

The Challenges for Brazil in the New Oil and Gas Landscape

**Prof. Edmar de Almeida
Energy Economics Group
Institute of Economics
Federal University of Rio de Janeiro**

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- The Brazilian oil and gas sector: current status and potential
- The new and unfavorable external and domestic scenario
- Roadmap to an attractive investment environment
- Conclusion



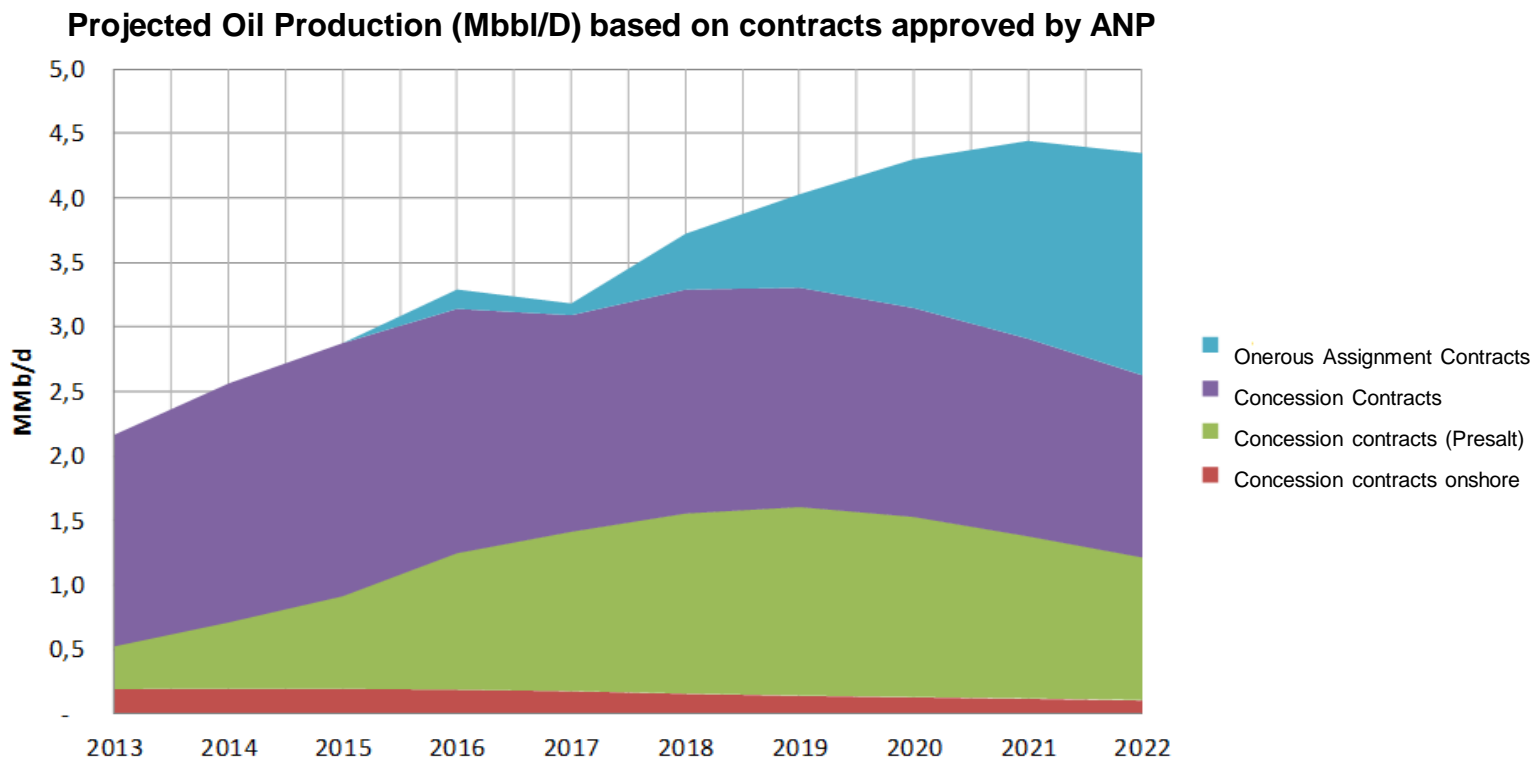
Brazilian oil and gas sector: current status and potential



- Produced to 2.53 million b/d in 2015.
- Is already a net oil exporter:
 - Imported 324 thousand b/d in 2015
 - Exported 737 thousand b/d in 2015
- Imported 19.1 bcm of gas in 2015:
 - 62% in natural gas (Pipelines - Bolívia)
 - 38% in LNG (three terminals)
- 90 Oil companies: half foreign companies.
- Petrobras is the main player: over 90% of the country O&G production

Brazilian oil and gas sector: potential

- The IEA (2015) estimates that Brazil could export 2.3 million b/d in 2040.



Source: ANP

Brazilian oil and gas sector: potential

- The Pre-salt fields has high productivity and already surpassed 1 million bpd.

Well productivity in Brazil's largest oil producing platforms (April 2015)

Platform	Nº of Wells	Total Platform Production (b/d)	Production per Well (b/d)
PETROBRAS 52	17	145,376	8,552
FPSO CIDADE DE PARATY	6	119,850	19,975
FPSO CIDADE DE SÃO PAULO	5	119,817	23,963
FPSO CIDADE DE MANGARATIBA	3	98,050	32,683
PETROBRAS 57	15	96,539	6,436
FPSO CIDADE DE ANGRA DOS REIS	5	89,697	17,939
PETROBRAS 53	15	83,561	5,571
FPSO CIDADE DE ANCHIETA	5	82,329	16,466
PETROBRAS 54	13	80,592	6,199
FPSO CIDADE DE ILHA BELA	2	67,883	33,942

Presalt in Santos Basin
 Presalt in Campos Basin

Source: Own elaboration based on MME

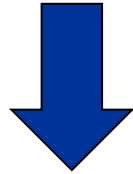


The new and unfavorable external and domestic scenario



The Perfect Storm for Petrobras

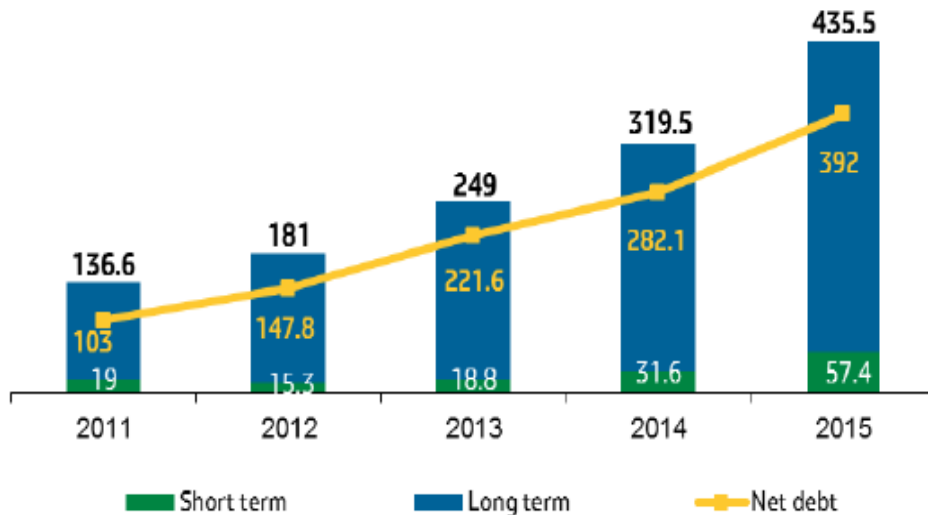
- Oil price collapse
- Excessive Leverage
- Corruption Scandal and governance crises



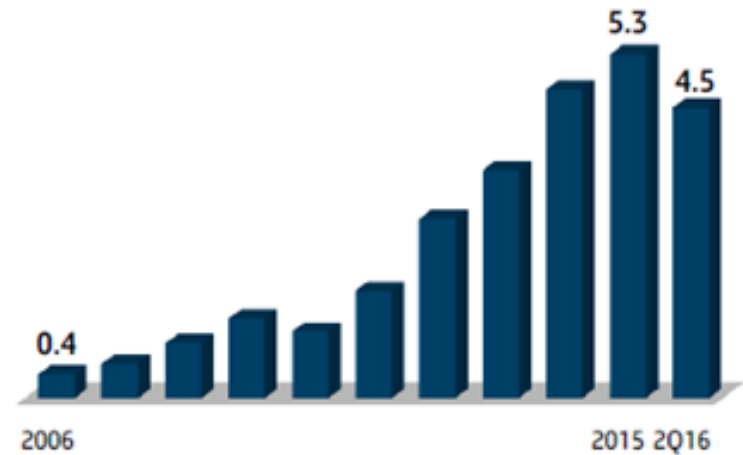
- A Strong trade off between investing to grow and debt reduction
- Need to disinvest

Petrobras is facing a stressful financial situation

Consolidated debt (R\$ billion)



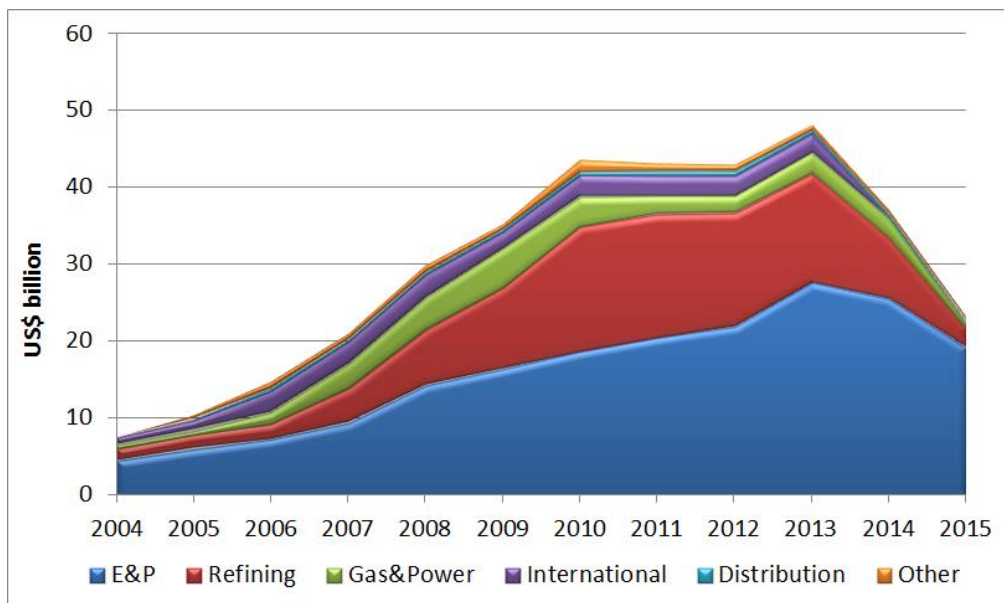
Net Debt / EBITDA



Source: Petrobras

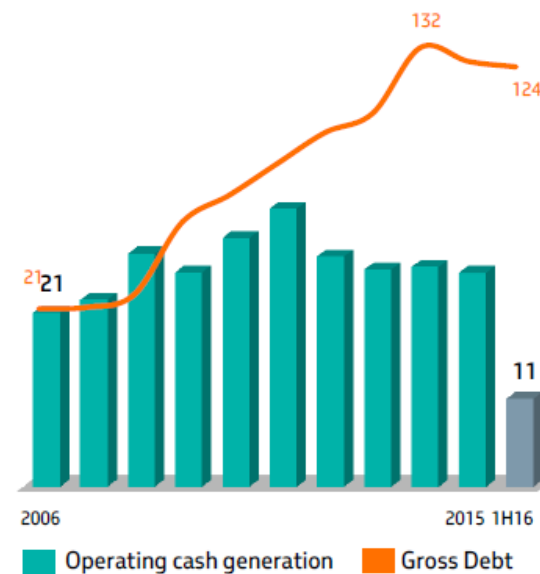
In the last decade, fast growth in investment spending was not matched up by cash flow generation

Petrobras investment spending (US\$ billion)



Source: Own elaboration with data from Petrobras

Growing Debt relative to Cash Generation (US\$ billion)

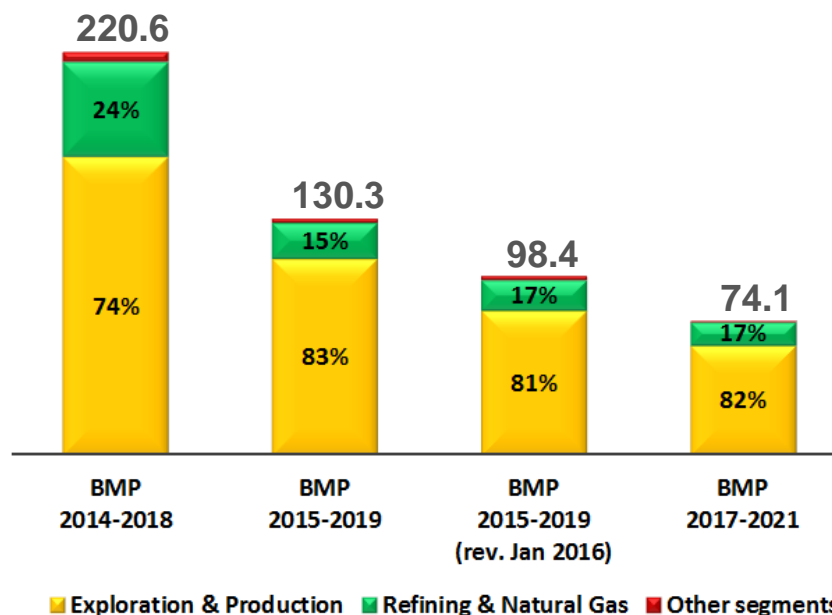


Source: Petrobras

The main adjustment to reduce debt is a strong reduction in investment spending

Petrobras new Business Plan has a strong focus on E&P investment and, within E&P, on high productivity areas, such as Presalt (portfolio optimization)

Total projected investment (US\$ billion)



Source: Own elaboration with data from Petrobras



Roadmap to an attractive investment environment



Reduce current restrictions to private investment in the Presalt:

- Returning to regular E&P bidding rounds, with the end of the Sole Operator Rule in the Presalt
- Review contracts that forbids Petrobras to partner with private companies (PSCs and Transfer of Rights Contract)
- In addition to increase investments, diversification in upstream investors can be a source of competitiveness

Reducing the regulatory costs associated with the diversity of contracts and fiscal regimes in the same field

- It is important to find new criteria to choose the E&P contract (PSC or Concession)
- Field unitization should be done using the same type of contract

Adjusting government take to the current international oil sector landscape

- **Government take is the larger part of the break-even cost**
- **It is necessary to adjust not only the level of taxation, but also its characteristics in terms of:**
 - **Progressiveness**
 - **Complexity**
 - **Flexibility**

- There is a strong conflict of views, by different players, on the way the changes on the LC must occur.
- Circa of 100 fines have been applied, consolidating as a risk factor for investments.
- Suggestions:
 - More flexibility and less risk for local content commitments;
 - Shifting from a local content approach that penalizes to one that rewards;
 - Turning possible contractual penalties into mechanisms that encourage the development of the oil industry.

- Brazil has not been able to promote domestic supply to reduce its dependence on the imported gas.
- Petrobras' current market control represents the most important barrier to attract private investment into gas production and commercialization.
- There is a great potential to use gas for power generation.
- It is necessary a strong institutional coordination to create a competitive market for gas in Brazil.

The downstream challenge

- The Federal Government can control fuels prices indirectly, although officially prices are freely set by the market since 2002.
- Petrobras lost circa of US\$56.5 billion from 2007 and 2014 due to price control of fuels (subsidize).
- It is essential to define a new transparent price mechanism for oil products, in order attract private investments to the downstream

Conclusion

- The discovery of the Presalt resources increased tremendously the growth potential of the oil and gas industry in Brazil.
- Brazil has a potential to become an important oil exporter, if manage to create an attractive business environment for private capital.
- The current international and domestic oil sector context is hindering the necessary investment to tap the Presalt bounty in Brazil.
- Private players will have larger role in the Brazilian oil and gas sector, at least in the middle term.
- The O&G investments could boost the Brazilian economy, which is currently in a difficult situation.



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Thank you