA Forecast

		Avg. 5-yr Brent Price (USD/bbl)						
		40	45	50	55	60	65	
Avg. 5-yr USDBRL	3.6	4.0	3.9	3.9	3.8	3.8	3.7	
	3.8	4.2	4.2	4.1	4.1	4.0	4.0	
	4.0	4.5	4.4	4.4	4.3	4.3	4.2	
	4.3	4.8	4.7	4.6	4.6	4.5	4.4	
	4.5	5.0	5.0	4.9	4.8	4.7	4.7	
	4.7	5.3	5.2	5.1	5.1	5.0	4.9	

2016-20 Funding Gap Forecast (USDbn)

		Avg. 5-yr Brent Price (USD/bbl)						
		40	45	50	55	60	65	
Avg. 5-yr USDBRL	3.6	82	81	80	79	78	77	
	3.8	84	83	82	81	80	79	
	4.0	85	85	84	83	82	81	
	4.3	87	86	85	84	83	82	
	4.5	88	88	87	86	85	84	
	4.7	90	89	88	87	86	85	

The Funding Gap Forecast is cumulative from 2016.

Key assumptions:

- # Domestic E&P production growing 4.5% in 2015 and 2.0% thereafter, international E&P production flat.
- # Domestic demand for oil products: -8% in 2015, flat in 2016, +3% in 2017, +2% p.a. thereafter; international demand for oil products flat.
- # Domestic gasoline and diesel prices: +6% p.a. in BRL terms.
- # Variable costs denominated in BRL: 38% of total in 2015, growing with inflation of 5% p.a.
- # Marginal interest rate: 8% p.a. for USD debt, 14% p.a. for BRL debt.
- # Capex: USD25bn in 2015, USD19bn thereafter.
- # Working capital variation: USD5bn negative in 2016.
- # Asset sales: USD10bn in 2016 and USD3bn in 2017.
- # No dividend payments.
- # New debt breakdown: 75% in USD, 25% in BRL.
- # Minimum cash position: USD5bn.

Source: Deutsche Bank Credit Research

How motivated is Petrobras to reduce capex further?

One of the key initiatives a levered cyclical company normally takes (or is forced by creditors to take) during a downcycle is to significantly cut capex, in addition to cutting costs and dividends and selling non-core assets, particularly in more capital intensive industries like the oil and gas one. How much such company actually does reduce its capex depends on its cash burn, funding gap, cost profile and access to credit. Cutting capex beyond the level to sustain production levels is normally not advisable unless doing so is highly accretive to leverage, which normally happens to high-cost producers. In the case of Petrobras, we estimate that the marginal E&P capex has a marginal leverage impact of about 4.5x with Brent of USD40/bbl, 3.5x with Brent of USD45/bbl and 2.8x with Brent of USD50/bbl. These estimates are based on the cost of about USD5bn to fully deploy and ramp up a 150kbpd pre-salt production unit (FPSO with subsea equipment and about 15-17 production/injection wells). Given the accretive nature of E&P development capex with oil above USD45/bbl, and its relevance to total capex, we then believe that Petrobras' management could be reluctant to materially reduce its plan to increase domestic production, thus limiting the prospects for capex reduction. It is thus hard to imagine a capex level smaller than USD19bn guided for 2016 in the absence of a more aggressive stance on exploration and non-E&P segments.