



Welcome to **PH Global Research**. The objective of the report is to present and analyze macroeconomic information related to the company, its segmentation, its benchmarking and its strategy. This leads to some rationales and business risks/mitigates that are split up into three sections: macroeconomic, company-related and financial. The analysis is essentially graphic, while the executive summary provides an opinion.

Petrobras is by far the largest company in Brazil in terms of total revenues and operating performance. After having been in the top 10 largest market capitalization in the world in 2010, the Group is now in disarray (Petrobras lost 54% of its enterprise value since the end of 2010; its share value declined by 77% over the last 5 years) because of a series of events:

- **The largest corruption scandal** ever, involving Petrobras executives and politicians in the form of bribes and illegal political donations
- An extraordinarily **bad macroeconomic environment**, characterized by low crude oil and natural gas prices, unfavorable currency exchange evolution, and Brazilian economy in its deepest recession since 1990.
- A **massive debt** of around US\$128bn currently (representing 25% of Brazil's hard currency borrowing), whose obligations for 2016 and 2017 are not likely to be met, due to sustained strong level of capex absorbing operating cash flows.

Petrobras is not able to face its debt requirements without Herculean efforts and help. There are few options that could improve the situation:

- **Bail-out from the Brazilian Government**, its majority shareholder: some kind of involvement and help from the Brazilian Government is most likely considering the strategic importance of Petrobras in terms of what it represents for the Brazilian economy, and also socially. The form of the support includes increase in domestic fuel price, subsidies, increase in share, regulatory reforms, etc.
- **Support by banks and financial institutions**: banks have no interest in defaulting Petrobras (although its current Net Fixed Assets base represented 130% of total financial debt at the end of September 2015. Domestic banks, particularly the ones that are State-owned could eventually transform debt into Equity to a certain extent or extent maturity to a significantly longer horizon (BNDES and Libra shipping in the past)
- **New partners**, particularly Chinese, slowly taking control of a significant share in Petrobras in order to guarantee delivery to China but also to have a decisive stake into a strategic company in Brazil.

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- 13: Threats/Opportunities

These three most likely options could occur independently or jointly and should be accompanied by Petrobras' serious gains in productivity and further Assets disposals in order to transform the business model in a sustainable manner.

A shock cannot be excluded that could precipitate the fall of Petrobras (further scandal consequences, derivative defaults or massive Assets impairments), but it is unlikely that it may result in default, as there are still some strong fundamentals, such as its leading position in Brazil, Petrobras' EBITDA margin, its Cash and liquidity positions, and its solid Net Fixed Assets base. The consequences of a default could probably be bigger than the default of a medium size sovereign country as it would impact significantly Brazil economy (risk of becoming systemic), South America (Argentina, Bolivia, Uruguay and Panama are all dependent to Brazil either in terms of FDI or imports) to a large extent and particularly ruin the reputation of Brazil for a long time.

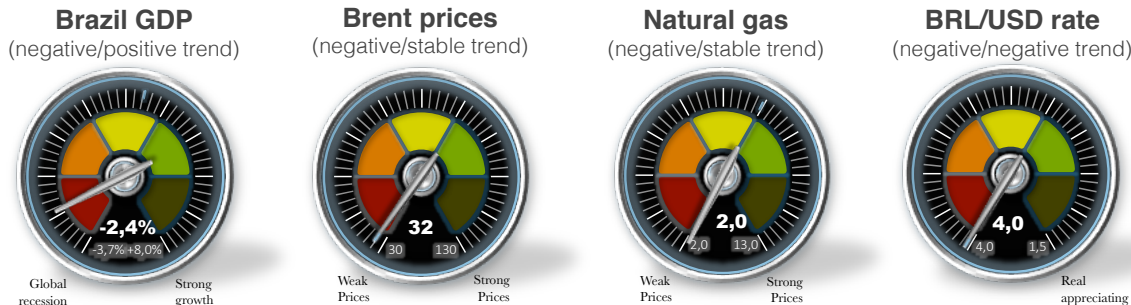


MACROECONOMIC ENVIRONMENT

KEY MACROECONOMIC VARIABLES

The overall macroeconomic environment is very unfavorable for Petrobras, with a Brazil in deep recession, very low Brent and natural gas prices combined with a weak Brazilian Real. Out of all variables monitored, the following four macroeconomic variables are the most correlated to Petrobras total revenues, volumes or profitability, according to econometric models

Petrobras faces very unfavorable macroeconomic environment



Brazil is currently in a recession. Economic activity and confidence sink amid a political crisis. In 2015, GDP contracted by 3.7% and is due to contract further by 2.4% in 2016 before stabilizing in 2017.

Brent crude oil prices (\$/bbl) decreased significantly in the last two years and reach 10-year low.

Natural gas prices (\$/MMBtu) are at their historical low over the last 10 years as well.

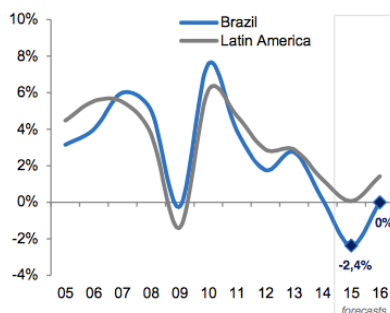
Brazilian Real reached all-time historical low as compared to US \$, which has a negative effect on Petrobras due to its segmentation

BRAZIL ECONOMY

Brazil is facing its worst economic situation in 10 years. The worst stagflation in 10 years and huge twin deficits leads to a gap between demand and supply resulting in inflationary pressures and external deficit. The adjustment of the external position has begun as Brazil has returned to a trade surplus. Portfolio inflows are negative but Foreign investment inflows is gaining momentum.

Brazil (91% of Petrobras sales), is in recession with minor signs of recovery

GDP growth (%)



Key economic forecasts

	2013	2014	2015	2016
GDP growth (% change)	2.7	0.1	-2.4	0.0
Inflation (% , yearly average)	6.2	6.3	8.9	7.0
Fiscal balance* (% of GDP)	-3.1	-6.2	-5.3	-4.7
Public debt* (% of GDP)	62.2	65.2	68.0	70.0
Current account (% of GDP)	-3.4	-4.5	-4.3	-3.4
External debt (% of GDP)	13.0	14.9	21.7	22.5

*Includes Local Government; Nonfinancial Public Corporation; Social Security Funds; State Government

Strengths

- Overall size of the economy
- Large domestic market and expanding middle class
- Diversified economic base (minerals, agriculture, manufacturing sector)
- Robust foreign direct investment, high level of foreign exchange reserves, moderate external debt
- Durable political system with established effective democratic transfers of power

Weaknesses

- Insufficient domestic investment and infrastructure bottlenecks
- Vulnerable to global commodity demand and prices
- Lack of qualified workforce and high production costs
- Persistent inflation and public spending stresses
- High taxation and bureaucracy undermine competitiveness
- Political and social tensions, persistent insecurity, allegations of corruption and inequalities of income distribution

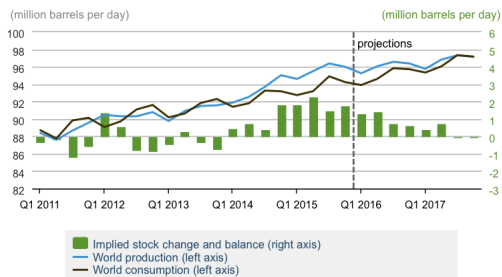
MACROECONOMIC ENVIRONMENT

CRUDE OIL GLOBAL FUNDAMENTALS

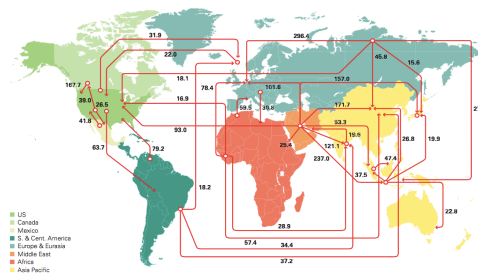
Oil market is still characterized by a chronic oversupply, which is, however, due to improve slightly in 2016 and 2017. EIA estimates that global oil inventories increased by 1.8 mm b/d in 2015, marking the second consecutive year of strong inventory builds. Persistent oversupply has contributed to oil prices dropping further in January and reaching the lowest monthly average level since 2003. Refinery throughputs are increasing at a lower pace than crude oil production.

Global oil industry is in an oversupply situation, that is expected to reduce within the two coming years

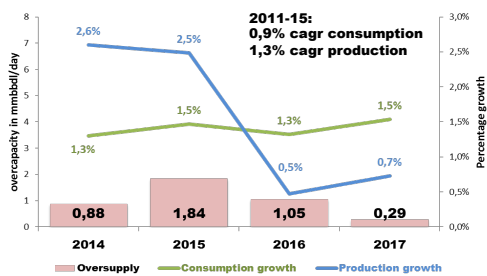
World liquid fuels production and consumption balance



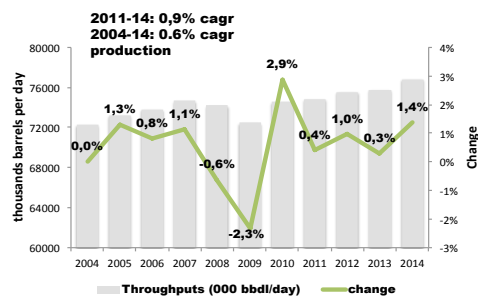
Major trade movements in liquid fuels (2014)



World liquid fuels production and consumption evolution



Refinery throughput

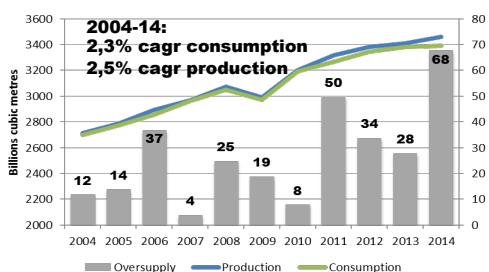


NATURAL GAS FUNDAMENTALS

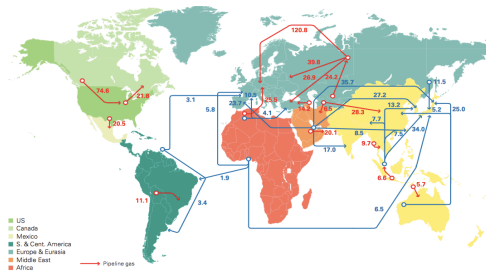
Natural balance leads to oversupply. The situation is not expected to improve soon as consumption and production are evolving in parallel.

Global natural gas industry is in sustained oversupply situation, that is not expected to improve any time soon

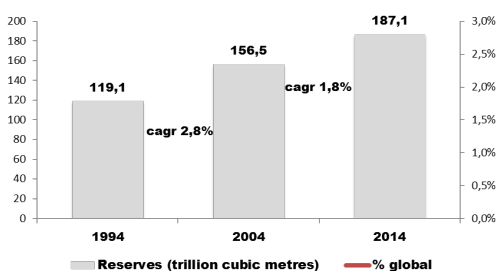
World natural gas production and consumption balance



Major trade movements in natural gas (2014)



Global natural gas reserves





CRUDE OIL IN BRAZIL

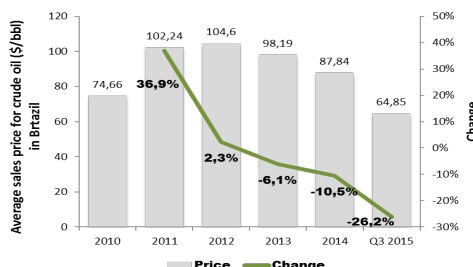
Brazil is the 8th largest total energy consumer and 9th largest liquid fuels producer in the world. Increasing domestic oil has been a long-term goal of Brazil with large off-shore presalt oil deposits. Crude prices are higher in Brazil but declining as well. Refinery capacity is increasing well above average, due to high increase in production and consumption.

In Brazil, oil production increases, albeit not sufficient to meet domestic demand. Price decrease accelerates in Brazil.

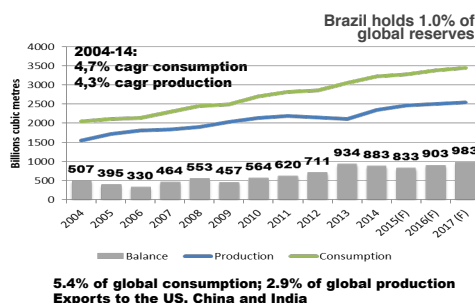
Brent Crude future (US\$/bbl)



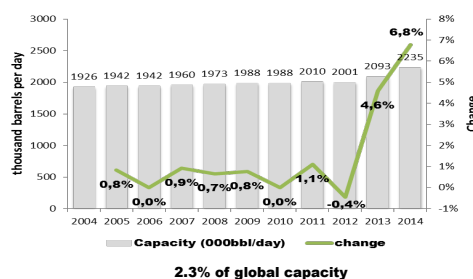
Crude prices in Brazil



Brazil liquid fuels production and consumption balance



Refinery capacity



NATURAL GAS IN BRAZIL

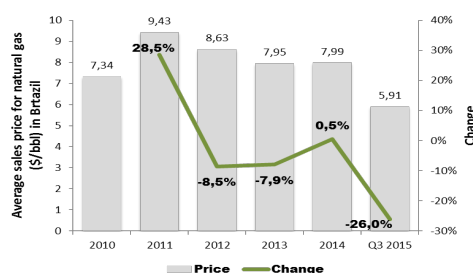
Although natural gas accounted for 12% of energy consumption only in 2014, production and consumption increase significantly. Natural gas prices decrease by over 25% in 2015. Brazil holds the second largest reserve in South America.

Brazil needs to import natural gas to meet increasing domestic demand. Most of the reserves are offshore (production more costly than onshore)

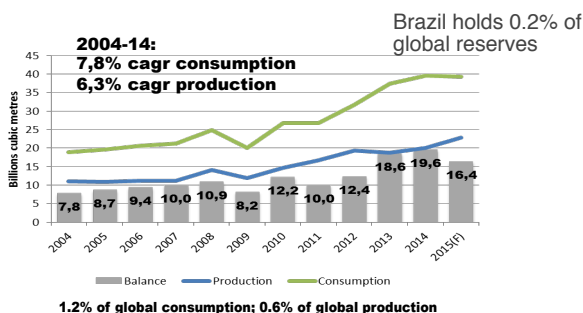
Natural gas (NGJ6, \$)



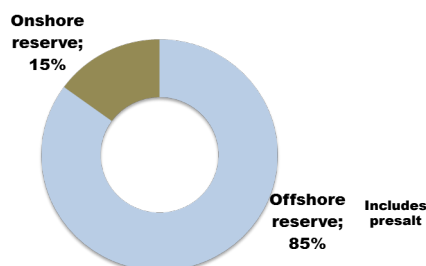
Natural gas in Brazil



Brazil natural gas production and consumption balance



Concentration of reserves



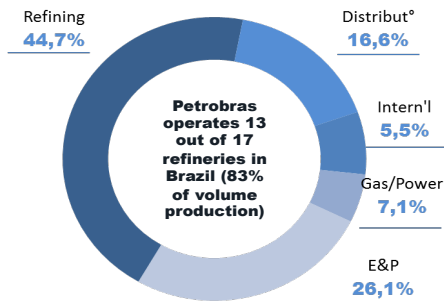
PETROBRAS ANALYSIS

SEGMENTATION

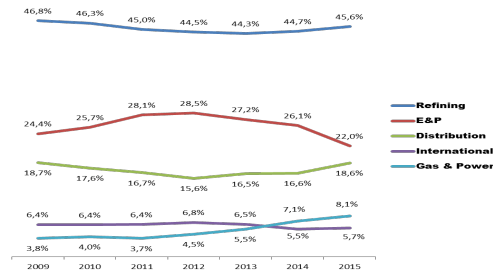
Petrobras is relatively diversified, holding a dominant position in Brazil's oil sector with important positions in upstream, midstream and downstream activities. Its Refining segment's operating performance is improving and somewhat offsets the decline in E&P, although suffering from Brazilian Real deterioration for its oil imports combined with lower prices. Petrobras continues increasing production volumes to compensate the low prices.

Petrobras has a strong presence in E&P and decent in Refining.

Segmentation in 2014 (% sales)

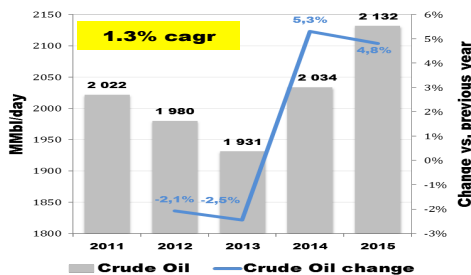


Segments (% total sales before intersegment elimination)



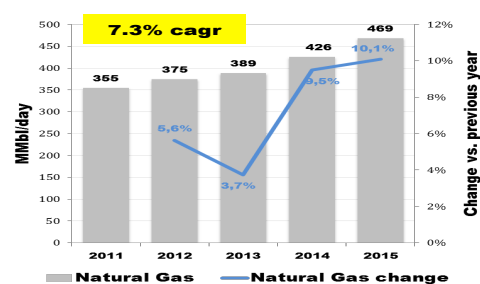
Crude oil production evolution

82% of Petrobras production



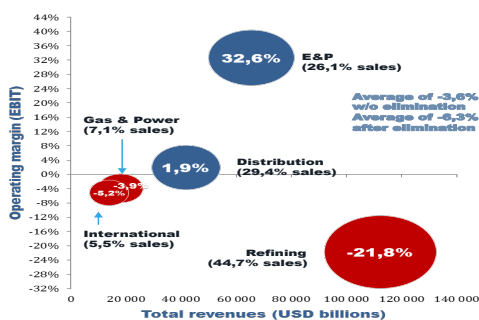
Natural gas production evolution

18% of Petrobras production

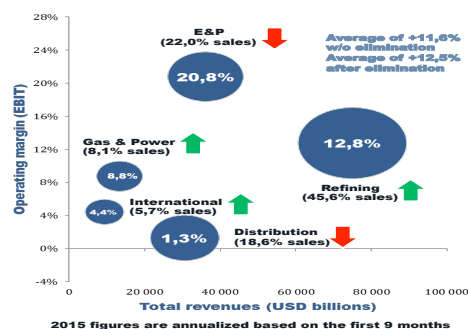


Petrobras' oil and gas production increased particularly since 2014 to compensate price decrease.

Operating margins (EBIT 2014) before intersegment elimination

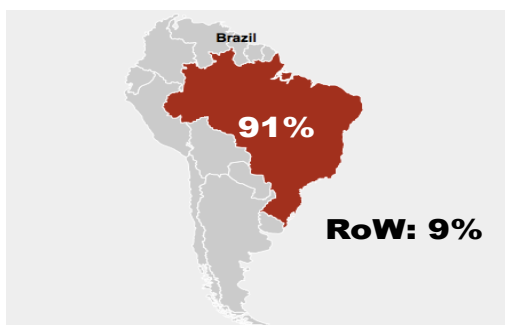


Operating margins (EBIT 2015) before intersegment elimination



Refinery profitability increases while E&P decreases significantly.

Geographical diversification (%sales)



Characteristics

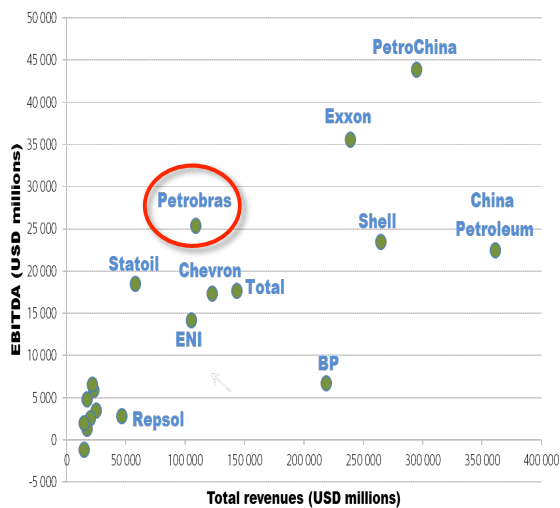
- Petrobras is responsible for most domestic crude oil and natural gas production
- Petrobras is responsible for gas imports from Bolivia
- It controls all the transmission network (although currently being acquired by foreign investments)
- Petrobras has a stake in the vast majority of the 27 State-owned natural distribution companies
- Petrobras' reserves are, however, currently at their lowest level since 2011, at 11.3 years of output

PETROBRAS ANALYSIS

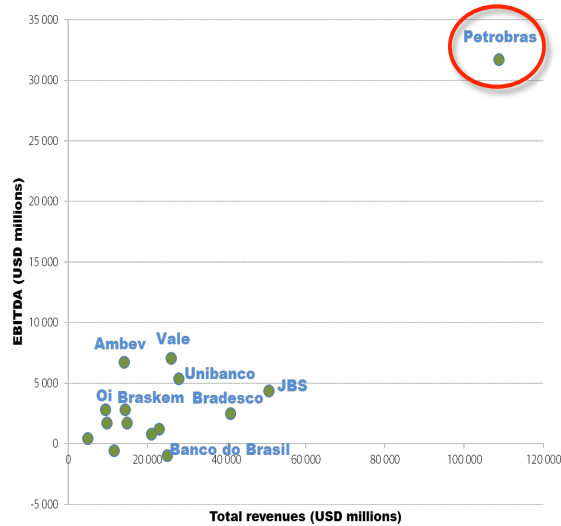
POSITIONING

Petrobras is a large Oil&Gas company (within top 10 in terms of total revenues) and it is by far the largest Brazilian company.

Global industry peers by Sales and EBITDA (last Calendar Year)



Largest Brazilian companies

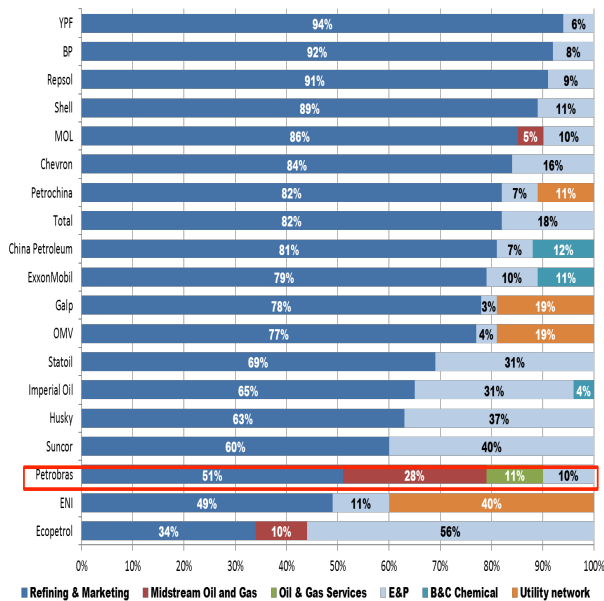


Petrobras is by far the largest Brazilian company

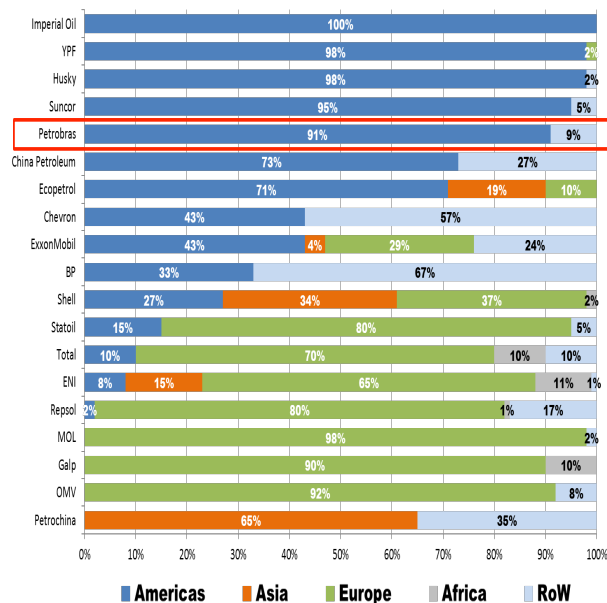
SEGMENT BENCHMARKING

Petrobras is relatively diversified in terms of products (although it does not have a segment split up that allows to face oil price cyclicalities, such as Total SA). It is heavily dependent on Brazil's economy as 92% of its sales is generated in Brazil.

Segment diversification by products



Segment diversification by geography



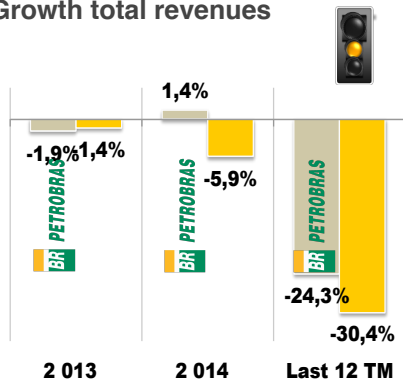
Petrobras concentrates on Brazil and displays lower refining segment share than peers, suffering more than peers from price volatility

PETROBRAS ANALYSIS

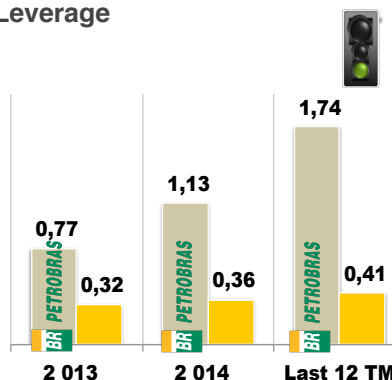
FINANCIAL BENCHMARKING VS. OIL&GAS INDUSTRY

Petrobras' main issue relate to its level of debt as compared to Equity, which is about over 4 times the level of the average industry. Its total revenues evolved in line with the industry, while its Cash strengthened and its EBITDA margin remained above industry average. Petrobras Balance Sheet is long-term oriented. Petrobras's credit rating is 9-notches below industry's centre of gravity, with a much higher probability of default as compared to its peers

Growth total revenues

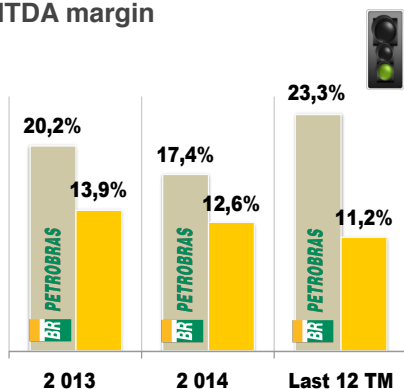


Leverage

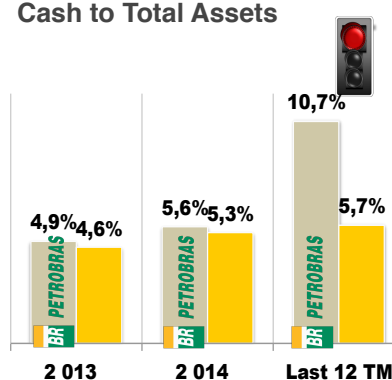


Leverage continues increasing but operating performance is strong

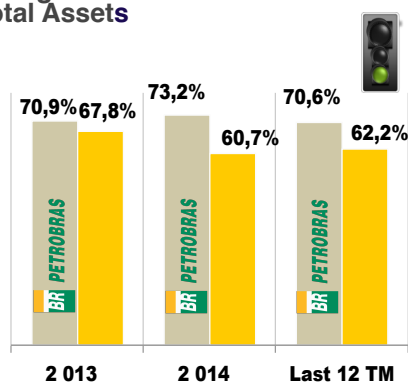
EBITDA margin



Cash to Total Assets

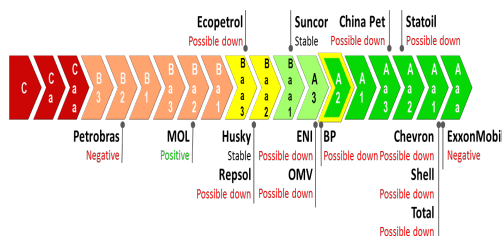


Net Tangible Fixed Assets to Total Assets



Credit ratings (Moody's and equivalents)

GRAVITY CENTER OF INDUSTRY: A2 (possible downgrade)



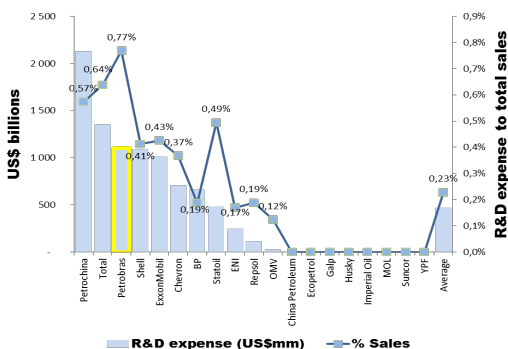
Petrobras is rated «junk» investment by credit agencies

PETROBRAS ANALYSIS

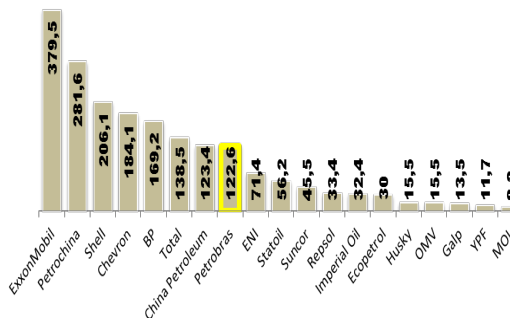
KEY INDICATORS BENCHMARKING VS. OIL&GAS INDUSTRY

Petrobras has a low enterprise value and a low market capitalization, essentially due to the high level of debt. In 2010, Petrobras' market capitalization ranked within the world's 10 largest capitalization. Since then, it lost over 3/4 of it. Employee productivity is the lowest of its peers. Although deteriorating over the last years, it generated operating margin still above industry average.

R&D to sales , last Calendar Year

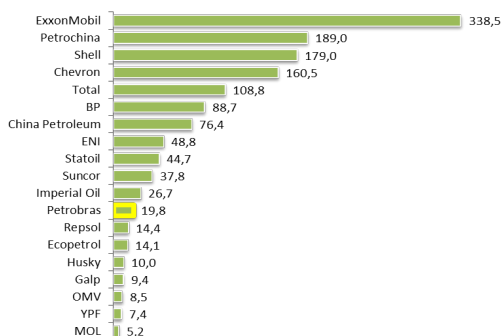


Entreprise value (US\$bn) end Feb-16

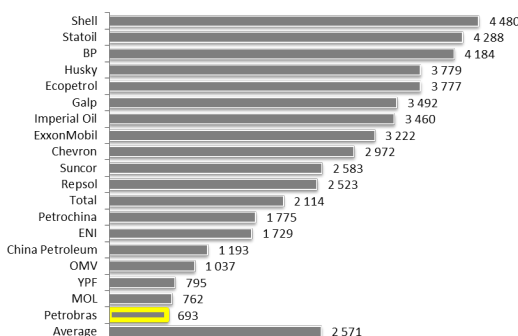


Market capitalization and enterprise value are very weak as compared to Petrobras's size

Market capitalization (US\$bn) end Feb-16

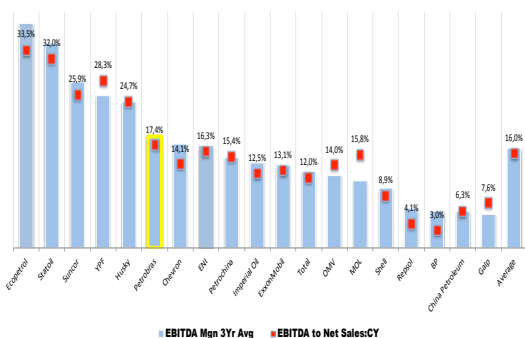


Employee productivity (US\$/employee)

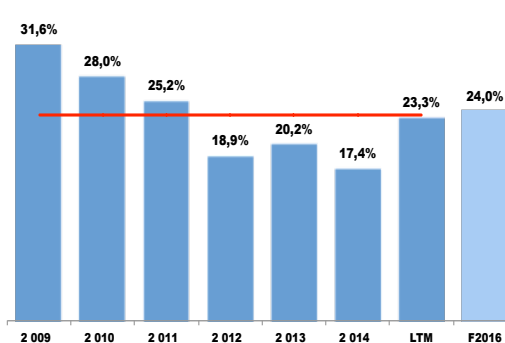


Petrobras' employee productivity is the lowest of its peers

EBITDA margin peers comparison



Petrobras EBITDA margin



Petrobras' operating performance is above industry average and improving in 2015

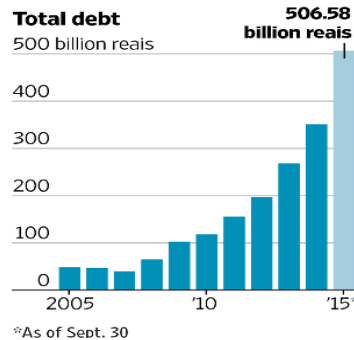
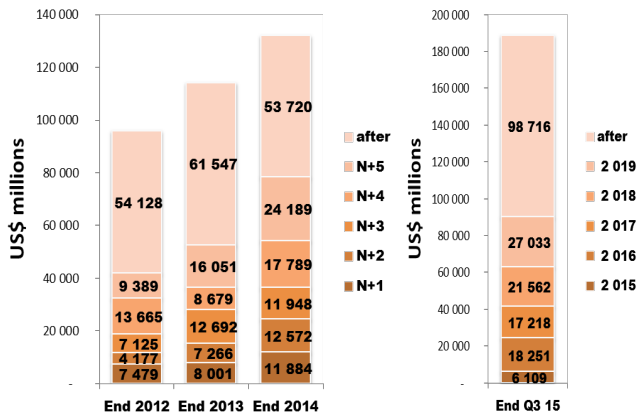
PETROBRAS ANALYSIS

SPECIAL FOCUS 1: FINANCIAL DEBT

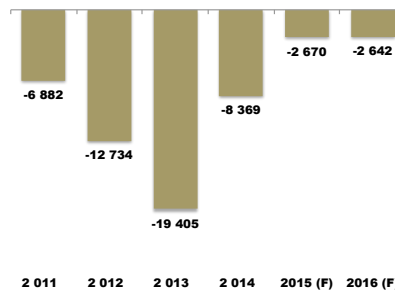
Petrobras has the largest financial debt of a company in the world at close to US\$130bn at the end of Q3 15. Petrobras plans to spend the same amount in capex, that it should generate in cash in 2016, leaving no margin to reduce its massive debt. The company is totally dependent on assets sale (for which the sales results cannot be controlled) or to special deal with Chinese companies or banks in order to reduce leverage.

Petrobras displays an unsustainable amount of financial debts (of which 89% is US\$ denominated)

Debt repayment schedule (US\$mm)



Free Cash Flow (US\$mm)



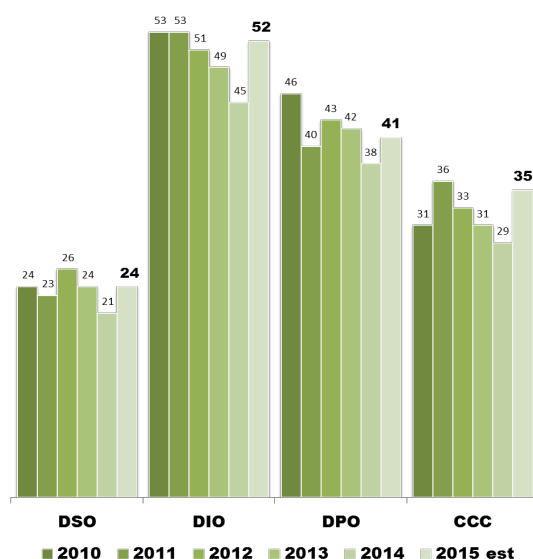
SPECIAL FOCUS 2: WORKING CAPITAL

Petrobras has higher working capital requirements as compared to its peers, due to high inventory levels and low DPO. A significant share of account receivables is provisioned

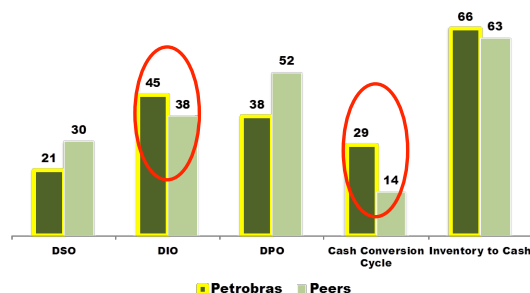
Petrobras has higher working capital requirements than peers

Evolution of working capital

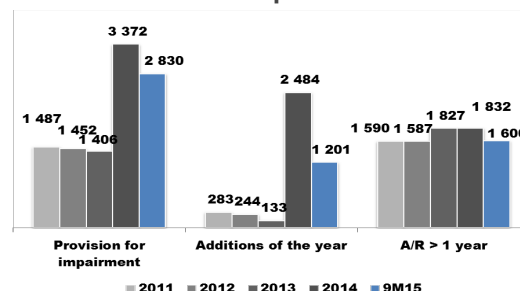
1 day DSO = €298mm;
1 day DPO = €211mm.



Peers comparison



Accounts receivable provision



PETROBRAS ANALYSIS

SHARE VALUE PRICE

Situation has been deteriorating for Petrobras share value for the last 6 years, which translated in enterprise value decreasing by 14% CAGR since 2010. Investors are pessimistic about the near future, although some investors believe that the share value price reached a trough at February as share value gained 58% in one month.

Petrobras' difficult situation reflects into share value evolution and enterprise value. There is a glimpse of hope in the last month

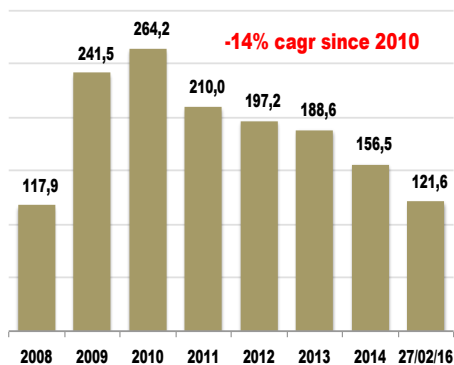
Share evolution over 5 years



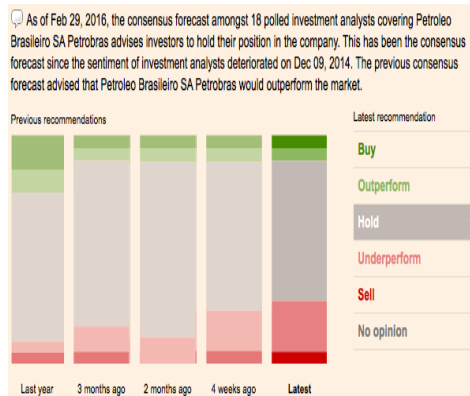
Change in value share (09/03/16)

Companies	Last month	Last year	Last 5 years
Petrobras	58%	10%	-67%
ExxonMobil	3%	1%	16%
Chevron	8%	-11%	6%
China Petroleum	18%	-19%	1%
Repsol	23%	-33%	-36%
Shell	16%	-19%	15%
Total	14%	-5%	33%
BP	8%	-15%	-2%
Suncor	16%	-1%	-9%

Enterprise value in \$bn (27/02/16) and eoY



Investors' recommendation



STRATEGY

Petrobras' strategy is mostly focused on restoring a more decent capital structure. Petrobras has a long history of failed spending and output plans which jeopardizes its efforts to convince investors about its strategy to reduce its massive debt.

Petrobras' strategy focuses on decreasing financial debts

EXPANSION

- \$102bn to be invested in pre-salt area only in 2015-2018 (breakeven point at US\$45/barrel)
- Partnership with Chinese partners to reduce debt

INNOVATION

- R&D at 0,77% of total sales (highest % of peers)
- R&D focused on power generation diversification, products improvements, sustainability

EFFICIENCY

- Decrease capex significantly (focus on the pre-salt; E&P = 83% of investments)
- Deleverage (strengthen capital structure), focus on profitability
- Divestments (\$15bn in 2015-16, goal currently believed to be impossible);
- assets disposals, disposal and restructuring to bring \$43bn in 2017-18
- Diversify its financing sources (China)
- Sell off natural gas pipeline for \$6bn
- Cost-cutting efforts (strike threats)
- Changes in management

PETROBRAS RATIONALE

This is an exercise to help identify the Business Rationales that an investor, credit agency or stakeholder would typically highlight in doing business.

MACROECONOMIC BUSINESS RATIONALES

S/D situation	E&P potential	Energy in BR	Regulatory	GDP trough
The oversupply situation of the oil industry is expected to become more balanced in 2016 to reach an equilibrium in 2017, which is likely to help prices recover from their current historical low levels.	Brazil has the second-largest reserve of oil in South America right after Venezuela. Most of the reserves are offshore, near the Rio de Janeiro coast. Reserves are expected to increase with the pre-salt project.	Total primary energy consumption nearly doubled in the last decade in Brazil. Oil and liquid fuels represent a significant part of energy consumption. Brazil is the 9 th largest producer in the world, encouraged by Govt.	Recent regulatory framework development in the oil industry in Brazil evidenced the Government's willingness to alleviate the burden on Petrobras. Additional positive regulatory developments expected.	GDP growth has reached a trough in 2015 with 3.7% deterioration. It is expected to be more stable in 2017. Brazil has returned to a trade surplus position. Foreign Direct Investment inflows are slowly growing. Those are good signs.

Macro rationales relate to the future and the potential development of the economy and the industry only

COMPANY-RELATED BUSINESS RATIONALES

State-owned	Leading	Integrated	Production	Management
Petrobras is ultimately owned and controlled by the Government of Brazil. The latter is an active shareholder that was notably involved in choosing the CEO after the car wash scandal. Govt support is likely.	Petrobras is by far the largest company in Brazil in terms of total sales and EBITDA generated, totaling a total revenue twice as much as the follower. It is dominant in upstream, midstream and downstream activities.	Petrobras established in 1953 as an integrated energy company in Brazil essentially but also internationally. It is involved in E&P, transportation, distribution of oil and gas. It is strategic to Brazil's economy.	Production of both crude oil and natural gas has been increasing over the last years, notably with the pre-salt region. In 2015, pre salt oil production increased by 56%. Total crude production increased by 4.6%	Petrobras has a new management team and structure (CEO designed by Dilma Rousseff herself). First measures taken are well received by market players and analysts.

Petrobras' ownership, leading position, integrated operations are the main company-related rationales

FINANCIAL BUSINESS RATIONALES







Banks	EBITDA	Operating CF	Net Fx. Assets	Cash
Petrobras has solid relationships with Brazil's banking system. Some significant banks are also shareholders (BNDES notably with 10% shares).	Over the last six years, EBITDA has been decreasing. 2015 results are, however, expected above average. Over the last years, EBITDA remained adequate to meet debt obligations.	Operating Cash flows has been relatively stable over the last 7 years ranging around US\$27bn on average, representing around 20% of total revenues, evidencing decent business flows.	Although the fair value of the Assets is questionable, Petrobras holds a significant share of Net Fixed Assets, representing close to ¼ of Total Assets fye 2014.	At the end of Q3 15, Petrobras was holding a decent Cash position at around 10% of Total Assets. Liquidity ratios were greater than 1.0x. Access to funds proved to be strong in the past.

Petrobras operating performance and decent operating cash flows are strong financial rationales

PETROBRAS RISK AND MITIGATES

This is an exercise to help identify the Business Risks that an investor, credit agency or stakeholder would typically highlight in doing business.

MACROECONOMIC BUSINESS RISKS

Risk Crude oil and natural gas prices 	Mitigate HIGH IMPACT Petrobras produces crude oil and natural gas. The low prices have consequences on total sales and profitability. Additionally, launched projects that were deemed profitable when the prices were high, are due to generate losses and investments are impaired either partially or totally. Usually, production volumes are increased in order to compensate the loss in sales. Higher supply deteriorates further the Supply/Demand balance. Petrobras entered a cost cutting program that is partially offsetting the losses	Risk Brazil oil industry chain being investigated 	Mitigate The Petrobras massive corruption scandal concerns Petrobras but also the oil and natural gas value chain in Brazil in general. Notably, many contractors of Petrobras have been accused in the corruption scheme and have been banned from receiving payment from Petrobras. The scandal has hamstrung over 20 of Brazil's construction and engineering firms, bankrupting 5 of them. New regulatory framework should prevent such disarray. Petrobras' supply chain is likely to suffer from it.	Economic environment is unfavorable to Petrobras. Mitigates consist of production volume increase and slowdown of E&P costs
Risk Exchange rate 	Mitigate HIGH IMPACT Brazilian Real has been depreciating against the US Dollar significantly over the last years to reach unprecedented low levels. It generates foreign exchange losses (due to combination with low Brent crude oil price), higher financial expense (as 89% of Petrobras financial debt is denominated in USD), imports, and impairment losses. Over the last 12-month rolling period, Real deteriorated 28%, following 19% decrease in previous year. Petrobras tries to accelerate the reimbursement of debt and entered cost cutting program to compensate.	Risk Significant cost of offshore production 	Mitigate The vast majority of the oil and natural gas reserves of Brazil are offshore. First of all, the rights to pay a cash-hungry Government have been high. Secondly, the actual cost of drilling are particularly high, considering deep sea and technical issues. The pre-salt offshore production is said to be viable at \$45/barrel and \$52/barrel with natural gas. Petrobras is trying to increase production to reduce the share of fixed costs and to cut costs in general to face the current challenging price situation.	
Risk Brazil finance in general deterioration 	Mitigate In 2015, Brazil experienced the worst recession in over 25 years. The worst stagflation in 10 years and huge twin deficits led to a gap between demand and supply resulting in inflationary pressures and external deficit. After a 3,7% recession in 2015, GDP is expected to deteriorate in 2016 by 2.4% and be stable in 2017. However, Brazil has started generating a trade surplus again recently, while FDI is gaining momentum, both of which are good signs of a potential slow recovery. Nevertheless, Brazil finances are not in a position to bail out Petrobras.	Risk Bad prospects for Assets sale 	Mitigate The whole oil industry is in disarray, and Moody's consider downgrading a vast majority of players. Petrobras needs to divest and also to enter an asset disposal program, notably in order to meet the debt obligations. But market access is more difficult and timing is not favorable and it is likely that Petrobras may have to sell its Assets either below book value or at least not at what was considered fair value only a couple of years ago. Some analysts state that Petrobras could lose its control over the pre-salt, its most valuable Asset. Also, Petrobras could sell all electricity assets, that are less in jeopardy.	

COMPANY-RELATED BUSINESS RISKS

Risk Massive corruption scandal 	Mitigate Petrobras is still being investigated for one of the major corruption scandal ever, involving Petrobras executives and politicians in the form of bribes and illegal political donations. Cost is estimated at US \$17bn in Asset and corruption charges. Petrobras faces numerous law suits from over the world. Consequences are very severe in financial terms but also reputation, and sustainability. Forthcoming legal fees and fines are unknown.	Risk Dependency to Brazilian economy 	Mitigate Petrobras is strategically key to Brazil (and v.v. with 91% of sales in Brazil). Petrobras is by far the largest company in Brazil. It is a dominant participant in oil and gas activities and counts for 10% of all investments made in Brazil. It is the main oil producer and fuel distributor in Brazil. The Brazilian economy is not in a position to help Petrobras with the needed US\$21bn to fix its capital structure. The fact that Dilma Rousseff designed the new CEO of the company evidences the interconnection between Brazil Govt (majority shareholder) and Petrobras.	Petrobras faces significant risk of default due to corruption, litigations, low productivity and because of tight links with Brazilian economy in recession
Risk Default consequences 	Mitigate HIGH IMPACT IF Petrobras cannot convince its auditors to sign off its yearly financial statements by the month of May, Petrobras faces a technical default. Petrobras' default would have severe consequences on the Brazilian's Government reputation but also on the economy, considering its size and the number of employees, as well considering its quasi monopolistic situation in upstream and midstream segments. Total "direct" cost is estimated to \$20bn.	Risk Employee productivity and unions 	Mitigate Operationally, as compared to its peers, Petrobras has the .lowest employee productivity with sales per employee 74% lower than average industry. This is due to the fact that until 1997, Petrobras was a Government owned monopoly. Petrobras history, as well as its activities explain the presence of powerful unions, whose strikes block ports, production or fuel terminals. Some fear strike demands compromise efforts to restore confidence. Petrobras faces challenges to improve employee productivity.	
Risk Massive litigation with class actions and litigation 	Mitigate HIGH IMPACT Petrobras faces class action by some investors. Direct litigation actions against Petrobras also soar. Dozens of mutual funds have sued Petrobras over losses stemming from the corruption scandal. Petrobras impairment may also lead to new class action suits. Risks of further corruption investigations and class action securities litigations remain very high and the outcome uncertain. Debt-to-equity possible scheme considered by Brazilian banks is also subject to further litigations.	Risk New dependency to China? 	Mitigate Petrobras secured in February 2016 \$10bn loan from China Development Bank, that should help Petrobras to meet its debt obligations. In exchange, Petrobras commits to supply crude to China. It is not the first time that China comes to the rescue of Petrobras. It has a L/ T relationship with ICBC, supported at political level. This type of deals reduces Petrobras dependency to capital markets but increases dependency to China. More than a dependency, what is the salute of the company comes from China?	

PETROBRAS RISK AND MITIGATES

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FINANCIAL BUSINESS RISKS

Risk

Massive write downs and impairments



Mitigate

HIGH IMPACT
Petrobras' profit and loss was significantly impacted in 2014 with a total of \$16.8bn write-offs following the "car wash" massive corruption scandal but also due to impairments from poor planning, low oil prices, excess costs etc. Nevertheless, the write-off is a positive step to restore trust and access to capital market. Further write off of Assets or A/R is not excluded, although the bulk of write downs is likely to have happened.

Risk

High sensitivity to BRL/USD exchange rate



Mitigate

Petrobras has a strong sensitivity to the depreciation of the Brazilian Real that is at its lowest level ever. The depreciation affects all aspects of Petrobras revenues, from its revenues, interest, capex, and import of oil products. A further 25% devaluation of the Real would reduce EBITDA by 50%, if local prices not adjusted. Forecasts (consensus) indicate that the Real could depreciate by 50% again by the end of 2017. Volatility remains high. Best way to mitigate is to reduce debt and therefore interest expense.

Main risk consists of the level of debt and being able to meet requirements. For the time being, there are no clear solutions identified

Risk

Lack of trust from investors and financial institutions



Mitigate

HIGH IMPACT
Systemic bad projections and planning made by Petrobras lead investors to question significantly the announced improvements and its strategy in general. Additionally, Petrobras has a severe ethical/trust issue. We note also that PwC, Petrobras' auditors refused to provide an opinion to Petrobras accounts since September 2014. The lack of faith of investors is evidenced by the collapse of Petrobras shares and by consensus negative recommendations.

Risk

Longer cash conversion cycle than average



Mitigate

On average, Cash conversion cycle of Petrobras is longer than the industry average, because of high inventory levels and payments to suppliers earlier than industry average. The long Cash conversion cycle requires additional working capital requirements as compared to Petrobras' peers. The early payment to suppliers may be due to the current difficult situation in which Petrobras find itself. We note massive provision for A/R in total and also in the last 2 years as well as high A/R due over a year.

Risk

Explosive capital structure



Mitigate

At the end of September 2015, Equity funded 31% of Total Assets but financial leverage reached 1.74x, essentially due to the decrease in Equity (losses, foreign exchange) by 26% in 3 months. The amount of financial debt (89% of which is US\$ denominated) decreased slightly as compared to the end of 2014 but remained massive (US\$128 billions). Although average maturity is increasing, the amount of debt obligations is very high and Operating cash flows are already absorbed by the significant amount of capex. Brazil state banks may swap debt for shares but share could lose value accordingly.

Risk

Strong capex needed



Mitigate

Over the last years, capex reached an average of \$40bn per year in the 2012-2014 period. Following the largest ever corruption scandal, Petrobras slashed its capex plan for 2015-2019 to close to \$20bn per year (originally planned at \$26bn per year during this period). Capex remains high due to maintenance costs and to the development of the pre-salt production but its decrease helps the company preserve a bit of cash while it needs to restructure its debt.

CONCLUSION

Petrobras must find a solution to alleviate the burden of its huge financial debt, while dealing with a massive corruption scandal, and litigations, and in a very difficult macroeconomic environment. It is currently not in a position to meet upcoming debt obligations without help, either resulting in the decrease of the amount of debt or in rescheduling the debt over a (much) longer horizon.

Otherwise, Petrobras could default, which would have many economic and political consequences for Brazil and for some countries in South America, with further consequences that are difficult to imagine. An intervention from the State, its majority shareholder, and/or from the banks or a new third party (China seems interested in helping Petrobras) is likely to avoid the collapse but it needs to happen soon. An improvement in the oil and natural gas prices could help Petrobras significantly, as well as an acceleration of Brazil's economic recovery, but those improvements are not expected to a sufficient scale in the near future.

There are many threats to Petrobras' outlook, such an escalation of the corruption scandal that could prevent politicians' intervention, or a technical default in May 2016 if auditors refuse again to provide an opinion on Petrobras' financials. Continued depressed crude oil and natural gas prices, coupled with continued adverse currency exchange fluctuations would further deteriorate Petrobras' creditworthiness. Further impairment losses are not excluded either. Petrobras is also vulnerable to further bankruptcies in its supply chain (we count 5 suppliers bankrupt for the time being), which could lead to business interruptions. The Government is inclined to liberalize the exploitation of the presalt production, which is currently a burden to Petrobras as its involvement is currently mandatory but it also guarantees a stranglehold on promising future production.

Petrobras' situation is serious. I personally believe that it is too big to fail, due to its size and strategic importance to Brazil and more generally South America. The increase in Petrobras' share value price over the last month seems to confirm a trend to believe in survival of the company.

Petrobras is too big to fail due to its size and strategic importance. An intervention from either the State, the banks or third parties is likely either separately or jointly.