

## Petrobras and Banco do Brasil

### Implications of debt-to-equity conversion

#### No easy way out for PBR...

In the current commodity environment, and despite its quasi-monopoly on the country's refining, PBR has no equity value. Unwilling to take the classical-liberal route of privatization and/or do some major downsizing (involuntarily), the remaining options aren't easy to achieve. In fact, an increasingly large section of the investor community believes fresh equity injections and/or debt-to-equity conversions are now inevitable. And while all the measures currently favored by management may buy the company some time, structurally-speaking PBR's problems aren't going anywhere. In this note, we analyze the possibility of converting the debt held by public banks (Banco do Brasil, Caixa and BNDES) into equity. The implications for both PBR and the banks would be important.

#### First things first: Yes, conversion is a genuine possibility!

The first question that arises is whether such a conversion would respect the capital requirements established for banks (BIS ratio, exposure limit to economic groups, limit on permanent assets, etc.). Under current rules (*details below*), it seems a full conversion is possible for both BB and Caixa. And although BNDES' exposure to PBR is already above the regulatory limit, Brazil's Development Bank benefits from waivers allowing it to also make a full debt-to-equity conversion.

#### Impacts for PBR's equity and bonds

Such an event is everything equity holders don't want and bondholders do want to see. If a debt-to-equity conversion of some R\$87bn were to happen, it would probably hurt existing shareholders considerably. Assuming (i) this sizable conversion; and (ii) that investors don't participate, leverage would drop by 1.0x. If all investors were to participate, it would drop by 2.2x (albeit to a still lofty 3.4x net debt/EBITDA).

#### Impacts for Banco do Brasil

If the ~R\$26bn (that we believe BB holds in Petrobras credit) is fully converted into equity, we estimate only a minor impact on the bank's capital ratios. Indeed, if we assume that the new equity is booked in BB's balance sheet as a permanent investment, the bank's ratios would be unchanged. BB would still be within the limits of maximum exposure to an economic group and permanent assets, and the bank would still be in a decent position if the equity is classified to current assets – the impact would be below 30bps, but in this case, book value volatility could be high given mark-to-market needs. However, if Brazil were to fully follow international rules, which take into account a much higher burden (~12x more!) for relevant equity stakes, then the impact would be much larger. BB's total capital ratio would fall >250bps to ~13.5% and core capital by >100bps to below 7%, which we reckon would put the bank in a tough position.

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#### ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 5

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## One of the (many) painful alternatives for PBR

Although the information is not public, we estimate Brazil's three main public banks carry some R\$87bn of PBR debt (R\$26bn for BB, R\$11bn for Caixa and R\$50bn for BNDES).

Due to PBR's extremely inadequate capital structure, aggravated by the current oil scenario and the government's lackluster approach to the company's problems, more and more investors believe that the only structural solution for PBR is to pursue an equity capitalization or a debt-into-equity conversion.

Based on the opinion (correct, in our view) that converting the tradable bonds into equity would be highly disruptive, most investors believe the way-out is to convert public banks' debt into PBR equity.

The impact of such a conversion on PBR's solvency would be relevant. If investors don't exercise their rights, leverage would go down by some 1.0x. If all investors were to participate in the capital increase, the impact would be much more relevant (~2.2x), bringing leverage down to 3.4x net debt/EBITDA.

### **But is it possible?**

As far as public banks are concerned, such a conversion could be made without breaching the Brazilian financial system's regulatory requirements. It seems the most viable way to do this conversion is to book converted debt as Permanent Assets.

Post-conversion, both BB's and Caixa's Permanent Assets/Regulatory Capital would still be below the limit of 50%. BNDES, in our view, would breach the limit. But Brazil's Development Bank carries some waivers (including one enabling it to temporarily breach this specific ratio) that would allow it – with the government's green light, of course – to make a full conversion.

BIS III regulatory requirements are more restrictive than those currently in place in Brazil for relevant equity stakes. If, for example, we were already fully following BIS III guidelines, such a conversion could be classified with a RWF of 1250% (instead of ~100%). So, if the government opts for conversion, ideally it would have to do it sooner rather than later.

Income Statement (US\$m)	12/2010	12/2011	12/2012	12/2013	12/2014	12/2015E	12/2016E	12/2017E
<b>Revenue</b>	<b>121,089</b>	<b>145,781</b>	<b>143,976</b>	<b>141,620</b>	<b>143,288</b>	<b>96,045</b>	<b>83,440</b>	<b>97,614</b>
Operating expenses (ex depn)	(86,923)	(109,015)	(116,776)	(114,903)	(115,167)	(71,171)	(61,980)	(76,103)
<b>EBITDA (BTG Pactual)</b>	<b>34,166</b>	<b>36,766</b>	<b>27,200</b>	<b>26,717</b>	<b>28,121</b>	<b>24,874</b>	<b>21,460</b>	<b>21,512</b>
Depreciation	(8,409)	(10,591)	(11,137)	(13,223)	(13,033)	(11,239)	(11,087)	(12,221)
<b>Operating income (EBIT, BTG Pactual)</b>	<b>25,757</b>	<b>26,176</b>	<b>16,063</b>	<b>13,494</b>	<b>15,088</b>	<b>13,635</b>	<b>10,373</b>	<b>9,290</b>
Other income & associates	476	230	1,377	8,223	(18,312)	12,090	(51)	(49)
Net Interest	1,097	73	(3,239)	(8,640)	(7,744)	(21,974)	(4,762)	(4,662)
Abnormal items (pre-tax)	0	0	0	0	0	0	0	0
<b>Profit before tax</b>	<b>27,330</b>	<b>26,479</b>	<b>14,201</b>	<b>13,077</b>	<b>(10,968)</b>	<b>3,751</b>	<b>5,560</b>	<b>4,579</b>
Tax	(6,947)	(6,711)	(3,476)	(2,391)	1,654	(2,317)	(1,116)	(801)
<b>Profit after tax</b>	<b>20,383</b>	<b>19,768</b>	<b>10,724</b>	<b>10,687</b>	<b>(9,315)</b>	<b>1,433</b>	<b>4,444</b>	<b>3,778</b>
Abnormal items (post-tax)	0	0	0	0	0	0	0	0
Minorities / pref dividends	(404)	121	114	262	143	477	(126)	(47)
Net Income (local GAAP)	19,979	19,889	10,838	10,948	(9,171)	1,910	4,318	3,731
<b>Adjusted Net Income</b>	<b>19,979</b>	<b>19,889</b>	<b>10,838</b>	<b>10,948</b>	<b>(9,171)</b>	<b>1,910</b>	<b>4,318</b>	<b>3,731</b>
Tax rate (%)	25	25	24	18	0	62	20	18
<b>Per Share</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
EPS (local GAAP)	3.06	3.05	1.66	1.68	(1.41)	0.29	0.66	0.57
EPS (BTG Pactual)	3.06	3.05	1.66	1.68	(1.41)	0.29	0.66	0.57
Net DPS	1.02	1.10	0.98	0.90	0.00	0.51	0.41	0.41
BVPS	28.31	26.96	25.74	22.77	17.82	10.94	11.31	11.16
<b>Cash Flow (US\$m)</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
<b>Net Income</b>	<b>19,979</b>	<b>19,889</b>	<b>10,838</b>	<b>10,948</b>	<b>(9,171)</b>	<b>1,910</b>	<b>4,318</b>	<b>3,731</b>
Depreciation	8,409	10,591	11,137	13,223	13,033	11,239	11,087	12,221
Net change in working capital	(5,883)	323	310	(191)	1,000	(186)	521	(1,496)
Other (operating)	0	0	0	0	0	0	0	0
<b>Net cash from operations</b>	<b>22,506</b>	<b>30,803</b>	<b>22,286</b>	<b>23,980</b>	<b>4,862</b>	<b>12,963</b>	<b>15,926</b>	<b>14,456</b>
Cash from investing activities	(43,383)	(43,312)	(40,557)	(45,538)	(34,751)	(25,137)	(22,041)	(21,031)
Cash from financing activities	29,479	(7,686)	(7,189)	(3,816)	(9,261)	(30,903)	(3,468)	(10,981)
<b>Bal sheet chge in cash &amp; equivalents</b>	<b>12,232</b>	<b>(669)</b>	<b>(4,066)</b>	<b>(4,198)</b>	<b>6,211</b>	<b>(3,468)</b>	<b>(5,499)</b>	<b>(5,567)</b>
<b>Balance Sheet (US\$m)</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Cash and equivalents	28,687	28,017	23,951	19,753	25,964	22,496	16,997	11,430
Other current assets	58,688	58,533	56,947	51,685	43,695	35,528	34,462	36,683
<b>Total current assets</b>	<b>87,374</b>	<b>86,550</b>	<b>80,898</b>	<b>71,438</b>	<b>69,659</b>	<b>58,024</b>	<b>51,460</b>	<b>48,113</b>
Net tangible fixed assets	170,251	182,465	204,901	227,901	218,615	169,650	173,591	177,205
Net intangible fixed assets	0	0	0	0	0	0	0	0
Investments / other assets	55,364	50,396	45,845	22,085	10,257	7,030	7,030	6,859
<b>Total assets</b>	<b>312,990</b>	<b>319,410</b>	<b>331,645</b>	<b>321,424</b>	<b>298,531</b>	<b>234,703</b>	<b>232,081</b>	<b>232,176</b>
Trade payables & other ST liabilities	45,519	49,735	56,475	45,403	32,247	22,991	22,838	23,813
Short term debt	0	0	0	0	0	0	0	0
<b>Total current liabilities</b>	<b>45,519</b>	<b>49,735</b>	<b>56,475</b>	<b>45,403</b>	<b>32,247</b>	<b>22,991</b>	<b>22,838</b>	<b>23,813</b>
Long term debt	70,754	82,927	96,068	114,326	132,087	127,571	122,575	122,970
Other long term liabilities	9,981	9,639	10,063	12,573	17,278	12,363	12,363	12,062
<b>Total liabilities</b>	<b>126,254</b>	<b>142,300</b>	<b>162,605</b>	<b>172,301</b>	<b>181,612</b>	<b>162,926</b>	<b>157,777</b>	<b>158,845</b>
Equity & minority interests	186,736	177,111	169,040	149,122	116,918	71,777	74,242	73,271
<b>Total liabilities &amp; equities</b>	<b>312,990</b>	<b>319,410</b>	<b>331,645</b>	<b>321,424</b>	<b>298,531</b>	<b>234,703</b>	<b>232,081</b>	<b>232,115</b>

## Company Profile:

Petrobras is a mixed-capital corporation that began operations in Brazil in 1954, and it is linked to Brazil's Ministry of Mines and Energy. Petrobras is the largest publicly traded oil company in Latin America. It operates in the exploration, development, production, refining, processing, trading, and transportation of crude oil, oil products, natural gas, and other fluid hydrocarbons.

Financial ratios	12/2013	12/2014	12/2015E	12/2016E	12/2017E
EBITDA margin	18.9%	19.6%	25.9%	25.7%	22.0%
Operating margin	9.5%	10.5%	14.2%	12.4%	9.5%
Net margin	7.7%	-6.4%	2.0%	5.2%	3.8%
RoE	6.9%	-6.9%	2.0%	5.9%	5.1%
RoIC	5.5%	6.2%	6.5%	5.6%	4.9%
EBITDA / net interest	3.1x	3.6x	1.1x	4.5x	4.6x
Net debt / EBITDA	3.5x	3.8x	4.2x	4.9x	5.2x
Total debt / EBITDA	4.3x	4.7x	5.1x	5.7x	5.7x
Net debt / (net debt + equity)	38.8%	47.6%	59.4%	58.7%	60.4%

Source: Company reports and BTG Pactual estimates. Valuations: based on the last share price of that year (E) based on share price as of 12 February 2016

<b>Income Statement (R\$m)</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Net Interest Income	38,398	41,270	46,407	46,427	50,098	57,012	62,737	66,979
Other income	14,838	16,979	17,042	18,564	20,772	21,844	24,569	27,184
Total revenues	53,236	58,249	63,449	64,991	70,870	78,856	87,306	94,163
Expenses	(28,586)	(31,510)	(35,115)	(37,642)	(40,027)	(42,348)	(45,682)	(48,857)
Operating profit	24,651	26,739	28,334	27,349	30,843	36,508	41,624	45,306
Provisions and other items	(10,675)	(11,827)	(14,651)	(15,600)	(18,531)	(24,688)	(29,527)	(29,646)
Profit before tax	14,019	14,968	13,789	11,916	12,513	11,870	12,152	15,720
Pre-exceptional net income	10,664	11,751	11,528	10,353	11,343	11,695	11,392	13,396
<b>Balance Sheet (R\$m)</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Assets	811,172	981,230	1,150,486	1,303,915	1,437,629	1,570,842	1,681,062	1,830,590
Total loans	358,366	422,989	525,672	623,417	687,911	738,392	792,441	860,523
Total deposits	376,851	442,386	472,085	491,013	468,362	476,112	494,403	533,060
Shareholders equity	50,441	58,416	66,070	72,225	80,613	85,576	92,412	100,450
Loans : assets	44.2%	43.1%	45.7%	47.8%	47.9%	47.0%	47.1%	47.0%
Deposits : assets	46.5%	45.1%	41.0%	37.7%	32.6%	30.3%	29.4%	29.1%
Loans : deposits	95.1%	95.6%	111.4%	127.0%	146.9%	155.1%	160.3%	161.4%
Shareholders equity : assets	6.22%	5.95%	5.74%	5.54%	5.61%	5.45%	5.50%	5.49%
<b>Asset Quality 1</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Risk-weighted assets	504,504	575,693	727,590	813,723	785,773	854,049	907,982	980,669
Tier one capital	52,397	60,615	76,769	85,501	89,538	99,724	106,560	114,598
Total capital	71,135	80,482	107,925	118,234	126,588	138,396	145,232	153,270
Tier one ratio	10.4%	10.5%	10.5%	10.5%	11.4%	11.7%	11.7%	11.7%
Total capital ratio	14.1%	14.0%	14.8%	14.5%	16.1%	16.2%	16.0%	15.6%
Net profit after tax	8,777	9,580	9,334	7,963	9,736	10,020	9,266	11,062
Dividends	(4,706)	(4,899)	(4,913)	(6,290)	(4,525)	(5,854)	(4,557)	(5,358)
<b>Asset Quality 2</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Non-performing assets	9,510	11,057	12,629	15,650	18,179	22,152	29,320	30,118
Total risk reserves	17,315	19,015	21,210	23,662	27,312	35,856	40,611	41,819
NPLs : loans	2.65%	2.61%	2.40%	2.51%	2.64%	3.00%	3.70%	3.50%
NPL coverage	182.08%	171.98%	167.95%	151.19%	150.24%	161.87%	138.51%	138.85%
Provision charge : average loans	3.24%	3.03%	3.09%	2.72%	2.83%	3.46%	3.86%	3.59%
Net NPLs : shareholders' funds	-15.5%	-13.6%	-13.0%	-11.1%	-11.3%	-16.0%	-12.2%	-11.6%
<b>Share Data</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
EPS (stated)	4.29	4.24	4.26	5.52	3.97	5.17	4.03	4.73
EPS (BTG Pactual adjusted)	4.29	4.24	4.26	5.52	3.97	5.17	4.03	4.73
GOPS	9.77	10.13	10.71	10.81	12.46	14.69	16.68	18.17
DPS	1.73	1.71	1.71	2.22	1.60	2.07	1.61	1.89
BVPS (stated)	17.63	20.41	23.06	25.52	28.49	30.24	32.66	35.50
BVPS (adjusted)	17.63	20.41	23.06	25.52	28.49	30.24	32.66	35.50
<b>Returns</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Net interest margin (avg assets)	5.05%	4.61%	4.35%	3.78%	3.65%	3.79%	3.86%	3.81%
Provisions : operating profit	43.3%	44.2%	51.7%	57.0%	60.1%	67.6%	70.9%	65.4%
RoE	27.0%	22.3%	19.6%	22.8%	14.7%	17.6%	12.8%	13.9%
RoAdjE	24.6%	21.6%	18.5%	15.0%	14.8%	14.1%	12.8%	13.9%
RoRWA	1.89%	1.77%	1.43%	1.03%	1.04%	1.02%	0.86%	0.97%
RoA	1.54%	1.35%	1.15%	1.28%	0.82%	0.97%	0.70%	0.76%
Cost : income ratio	53.7%	54.1%	55.3%	57.9%	56.5%	53.7%	52.3%	51.9%
<b>Growth Rates</b>	<b>12/2010</b>	<b>12/2011</b>	<b>12/2012</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Revenue growth	22.4%	9.4%	8.9%	2.4%	9.0%	11.3%	10.7%	7.9%
Operating profit growth	24.0%	8.5%	6.0%	-3.5%	12.8%	18.4%	14.0%	8.8%
Net profit growth	56.1%	10.2%	-1.9%	-10.2%	9.6%	3.1%	-2.6%	17.6%
Dividend growth	16.0%	4.1%	0.3%	28.0%	-28.1%	29.4%	-22.2%	17.6%

## Company Profile:

Banco do Brasil is controlled by the government and is one of the largest Brazilian banks. The bank has the largest branch network of the country, offers a diversified array of banking services, and operates in insurance and pensions through JVs with private sector companies. Banco do Brasil relies on funding from deposits and government programs. Retail and agricultural lending are the most relevant components of its loan portfolio. Recently the bank acquired several state-owned banks (Nossa Caixa, BESEC) and agreed to buy a 50% stake on Banco Votorantim.

<b>Valuation</b>	<b>12/2013</b>	<b>12/2014</b>	<b>12/2015E</b>	<b>12/2016E</b>	<b>12/2017E</b>
Market capitalization (R\$m)	69,049	67,266	41,712	37,184	37,184
<b>Conventional valuation</b>					
Market cap./Revenues	1.1x	0.9x	0.5x	0.4x	0.4x
Market cap./Operating profit	2.5x	2.2x	1.1x	0.9x	0.8x
P/E (stated)	8.7x	6.9x	4.2x	4.0x	3.4x
P/E (BTG Pactual adjusted)	6.7x	5.9x	3.6x	3.3x	2.8x
Dividend Yield (net)	9.11%	6.73%	14.04%	12.25%	14.41%
P/BV (stated)	1.0x	0.8x	0.5x	0.4x	0.4x
P/BV (adjusted)	1.0x	0.8x	0.5x	0.4x	0.4x

Source: Company reports and BTG Pactual estimates. Valuations: based on the last share price of that year(E) based on share price as of 15 February 2016

## Required Disclosures

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The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results.

BTG Pactual Rating	Definition	Coverage *1	IB Services *2
Buy	Expected total return 10% above the company's sector average.	45%	42%
Neutral	Expected total return between +10% and -10% the company's sector average.	49%	46%
Sell	Expected total return 10% below the company's sector average.	6%	38%

1: Percentage of companies under coverage globally within the 12-month rating category.

2: Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

### Absolute return requirements

Besides the abovementioned relative return requirements, the listed absolute return requirements must be followed:

- a Buy rated stock must have an expected total return above 15%
- a Neutral rated stock can not have an expected total return below -5%
- a stock with expected total return above 50% must be rated Buy

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## Statement of Risk

Petroleo Brasileiro - Petrobras [BRPET] - Petrobras is exposed to a number of risks in its activities that include: (i) exploration risk in its oil exploration portfolio; (ii) execution risk on new production and downstream assets; (iii) commodity price risks on its day to day marketing and trading businesses; and (iv) administrative risks due to the potential change in management that the company faces every four years, in line with Brazil's presidential elections. The most relevant risks to our forecasts focus on Petrobras' ability to increase its oil and gas production, its ability to keep domestic fuel prices high enough to maintain profitability of its refining assets and the Brazilian exchange rate.

Banco do Brasil S.A. [BRBBAS] - Latin American banks can be affected by changes in both global and local economic conditions and are also subject to political, interest rate, and foreign exchange risks. Our target prices are highly dependent on the level of country risk.

## Valuation Methodology

Petroleo Brasileiro - Petrobras [BRPET] - Our price target is the average of two scenarios: (a) no capital increase; and (b) a capital increase. Our 'no capital increase' scenario is the result of our SOTP calculation, which values most of the assets (notably productive E&P fields) using a discounted cashflow methodology, and all other assets using a target multiple, while our 'capital increase' scenario assumes a target multiple of 5.0x P/E 2016.

Banco do Brasil S.A. [BRBBAS] - Our primary valuation tool for LatAm banks is the Gordon growth model, which works with profitability levels, cost of equity, and expected growth rates. Our 2016YE TP of R\$21 is based on a 14% sustainable ROE, 17.5% cost of equity, and 8% growth, producing a target P/BV of 0.65x, which we apply to our 2016 BVPS estimate.

## Company Disclosures

Company Name	Reuters	12-mo rating	Price	Price date
Banco do Brasil <sup>1, 2, 4, 6, 18, 19, 20</sup>	N.A.	Neutral	R\$13.14	15-2-2016
Petrobras <sup>1, 2, 4, 6, 18, 19, 20</sup>	PBRa.N	Neutral	US\$2.23	12-2-2016

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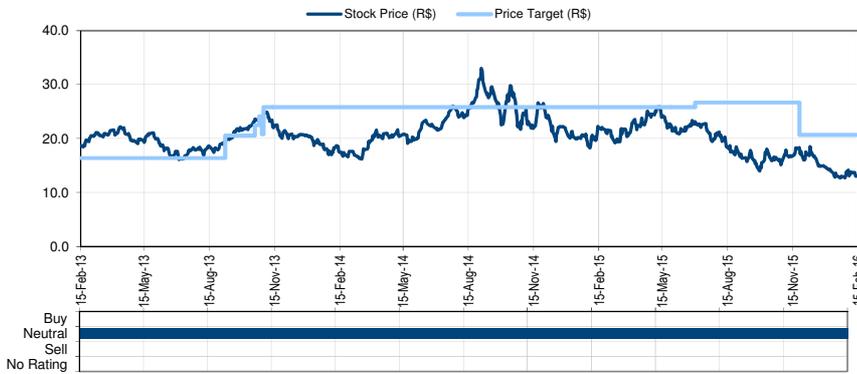
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**Banco do Brasil**



Source: BTG Pactual and Economica. Prices as of 15 February 2016

**Petrobras**



Source: BTG Pactual and Economica. Prices as of 12 February 2016

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