

CHALLENGES FOR FINANCING OIL AND GAS INVESTMENT IN BRAZIL

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- Upstream investment in Brazil: current context and perspectives
- Financing challenges for Petrobras
- Financing challenges for Brazilian independents
- A proposal for a comprehensive policy for financing oil and gas exploration

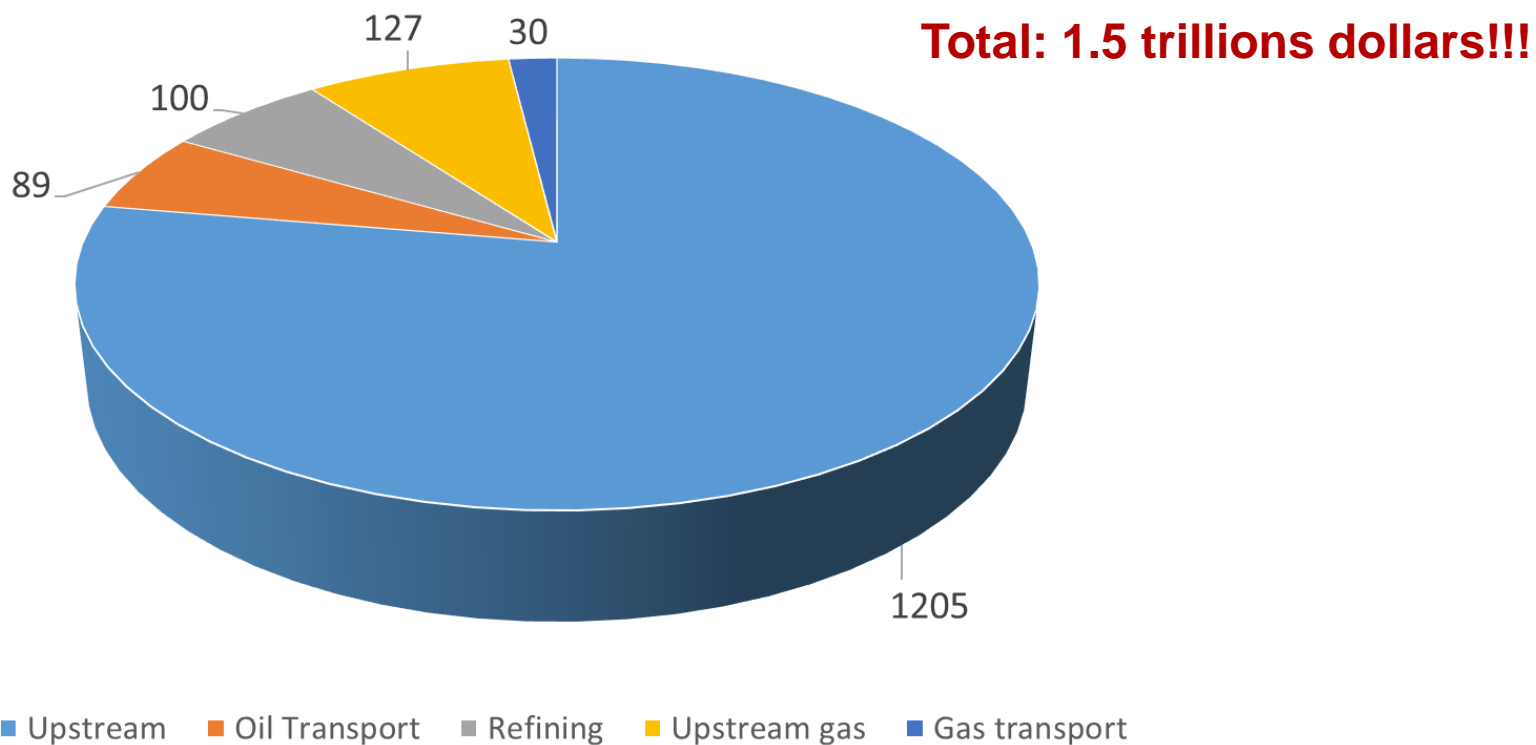
Upstream investment in Brazil: current context and perspectives

Diversification of upstream investment

- Since the opening of the upstream sector in 1997 and Round Zero in 1999, private companies (both foreign and local) have increased their participation in the Brazilian E&P
- Today there are about 100 companies, aside from Petrobras, active in E&P in Brazil
 - About 55 international companies (majors and independents)
 - Responsible for most of non-Petrobras investment in Brazil
 - About 45 Brazilian companies
 - Mostly newly-created companies
 - Diversity of size and business models
 - Important for onshore exploration
- However, Petrobras is still responsible for about 70% of all investments in the Brazilian upstream

Huge investment needs

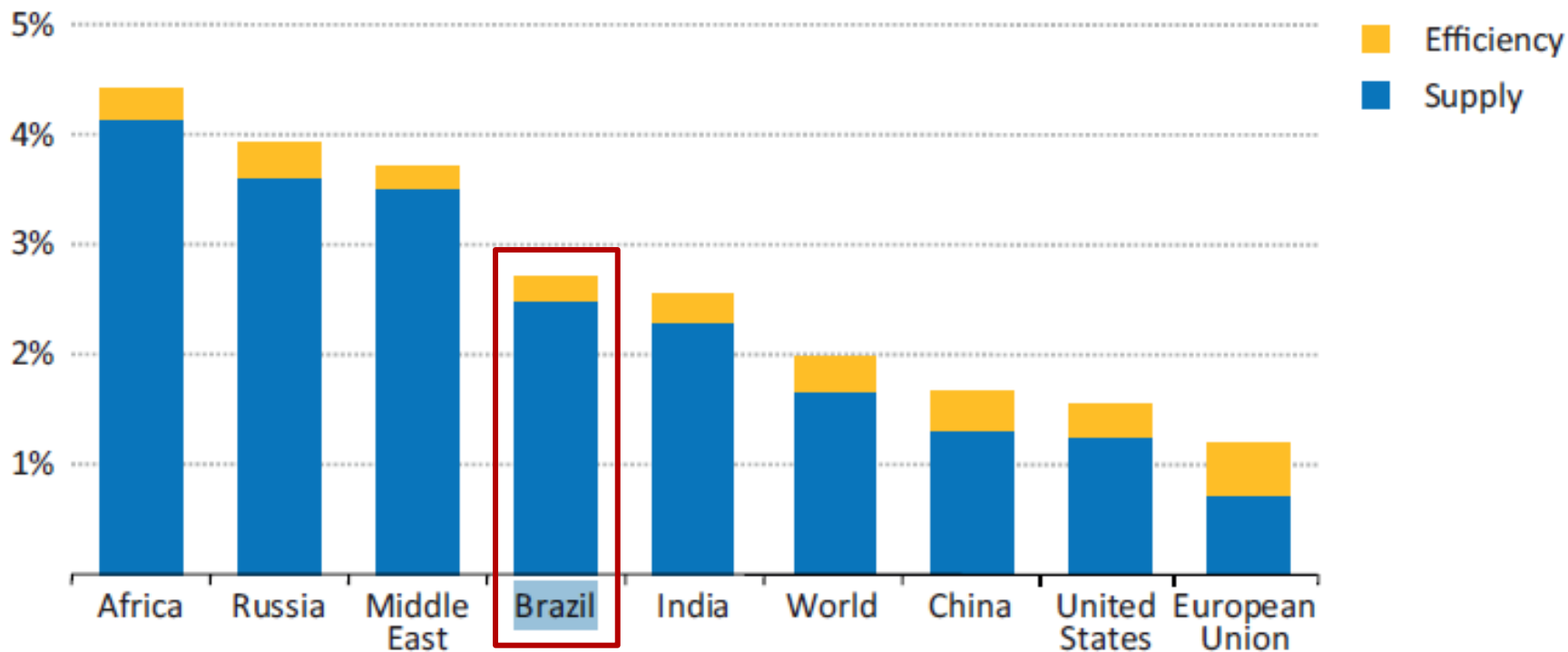
Expected Cumulative Oil and Gas Investment in Brazil, 2012-2035



Source: IEA, World Energy Investment Outlook 2014

Energy investment as a share of GDP

Cumulative Energy Investment as a share of GDP, 2014-2035



Source: IEA, World Energy Investment Outlook 2014

Challenges for financing upstream investment in Brazil

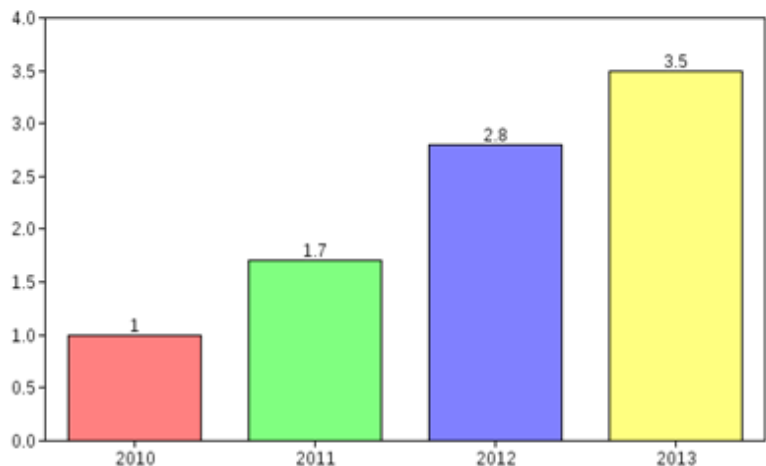
- The amount of investment needed in the upstream is huge!
- Upstream financing:
 - Normally investment comes mostly from free cash flow (retained earnings)
 - But Petrobras has been able to use debt as an important source of financing
 - Newly created companies with no production and revenues require lots of equity!
- Brazilian challenges
 - Petrobras ability to raise and roll over its debt
 - Brazilian independents' ability to raise equity

Financing challenges for Petrobras

Petrobras' financial challenges

- Rapid increase in net debt from US\$ 31 billions in 2010 to US\$ 94.6 billions in 2013
- The debt level is jeopardizing Petrobras' investment grade rating

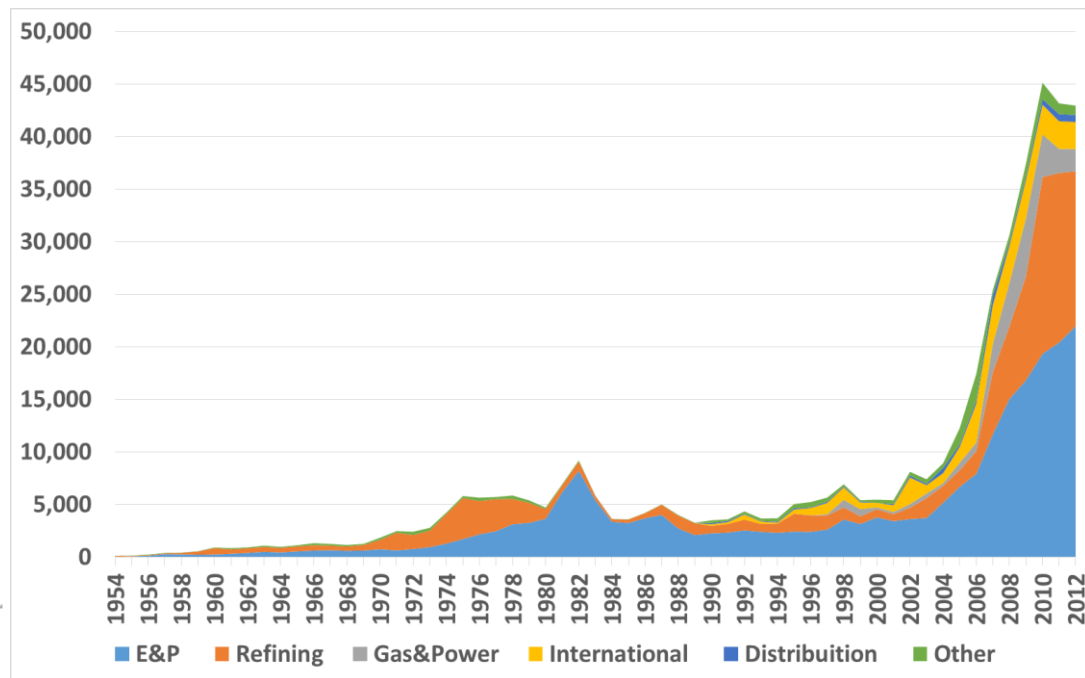
**Debt Index for Petrobras
(Net debt / EBITDA)**



Fonte: Petrobras. Elaboração: Paula Barbosa.

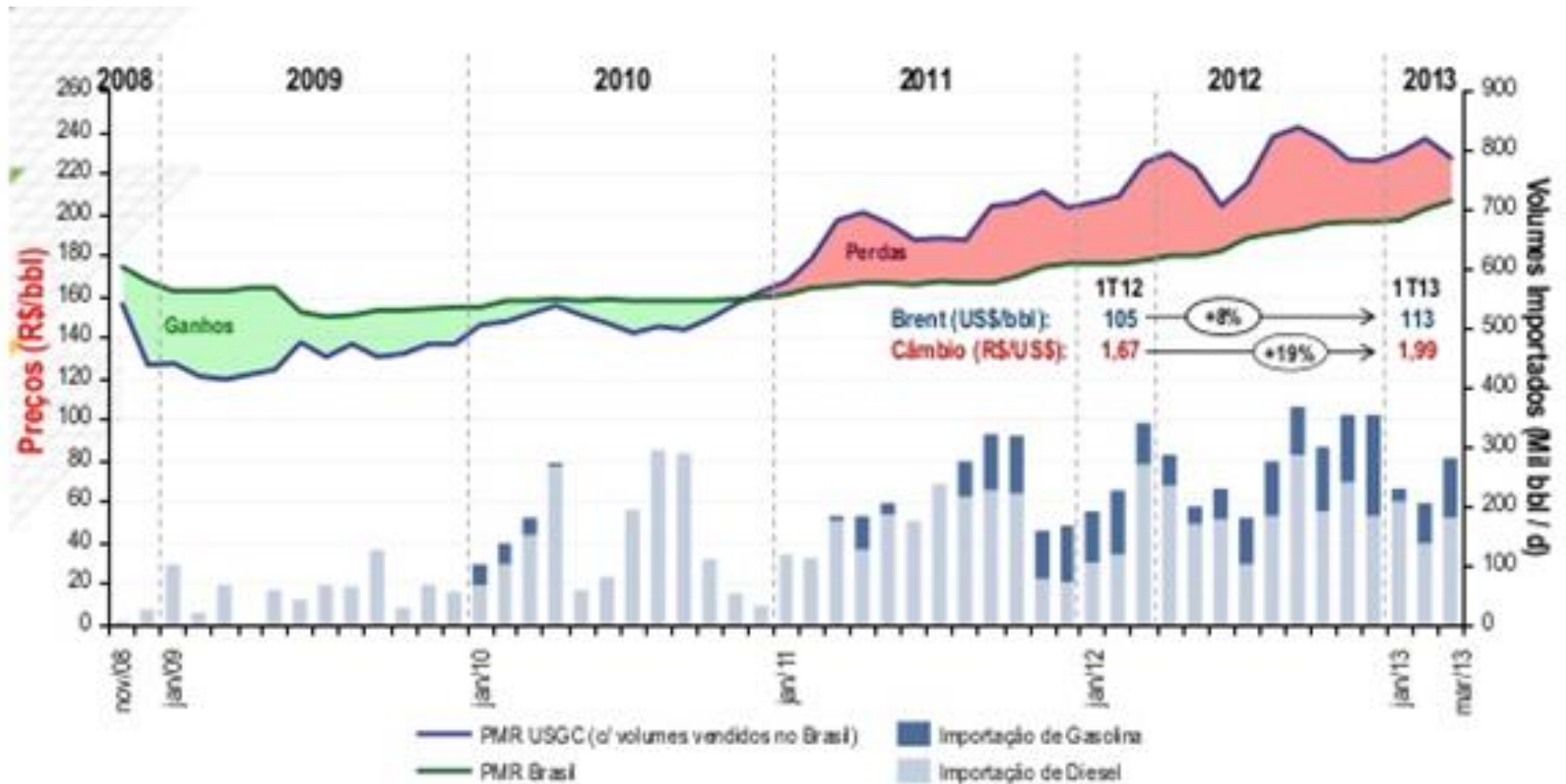
Source: PETROBRAS

Petrobras Investment in US\$ billions



A new pattern of oil products pricing in Brazil?

Average realization prices in Brazil vs. the US Gulf prices



Source: PETROBRAS

Petrobras: Evolution of Results (millions of R\$)

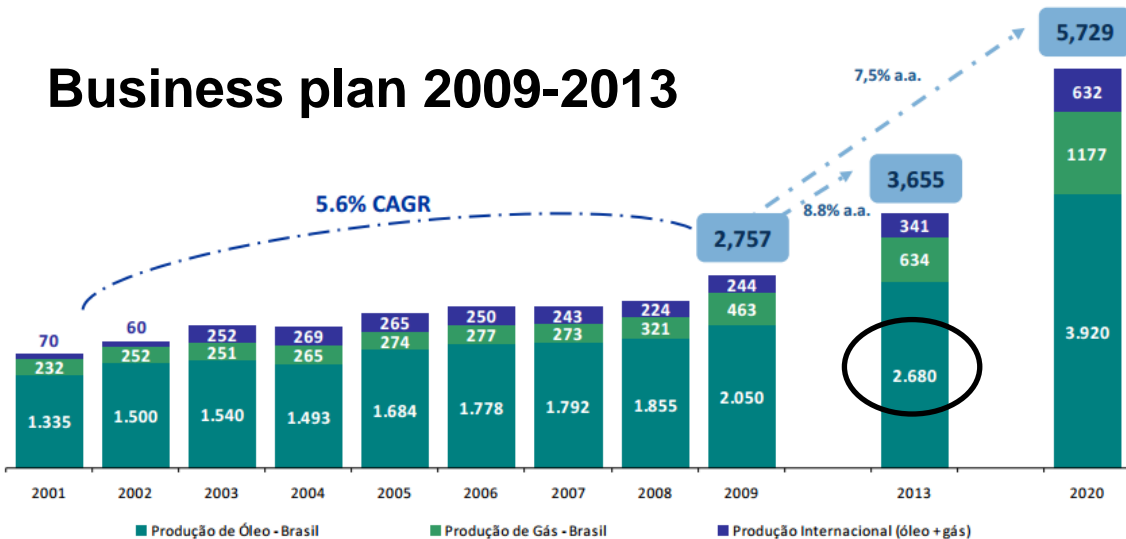
Segment	2010	2011	2012	2013
E&P	29.558	40.575	45.452	42.266
Midstream	3.796	-9.970	-22.931	-17.782
Gas and power	1.247	3.138	1.733	1.387
Biofuels	-92	-157	-218	-254
Distribution	1.276	1.175	1.793	1.843
International	1.398	1.967	1.436	3.775
Corporate	-348	-1.453	-5.391	-8.013
Adjustments	-954	-2.165	-915	-215
Total	35.881	33.110	20.959	23.007

Source: Petrobras

Recent evolution of oil sector in Brazil: large expectations and frustrations

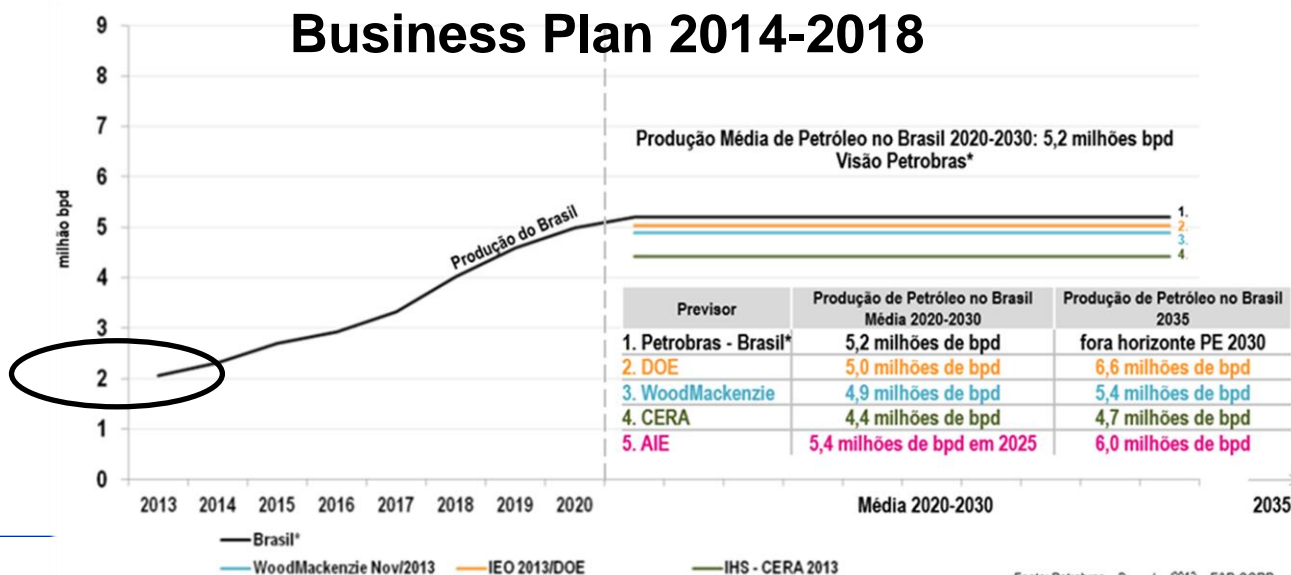
PRODUÇÃO TOTAL PETROBRAS (mil boed)

Business plan 2009-2013



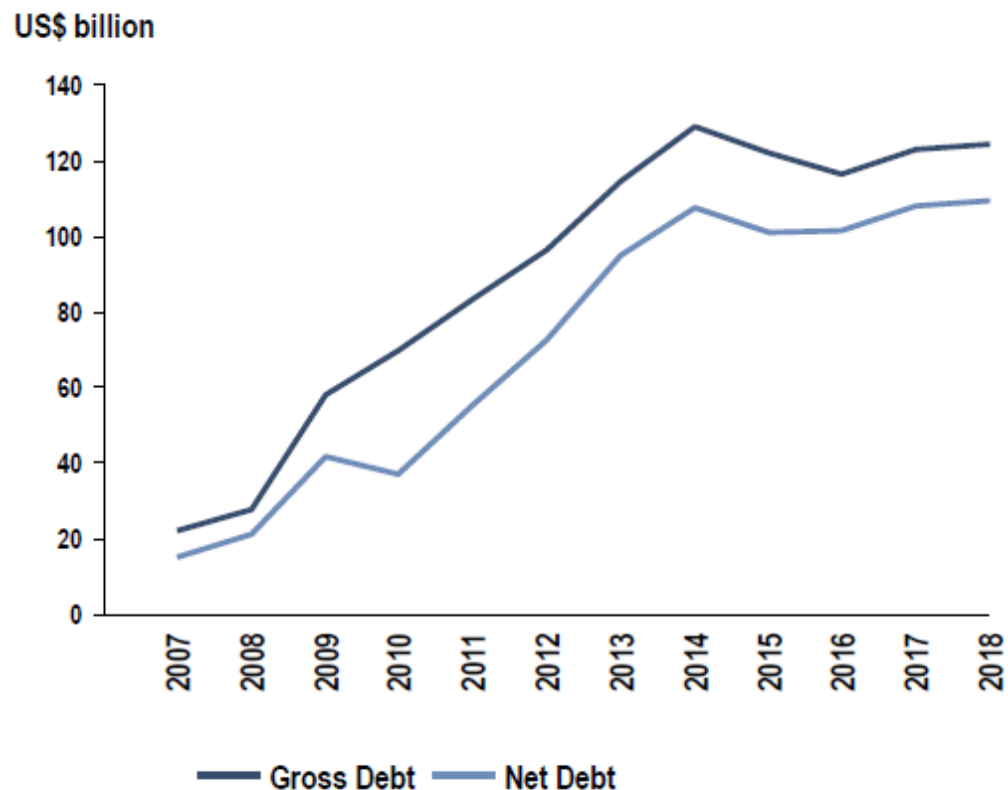
750 k barrels/day would represent more than \$25 billions in revenue if exported

Business Plan 2014-2018



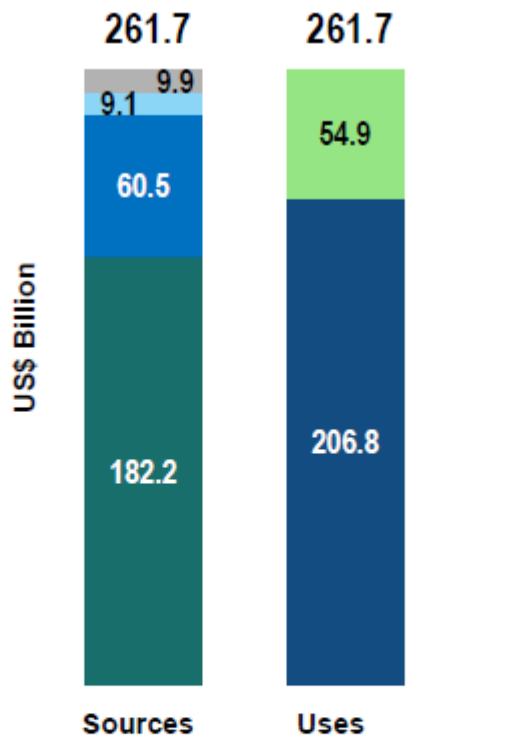
Evolution of Petrobras' debt

Evolution of Petrobras' Debt



- About 45% of the debt must be renewed by the end of 2018
- Only 20% of the debt is based in Reals

Source of financing for Petrobras investment in the 2014-2018 Business Plan



- Business Model Restructuring
- Cash Utilization
- Third-party resources (Debt)
- Operating Cash Flow (After Dividends) and Divestments
- Amortization
- Investments

Source: Petrobras

- The Chinese Development Bank (CDB) is keen to offer credit backed by oil exports contracts
 - In 2009, the Chinese Development Bank (CDB) authorized an operation to lend US\$ 10 billions to Petrobras
 - The loan shall be reimbursed in 10 years with oil exports
 - Sinopec is importing 200 thousand barrels per day from Brazil
- This type of financing is likely to continue to be available to Petrobras given the expected increase in production and exports

Financing challenges for Brazilian independents

- Companies created after the liberalization of the upstream in 1997
- Fast expansion in the 2000s:
 - Focused on onshore exploration
 - Access to equity (high market liquidity in Brazil and abroad)
 - IPOs

IPOs of Brazilian Independents: a short story

Company	Year	Revenue from IPO
OGX	2008	R\$ 6.7 billion
HRT	2010	R\$ 2.6 billion
Queiroz Galvão	2011	R\$ 1.5 billion

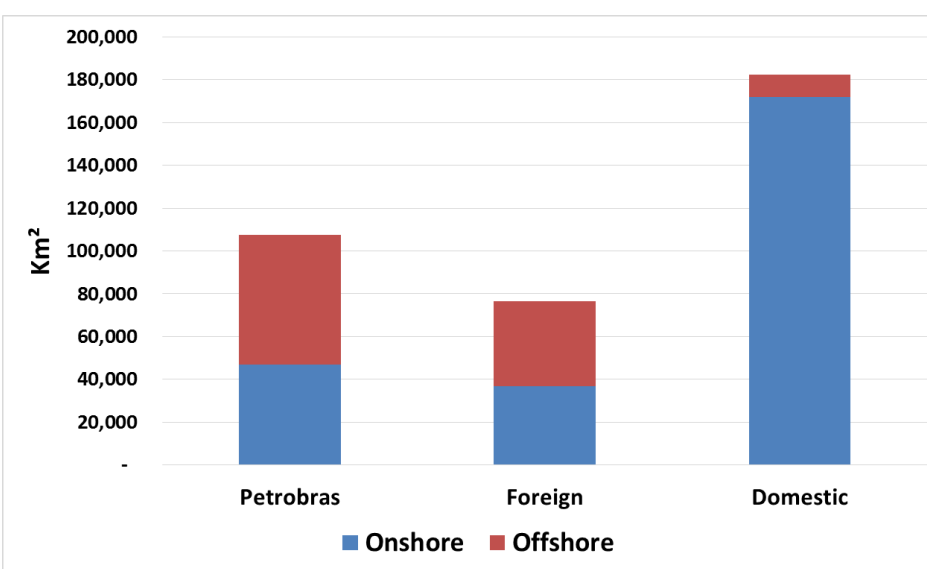
Source: Own elaboration

Total of R\$ 10.8 billion in IPOs

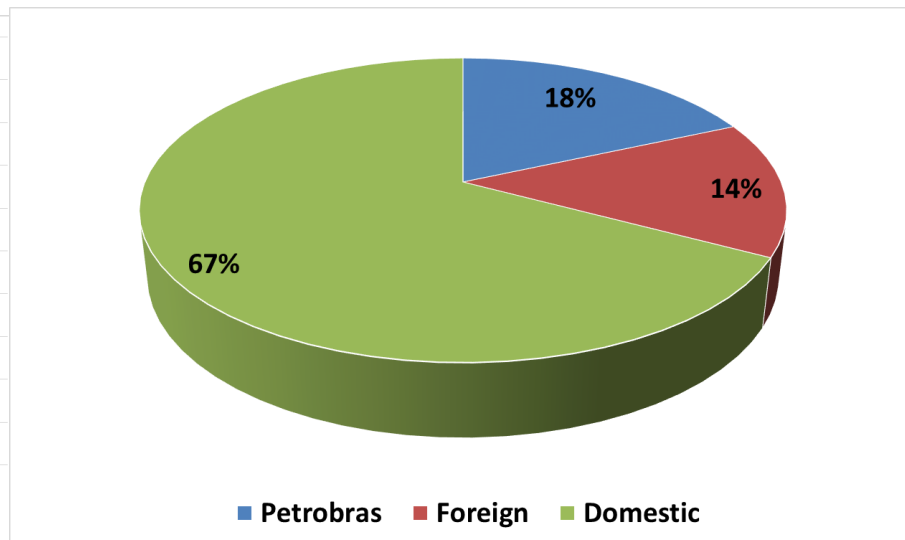
Brazilian independents are responsible for most of onshore exploratory acreage in Brazil

- Onshore exploration is very important for future natural gas supply
- As Petrobras focuses in the Presalt, Brazilian independents are expected to take the lead in onshore exploration

Onshore and Offshore Exploration Acreage by Type of Company - 2014



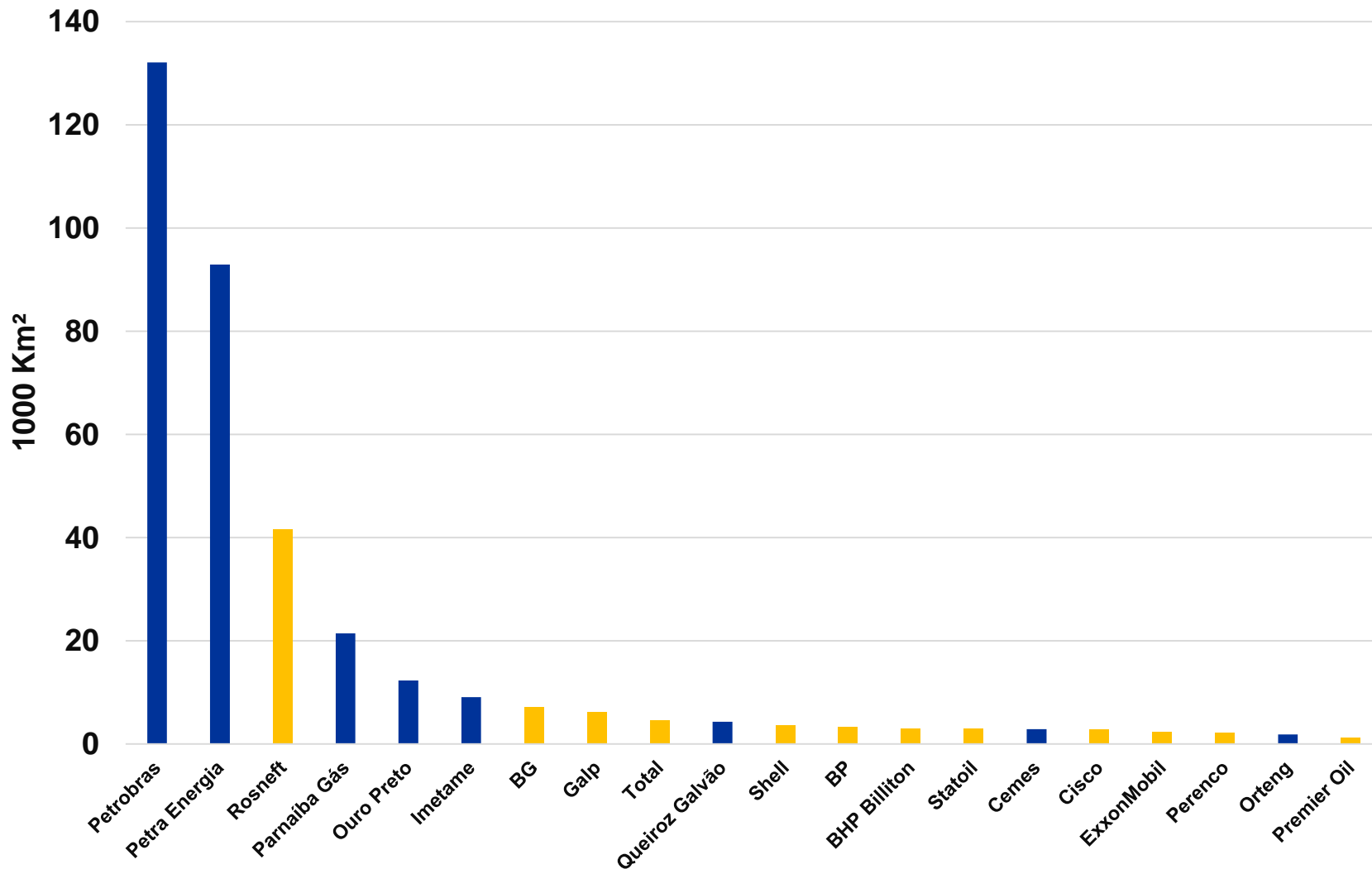
Share in Onshore Exploration Acreage by Type of Company - 2014



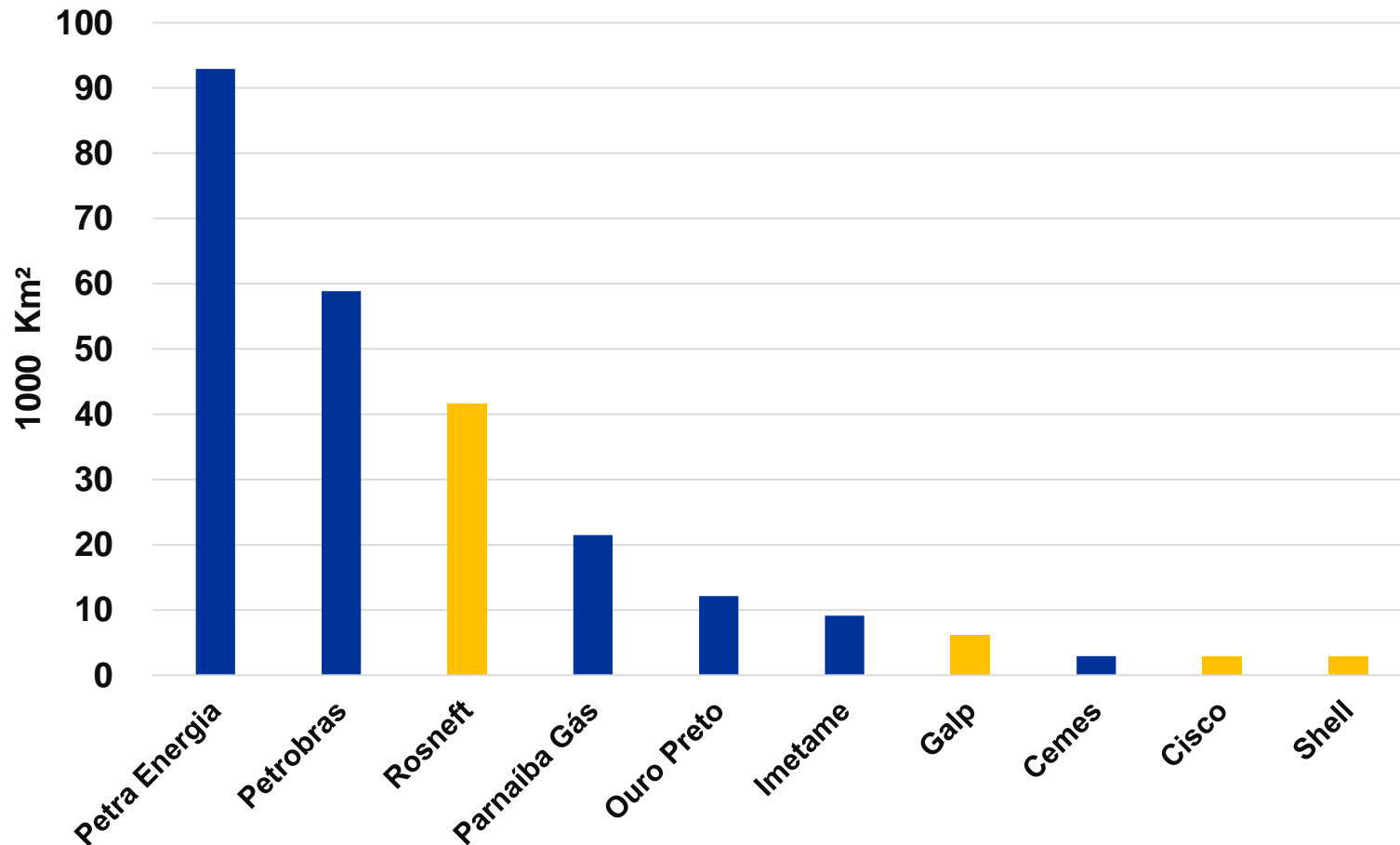
Source: Own elaboration with ANP data

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Largest operating companies by acreage



Largest operating companies by onshore acreage



Financing difficulties of Brazilian independents

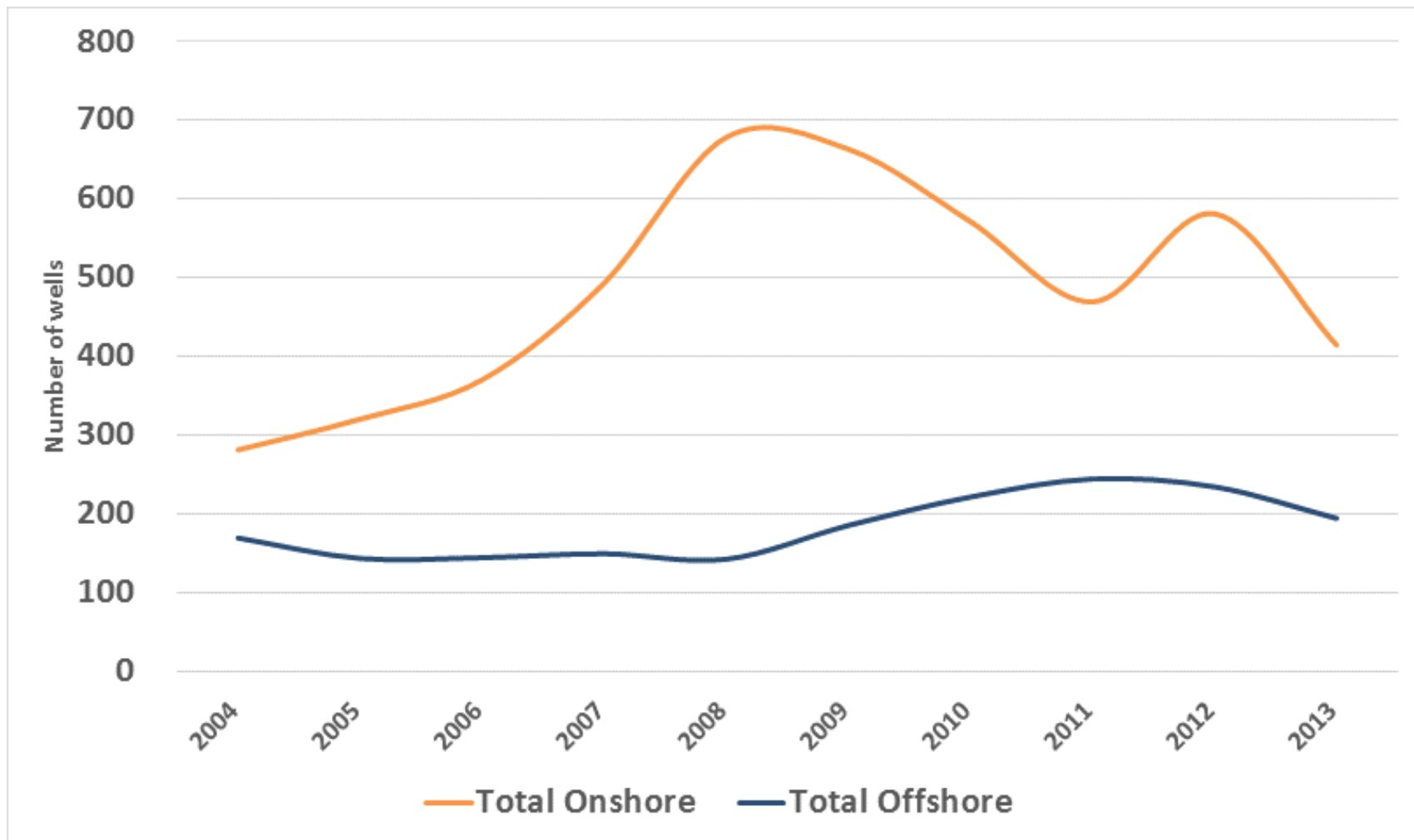
- The reduction of international market liquidity and the OGX crisis contributed to dry financial sources for Brazilian independents
- Main independents has sold assets to finance exploration campaigns

As a result:

- Onshore exploration in Brazil is stagnating
 - Petrobras is focusing on Presalt and other offshore opportunities
 - 12 Bidding Round was a disappointment
 - Brazilian independents face problems to finance exploratory campaigns

Lack of financing is affecting the ability of Brazilian independents to invest

Evolution of the Number of Wells Drilled in Brazil



Source: ANP

A proposal for a comprehensive policy for financing oil and gas exploration

- Currently, BNDES finances the oil and gas segment
 - Supply chain
 - Downstream
 - Petrobras
- Petrobras will not have a problem financing, as long as the cash-flow remains balanced.
- But Brazilian independents have problems:
 - Difficulties to have access to equity market
 - No access to debt for upstream investments
- Therefore, financing is an important obstacle to promote onshore exploration.

- Can BNDES do something to help organize the equity market for exploration in Brazil?
 - Direct participation
 - Venture capital funds

- Can BNDES do something to organize the debt market for early development?
 - Credit
 - Warranty fund

Thank you! Obrigado!

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