

# Newsletter Infrastructure Debentures

And other financial instruments under the terms of Law # 12,431 dated june 24,2011 - ("Law 12,431") Real Estate Receivables Ceertificates - CRI's and Ivestment Funds

August 2016 33 th Edition



## **Newsletter**

### **Infrastructure Debentures**



Objective: Law 12,431/11

In order to promote private long-term financing of investments, in particular infrastructure, the Federal Government enacted Law # 12,431 which provides tax breaks for capital market instruments, creating alternative sources of long-term funding.

The Law provides for zero income tax on interest earned and capital gains for nonresidents and Brazilian individuals. It introduced two types of local currency fixed-income instruments:

- Capex Bond/Funds when the tax break applies to non-residents only;
- Infrastructure Bond/Funds when the tax break applies to both residents and non-residents.

A 10 percentage point reduction of the income tax rate applies for financial institutions.

The same tax benefits apply to Private Equity Funds that invest in infrastructure (FIP - IE).

Brazilian
Infrastructure Bonds
(main features)

Minimum duration of 4 years at issuance (6 years in the case of FIDC);

Fixed rate or inflation-linked;

There should be no repurchase by issuer during the first 2 years after the issuance date;

No resale commitment undertaken by the buyer;

Periodic interest payments (if applicable) of no less than 180 days;

The instrument must be registered in a regulated securities market authorized by the Central Bank of Brazil or the Brazilian Securities Commission;

Simplified procedure showing isser's commitment to allocate raised funds in future payments or reimbursements of expenses, costs or liabilities related to investment projects;

Dollar-denominated instruments are not eligible for the tax breaks;

Public Issuance (Securities Comission Instruction 400) or Public Issuance with Restricted Efforts (Securities Comission Instruction 476).

The National Monetary Council (CMN) Resolution 4,476 of April 11, 2016 authorizes the anticipated settlement of debentures at the issuer sole discretion, since it cumulatively meets the following requirements:

After at least four years from the debentures issuance date; and

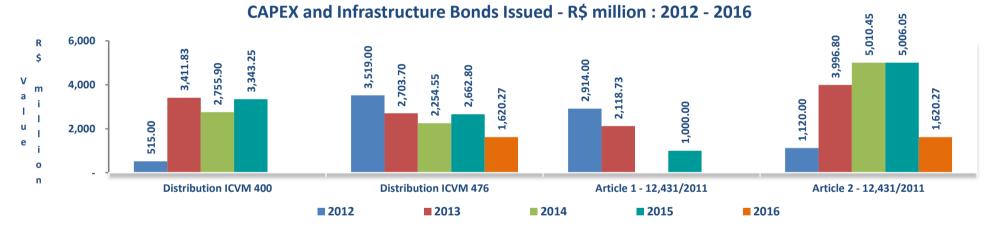
If there is an express provision in the debetures indenture.

This resolution only applies to bonds issed bettween April 12, 2016 and December 31, 2017.



## Law # 12,431/2011 (Articles 1 and 2) - CAPEX and Infrastructure Bonds Issued: 2012 - 2016

| INFRASTRUCTURE              |          |          | Value (R\$ million)<br>Law 12,431/2011 |          |          | Total Value |
|-----------------------------|----------|----------|--|----------|----------|-------------|
| DEBENTURES                  | 2012     | 2013     | 2014                                   | 2015     | 2016     | Issued      |
| Distribution ICVM 400 (1)   | 515.00   | 3,411.83 | 2,755.90                               | 3,343.25 | 0.00     | 9,510.98    |
| Distribution ICVM 476 (2)   | 3,519.00 | 2,703.70 | 2,254.55                               | 2,662.80 | 1,620.27 | 9,241.32    |
| Total                       | 4,034.00 | 6,115.53 | 5,010.45                               | 6,006.05 | 1,620.27 | 18,752.30   |
| Article 1 - 12,431/2011 (3) | 2,914.00 | 2,118.73 | 0.00                                   | 1,000.00 | 0.00     | 3,118.73    |
| Article 2 - 12,431/2011 (4) | 1,120.00 | 3,996.80 | 5,010.45                               | 5,006.05 | 1,620.27 | 15,633.57   |
| Total                       | 4,034.00 | 6,115.53 | 5,010.45                               | 6,006.05 | 1,620.27 | 18,752.30   |



Source: ANBIMA - Brazilian Financial and Capital Markets Association and Ministerial Orders Elaborated by COGTL/SEAE/MF

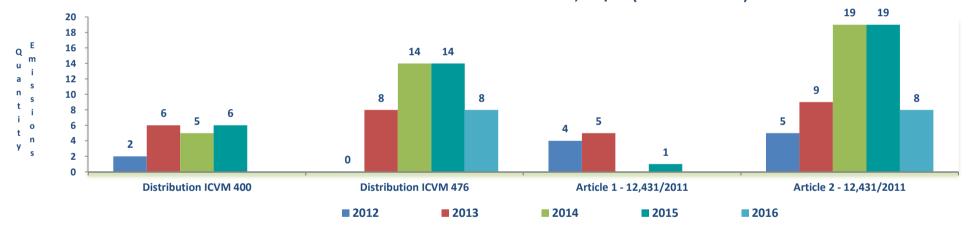
- (1) CVM Ruling 400 Public Offer
- (2) CVM Ruling 476 limited public offering in which up to 50 qualified investors can participate.
- (3) CAPEX Bonds (also referred to as Law # 12,431 article 1 debenture) tax-exempt bond for non-residents. Funds raised must be used in capital expenditures.
- (4) Infrastrucuture Bond (also referred to as Law # 12,431 article 2 debenture) tax-exempt bond for resident natural persons. A ten-percentage point Ten percentage-point reduction for local companies. Funds raised must be used in infrastrucuture investiments or in research, development and innovation-intensive economic production.



## Projects that have issued CAPEX and infrastructure bonds in compliance with Law # 12,431/2011 (Articles 1 and 2): 2012 - 2016

| INFRASTRUCTURE              |      |      | Number of issuances<br>Law 12,431/2011 |      |      | Total<br>Number of |
|-----------------------------|------|------|--|------|------|--------------------|
| DEBENTURES                  | 2012 | 2013 | 2014                                   | 2015 | 2016 | Issuances          |
| Distribution ICVM 400 (1)   | 2    | 6    | 5                                      | 6    | 0    | 17                 |
| Distribution ICVM 476 (2)   | 7    | 8    | 14                                     | 14   | 8    | 44                 |
| Total                       | 9    | 14   | 19                                     | 20   | 8    | 61                 |
| Article 1 - 12,431/2011 (3) | 4    | 5    | 0                                      | 1    | 0    | 6                  |
| Article 2 - 12,431/2011 (4) | 5    | 9    | 19                                     | 19   | 8    | 55                 |
| Total                       | 9    | 14   | 19                                     | 20   | 8    | 61                 |

### Number of CAPEX and infrastructure bonds issued - Law # 12,431/11 (Articles 1 and 2): 2012 - 2016



Source: ANBIMA - Brazilian Financial and Capital Markets Association and Ministerial Orders Elaborated by COGTL/SEAE/MF

- (1) CVM Ruling 400 Public Offer
- (2) CVM Ruling 476 limited public offering in which up to 50 qualified investors can participate.
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## CAPEX Bonds: Law # 12,431/2011 - Project Bonds - (Article 1)1 - Non-Residents/ 2012

| Issuer                                     | Ticker | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Value<br>(R\$ million) | Yield            | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|--|--------|------------------|---------------|---------------------|------------------------|------------------|-------------------------|-------------------|
| Minerva S/A.                               | BEEF13 | 6/20/2012        | ICVM 476      | 10                  | 450.00                 | Prefixado 16,95% | N/D                     | N/D               |
| OGX Petróleo e Gás S/A (judicial recovery) | OGXP11 | 9/28/2012        | ICVM 476      | 10                  | 2,025.00               | Prefixado 10,50% | N/D                     | N/D               |
| Rio Canoas Energia S/A.                    | RCNE22 | 8/15/2012        | ICVM 476      | 12                  | 75.00                  | IPCA + 7,89%     | N/D                     | N/D               |
| BR Malls Participações S/A.                | BRML13 | 12/17/2012       | ICVM 476      | 11                  | 364.00                 | Prefixado 13,49% | N/D                     | N/D               |
|  |        |                  |               | Total               | 2,914.00               |                  |                         |                   |

## CAPEX Bonds: Law # 12,431/2011 - Project Bonds - (Article 1)1 - Non-Residents/2013

| Issuer  | Ticker           | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Value<br>(R\$ million) | Yield            | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|---|------------------|------------------|---------------|---------------------|------------------------|------------------|-------------------------|-------------------|
| Marfrig Alimentos S/A.                            | MRFG14           | 3/22/2013        | ICVM 476      | 6                   | 570.00                 | Prefixado 15,85% | N/D                     | N/D               |
| OAS S.A.  | OAEP18<br>OAEP28 | 7/11/2013        | ICVM 476      | 11                  | 347.35<br>347.35       | Prefixado 9,47%  | N/D                     | N/D               |
| CENTRAD - Conc. Centro Adm. Distrito Federal S/A. | CTRD11<br>CTRD21 | 7/11/2013        | ICVM 476      | 5                   | 50.00<br>50.00         | IPCA + 7,97%     | N/D                     | N/D               |
| Holcim (BRASIL) S/A                               | HOLC11           | 10/1/2013        | ICVM 476      | 10                  | 450.00                 | Prefixado 14%    | N/D                     | N/D               |
| Raizen Energia S/A                                | RESA31           | 10/15/2013       | ICVM 400      | 7                   | 304.03                 | IPCA + 6,38%     | N/D                     | AAA               |
|   |                  |                  |               | Total               | 2,118.73               |                  |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by ASSEC/SEAE/MF Elaborated by COGTL/SEAE/MF

- (1) CAPEX Bonds (also referred to as Law # 12,431/2011 article 1 debenture) Local currency IOF and tax-exempt bond for non-residents. The funds raised will be used for investments.
- (2) Consumer Prince Index CPI (IPCA)



## CAPEX Bonds: Law # 12,431/2011 - Project Bonds - (Article 1)1 - Non-Residents/ 2015

| Issuer    | Ticker | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Value<br>(R\$ million) | Yield            | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|-----------|--------|------------------|---------------|---------------------|------------------------|------------------|-------------------------|-------------------|
| AMBEV S/A | ABEV11 | 10/30/2015       | ICVM 476      | 6                   | 1,000.00               | Prefixado 14,47% | 14.50%                  | AAA               |
|           |        |                  |               | Total               | 1,000.00               |                  |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by ASSEC/SEAE/MF Elaborated by COGTL/SEAE/MF

#### Note:

- (1) CAPEX Bonds (also referred to as Law # 12,431/2011 article 1 debenture) Local currency IOF and tax-exempt bond for non-residents. The funds raised will be used for investments.
- (2) Consumer Prince Index CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Project Bonds - (Article 2)1 - 2012

| Issuer  | Ticker | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Duration <sup>2</sup><br>(years) | Value<br>(R\$ million) | Yield            | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|---|--------|------------------|---------------|---------------------|----------------------------------|------------------------|------------------|-------------------------|-------------------|
| Linhas de Transmissão de Montes Claros<br>S/A.                    | LTMC12 | 8/15/2012        | ICVM 476      | 17                  | 12.9                             | 25.00                  | IPCA + 8,75%     | 4.51%                   | N/D               |
| ALL - América Latina Logística Malha Norte S/A.                   | FERR18 | 9/25/2012        | ICVM 476      | 8                   | 5.7                              | 160.00                 | Prefixado 10,10% | 0.84%                   | Α                 |
| AUTOBAN - Concessionária Sistema<br>Anhanguera - Bandeirantes S/A | ANHB24 | 10/15/2012       | ICVM 400      | 5                   | 4.3                              | 135.00                 | IPCA + 2,71%     | 0.01%                   | AAA               |
| Santo Antonio Energia S/A.  | SAES12 | 12/27/2012       | ICVM 476      | 10                  | 6.2                              | 420.00                 | IPCA + 6,20%     | 3.11%                   | N/D               |
| CART - Concessionária Auto Raposo<br>Tavares S/A                  | CART12 | 12/15/2012       | ICVM 400      | 12                  | 7.9                              | 380.00                 | IPCA + 5,80%     | 2.41%                   | A+                |
|   |        |                  |               |                     | Total                            | 1,120.00               |                  |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by COGTL/SEAE/MF

- (1) Infrastructure Bonds (also referred to as Law # 12,431 article 2 debênture) Tax-exempt bond for resident natural persons. A ten-percentage point 15% company income tax rate (ten percentage-point reduction) for local companies. Funds raised must be used in infrastructure investments or in research, development and inovation-intensive economic production.
- (2) In this presentation we consider duration (Macauley duration) as a measure of the sensitivity of the price (value of principal) of a infrastructure Bond expressed as a number of years. This indicator involving present value, yield, coupon and final maturity.
- (3) Consumer Prince Index CPI (IPCA)



## Infrastructure Bonds: Law # 12,431/2011 - Project Bonds - (Article 2)1 - 2013

| Issuer   | Ticker | Emission<br>Date | Offer<br>type   | Maturity<br>(years) | Duration <sup>2</sup><br>(years) | Value<br>(R\$ million) | Yield          | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|--|--------|------------------|-----------------|---------------------|----------------------------------|------------------------|----------------|-------------------------|-------------------|
| Interligação Elétrica do Madeira S/A.                                | IEMD12 | 3/18/2013        | ICVM 476        | 12                  | 7.0                              | 350.00                 | IPCA + 5,50%   | 1.69%                   | N/D               |
| Concessionária Ecovias dos Imigrantes                                | ECOV12 | 4/15/2013        | ICVM 400        | 7                   | 5.9                              | 200.00                 | IPCA + 3,80%   | 0.00%                   | AAA               |
| S/A.   | ECOV22 | 4/15/2015        | ICVIVI 400      | 11                  | 8.3                              | 681.00                 | IPCA + 4,28%   | 0.20%                   | AAA               |
| Concessionária Rodovias do Tietê S/A.                                | RDVT11 | 6/15/2013        | <b>ICVM 400</b> | 15                  | 7.4                              | 1,065.00               | IPCA + 8,00%   | 2.16%                   | AA                |
| Jauru Transmissora de Energia S/A.                                   | JAUR12 | 6/15/2013        | ICVM 476        | 18                  | 10.4                             | 39.00                  | IPCA + 8,00%   | 2.29%                   | AA-               |
| Norta Procil Transmissora da Engraia C/A                             | NRTB11 | 9/15/2013        | ICVM 476        | 13                  | 7.4                              | 100.00                 | IPCA + 7,15%   | 1.55%                   | AA+               |
| Norte Brasil Transmissora de Energia S/A                             | NRTB21 | 9/15/2015        | ICVIVI 476      | 15                  | 7.4                              | 100.00                 | IPCA + 7,13%   | 1.55%                   | AAT               |
| CIA de Gás de São Paulo - COMGÁS.                                    | GASP23 | 9/15/2013        | ICVM 400        | 5                   | 3.7                              | 269.30                 | IPCA + 5,10%   | 0.00%                   | AA+               |
| CIA de das de Sao Paulo - COMIGAS.                                   | GASP33 | 9/15/2015        | ICVIVI 400      | 7                   | 5.6                              | 142.50                 | IPCA + 5,57%   | 0.31%                   | AA+               |
| AUTOBAN - Concessionária do Sistema<br>Anhanguera - Bandeirantes S/A | ANHB15 | 10/15/2013       | ICVM 400        | 5                   | 4.5                              | 450.00                 | IPCA + 4,88%   | (0.38)%                 | AAA               |
| Odebrecht Transport S/A  | ODTR11 | 10/15/2013       | ICVM 476        | 12                  | 8.6                              | 300.00                 | IPCA + 6,70%   | 1.55%                   | A+                |
|  | TEPE11 |                  |                 |                     |                                  | 75.00                  |                |                         |                   |
| Termelétrica Pernambuca III S/A                                      | TEPE21 | 11/15/2012       | ICVM 400        | 12                  | 5.0                              | 75.00                  | IPCA + 9,11%   | 2 75%                   | AA+               |
| Termelétrica Pernambuco III S/A                                      | TEPE31 | 11/15/2013       | 1CV1V1 400      | 12                  | 5.0                              | 75.00                  | IF CA + 9,11/6 | 2.75%                   | AA+               |
|  | TEPE41 |                  |                 |                     |                                  | 75.00                  |                |                         |                   |
|  |        |                  |                 |                     | Total                            | 3,996.80               |                |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by COGTL/SEAE/MF

<sup>(1)</sup> Infrastructure Bonds (also referred to as Law # 12,431 article 2 debênture) - Tax-exempt bond for resident natural persons. A ten-percentage point 15% company income tax rate (ten percentage-point reduction) for local companies. Funds raised must be used in infrastructure investments or in research, development and inovation-intensive economic production.

<sup>(2)</sup> In this presentation we consider duration (Macauley duration) as a measure of the sensitivity of the price (value of principal) of a infrastructure Bond expressed as a number of years. This indicator involving present value, yield, coupon and final maturity.

<sup>(3)</sup> Consumer Prince Index - CPI (IPCA)



## Infrastructure Bonds: Law # 12,431/2011 - Project Bonds - (Article 2)1 - 2014

| Issuer   | Ticker                               | Emission<br>Date       | Offer<br>type        | Maturity<br>(years) | Duration <sup>2</sup><br>(years) | Value<br>(R\$ million)               | Yield  | Spread<br>Over<br>NTN-B              | Rating<br>(local) |
|--|--------------------------------------|------------------------|----------------------|---------------------|----------------------------------|--------------------------------------|--|--------------------------------------|-------------------|
| Aeroportos Brasil Viracopos S.A.                                   | VRCP11<br>VRCP21<br>VRCP31<br>VRCP41 | 1/15/2014              | ICVM 476             | 12                  | 7.4                              | 75.00<br>75.00<br>75.00<br>75.00     | IPCA + 8,79%   | 2.27%                                | AA-               |
| Vale S/A   | VALE18<br>VALE28<br>VALE38<br>VALE48 | 2/10/2014              | ICVM 400             | 7<br>10<br>12<br>15 | 5.5<br>7.1<br>8.1<br>8.8         | 600.00<br>150.00<br>100.00<br>150.00 | IPCA + 6,46%<br>IPCA + 6,57%<br>IPCA + 6,71%<br>IPCA + 6,78% | (0.15)%<br>(0.10)%<br>0.00%<br>0.00% | ААА               |
| Concessionária do Aeroporto Internacional<br>de Guarulhos S/A      | AGRU11<br>AGRU21<br>AGRU31<br>AGRU41 | 2/15/2014              | ICVM 476             | 11                  | 6.0                              | 75.00<br>75.00<br>75.00<br>75.00     | IPCA + 7,86%   | 1.40%                                | АА                |
| Santo Antônio Energia S/A - 2ª                                     | STEN13<br>STEN23                     | 4/15/2014              | ICVM 400             | 8<br>10             | 5.8<br>6.7                       | 200.00<br>500.00                     | IPCA + 7,05%<br>IPCA + 7,49%                                 | 0.85%<br>1.18%                       | AA+               |
| CPFL - Transmissão Piracicaba S/A<br>Ferreira Gomes Energia S/A    | CPGE18<br>FGEN13                     | 4/28/2014<br>6/15/2014 | ICVM 476<br>ICVM 400 | 5<br>14             | 4.5<br>7.9                       | 70.00<br>210.90                      | IPCA + 5,86%<br>IPCA + 6,47%                                 | (0.09)%<br>0.48%                     | AA+<br>AA+        |
| Transmissora Sul Brasileira de Energia S/A                         | TSBE12                               | 9/15/2014              | ICVM 476             | 14                  | 8.2                              | 77.55                                | IPCA + 6,80%   | 1.00%                                | AA+               |
| Concessionária de Rodovias do Oeste de<br>São Paulo - VIAOESTE     | VOES25                               | 9/15/2014              | ICVM 476             | 5                   | 4.4                              | 150.00                               | IPCA + 5,67%   | 0.00%                                | AAA               |
| RODONORTE - Concessionária de Rodovias<br>Integradas S/A           | RDNT14                               | 10/15/2014             | ICVM 476             | 5                   | 4.4                              | 130.00                               | IPCA + 5,69%   | 0.10%                                | AAA               |
| Autoban - Concessionária do Sistema<br>Anhanguera-Bandeirantes S/A | ANHB16                               | 10/15/2014             | ICVM 400             | 5                   | 4.4                              | 545.00                               | IPCA + 5,43%   | (0.15)%                              | AAA               |
| Concessionária do Aeroporto Internacional de Guarulhos             | AGRU12                               | 10/15/2014             | ICVM 400             | 12                  | 6.9                              | 300.00                               | IPCA + 6,40%   | 0.90%                                | AA                |
| Intervias - Concessionária de Rodovias do Interior Paulista S/A    | IVIA24                               | 10/15/2014             | ICVM 476             | 5                   | 4.5                              | 225.00                               | IPCA + 5,96%   | 0.12%                                | AA                |
| Geribatu - Santa Vitória do Palmar Holding                         | SVIT11                               | 9/15/2014              | ICVM 476             | 14                  | 8.0                              | 90.00                                | IPCA + 7,94%   | 1.92%                                | AA                |
| SUPERVIA-Concessionaria de Transporte<br>Ferroviário S/A           | SPVI12                               | 11/15/2014             | ICVM 476             | 12                  | 6.04                             | 300.00                               | IPCA + 7,50%   | 1.85%                                | AA-               |



### Continuation - 2014

| Issuer   | Ticker | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Duration <sup>2</sup><br>(years) | Value<br>(R\$ million) | Yield        | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|--|--------|------------------|---------------|---------------------|----------------------------------|------------------------|--------------|-------------------------|-------------------|
| Denova Fálica Deuticinosãos S/A                  | RNEP11 | 11/15/2014       | ICVM 476      | 11                  | 5.40                             | 73.00                  | IPCA + 7,61% | 1.40%                   | AA-               |
| Renova Eólica Participações S/A                  | RNEP21 | 11/15/2014       | ICVIVI 476    | 11                  | 5.50                             | 73.00                  | IPCA + 7,87% | 1.65%                   | AA-               |
| Engie Brasil Energia S/A                         | TBLE15 | 12/15/2014       | ICVM 476      | 10                  | 7.09                             | 165.00                 | IPCA + 6,30% | 0.0%                    | AAA               |
| Empresa de Energia Cachoeira Caldeirão S/A       | CADR13 | 12/15/2014       | ICVM 476      | 16                  | 9.20                             | 156.50                 | IPCA + 7,27% | 1.40%                   | AA                |
| Linhas de Taubaté Transmissora de<br>Energia S/A | LTTE14 | 12/15/2014       | ICVM 476      | 15                  | 7.90                             | 44.50                  | IPCA + 7,88% | 1.50%                   | AA+               |
| Autopista Planalto Sul S/A                       | APPS12 | 12/15/2014       | ICVM 476      | 11                  | 7.50                             | 100.00                 | IPCA + 8,17% | 1.70%                   | AAA               |
|  |        |                  |               |                     | Total                            | 5,010.45               |              |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by COGTL/SEAE/MF

- (1) Infrastructure Bonds (also referred to as Law # 12,431 article 2 debênture) Tax-exempt bond for resident natural persons. A ten-percentage point 15% company income tax rate (ten percentage-point reduction) for local companies. Funds raised must be used in infrastructure investments or in research, development and inovation-intensive economic production.
- (2) In this presentation we consider duration (Macauley duration) as a measure of the sensitivity of the price (value of principal) of a infrastructure Bond expressed as a number of years. This indicator involving present value, yield, coupon and final maturity.
- (3) Consumer Prince Index CPI (IPCA)



## Infrastructure Bonds: Law # 12,431/2011 - Project Bonds - (Article 2)1 - 2015

| Issuer  | Ticker | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Duration²<br>(years) | Value<br>(R\$ million) | Yield         | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|---|--------|------------------|---------------|---------------------|----------------------|------------------------|---------------|-------------------------|-------------------|
| MRS Logistica S/A                             | MRSL17 | 2/15/2015        | ICVM 400      | 7                   | 5.54                 | 336.30                 | IPCA + 5,98%  | 0.00%                   | AA+               |
| • ,   | MRSL27 |                  |               | 10                  | 7.07                 | 214.40                 | IPCA + 6,42%  | 0.35%                   | AA+               |
| SALUS Infraestrutura Portuária S/A            | SAIP11 | 3/15/2015        | ICVM 400      | 10                  | 5.48                 | 320.90                 | IPCA + 6,79%  | 0.50%                   | AA+               |
| Rodovias Integradas do Oeste S/A              | RVIO14 | 4/15/2015        | ICVM 476      | 5                   | 4.54                 | 190.00                 | IPCA + 6,38%  | 0.15%                   | Aa1               |
| Alupar Investimentos S/A                      | APAR16 | 4/15/2015        | ICVM 476      | 6                   | 4.60                 | 250.00                 | IPCA + 7,33%  | 0.90%                   | AA+               |
| VLI Multimodal S/A                            | VLIM11 | 6/15/2015        | ICVM 476      | 5                   | 4.38                 | 232.40                 | IPCA + 6,88%  | 0.30%                   | AA                |
| Geradora Eólica Bons Ventos da Serra I<br>S/A | GLIC11 | 6/15/2015        | ICVM 476      | 12                  | 7.35                 | 10.30                  | IPCA + 9,43%  | 3.00%                   | ВВВ               |
| Ultrafertil S/A                               | ULFT11 | 6/15/2015        | ICVM 476      | 12                  | 6.40                 | 115.00                 | IPCA + 9,06%  | 1.50%                   | Α                 |
| CIA de Saneamento do Tocantins -              | SNTI13 | 6/26/2015        | ICVM 476      | 7                   | 4.40                 | 50.00                  | IPCA + 10,33% | 3.00%                   | Α                 |
| SANEATINS                                     | SNTI23 | 6/26/2015        | ICVIVI 476    | ,                   | 4.40                 | 140.00                 | IPCA + 10,33% | 3.00%                   | Aa2               |
| Concessionária Rodovia dos Lagos S/A          | RDLA12 | 7/15/2015        | ICVM 476      | 5                   | 4.29                 | 150.00                 | IPCA + 7,34%  | 0.14%                   | AA                |
| Ventos de São Tome Holding S/A                | TOME12 | 7/15/2015        | ICVM 476      | 12                  | 6.30                 | 89.00                  | IPCA + 8,86%  | 1.70%                   | AAA               |
| Vale S/A                                      | VALE19 | 8/15/2015        | ICVM 400      | 5                   | 4.37                 | 800.00                 | IPCA + 6,62%  | 0.50%                   | AAA               |
| vale 3/A                                      | VALE29 | 8/13/2013        | ICVIVI 400    | 7                   | 5.74                 | 550.00                 | IPCA + 6,63%  | 0.50%                   | AA                |
| Chapada do Piauí I Holding S/A                | CHPA11 | 8/15/2015        | ICVM 476      | 14                  | 7.90                 | 100.00                 | IPCA + 9,22%  | 1.75%                   | AA                |
| EDP Energias do Brasil S/A                    | ENBR24 | 9/15/2015        | ICVM 400      | 6                   | 4.10                 | 179.90                 | IPCA + 8,32%  | 1.00%                   | Aa3               |
| EDF Ellergias do Brasil 3/A                   | ENBR34 | 9/13/2013        | ICVIVI 400    | 9                   | 5.90                 | 48.10                  | IPCA + 8,26%  | 1.00%                   | Aa3               |
| Ventos de São Tito Holding S/A                | VNTT11 | 9/15/2015        | ICVM 476      | 13                  | 5.50                 | 111.00                 | IPCA + 9,24%  | 1.70%                   | AA                |
| NC Energia S/A                                | NCEN11 | 10/1/2015        | ICVM 476      | 10                  | 5.70                 | 31.60                  | IPCA + 7,89%  | 0.60%                   | A1                |
| Centrais Eólicas Caetité S/A                  | CAET12 | 10/15/2015       | ICVM 476      | 13                  | 6.20                 | 33.50                  | IPCA + 9,31%  | 1.80%                   | AA-               |
| COPEL Telecomunicações S/A                    | CTEL11 | 10/30/2015       | ICVM 476      | 9                   | 6.00                 | 160.00                 | IPCA + 7,96%  | 0.60%                   | AA+               |
|   | GASP14 |                  |               | 5                   | 4.36                 | 269.62                 | IPCA + 7,14%  | (0.30)%                 | AA+               |
| CIA de Gás de São Paulo - COMGÁS              | GASP24 | 12/15/2015       | ICVM 400      | 7                   | 5.35                 | 242.37                 | IPCA + 7,48%  | 0.00%                   | AA+               |
|   | GASP34 |                  |               | 10                  | 6.77                 | 79.90                  | IPCA + 7,36%  | 0.00%                   | AA+               |
| AES Tietê S/A                                 | TIET34 | 12/15/2015       | ICVM 400      | 5                   | 4.26                 | 301.76                 | IPCA + 8,43%  | 1.50%                   | AA                |
|   |        |                  |               |                     | Total                | 5,006.05               |               |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by COGTL/SEAE/MF

**Note:** (1) Infrastructure Bonds (also referred to as Law 12,431 article 2 debênture) - Tax-exempt bond for resident natural persons. A ten-percentage point 15% company income tax rate (ten percentage-point reduction) for local companies. Funds raised must be used in infrastructure investments or in research, development and inovation-intensive economic production.

<sup>(2)</sup> In this presentation we consider duration (Macauley duration) as a measure of the sensitivity of the price (value of principal) of a infrastructure Bond expressed as a number of years. This indicator involving present value, yield, coupon and final maturity.

<sup>(3)</sup> Consumer Prince Index - CPI (IPCA)



## Infrastructure Bonds: Law # 12,431/2011 - Project Bonds - (Article 2)1 - 2016

| Issuer   | Ticker | Emission<br>Date | Offer<br>type | Maturity<br>(years) | Duration <sup>2</sup><br>(years) | Value<br>(R\$ million) | Yield        | Spread<br>Over<br>NTN-B | Rating<br>(local) |
|--|--------|------------------|---------------|---------------------|----------------------------------|------------------------|--------------|-------------------------|-------------------|
| Voltalia S. M. do Gostoso Participações<br>S/A | VTLA11 | 3/8/2016         | ICVM 476      | 13                  | 5.50                             | 57.00                  | IPCA + 8,19% | 2.00%                   | A+                |
| EDP Energias do Brasil S/A                     | ENBR15 | 3/22/2016        | ICVM 476      | 6                   | 4.50                             | 250.00                 | IPCA + 8,34% | 1.70%                   | Α                 |
| ALGAR Telecom S/A                              | ALGA15 | 5/15/2016        | ICVM 476      | 6                   | 4.55                             | 210.00                 | IPCA + 7,73% | 1.40%                   | AA-               |
| Engie Brasil Energia S/A                       | TBLE16 | 7/15/2016        | ICVM 476      | 7                   | 5.00                             | 246.60                 | IPCA + 6,26% | 0.08%                   | AAA               |
| Engie Brasil Energia S/A                       | TBLE26 | 7/15/2016        | ICVM 476      | 10                  | 5.00                             | 353.40                 | IPCA + 6,25% | 0.08%                   | AAA               |
| CTEEP-CIA Energia Paulista S/A                 | CTEE14 | 7/15/2016        | ICVM 476      | 5                   | 4.40                             | 148.27                 | IPCA + 6,04% | (0.10)%                 | AA+               |
| VLI Operações Portuárias S/A                   | VLIO11 | 8/15/2016        | ICVM 476      | 5                   | 4.40                             | 175.00                 | IPCA + 6,05% | 0.00%                   | AA+               |
| TP Norte Energia S/A                           | TPNO12 | 5/15/2016        | ICVM 476      | 13                  | N/D                              | 180.00                 | IPCA + 7,58% | N/D                     | AA+               |
|  |        |                  |               |                     | Total                            | 1,620.27               |              |                         |                   |

Source: ANBIMA, Rating reports and Debentures Agreements Elaborated by COGTL/SEAE/MF

**Note:** (1) Infrastructure Bonds (also referred to as Law 12,431 article 2 debênture) - Tax-exempt bond for resident natural persons. A ten-percentage point 15% company income tax rate (ten percentage-point reduction) for local companies. Funds raised must be used in infrastructure investments or in research, development and inovation-intensive economic production.

(2) In this presentation we consider duration (Macauley duration) as a measure of the sensitivity of the price (value of principal) of a infrastructure Bond expressed as a number of years. This indicator involving present value, yield, coupon and final maturity.

(3) Consumer Prince Index - CPI (IPCA)

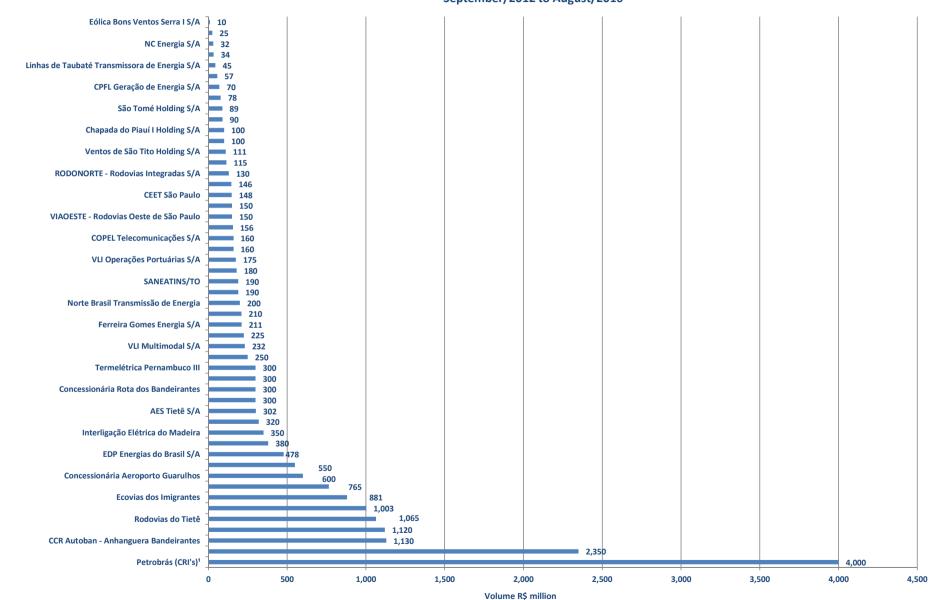
Ticker

## **Infrastructure Debentures**



Debentures - DI 's and CRI 's Infrastructure (Article 2 and 3) Law # 12,431/2011 - Volume (R\$ million)

September/2012 to August/2016

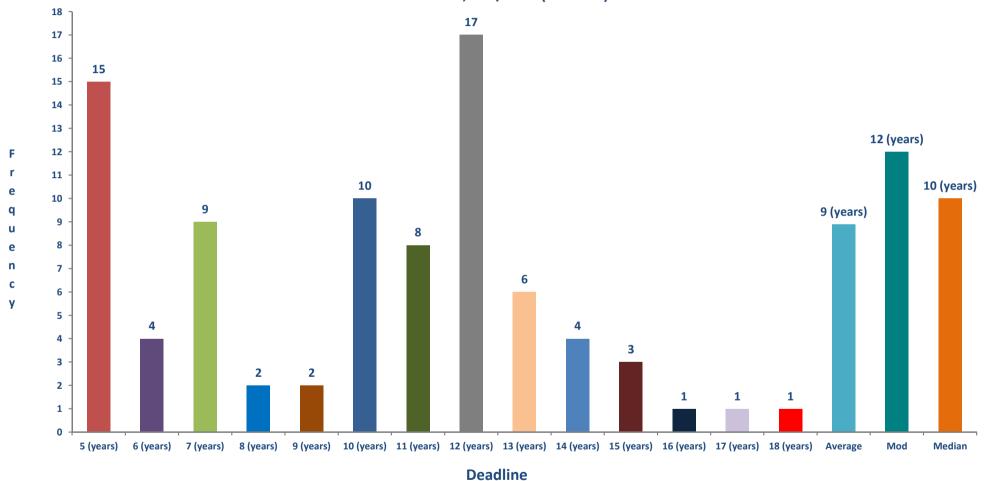


Source : ANBIMA , Debentures Agreements and Terms of Securitization of Real Estate Credit Elaborated by COGTL/SEAE/MF

Note: (1) Operations backed by real estate receivables owed by Petrobras Banco Bank.



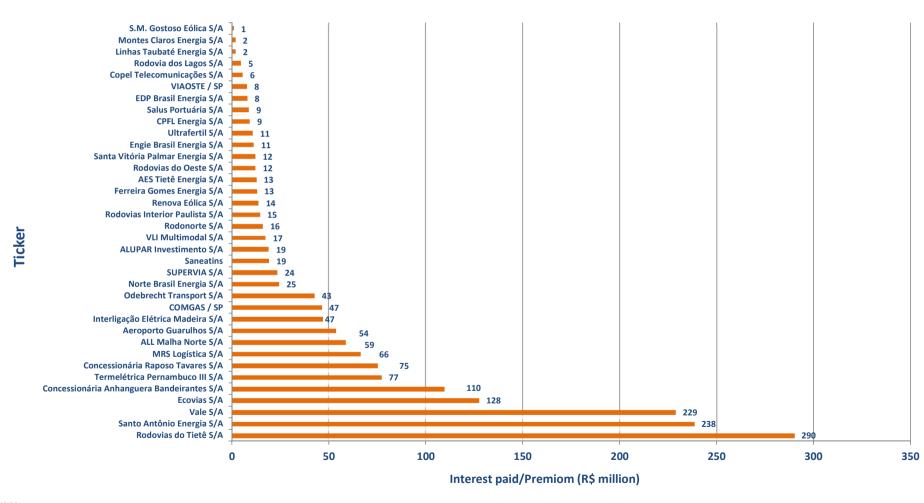
Infrastructure Debentures Issued (in years) between 2012 and 2016 by Maturity Law # 12,431 /2011 (Article 2).



Source: Source : Scripture of the Debentures Elaborated by COGTL/SEAE/MF



## Interest paid on Infrastructure Bonds (Debentures) between January/2013 and August/2016 Law # 12,431/2011 (Article 2) - (R\$ million)

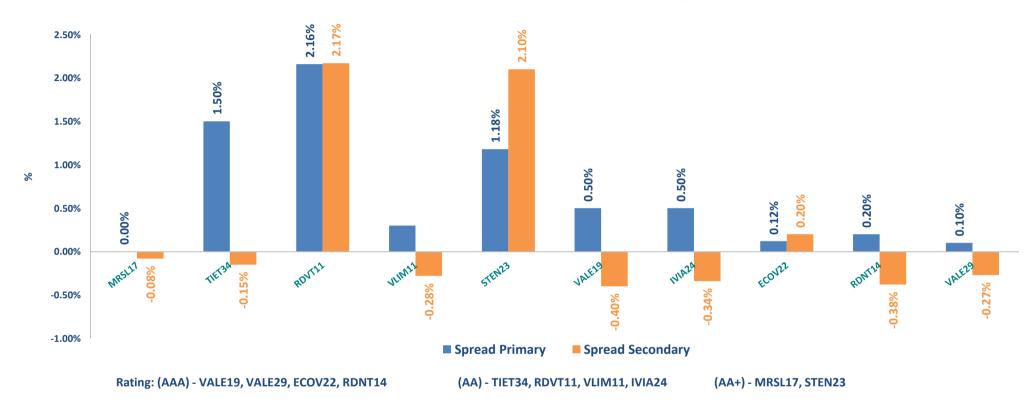


Source: ANBIMA Elaborated by COGTL/SEAE/MF



## Infrastructure Debenture Spread Comparison - Primary<sup>1</sup> Market vs. Secondary<sup>2</sup> Market

Focus is on Infrastructure Debenture - Article 2 of Law # 12,431/2011



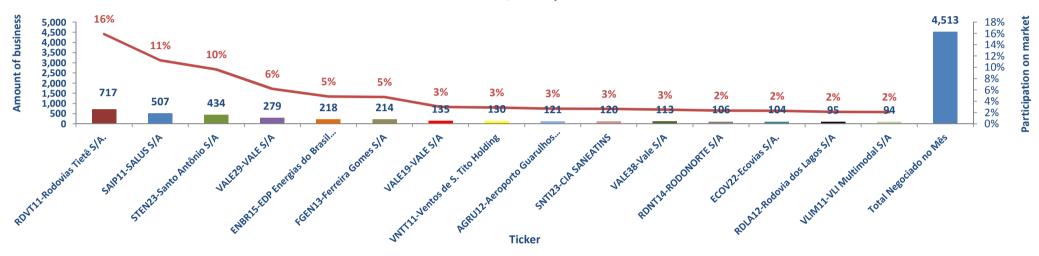
Source: ANBIMA and CETIP Elaborated by COGTL/SEAE/MF

- (1) Bookbuilding Process defines the final intrest rate.
- (2) Rate observed in Secondary Market considers average premium over NTN-b duration equivalent of negotiations held agost 1 through 31, 2016.

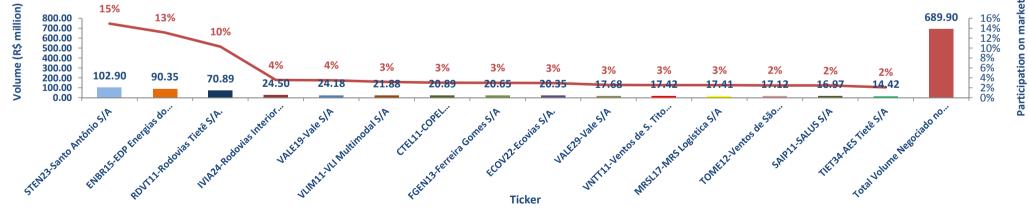


# Secondary Market - Number and Volume Traded - August in 2016 Debentures Infrastructure - Law # 12,431/2011 (Article 2) Amount of Business - 15 + traded

Amount of business / Participation on market







Source : ANBIMA and CETIP Elaborated by COGTL/SEAE/MF

#### Note:

Includes Intra-group and Extra-group transations (Without Leasing).

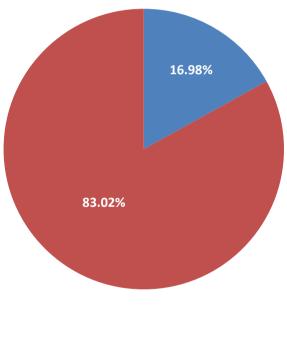


## **Debentures Secondary Market - Trading Volume and Turnover**

R\$ million

|         |                |                  | Tradin   | ig Volume <sup>1</sup> |                               |                 |               |
|---------|----------------|------------------|----------|------------------------|-------------------------------|-----------------|---------------|
|         |                | Debentures       |          | Infrastructure         | e Debentures-La               | aw # 12,431/11² | Total Trading |
| Period  | Trading Volume | Market<br>Volume | Turnover | Trading<br>Volume      | Market<br>Volume <sup>3</sup> | Turnover        | Volumes       |
| 2014/08 | 1,834.70       | 228,295.60       | 0.80%    | 569.53                 | 7,826.92                      | 7.28%           | 2,404.2       |
| 2014/09 | 3,354.81       | 229,596.53       | 1.46%    | 468.15                 | 7,719.83                      | 6.06%           | 3,823.0       |
| 2014/10 | 2,920.90       | 230,578.90       | 1.27%    | 318.86                 | 9,525.44                      | 3.35%           | 3,239.8       |
| 2014/11 | 1,927.50       | 231,398.30       | 0.83%    | 345.25                 | 9,301.40                      | 3.71%           | 2,272.8       |
| 2014/12 | 1,570.10       | 237,340.30       | 0.66%    | 383.35                 | 9,870.82                      | 3.88%           | 1,953.5       |
| 2015/01 | 893.00         | 238,456.60       | 0.37%    | 435.23                 | 10,032.92                     | 4.34%           | 1,328.2       |
| 2015/02 | 1,212.40       | 236,159.05       | 0.51%    | 333.56                 | 10,400.36                     | 3.21%           | 1,546.0       |
| 2015/03 | 1,126.40       | 237,120.20       | 0.48%    | 617.70                 | 11,317.18                     | 5.46%           | 1,744.1       |
| 2015/04 | 2,199.70       | 234,753.90       | 0.94%    | 640.85                 | 11,686.40                     | 5.48%           | 2,840.6       |
| 2015/05 | 1,399.60       | 234,618.60       | 0.60%    | 537.26                 | 11,654.56                     | 4.61%           | 1,936.9       |
| 2015/06 | 5,480.00       | 259,766.20       | 2.11%    | 347.50                 | 12,077.30                     | 2.88%           | 5,827.5       |
| 2015/07 | 2,406.21       | 229,030.80       | 1.05%    | 394.42                 | 12,481.77                     | 3.16%           | 2,800.6       |
| 2015/08 | 2,303.04       | 233,686.76       | 0.99%    | 308.68                 | 12,241.80                     | 2.52%           | 2,611.7       |
| 2015/09 | 4,026.00       | 231,080.00       | 1.74%    | 390.40                 | 13,928.64                     | 2.80%           | 4,416.4       |
| 2015/10 | 1,900.80       | 230,792.91       | 0.82%    | 416.06                 | 14,379.35                     | 2.89%           | 2,316.9       |
| 2015/11 | 3,308.66       | 230,510.20       | 1.44%    | 388.39                 | 14,767.35                     | 2.63%           | 3,697.1       |
| 2015/12 | 5,373.20       | 234,677.23       | 2.29%    | 582.50                 | 15,611.92                     | 3.73%           | 5,955.7       |
| 2016/01 | 2,188.13       | 229,072.13       | 0.96%    | 471.04                 | 15,915.17                     | 2.96%           | 2,659.2       |
| 2016/02 | 2,098.37       | 233,590.96       | 0.90%    | 696.70                 | 15,668.43                     | 4.45%           | 2,795.1       |
| 2016/03 | 2,382.40       | 231,593.00       | 1.03%    | 572.62                 | 17,091.60                     | 3.35%           | 2,955.0       |
| 2016/04 | 1,925.59       | 226,327.91       | 0.85%    | 560.89                 | 17,338.44                     | 3.23%           | 2,486.5       |
| 2016/05 | 2,091.80       | 225,773.60       | 0.93%    | 638.80                 | 16,918.60                     | 3.78%           | 2,730.6       |
| 2016/06 | 4,684.28       | 217,774.13       | 2.15%    | 634.28                 | 17,255.70                     | 3.68%           | 5,318.6       |
| 2016/07 | 1,454.20       | 220,812.80       | 0.66%    | 869.70                 | 17,794.00                     | 4.89%           | 2,323.9       |
| 2016/08 | 1,137.10       | 223,462.40       | 0.51%    | 591.30                 | 17,842.50                     | 3.31%           | 1,728.4       |





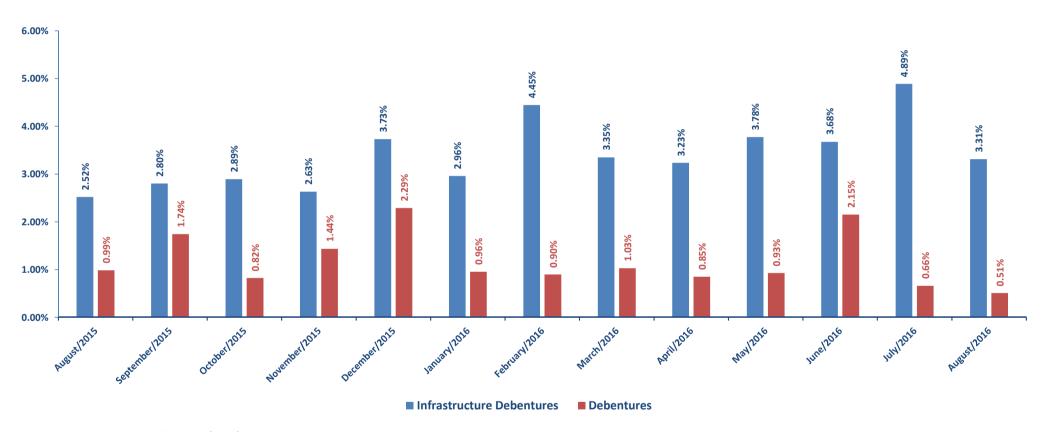
■ Infrastructure Debentures ■ Debentures

Source: ANBIMA Elaborated by COGTL/SEAE/MF

<sup>(1)</sup> Type of transation (Intra-group and Estra-group): The intra-group transations are negotiated between institutions belonging to the same financial conglomerate and extra-group transations are negotiated between participants of different conglomerates and among participants with clients who are not part of the ANBIMA REUNE system. Leasing debentures are not considered. (2) Financial trading Volume of infrastructure debentures.



# Secondary Market - Trading Volume<sup>1</sup> Infrastructure Debentures Vs. Debentures Comparative Turnover (Trading Volume<sup>2</sup>/Market Volume<sup>3</sup>)



Source: ANBIMA Elaborated by COGTL/SEAE/MF

#### Note

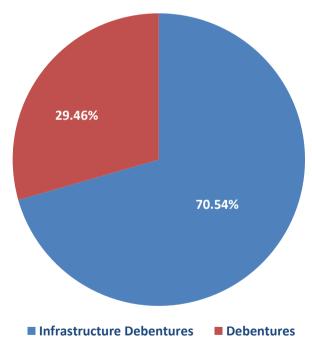
(1) Type of transation (Intra-group and Estra-group): The intra-group transations are negotiated between institutions belonging to the same financial conglomerate and extra-group transations are negotiated between participants of different conglomerates and among participants with clients who are not part of the ANBIMA REUNE system. Leasing debentures are not considered. (2) Financial trading Volume of infrastructure debentures.



## **Infrastructure Debentures Secondary Market - Share of Trades**

|         | Share of Trades <sup>1</sup> |  |                |  |  |  |  |  |  |
|---------|------------------------------|--|----------------|--|--|--|--|--|--|
| Period  | Debentures                   | Infrastructure debentures-Law # 12,431/11 <sup>2</sup> | Share Total of |  |  |  |  |  |  |
|         | Share of Trades              | Share of Trades  | Trades         |  |  |  |  |  |  |
| 2014/08 | 1,397                        | 2,860  | 4,257          |  |  |  |  |  |  |
| 2014/09 | 1,642                        | 2,460  | 4,102          |  |  |  |  |  |  |
| 2014/10 | 1,546                        | 2,077  | 3,623          |  |  |  |  |  |  |
| 2014/11 | 1,108                        | 2,084  | 3,192          |  |  |  |  |  |  |
| 2014/12 | 1,113                        | 2,678  | 3,791          |  |  |  |  |  |  |
| 2015/01 | 1,188                        | 2,072  | 3,260          |  |  |  |  |  |  |
| 2015/02 | 1,269                        | 2,263  | 3,532          |  |  |  |  |  |  |
| 2015/03 | 1,134                        | 4,120  | 5,254          |  |  |  |  |  |  |
| 2015/04 | 1,526                        | 3,811  | 5,337          |  |  |  |  |  |  |
| 2015/05 | 1,218                        | 3,357  | 4,575          |  |  |  |  |  |  |
| 2015/06 | 1,475                        | 3,311  | 4,786          |  |  |  |  |  |  |
| 2015/07 | 1,076                        | 3,110  | 4,186          |  |  |  |  |  |  |
| 2015/08 | 1,157                        | 2,785  | 3,942          |  |  |  |  |  |  |
| 2015/09 | 1,473                        | 2,716  | 4,189          |  |  |  |  |  |  |
| 2015/10 | 1,526                        | 2,894  | 4,420          |  |  |  |  |  |  |
| 2015/11 | 1,218                        | 3,317  | 4,535          |  |  |  |  |  |  |
| 2015/12 | 1,475                        | 3,716  | 5,191          |  |  |  |  |  |  |
| 2016/01 | 1,076                        | 3,104  | 4,180          |  |  |  |  |  |  |
| 2016/02 | 1,157                        | 3,947  | 5,104          |  |  |  |  |  |  |
| 2016/03 | 1,827                        | 4,500  | 6,327          |  |  |  |  |  |  |
| 2016/04 | 1,656                        | 4,167  | 5,823          |  |  |  |  |  |  |
| 2016/05 | 1,601                        | 4,711  | 6,312          |  |  |  |  |  |  |
| 2016/06 | 1,656                        | 5,886  | 7,542          |  |  |  |  |  |  |
| 2016/07 | 1,882                        | 5,060  | 6,942          |  |  |  |  |  |  |
| 2016/08 | 2,466                        | 4,874  | 7,340          |  |  |  |  |  |  |

Share of trades
August/2014 to August/2016



Source: ANBIMA

Elaborated by COGTL/SEAE/MF

#### Note

(1) Type of transation (Intra-group and Estra-group): The intra-group transations are negotiated between institutions belonging to the same financial conglomerate and extra-group transations are negotiated between participants of different conglomerates and among participants with clients who are not part of the ANBIMA REUNE system. Leasing debentures are not considered. (2) Share of trades: infrastructure debentures.



## Breakdown by Type of Investor (R\$ million ) - ICVM 400 - Article 2 Law # 12,431/2011

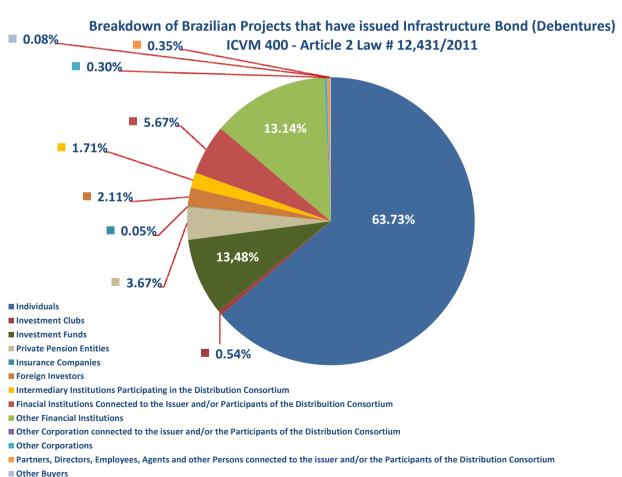


Summary: Infrastructure Debentures (R\$ million) - Portfolio Allocation (%) ICVM 400 - Article 2 Law # 12,431/2011

| 100 711111010 =   |         | -/       |
|---|---------|----------|
| Investor  | %       | R\$      |
| Individuals   | 63.73%  | 6,195.71 |
| Investment Clubs  | 0.54%   | 52.43    |
| Investment Funds  | 8.66%   | 842.12   |
| Private Pension Entities  | 3.67%   | 356.59   |
| Insurance Companies   | 0.05%   | 4.68     |
| Foreign Investors   | 2.11%   | 205.28   |
| Intermediary Institutions Participating in the Distribution   | 1.71%   | 165.89   |
| Finacial Institutions Connected to<br>the Issuer and/or Participants of the<br>Distribuition Consortium   | 5.67%   | 550.81   |
| Other Financial Institutions  | 13.14%  | 1,277.09 |
| Other Corporation connected to the issuer and/or the Participants of the Distribution Consortium  | 0.00%   | 0.01     |
| Other Corporations  | 0.30%   | 29.08    |
| Partners, Directors, Employees,<br>Agents and other Persons<br>connected to the issuer and/or the<br>Participants of the Distribution<br>Consortium | 0.35%   | 34.13    |
| Other Buyers  | 0.08%   | 8.12     |
| Total   | 100.00% | 9,721.94 |

 $Source: ANBIMA, Leading\ Banks\ and\ closing\ announcement$ 

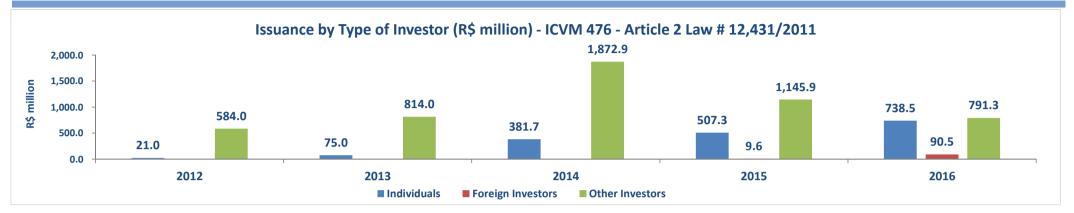
Elaborated by COGTL/SEAE/MF



## Newsletter

## **Infrastructure Debentures**





Summary: Infrastructure Debentures (R\$ million) - Portfolio Allocation ICVM 476 -

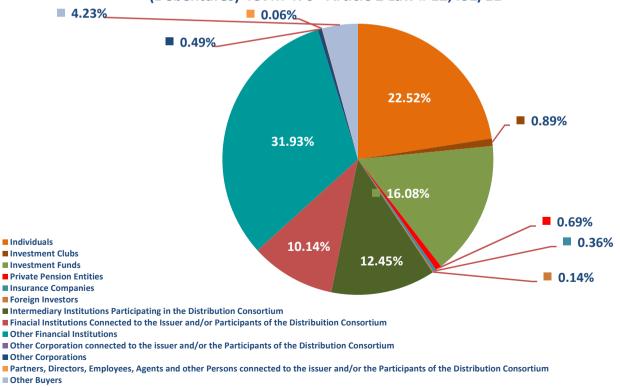
Article 2 Law # 12.431/11

| Al title 2 La   | W # 12,431/ | 11       |
|---|-------------|----------|
| Investor  | %           | R\$      |
| Individuals   | 22.52%      | 1,543.38 |
| Investment Clubs  | 0.89%       | 61.10    |
| Investment Funds  | 16.08%      | 1,102.13 |
| Private Pension Entities  | 0.69%       | 47.62    |
| Insurance Companies   | 0.36%       | 25.00    |
| Foreign Investors Intermediary Institutions   | 0.14%       | 9.61     |
| Participating in the Distribution<br>Consortium   | 12.45%      | 852.93   |
| Finacial Institutions Connected to<br>the Issuer and/or Participants of the<br>Distribuition Consortium   | 10.14%      | 694.72   |
| Other Financial Institutions Other Corporation connected to the   | 31.93%      | 2,187.93 |
| issuer and/or the Participants of the Distribution Consortium   | 0.00%       | 0.00     |
| Other Corporations  | 0.49%       | 33.50    |
| Partners, Directors, Employees,<br>Agents and other Persons<br>connected to the issuer and/or the<br>Participants of the Distribution<br>Consortium | 0.06%       | 4.00     |
| Other Buyers  | 4.23%       | 290.00   |
| Total   | 100.00%     | 6,851.92 |

Source: ANBIMA, Leading Banks and closing announcement

Elaborated by COGTL/SEAE/MF

## Breakdown of Brazilian Projects that have issued Infrastructure Bond (Debentures) ICVM 476 - Article 2 Law # 12,431/11

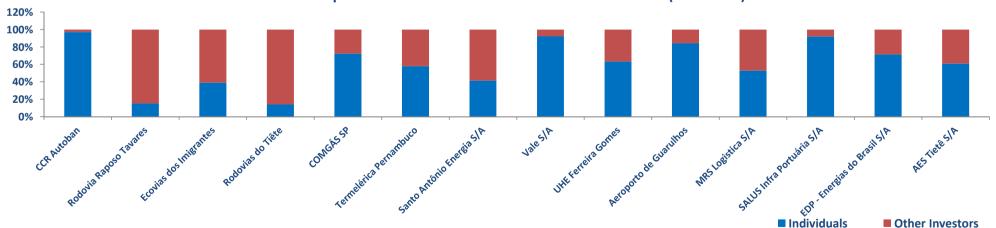




## Demand for Individuals - Article 2 of Law # 12,431/2011 Infrastructure Debentures - Only Issuance ICVM 400 (% of volume issued)

| Adquirentes                   | Pessoas Fisícas | Demais Investidores | Total de Investidores |
|-------------------------------|-----------------|---------------------|-----------------------|
| CCR Autoban                   | 97.25%          | 2.75%               | 100%                  |
| CART                          | 15.13%          | 84.87%              | 100%                  |
| <b>Ecovias dos Imigrantes</b> | 39.07%          | 60.93%              | 100%                  |
| Rodovias do Tiête             | 14.03%          | 85.97%              | 100%                  |
| COMGÁS SP                     | 72.33%          | 27.67%              | 100%                  |
| Termelérica Pernambuco        | 58.05%          | 41.95%              | 100%                  |
| Santo Antônio Energia S/A     | 41.38%          | 58.62%              | 100%                  |
| Vale S/A                      | 92.20%          | 7.80%               | 100%                  |
| UHE Ferreira Gomes            | 63.26%          | 36.74%              | 100%                  |
| Aeroporto de Guarulhos        | 84.37%          | 15.63%              | 100%                  |
| MRS Logistica S/A             | 52.84%          | 47.16%              | 100%                  |
| SALUS Infra Portuária S/A     | 91.99%          | 8.01%               | 100%                  |
| EDP - Energias do Brasil S/A  | 71.42%          | 28.58%              | 100%                  |
| AES Tietê S/A                 | 61.00%          | 39.00%              | 100%                  |

## Adquirentes of Debentures Infrastructure ICVM 400 (% volume)



Source: ANBIMA Elaborated by COGTL/SEAE/MF



## Approved Projects up to July 2016 - Article 2 Law # 12,431/2011

(Includes projects having or not having issued infrastructure Debentures)

|                                     | Investments million |           |           |           |           |                            |  |  |
|-------------------------------------|---------------------|-----------|-----------|-----------|-----------|----------------------------|--|--|
| Sectors                             | 2012                | 2013      | 2014      | 2015      | 2016      | Imvestments<br>BRL million |  |  |
| Transport                           | 5,550.60            | 13,353.71 | 9,174.11  | 37,746.22 | 4,650.00  | 64,924.04                  |  |  |
| Toll Road                           | 4,078.16            | 9,703.31  | 6,480.92  | 25,949.29 | 4,650.00  | 46,783.52                  |  |  |
| Railways                            | 1,472.44            | 3,650.40  | 2,693.19  | 11,796.93 | 0.00      | 18,140.52                  |  |  |
| Mines and Energy                    | 45,835.64           | 41,186.39 | 43,494.65 | 29,091.61 | 9,170.83  | 122,943.48                 |  |  |
| Electric Power Transmission<br>Line | 1,329.55            | 3,681.28  | 592.02    | 170.29    | 418.41    | 4,862.00                   |  |  |
| <b>Hydroeletric Power Plants</b>    | 44,062.49           | 19,028.55 | 3,740.52  | 4,198.70  | 1,053.93  | 28,021.70                  |  |  |
| Thermoelectric                      | 0.00                | 4,123.85  | 1,111.06  | 5,075.50  | 3,246.28  | 13,556.69                  |  |  |
| Small Hydro                         | 0.00                | 125.48    | 68.54     | 860.56    | 419.02    | 1,473.60                   |  |  |
| Gas                                 | 0.00                | 2,033.52  | 0.00      | 2,209.44  | 0.00      | 4,242.96                   |  |  |
| Wind Farms                          | 443.60              | 5,193.71  | 7,982.51  | 11,577.12 | 4,033.19  | 28,786.53                  |  |  |
| Pipelines                           | 0.00                | 7,000.00  | 0.00      | 0.00      | 0.00      | 7,000.00                   |  |  |
| Oil                                 | 0.00                | 0.00      | 30,000.00 | 5,000.00  | 0.00      | 35,000.00                  |  |  |
| Comunications                       | 0.00                | 800.00    | 1,605.00  | 2,882.14  | 2,147.58  | 7,434.72                   |  |  |
| Data communication broadband        | 0.00                | 800.00    | 1,605.00  | 2,882.14  | 2,147.58  | 7,434.72                   |  |  |
| Cities                              | 0.00                | 0.00      | 0.00      | 18,288.30 | 4,739.00  | 23,027.30                  |  |  |
| Water and Sewerage                  | 0.00                | 0.00      | 0.00      | 405.95    | 0.00      | 405.95                     |  |  |
| Urban Mobility                      | 0.00                | 0.00      | 0.00      | 17,882.35 | 4,739.00  | 22,621.35                  |  |  |
| <b>Civil Aviation Secretariat</b>   | 0.00                | 0.00      | 8,887.90  | 143.40    | 5,000.00  | 14,031.30                  |  |  |
| Airports                            | 0.00                | 0.00      | 8,887.90  | 143.40    | 5,000.00  | 14,031.30                  |  |  |
| Secretariat of Ports                | 0.00                | 0.00      | 2,551.85  | 2,226.84  | 0.00      | 4,778.69                   |  |  |
| Ports                               | 0.00                | 0.00      | 2,551.85  | 2,226.84  | 0.00      | 4,778.69                   |  |  |
| Total                               | 51,386.24           | 55,340.10 | 65,713.51 | 90,378.51 | 25,707.41 | 237,139.53                 |  |  |

Source: Ministerial Orders issued and Linked Entities Elaborated by COGTL/SEAE/MF



## Approved Projects up to July 2016 - Article 2 Law # 12,431/2011

(Includes projects having or not having issued infrastructure Debentures)

|                                     | Approved Projects |      |      |      |      |                                   |  |  |  |
|-------------------------------------|-------------------|------|------|------|------|-----------------------------------|--|--|--|
| Sectors                             | 2012              | 2013 | 2014 | 2015 | 2016 | Approved<br>Projects <sup>1</sup> |  |  |  |
| Transport                           | 3                 | 6    | 7    | 13   | 1    | 30                                |  |  |  |
| Toll Road                           | 2                 | 5    | 5    | 12   | 1    | 25                                |  |  |  |
| Railways                            | 1                 | 1    | 2    | 1    | 0    | 5                                 |  |  |  |
| Mines and Energy                    | 12                | 74   | 91   | 160  | 61   | 398                               |  |  |  |
| Electric Power Transmission<br>Line | 3                 | 9    | 2    | 4    | 4    | 22                                |  |  |  |
| Hydroeletric Power Plants           | 4                 | 2    | 5    | 12   | 2    | 25                                |  |  |  |
| Thermoelectric                      | 0                 | 5    | 1    | 3    | 2    | 11                                |  |  |  |
| Small Hydro                         | 0                 | 1    | 1    | 8    | 5    | 15                                |  |  |  |
| Gas                                 | 0                 | 1    | 0    | 1    | 0    | 2                                 |  |  |  |
| Wind Farms                          | 5                 | 55   | 81   | 131  | 48   | 320                               |  |  |  |
| Pipelines                           | 0                 | 1    | 0    | 0    | 0    | 1                                 |  |  |  |
| Oil                                 | 0                 | 0    | 1    | 1    | 0    | 2                                 |  |  |  |
| Comunications                       | 0                 | 1    | 2    | 1    | 1    | 5                                 |  |  |  |
| Data communication broadband        | 0                 | 1    | 2    | 1    | 1    | 5                                 |  |  |  |
| Cities                              | 0                 | 0    | 0    | 5    | 1    | 6                                 |  |  |  |
| Water and Sewerage                  | 0                 | 0    | 0    | 2    | 0    | 2                                 |  |  |  |
| Urban Mobility                      | 0                 | 0    | 0    | 3    | 1    | 4                                 |  |  |  |
| Civil Aviation Secretariat          | 0                 | 0    | 2    | 1    | 1    | 4                                 |  |  |  |
| Airports                            | 0                 | 0    | 2    | 1    | 1    | 4                                 |  |  |  |
| Secretariat of Ports                | 0                 | 0    | 3    | 1    | 0    | 4                                 |  |  |  |
| Ports                               | 0                 | 0    | 3    | 1    | 0    | 4                                 |  |  |  |
| Total                               | 15                | 81   | 105  | 181  | 65   | 447                               |  |  |  |

**Source: Ministerial Orders issued and Linked Entities** 

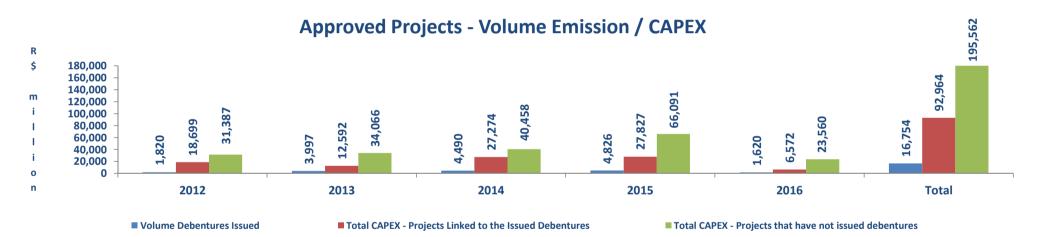
Elaborated by COGTL/SEAE/MF

Nota: (1) Portarias Editadas: 451; Portarias Canceladas e Reeditadas: 04; Portarias Vigentes: 447



## Summary Table - Volume issued of infrastructure debentures - Law # 12,431 / 2011 (Article 2) / CAPEX linked to the issued debentures (R\$ million)/Projects that have not issued debentures

| Status of Projects                                     | Investment (R\$ million) |           |           |           |           |               |  |
|--|--------------------------|-----------|-----------|-----------|-----------|---------------|--|
|  | 2012                     | 2013      | 2014      | 2015      | 2016      | (R\$ million) |  |
| Volume debentures issued                               | 1,820.00                 | 3,996.80  | 4,490.35  | 4,826.11  | 1,620.27  | 16,753.53     |  |
| Total CAPEX - Projects Linked to the issued debentures | 18,699.36                | 12,591.59 | 27,273.79 | 27,827.01 | 6,571.84  | 92,963.59     |  |
| Total CAPEX - Projects that have not issued debentures | 31,386.88                | 34,066.12 | 40,458.13 | 66,091.22 | 23,559.83 | 195,562.18    |  |



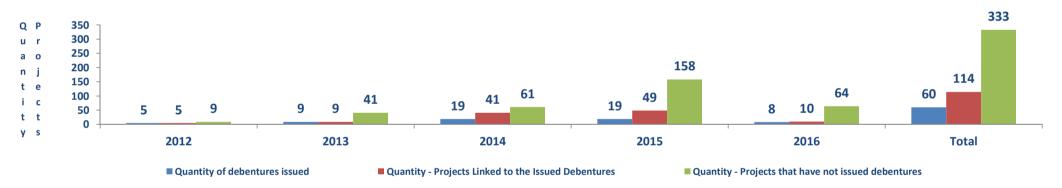
Source: Ministerial Orders issued and Linked Entities Elaborated by COGTL/SEAE/MF



Summary Table - Quantity issued of infrastructure debentures - Law # 12,431 / 2011 (Article 2) / Quantity of projects linked to the issued debentures (R\$ million)/Quantity of projects that have not issued debentures

| Status of Projects                                  | Quantity of issued debentures and approved projects |      |      |      |      |          |  |
|---|---|------|------|------|------|----------|--|
|   | 2012  | 2013 | 2014 | 2015 | 2016 | Quantity |  |
| Quantity of Debentures Issued                       | 5   | 9    | 19   | 19   | 8    | 60       |  |
| Quantity - Projects Linked to the Issued Debentures | 5   | 9    | 41   | 49   | 10   | 114      |  |
| Quantity - Projects that have not issued debentures | 9   | 41   | 61   | 158  | 64   | 333      |  |

## **Approved Projects - Quantity Emission / Quantity Waiting Emission**



Source: Ministerial Orders issued and Linked Entities Elaborated by COGTL/SEAE/MF

#### Note

The Debenture Issued SVIT11 - Santa Vitória do Palmar Holding , had 09 projects / linked Ordinances .

The Issued Debentures RNEP11 and RNEP21 - Renova Wind Participações S / A, had 15 projects / linked Ordinances .



## Real Estate Receivables Certificate - CRI's according to Law # 12,431/2011 (Article 3) - 2014

| Sectors     | Shareholders of Petrobras   | Issuer   | Series | Issued Value -<br>R\$ million | Term Loan | Yield                          | Value of Investments <sup>2</sup> | Use of Resources   |
|-------------|---|----------|--------|-------------------------------|-----------|--------------------------------|-----------------------------------|--|
|             | Brazilian Government; BNDES Participations S/A -<br>BNDESPAR; Brazilian Development Bank's -<br>BNDES; Social Participation Fund (FPS), managed |          | 232ª   | 2,350.00                      | 17 years  | TR <sup>(i)</sup> + 9,5 % year | Até R\$ 25 bilion                 | Civil construction project of the<br>Petrochemical Complex of Rio de Janeiro -<br>COMPERJ - in Itaboraí (in the State of Rio<br>de Janeiro). |
| Oil and Gas | by BNDES; Brazilian soverign wealth fund - Fiscal   | CIBRASEC | 234ª   | 1,650.00                      | 17 years  | TR + 9,5 % year                | R\$ 26 billion                    | Civil construction project of Abreu e Lima<br>Refinery in the metropolitan region of<br>Recife - PE (in the State of Pernambuco).            |

| Total | 4,000.00 |
|-------|----------|
|-------|----------|

Source : CIBRASEC and Terms of Securitization of Real Estate Credit Elaborated by COGTL/SEAE/MF

#### Note

- (1) Mortgage-Backed securities guaranteed by real estate credits real estate credit certificate CCI representative of bank credit notes CCB issued by Petrobras to Bradesco .
- (2) Investment Amount may reach up to R \$ 25 billion in civil works and R\$ 20 billion in industrial assembly.
- (3) Benefits for non-resident investors: zero income tax rate (IR) and zero tax. In case of investments from countries which are not subject to income tax rate of 20% or more ("tax havens"), tax benefits do not apply.
- (4) Concerning non-resident investors in financial and capital markets.

#### **Minimum Requirements:**

- (i) Fixed rate or linked to price index-linked or TR Referential Rate-linked. Total of partial use of floating rates is forbidden.
- (ii) Weighted average term over four years;
- (iii) No repurchase by the issuer or related party, in the first two years after issuing, nor bond redemption before its due date except in cases to be regulated by the National Monetary Council (CMN);
- (iv) No resale commitment undertaken by the buyer;
- (v) Coupon payments, if any, must be at least semi-annual;
- (vi) Proof that the security is registered in clearing houses duly authorized by the Central Bank of Brazil or the CVM (Brazilian SEC); and
- (vii) Simplified procedure to demonstrate the purpose of allocating the proceeds towards the future payment or reimbursement of expenses, costs or liabilities related to investment projects, including those relating to RD&I.



## Brazilian Infrastructure Bonds Investment Funds - Fixed-Income Investment - Law # 12,431/2011

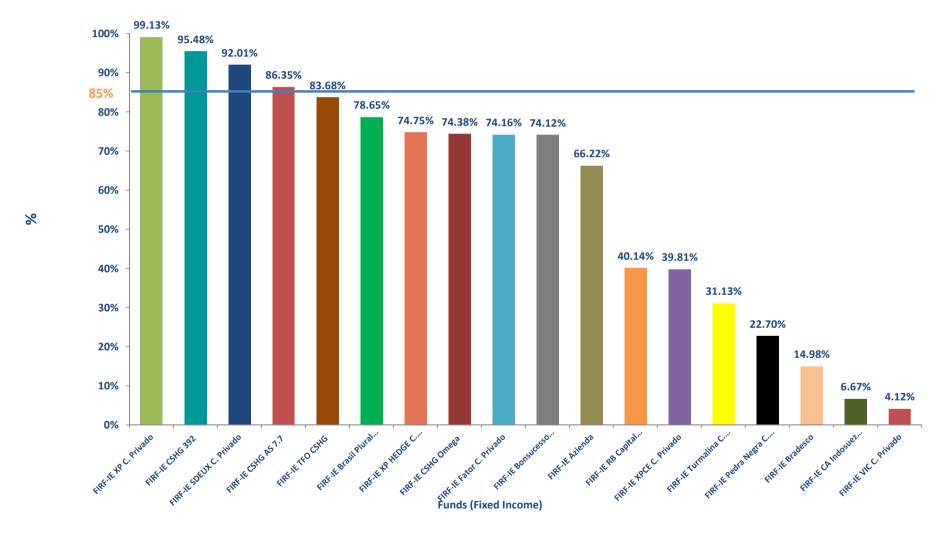
| Infrastructure Bonds<br>Investment funds | Debentures<br>(Infrastructure Bonds) | Time Deposits and Other<br>Financial Securities | Investment Funds Repurchase |               | Brazilian<br>Government<br>Bonds | Other         | Net Equity    |
|--|--------------------------------------|---|-----------------------------|---------------|----------------------------------|---------------|---------------|
|  | (R\$ million)                        | (R\$ million)                                   | (R\$ million)               | (R\$ million) | (R\$ million)                    | (R\$ million) | (R\$ million) |
| FIRF-IE Bradesco                         | 13.14                                | 0.00  | 0.00                        | 4.81          | 2.92                             | 66.80         | 87.66         |
| FIRF-IE XP Crédito Privado               | 108.66                               | 0.00  | 0.48                        | 0.00          | 0.78                             | (0.30)        | 109.61        |
| FIRF-IE CSHG AS 7.7                      | 23.96                                | 0.00  | 0.00                        | 0.23          | 0.00                             | 3.56          | 27.75         |
| FIRF-IE CSHG 392                         | 165.47                               | 0.00  | 0.00                        | 5.21          | 0.00                             | 2.63          | 173.31        |
| FIRF-IE TFO CSHG                         | 33.07                                | 2.48  | 0.00                        | 3.98          | 0.00                             | (0.02)        | 39.52         |
| FIRF-IE Azienda                          | 29.35                                | 0.00  | 0.00                        | 4.96          | 10.00                            | 0.00          | 44.32         |
| FIRF-IE CSHG Omega                       | 111.07                               | 0.00  | 0.00                        | 1.68          | 0.00                             | 36.58         | 149.32        |
| FIRF-IE CA Indosuez Master               | 3.32                                 | 1.89  | 1.01                        | 3.29          | 3.54                             | 36.72         | 49.78         |
| FIRF-IE Brasil Plural Master C. Privado  | 90.77                                | 0.00  | 0.33                        | 21.00         | 3.37                             | (0.07)        | 115.41        |
| FIRF-IE Bonsucesso C.<br>Privado         | 10.81                                | 0.00  | 0.60                        | 0.00          | 3.19                             | (0.02)        | 14.58         |
| FIRF-IE Alocação C. Privado              | 0.00                                 | 0.00  | 15.66                       | 0.00          | 7.42                             | 72.90         | 95.97         |
| FIRF-IE Fator C. Privado                 | 70.59                                | 13.66   | 0.00                        | 11.37         | 0.00                             | (0.43)        | 95.18         |
| FIRF-IE SDEUX C. Privado                 | 8.16                                 | 0.00  | 0.00                        | 0.35          | 0.36                             | (0.00)        | 8.87          |
| FIRF-IE XP HEDGE C. Privado              | 4.52                                 | 0.00  | 1.02                        | 0.00          | 1.54                             | (1.03)        | 6.05          |
| FIRF-IE RB Capital Master C.<br>Privado  | 10.67                                | 0.15  | 14.76                       | 0.00          | 0.00                             | 1.00          | 26.58         |
| FIRF-IE VIC C. Privado                   | 2.59                                 | 0.00  | 4.59                        | 0.00          | 31.74                            | 23.90         | 62.82         |
| FIRF-IE XPCE C. Privado                  | 15.57                                | 0.00  | 3.63                        | 0.00          | 19.93                            | (0.01)        | 39.12         |
| FIRF-IE Pedra Negra C.<br>Privado        | 38.42                                | 0.00  | 78.64                       | 0.00          | 16.85                            | 35.36         | 169.27        |
| FIRF-IE Turmalina C. Privado             | 18.35                                | 17.32   | 0.00                        | 23.30         | 0.00                             | (0.01)        | 58.96         |
| Total                                    | 758.49                               | 35.50   | 120.71                      | 80.18         | 101.64                           | 277.57        | 1,374.09      |

Source : Brazilian Securities Commission - CVM Elaborated by COGTL/SEAE/MF

**Note:** (i) Requirements: Investments in Brazilian Infrastructure Bonds, as previously defined, must correspond to at least 67% of the Fund portfolio within the firts two years and at least 85% in the remaining years. After the incorporation of the fund, 180 days to fulfill the investment requirements above.



## Infrastructure Funds - Fixed Income Debentures Participation in the Net Worth



Source : Brazilian Securities Commission - CVM Elaborated by COGTL/SEAE/MF



## FIC-FI - Investment Funds in Quotas of Investment Funds - Law # 12,431/2011

| Infrastructure funds                     | Quotas of Investment Funds | Time Deposits and Other<br>Financial Securities | Government Securities<br>Repurchase | Brazilan Government Bonds | Other         | Net Equity    |
|--|----------------------------|---|-------------------------------------|---------------------------|---------------|---------------|
|  | (R\$ million)              | (R\$ million)                                   | (R\$ million)                       | (R\$ million)             | (R\$ million) | (R\$ million) |
| FIC-IE XP Multimercado                   | 106.70                     | 0.00  | 0.00                                | 0.00                      | (0.11)        | 106.59        |
| FIC-IE TFO Multimercado                  | 21.30                      | 0.00  | 0.00                                | 0.00                      | 0.01          | 21.32         |
| FIC-IE CA Indosuez Infra<br>Multimercado | 49.78                      | 0.00  | 2.47                                | 0.00                      | (0.07)        | 52.18         |
| FIC-IE Brasil Plural 30<br>Multimercado  | 87.92                      | 0.00  | 0.00                                | 0.00                      | (0.28)        | 87.64         |
| FIC-IE Geração Futuro<br>Multimercado    | 29.25                      | 0.00  | 0.00                                | 0.00                      | 0.07          | 29.33         |
| FIC-IE XP HEDGE<br>Multimercado          | 6.25                       | 0.00  | 0.00                                | 0.00                      | (0.00)        | 6.25          |
| FIC-IE RB Capital<br>Multimercado        | 26.61                      | 0.00  | 0.00                                | 0.00                      | (0.02)        | 26.58         |
| Total                                    | 327.81                     | 0.00  | 2.47                                | 0.00                      | (0.40)        | 329.88        |

Source: Brazilian Securities Commission - CVM

Elaborated by COGTL/SEAE/MF

#### Note:

(i) Requirements: Investments in Brazilian Infrastructure Bonds, as previously defined, must correspond to at least 67% of the Fund portfolio within the first two years and at least 85% in the remaining years. After the incorporation of the fund, 180 days to fulfill the investment requirements above.



### Infrastructure Credit Rights Investment Fund – FIDC - Law # 12,431/2011

| Infrastructure Credit Rights Investment Fund | Credit Rights | Time Deposits and Other<br>Financial Securities | Quotas of<br>Investment Funds | Government Securities<br>Repurchase | Brazilian<br>Government<br>Bonds | Other         | Net Equity    |
|--|---------------|---|-------------------------------|-------------------------------------|----------------------------------|---------------|---------------|
|  | (R\$ million) | (R\$ million)                                   | (R\$ million)                 | (R\$ million)                       | (R\$ million)                    | (R\$ million) | (R\$ million) |
| FIDC - BB Votorantim<br>Highland Infra       | 410.19        | 0.00  | 0.00                          | 10.34                               | 0.00                             | (0.36)        | 420.17        |
| Total  | 410.19        | 0.00  | 0.00                          | 10.34                               | 0.00                             | (0.36)        | 420.17        |

Source : Brazilian Securities Commission - CVM Elaborated by COGTL/SEAE/MF

- (i) Benefits for non-resident investors: zero income tax rate (IR) and zero tax. In the case of investments from countries which are not subject to an income tax rate of 20% or more ("tax havens"), tax benefits don't not apply.
- (ii) The fund must have a minimum term of six years.
- (iii) No full or partial payment for the main quotas during the first two years counted as of the closing date of the public offering of quotas that make up the initial assets of the fund, except in cases of early settlement of the fund provided for in its regulations;
- (iv) No acquisition of quotas by their seller or transferor or by parties related to these except in the case of quotas subordinated to others for purposes of e payment and redemption;
- (v) Deadlines for partial redemption of quotas, including those from incorporated income, if any, must be at least 180 days one hundred eighty days apart;
- (vi) Proof that the quotas are admitted to trading on an organized securities market or registered in a registry system duly authorized by the Central Bank of Brazil or the CVM (Brazilian SEC) under their respective areas of competence;
- (vii) Simplified procedure to demonstrate the purpose of allocating the proceeds of the transaction to investment projects, including those focused on research, development and innovation;
- (viii) At least eighty-five percent of equity represented by receivables, and the remaining portion by federal government securities, repurchase agreements backed by government bonds or quotas from mutual funds that invest in federal government bonds.



## FIP-IE and FIP-PD&I1 under the terms of Laws # 11,478/2007 and # 12,431/2011

| Fundos de Infraestrutura <sup>2</sup>        | Stocks        | Investment Fund<br>Quotas | Federal<br>Government<br>Bonds | Government<br>Securities<br>Repurchase | Simple<br>Debentures | Other Applications | Forward Market -<br>Buyer | Other<br>Values | Net Equity    |
|--|---------------|---------------------------|--------------------------------|--|----------------------|--------------------|---------------------------|-----------------|---------------|
|  | (R\$ million) | (R\$ million)             | (R\$ million)                  | (R\$ million)                          | (R\$ million)        | (R\$ million)      | (R\$ million)             | (R\$ million)   | (R\$ million) |
| FIP-IE Infra ANESSA                          | 122.50        | 0.00                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.05)          | 122.46        |
| FIP-IE Infra XP OMEGA I                      | 107.11        | 0.47                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.07)          | 107.51        |
| FIP-IE Infra Votorantim Saneamento           | 22.50         | 12.77                     | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (13.41)         | 21.86         |
| FIP-IE Infra BB Votorantim Energia Sust. I   | 55.20         | 28.50                     | 0.28                           | 0.00                                   | 0.00                 | 40.89              | 0.00                      | (0.15)          | 124.72        |
| FIP-IE Infra BB Votorantim Energia Sust. II  | 79.18         | 37.48                     | 0.40                           | 0.00                                   | 0.00                 | 57.02              | 0.00                      | (0.21)          | 173.87        |
| FIP-IE Infra BB Votorantim Energia Sust. III | 76.12         | 38.40                     | 0.40                           | 0.00                                   | 0.00                 | 59.52              | 0.00                      | (0.20)          | 174.24        |
| FIP-IE Infra Energia Renovável               | 401.89        | 0.00                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.04)          | 401.85        |
| FIP-IE Pátria Energia Renovável              | 42.54         | 0.00                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.19                      | (0.02)          | 42.71         |
| FIP-IE Porto Sudeste Royalties               | 2,906.40      | 0.87                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.15)          | 2,907.13      |
| FIP-IE Olime                                 | 10.00         | 0.00                      | 0.06                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.03)          | 10.03         |
| FIP-IE TRX Infra I                           | 6.84          | 0.62                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.16)          | 7.30          |
| FIP-IE Infra Prosperidade                    | 106.80        | 0.54                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (0.01)          | 107.33        |
| FIP-IE Infra Origem                          | 237.76        | 0.30                      | 0.00                           | 0.00                                   | 0.00                 | 0.00               | 0.00                      | (175.01)        | 63.05         |
| Total  | 4,174.83      | 119.96                    | 1.15                           | 0.00                                   | 0.00                 | 157.43             | 0.19                      | (189.50)        | 4,264.06      |

Source : Brazilian Securities Commission - CVM Produced by COGTL/SEAE/MF

- (1) FIP-IE: Investment Fund (investment in infrastructure) and FIP-PD & I: Investment Fund for Participation in Research, Development and Innovation-Intensive Economic Production.
- (2) (i) The FIP-IE and FIP-D&I must have a minimum of 5 quota holders and no quota holder may hold morre than 40% of the quotas issued by Fund (FIP-IE or FIP-D&I) or earnings above 40% of the fund's earnings.
- (ii) The FIP-IE and FIP-PD&I must be closed-end fund.
- (iii) The FIP-IE and FIP-PD&I must maintain a minimum of 90% of its net worth invested in shares, subscription bonds, debentures (convertible or not into shares) or other bonds issued by either a publicly ou closely-
- (iv) The company must be aware of infrastructure projects related to the energy, transportation, water and sewage treatment, and irrigation sectors.
- (v) The FIP-IE and the FIP-PD&I must participate in in the decision-making process of the issuer company with effective influence on the definition of its strategic policy and management.
- (vi) Taxes: exemption for individuals and 15% rate for companies.



## **Secretary for Economic Monitoring**

Mansueto Facundo de Almeida Júnior

## **Undersecretary**

Angelo José Mont'alverne Duarte

## **Coordinator (substitute)**

Jônatas Bezerra de Souza

## **Technical Team**

Alexandre Araújo Carneiro Francisco Mendes de Alencar Filho Marco Antonio de Gouvêa Tadeu Luis Spohr