



Ministry of Finance

# Newsletter Infrastructure Debentures

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

February 2017

39 th Edition

## Seae

Secretariat for Economic Monitoring

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 issuer'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 Commission Instruction 400) or Public Issuance with Restricted Efforts (Securities Commission 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 debentures indenture.
  - This resolution only applies to bonds issued between April 12, 2016 and December 31, 2017.

Article 2 of Law No. 12,431/2011, regulated by Decree No. 8,874/2016, provides tax benefits for infrastructure projects through specific financial instruments making it a long-term funding mechanism via capital markets vis a vis traditional funding sources for infrastructure projects in strategic sectors.

In February 2017, a total of 3 (three) infrastructure debentures were issued in the energy sector (Transmission Lines). The total amount authorized in the period was R\$ 310 million.

Regarding total Issuances distributed Through Public Offers (Brazilian Securities and Exchange Commission - CVM No. 400/2003) and Restricted Offers (Brazilian Securities and Exchange Commission - CVM No. 476/2009), the individual investors participation accounted for R\$ 9 billion of the total amount until February 2017, corresponding to 46% of all incentive debentures issued since 2012.

The volume of tax-benefited debentures traded in the secondary markets exceeded the volume of non-tax benefited debentures. In February, the traded volume for tax-benefited debentures was 3% against 1% for non-tax benefited debentures.

Regarding ANBIMA Debentures Index (Índice de Debentures ANBIMA - IDA), over the past 12 months the IDA-DI's value rose 16% , against an increase of 17% in the IDA-IPCA (National Consumer Price Index (IPCA)-CPI) Infrastructure and 15% in the IDA-IPCA Exclusive Infrastructure. Looking at risk measures, over the past 12 months the IDA-IPCA Infrastructure outpaced the other indexes due to the longer Duration of the portfolio, with a risk rate of approximately 5%, compared to 0,1% and 3,3% for IDA-DI (Interbank Deposits - DI) and IDA-IPCA Exclusive Infrastructure, respectively.

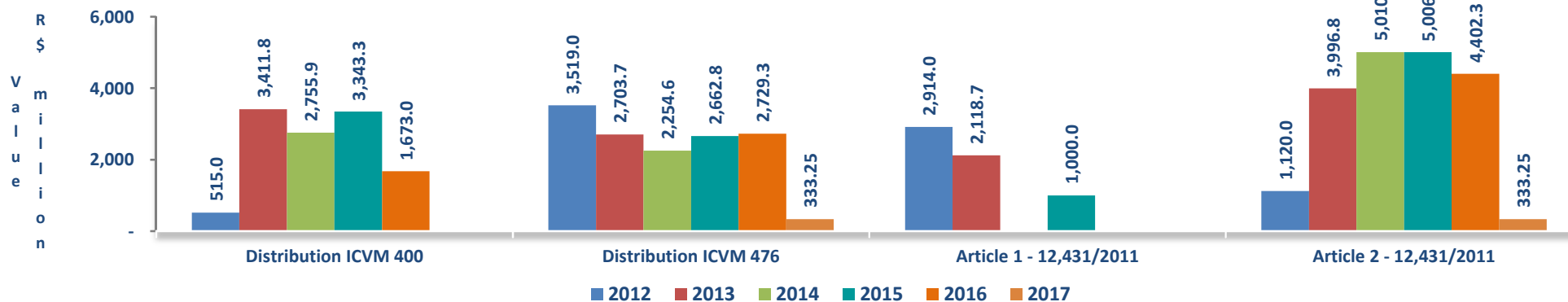
Concerning Infrastructure Funds, the percentage invested in Debentures through February 2017 in Fixed Income Funds (FIF), Fund of Funds (FOF) and Investment Funds in Credit Right (IFCR) was, respectively, 77%, 100% and 96% of Net Equity (NE).

Law No. 12,431/11 prescribes a minimum investment of 85% of Net Equity in infrastructure projects (debentures, quota funds, and direct credits), although in the first two years from the first pay-in, the minimum permitted percentage of infrastructure assets relative to Net Equity is 67%.

Law # 12,431/2011 (Articles 1 and 2) - CAPEX and Infrastructure Bonds Issued: 2012 - 2017

| INFRASTRUCTURE DEBENTURES   | Value (R\$ million) |                |                |                |                |              | Total Value Issued |
|-----------------------------|---------------------|----------------|----------------|----------------|----------------|--------------|--------------------|
|                             | 2012                | 2013           | 2014           | 2015           | 2016           | 2017         |                    |
| Distribution ICVM 400 (1)   | 515.0               | 3,411.8        | 2,755.9        | 3,343.3        | 1,673.0        | 0.0          | 11,699.0           |
| Distribution ICVM 476 (2)   | 3,519.0             | 2,703.7        | 2,254.6        | 2,662.8        | 2,729.3        | 333.3        | 14,202.6           |
| <b>Total.....</b>           | <b>4,034.0</b>      | <b>6,115.5</b> | <b>5,010.5</b> | <b>6,006.1</b> | <b>4,402.3</b> | <b>333.3</b> | <b>25,901.6</b>    |
| Article 1 - 12,431/2011 (3) | 2,914.0             | 2,118.7        | 0.0            | 1,000.0        | 0.0            | 0.0          | 6,032.7            |
| Article 2 - 12,431/2011 (4) | 1,120.0             | 3,996.8        | 5,010.5        | 5,006.1        | 4,402.3        | 333.3        | 19,868.8           |
| <b>Total.....</b>           | <b>4,034.0</b>      | <b>6,115.5</b> | <b>5,010.5</b> | <b>6,006.1</b> | <b>4,402.3</b> | <b>333.3</b> | <b>25,901.6</b>    |

CAPEX and Infrastructure Bonds Issued - R\$ million : 2012 - 2017



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

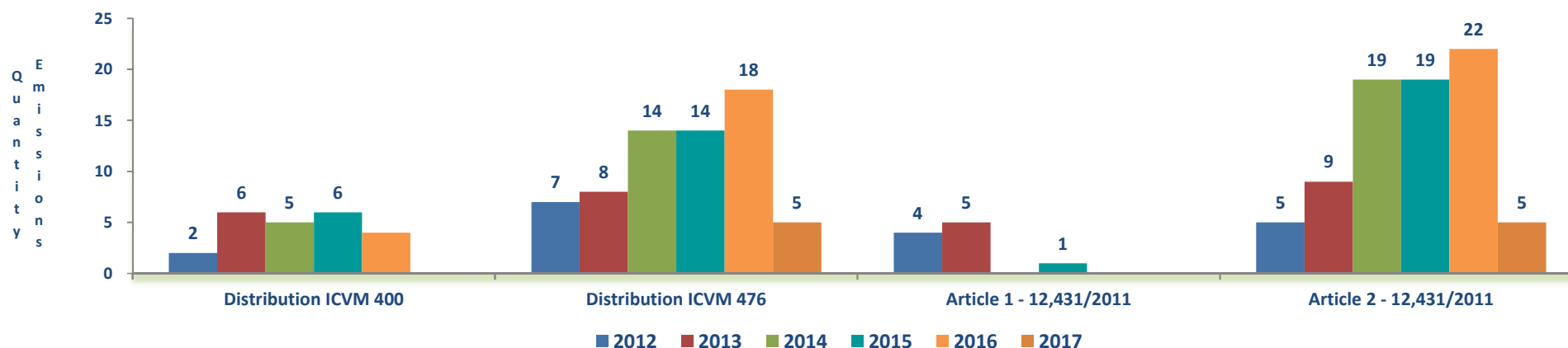
**Note:**

- (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) Infrastructure 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 infrastructure investments 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 - 2017

| INFRASTRUCTURE DEBENTURES   | Number of issuances |           |           |           |           |          | Total Number of Issuances |
|-----------------------------|---------------------|-----------|-----------|-----------|-----------|----------|---------------------------|
|                             | 2012                | 2013      | 2014      | 2015      | 2016      | 2017     |                           |
| Distribution ICVM 400 (1)   | 2                   | 6         | 5         | 6         | 4         | 0        | 23                        |
| Distribution ICVM 476 (2)   | 7                   | 8         | 14        | 14        | 18        | 5        | 66                        |
| <b>Total.....</b>           | <b>9</b>            | <b>14</b> | <b>19</b> | <b>20</b> | <b>22</b> | <b>5</b> | <b>89</b>                 |
| Article 1 - 12,431/2011 (3) | 4                   | 5         | 0         | 1         | 0         | 0        | 10                        |
| Article 2 - 12,431/2011 (4) | 5                   | 9         | 19        | 19        | 22        | 5        | 79                        |
| <b>Total.....</b>           | <b>9</b>            | <b>14</b> | <b>19</b> | <b>20</b> | <b>22</b> | <b>5</b> | <b>89</b>                 |

Number of CAPEX and infrastructure bonds issued - Law # 12,431/11 (Articles 1 and 2): 2012 - 2017



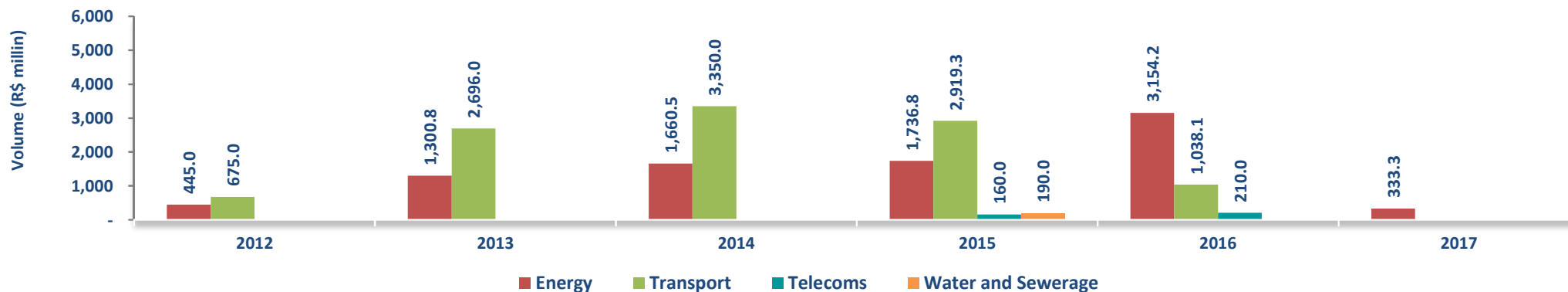
Source: Anbima and Ministerial Orders  
Elaborated by COGTL/Seae/MF

- Note:**
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Law # 12,431/2011 (Articles 1 and 2) - CAPEX and Infrastructure Bonds Issued: 2012 - 2017  
(by Sector)

| Sector Debenture   | Value (R\$ million) |                |                |                |                |              | Total Value Issued |
|--------------------|---------------------|----------------|----------------|----------------|----------------|--------------|--------------------|
|                    | 2012                | 2013           | 2014           | 2015           | 2016           | 2017         |                    |
| Energy             | 445.0               | 1,300.8        | 1,660.5        | 1,736.8        | 3,154.2        | 333.3        | 8,630.5            |
| Transport          | 675.0               | 2,696.0        | 3,350.0        | 2,919.3        | 1,038.1        | 0.0          | 10,678.4           |
| Telecoms           | 0.0                 | 0.0            | 0.0            | 160.0          | 210.0          | 0.0          | 370.0              |
| Water and Sewerage | 0.0                 | 0.0            | 0.0            | 190.0          | 0.0            | 0.0          | 190.0              |
| <b>Total.....</b>  | <b>1,120.0</b>      | <b>3,996.8</b> | <b>5,010.5</b> | <b>5,006.1</b> | <b>4,402.3</b> | <b>333.3</b> | <b>19,868.8</b>    |

CAPEX - and Infrastructure Bonds Issued - 2012 a 2017



Source: Anbima and Ministerial Ordinances  
Elaborated by COGTL/Seae/MF

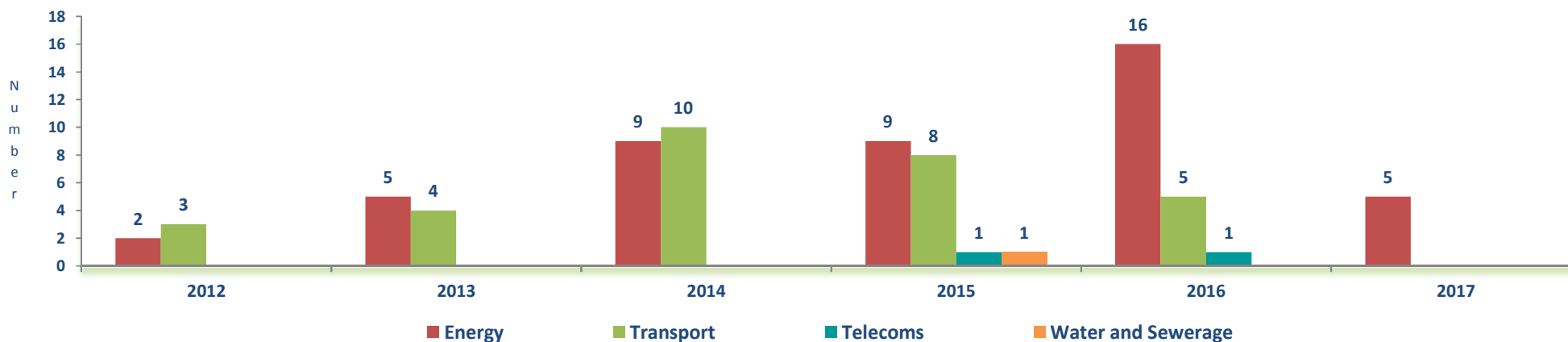
**Note:**

Securities linked to investments in infrastructure, referred to in article 2 of Law 12.431, of 2011. Local currency, exempt from Income Tax for resident individuals. A different tax rate must apply for local companies. The funds raised must be used for investments in infrastructure or in economic production intensive in research, development and innovation.

Number of CAPEX and infrastructure bonds issued - Law # 12,431/11 (Articles 1 and 2): 2012 - 2017  
(by Sector)

| Sector Debenture   | Number   |          |           |           |           |          | Total Number of Issuances |
|--------------------|----------|----------|-----------|-----------|-----------|----------|---------------------------|
|                    | 2012     | 2013     | 2014      | 2015      | 2016      | 2017     |                           |
| Energy             | 2        | 5        | 9         | 9         | 16        | 5        | 46                        |
| Transport          | 3        | 4        | 10        | 8         | 5         | 0        | 30                        |
| Telecoms           | 0        | 0        | 0         | 1         | 1         | 0        | 2                         |
| Water and Sewerage | 0        | 0        | 0         | 1         | 0         | 0        | 1                         |
| <b>Total.....</b>  | <b>5</b> | <b>9</b> | <b>19</b> | <b>19</b> | <b>22</b> | <b>5</b> | <b>79</b>                 |

Number of CAPEX and infrastructure bonds issued - 2012 a 2017

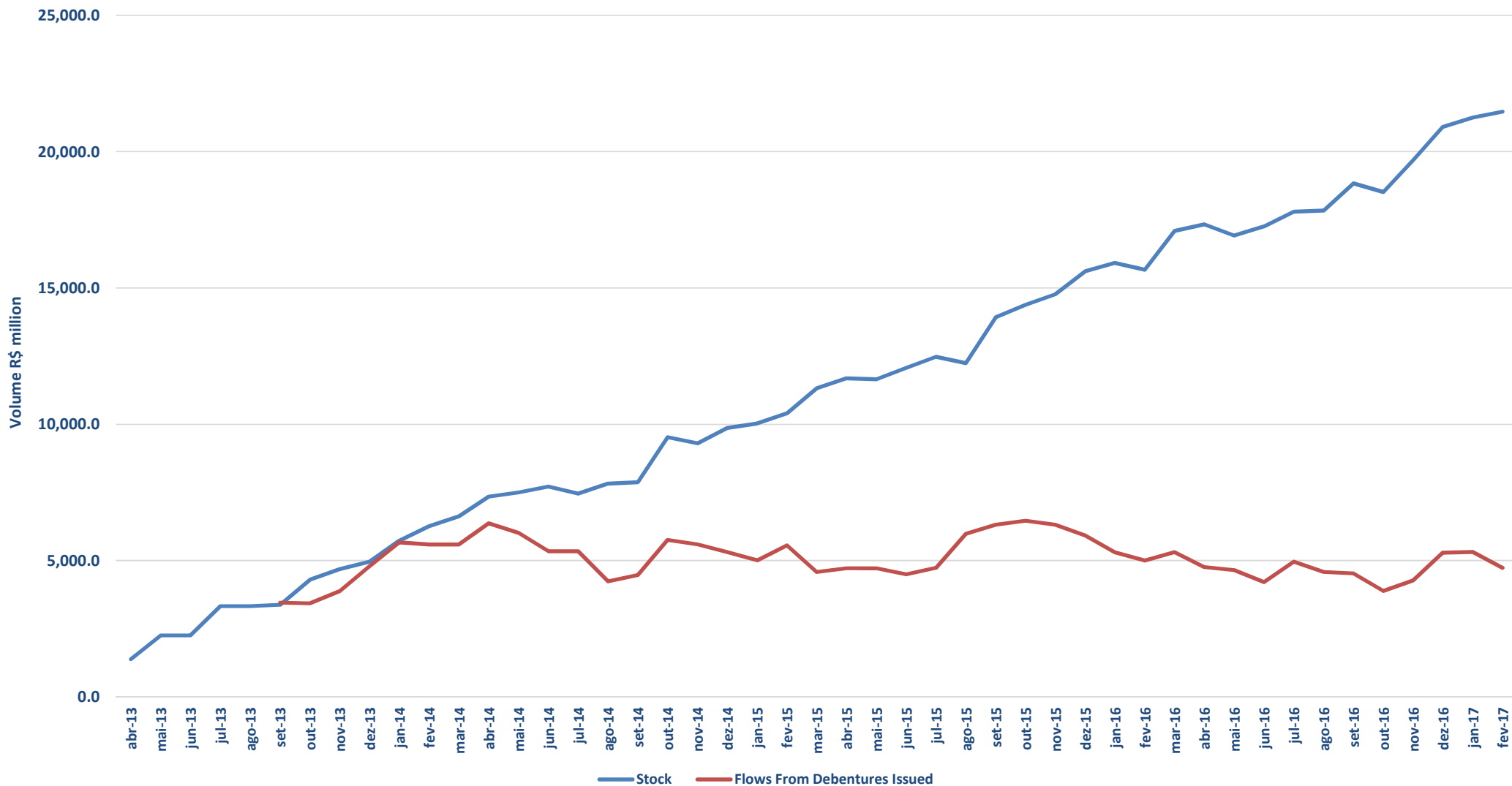


Source: Anbima and Ministerial Ordinances  
Elaborated by COGTL/Seae/MF

**Note:**

Securities linked to investments in infrastructure, referred to in article 2 of Law 12.431, of 2011. Local currency, exempt from Income Tax for resident individuals. . A different tax rate must apply for local companies. The funds raised must be used for investments in infrastructure or in economic production intensive in research, development and innovation.

Stock and volume - Infrastructure Debentures (Volume - Rolling Average in the last 12 (twelve) months)



Source: Anbima and Ministerial Ordinances  
Elaborated by COGTL/Seae/MF

Note: Sum of the emission values of the last 12 months.



CAPEX Bonds: Law # 12,431/2011 - Project Bonds - (Article 1)<sup>1</sup> - Non-Residents/ 2012

| Issuer  | Ticker | Emission Date | Offer type | Maturity (years) | Value (R\$ million) | Yield            | Sector              | Spread Over NTN-B | Rating (local)  |
|---|--------|---------------|------------|------------------|---------------------|------------------|---------------------|-------------------|-----------------|
| Minerva S/A                                   | BEEF13 | 6/20/2012     | ICVM 476   | 10               | 450.0               | Prefixado 16,95% | Alimentos           | N/D               | BB (bra) Fitch  |
| OGX Petróleo e Gás S/A. - (judicial recovery) | OGXP11 | 9/28/2012     | ICVM 476   | 10               | 2,025.0             | Prefixado 10,50% | Petróleo e Gás      | N/D               | N/D             |
| Rio Canoas Energia S/A.                       | RCNE22 | 8/15/2012     | ICVM 476   | 12               | 75.0                | IPCA + 7,89%     | UHE - Hidrelétricas | N/D               | A+ (bra) Fitch  |
| BR Malls Participações S/A.                   | BRML13 | 12/17/2012    | ICVM 476   | 11               | 364.0               | Prefixado 13,49% | Centros Comerciais  | N/D               | AA+ (bra) Fitch |
|   |        |               |            |                  | <b>Total.....</b>   | <b>2,914.0</b>   |                     |                   |                 |

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

| Issuer  | Ticker | Emission Date | Offer type | Maturity (years) | Value (R\$ million) | Yield            | Sector                      | Spread Over NTN-B | Rating (local)    |
|---|--------|---------------|------------|------------------|---------------------|------------------|-----------------------------|-------------------|-------------------|
| Marfrig Alimentos S/A.                            | MRFG14 | 3/22/2013     | ICVM 476   | 6                | 570.0               | Prefixado 15,85% | Alimentos                   | N/D               | AA+ (bra) Fitch   |
| OAS S.A.  | OAEP18 | 7/11/2013     | ICVM 476   | 11               | 347.4               | Prefixado 9,47%  | Saneamento e Estaleiro      | N/D               | BB+sf (bra) Fitch |
|   | OAEP28 |               |            |                  | 347.4               |                  |                             |                   |                   |
| CENTRAD - Conc. Centro Adm. Distrito Federal S/A. | CTRD11 | 7/11/2013     | ICVM 476   | 5                | 50.0                | IPCA + 7,97%     | Imobiliário                 | N/D               | N/D               |
|   | CTRD21 |               |            |                  | 50.0                |                  |                             |                   |                   |
| Holcim (BRASIL) S/A                               | HOLC11 | 10/1/2013     | ICVM 476   | 10               | 450.0               | Prefixado 14%    | Cimento                     | N/D               | N/D               |
| Raizen Energia S/A                                | RESA31 | 10/15/2013    | ICVM 400   | 7                | 304.0               | IPCA + 6,38%     | Produção de Açúcar e Etanol | N/D               | brAAA (S&P)       |
|   |        |               |            |                  | <b>Total.....</b>   | <b>2,118.7</b>   |                             |                   |                   |

Source: Anbima, Rating reports and Debentures Agreements  
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 Price Index - CPI (IPCA)

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

| Issuer     | Ticker | Emission Date | Offer type | Maturity (years) | Value (R\$ million) | Yield               | Sector  | Spread Over NTN-B | Rating (local) |
|------------|--------|---------------|------------|------------------|---------------------|---------------------|---------|-------------------|----------------|
| AMBEV S/A  | ABEV11 | 10/30/2015    | ICVM 476   | 6                | 1,000.0             | Prefixado<br>14,47% | Bebidas | 14.50%            | brAAA (S&P)    |
| Total..... |        |               |            |                  | 1,000.0             |                     |         |                   |                |

Source: Anbima, Rating reports and Debentures Agreements  
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)<sup>1</sup> - 2012

| Issuer   | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield               | Sector     | Spread Over NTN-B | Rating (local)  |
|--|--------|---------------|------------|------------------|-------------------------------|---------------------|---------------------|------------|-------------------|-----------------|
| Linhas de Transmissão de Montes Claros S/A.                    | LTMC12 | 8/15/2012     | ICVM 476   | 17               | 12.9                          | 25.0                | IPCA + 8,75%        | Energia    | 4.51%             | N/D             |
| ALL - América Latina Logística Malha Norte S/A.                | FERR18 | 9/25/2012     | ICVM 476   | 8                | 5.7                           | 160.0               | Prefixado<br>10,10% | Transporte | 0.84%             | A (bra) Fitch   |
| Autoban - Concessionária Sistema Anhanguera - Bandeirantes S/A | ANHB24 | 10/15/2012    | ICVM 400   | 5                | 4.3                           | 135.0               | IPCA + 2,71%        | Transporte | 0.01%             | brAAA (S&P)     |
| Santo Antonio Energia S/A.                                     | SAES12 | 12/27/2012    | ICVM 476   | 10               | 6.2                           | 420.0               | IPCA + 6,20%        | Energia    | 3.11%             | N/D             |
| Cart - Concessionária Auto Raposo Tavares S/A                  | CART12 | 12/15/2012    | ICVM 400   | 12               | 7.9                           | 380.0               | IPCA + 5,80%        | Transporte | 2.41%             | A1 (br) Moody's |
| Total.....   |        |               |            |                  |                               | 1,120.00            |                     |            |                   |                 |

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 debenture) - 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 innovation-intensive economic production.

(2) In this presentation we consider duration (Macaulay 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)<sup>1</sup> - 2013

| Issuer  | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield        | Sector     | Spread Over NTN-B | Rating (local)       |      |
|---|--------|---------------|------------|------------------|-------------------------------|---------------------|--------------|------------|-------------------|----------------------|------|
| Interligação Elétrica do Madeira S/A.                             | IEMD12 | 3/18/2013     | ICVM 476   | 12               | 7.0                           | 350.0               | IPCA + 5,50% | Energia    | 1.69%             | N/D                  |      |
| Concessionária Ecovias dos Imigrantes S/A.                        | ECOV12 | 4/15/2013     | ICVM 400   | 7                | 5.9                           | 200.0               | IPCA + 3,80% | Transporte | 0.00%             | brAAA (S&P)          |      |
|   | ECOV22 |               |            |                  |                               |                     |              |            |                   |                      | 11   |
| Concessionária Rodovias do Tietê S/A.                             | RDVT11 | 6/15/2013     | ICVM 400   | 15               | 7.4                           | 1,065.0             | IPCA + 8,00% | Transporte | 2.16%             | Aa2 (br)-<br>Moody's |      |
| Jauru Transmissora de Energia S/A.                                | JAUR12 | 6/15/2013     | ICVM 476   | 18               | 10.4                          | 39.0                | IPCA + 8,00% | Energia    | 2.29%             | brAA- (S&P)          |      |
| Norte Brasil Transmissora de Energia S/A                          | NRTB11 | 9/15/2013     | ICVM 476   | 13               | 7.4                           | 100.0               | IPCA + 7,15% | Energia    | 1.55%             | brAA+ (S&P)          |      |
|   | NRTB21 |               |            |                  |                               |                     |              |            |                   |                      | 7.4  |
| CIA de Gás de São Paulo - Comgás                                  | GASP23 | 9/15/2013     | ICVM 400   | 5                | 3.7                           | 269.3               | IPCA + 5,10% | Energia    | 0.00%             | Aa1 (br)<br>Moody's  |      |
|   | GASP33 |               |            |                  |                               |                     |              |            |                   |                      | 7    |
| Autoban - Concessionária do Sistema Anhanguera - Bandeirantes S/A | ANHB15 | 10/15/2013    | ICVM 400   | 5                | 4.5                           | 450.0               | IPCA + 4,88% | Transporte | (0.38)%           | Aaa (br)<br>Moody's  |      |
| Odebrecht Transporte S/A  | ODTR11 | 10/15/2013    | ICVM 476   | 12               | 8.6                           | 300.0               | IPCA + 6,70% | Transporte | 1.55%             | A+ (bra) Fitch       |      |
|   | TEPE11 |               |            |                  |                               |                     |              |            |                   |                      | 75.0 |
| Termelétrica Pernambuco III S/A                                   | TEPE21 | 11/15/2013    | ICVM 400   | 12               | 5.0                           | 75.0                | IPCA + 9,11% | Energia    | 2.75%             | AA+ (bra)<br>Fitch   |      |
|   | TEPE31 |               |            |                  |                               |                     |              |            |                   |                      | 75.0 |
|   | TEPE41 |               |            |                  |                               |                     |              |            |                   |                      | 75.0 |
|   | TEPE41 |               |            |                  |                               |                     |              |            |                   |                      | 75.0 |
| <b>Total.....</b>   |        |               |            |                  |                               | <b>3,996.8</b>      |              |            |                   |                      |      |

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by COGTL/Seae/MF

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(3) Consumer Prince Index - CPI (IPCA)

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

| Issuer  | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield        | Sector     | Spread Over NTN-B | Rating (local)      |
|---|--------|---------------|------------|------------------|-------------------------------|---------------------|--------------|------------|-------------------|---------------------|
| Aeroportos Brasil Viracopos S.A.                                | VRCP11 |               |            |                  |                               | 75.0                |              |            |                   |                     |
|   | VRCP21 | 1/15/2014     | ICVM 476   | 12               | 7.4                           | 75.0                | IPCA + 8,79% | Transporte | 2.27%             | AA- (bra)<br>Fitch  |
|   | VRCP31 |               |            |                  |                               | 75.0                |              |            |                   |                     |
|   | VRCP41 |               |            |                  |                               | 75.0                |              |            |                   |                     |
|   | 75.0   |               |            |                  |                               |                     |              |            |                   |                     |
| Vale S/A  | VALE18 | 2/10/2014     | ICVM 400   | 7                | 5.5                           | 600.0               | IPCA + 6,46% | Transporte | (0.15)%           | brAAA (S&P)         |
|   | VALE28 |               |            | 10               | 7.1                           | 150.0               | IPCA + 6,57% |            | (0.10)%           |                     |
|   | VALE38 |               |            | 12               | 8.1                           | 100.0               | IPCA + 6,71% |            | 0.00%             |                     |
|   | VALE48 |               |            | 15               | 8.8                           | 150.0               | IPCA + 6,78% |            | 0.00%             |                     |
| Concessionária do Aeroporto Internacional de Guarulhos S/A      | AGRU11 | 2/15/2014     | ICVM 476   | 11               | 6.0                           | 75.0                | IPCA + 7,86% | Transporte | 1.40%             | AA (bra) Fitch      |
|   | AGRU21 |               |            |                  |                               | 75.0                |              |            |                   |                     |
|   | AGRU31 |               |            |                  |                               | 75.0                |              |            |                   |                     |
|   | AGRU41 |               |            |                  |                               | 75.0                |              |            |                   |                     |
| Santo Antônio Energia S/A - 2ª                                  | STEN13 | 4/15/2014     | ICVM 400   | 8                | 5.8                           | 200.0               | IPCA + 7,05% | Energia    | 0.85%             | AA+ (bra)<br>Fitch  |
|   | STEN23 |               |            | 10               | 6.7                           | 500.0               | IPCA + 7,49% |            | 1.18%             |                     |
| CPFL - Transmissão Piracicaba S/A                               | CPGE18 | 4/28/2014     | ICVM 476   | 5                | 4.5                           | 70.0                | IPCA + 5,86% | Energia    | (0.09)%           | AA+ (bra)<br>Fitch  |
| Ferreira Gomes Energia S/A                                      | FGEN13 | 6/15/2014     | ICVM 400   | 14               | 7.9                           | 210.9               | IPCA + 6,47% | Energia    | 0.48%             | AA+ (bra)<br>Fitch  |
| Transmissora Sul Brasileira de Energia S/A                      | TSBE12 | 9/15/2014     | ICVM 476   | 14               | 8.2                           | 77.6                | IPCA + 6,80% | Energia    | 1.00%             | AA+ (bra)<br>Fitch  |
| Concessionária de Rodovias do Oeste de São Paulo - Viaoeste     | VOES25 | 9/15/2014     | ICVM 476   | 5                | 4.4                           | 150.0               | IPCA + 5,67% | Transporte | 0.00%             | Aaa (br)<br>Moody's |
| Rodonorte - Concessionária de Rodovias Integradas S/A           | RDNT14 | 10/15/2014    | ICVM 476   | 5                | 4.4                           | 130.0               | IPCA + 5,69% | Transporte | 0.10%             | brAAA (S&P)         |
| Autoban - Concessionária do Sistema Anhanguera-Bandeirantes S/A | ANHB16 | 10/15/2014    | ICVM 400   | 5                | 4.4                           | 545.0               | IPCA + 5,43% | Transporte | (0.15)%           | Aaa (br)<br>Moody's |
| Concessionária do Aeroporto Internacional de Guarulhos          | AGRU12 | 10/15/2014    | ICVM 400   | 12               | 6.9                           | 300.0               | IPCA + 6,40% | Transporte | 0.90%             | AA+ (bra)<br>Fitch  |
| Intervias - Concessionária de Rodovias do Interior Paulista S/A | IVIA24 | 10/15/2014    | ICVM 476   | 5                | 4.5                           | 225.0               | IPCA + 5,96% | Transporte | 0.12%             | AA+ (bra)<br>Fitch  |
| Geribatu - Santa Vitória do Palmar Holding                      | SVIT11 | 9/15/2014     | ICVM 476   | 14               | 8.0                           | 90.0                | IPCA + 7,94% | Energia    | 1.92%             | Aa (br)<br>Moody's  |

## Continuation – 2014

| Issuer  | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield        | Sector     | Spread Over NTN-B | Rating (local)  |
|---|--------|---------------|------------|------------------|-------------------------------|---------------------|--------------|------------|-------------------|-----------------|
| Supervia-Concessionaria de Transporte Ferroviário S/A | SPVI12 | 11/15/2014    | ICVM 476   | 12               | 6.04                          | 300.0               | IPCA + 7,50% | Transporte | 1.85%             | AA- (bra) Fitch |
| Renova Eólica Participações S/A                       | RNEP11 | 11/15/2014    | ICVM 476   | 11               | 5.40                          | 73.0                | IPCA + 7,61% | Energia    | 1.40%             | AA- (bra) Fitch |
|   | RNEP21 |               |            |                  | 5.50                          | 73.0                | IPCA + 7,87% |            | 1.65%             |                 |
| Engie Brasil Energia S/A                              | TBLE15 | 12/15/2014    | ICVM 476   | 10               | 7.09                          | 165.0               | IPCA + 6,30% | Energia    | 0.0%              | AAA (bra) Fitch |
| Empresa de Energia Cachoeira Caldeirão S/A            | CADR13 | 12/15/2014    | ICVM 476   | 16               | 9.20                          | 156.5               | IPCA + 7,27% | Energia    | 1.40%             | AA (bra) Fitch  |
| Linhas de Taubaté Transmissora de Energia S/A         | LTTE14 | 12/15/2014    | ICVM 476   | 15               | 7.90                          | 44.5                | IPCA + 7,88% | Energia    | 1.50%             | AA+ (bra) Fitch |
| Autopista Planalto Sul S/A                            | APPS12 | 12/15/2014    | ICVM 476   | 11               | 7.50                          | 100.0               | IPCA + 8,17% | Transporte | 1.70%             | brAAA (S&P)     |
| <b>Total.....</b>                                     |        |               |            |                  |                               | <b>4,910.45</b>     |              |            |                   |                 |

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 innovation-intensive economic production.
- (2) In this presentation we consider duration (Macaulay 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 Price Index - CPI (IPCA)

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

| Issuer                                     | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield         | Sector           | Spread Over NTN-B | Rating (local)      |
|--|--------|---------------|------------|------------------|-------------------------------|---------------------|---------------|------------------|-------------------|---------------------|
| MRS Logística S/A                          | MRSL17 | 2/15/2015     | ICVM 400   | 7                | 5.54                          | 336.3               | IPCA + 5,98%  | Transporte       | 0.00%             | brAA+ (S&P)         |
|  | MRSL27 |               |            | 10               | 7.07                          | 214.4               | IPCA + 6,42%  |                  | 0.35%             |                     |
| Salus Infraestrutura Portuária S/A         | SAIP11 | 3/15/2015     | ICVM 400   | 10               | 5.48                          | 320.9               | IPCA + 6,79%  | Transporte       | 0.50%             | AA+sfí (br) Moody's |
| Rodovias Integradas do Oeste S/A           | RVIO14 | 4/15/2015     | ICVM 476   | 5                | 4.54                          | 190.0               | IPCA + 6,38%  | Transporte       | 0.15%             | Aa1 (br) Moody's    |
| Alupar Investimentos S/A                   | APAR16 | 4/15/2015     | ICVM 476   | 6                | 4.60                          | 250.0               | IPCA + 7,33%  | Energia          | 0.90%             | AA+ (bra) Fitch     |
| VLI Multimodal S/A                         | VLIM11 | 6/15/2015     | ICVM 476   | 5                | 4.38                          | 232.4               | IPCA + 6,88%  | Transporte       | 0.30%             | AA (bra) Fitch      |
| Geradora Eólica Bons Ventos da Serra I S/A | GLIC11 | 6/15/2015     | ICVM 476   | 12               | 7.35                          | 10.3                | IPCA + 9,43%  | Transporte       | 3.00%             | brBBB (S&P)         |
| Ultrafertil S/A                            | ULFT11 | 6/15/2015     | ICVM 476   | 12               | 6.40                          | 115.0               | IPCA + 9,06%  | Transporte       | 1.50%             | AA (bra) Fitch      |
| CIA de Saneamento do Tocantins - Saneatins | SNTI13 | 6/26/2015     | ICVM 476   | 7                | 4.40                          | 50.0                | IPCA + 10,33% | Saneamento       | 3.00%             | Aa2 (br) Moody's    |
|  | SNTI23 |               |            |                  |                               | 140.0               | IPCA + 10,33% |                  | 3.00%             |                     |
| Concessionária Rodovia dos Lagos S/A       | RDLA12 | 7/15/2015     | ICVM 476   | 5                | 4.29                          | 150.0               | IPCA + 7,34%  | Transporte       | 0.14%             | Aa2 (br) Moody's    |
| Ventos de São Tome Holding S/A             | TOME12 | 7/15/2015     | ICVM 476   | 12               | 6.30                          | 89.0                | IPCA + 8,86%  | Energia          | 1.70%             | AA (bra) Fitch      |
| Vale S/A                                   | VALE19 | 8/15/2015     | ICVM 400   | 5                | 4.37                          | 800.0               | IPCA + 6,62%  | Transporte       | 0.50%             | A (bra) Fitch       |
|  | VALE29 |               |            | 7                | 5.74                          | 550.0               | IPCA + 6,63%  |                  | 0.50%             |                     |
| Chapada do Piauí I Holding S/A             | CHPA11 | 8/15/2015     | ICVM 476   | 14               | 7.90                          | 100.0               | IPCA + 9,22%  | Energia          | 1.75%             | brAA (S&P)          |
| EDP Energias do Brasil S/A                 | ENBR24 | 9/15/2015     | ICVM 400   | 6                | 4.10                          | 179.9               | IPCA + 8,32%  | Energia          | 1.00%             | Aa3 (br) Moody's    |
|  | ENBR34 |               |            | 9                | 5.90                          | 48.1                | IPCA + 8,26%  |                  | 1.00%             |                     |
| Ventos de São Tito Holding S/A             | VNTT11 | 9/15/2015     | ICVM 476   | 13               | 5.50                          | 111.0               | IPCA + 9,24%  | Energia          | 1.70%             | AA (bra) Fitch      |
| NC Energia S/A                             | NCEN11 | 10/1/2015     | ICVM 476   | 10               | 5.70                          | 31.6                | IPCA + 7,89%  | Energia          | 0.60%             | Aa1 (br) Moody's    |
| Centrais Eólicas Caetité S/A               | CAET12 | 10/15/2015    | ICVM 476   | 13               | 6.20                          | 33.5                | IPCA + 9,31%  | Energia          | 1.80%             | AA- (bra) Fitch     |
| Copel Telecomunicações S/A                 | CTEL11 | 10/30/2015    | ICVM 476   | 9                | 6.00                          | 160.0               | IPCA + 7,96%  | Telecomunicações | 0.60%             | AA+ (bra) Fitch     |

## Continuation – 2015

| Issuer                           | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield        | Sector  | Spread Over NTN-B | Rating (local)      |
|----------------------------------|--------|---------------|------------|------------------|-------------------------------|---------------------|--------------|---------|-------------------|---------------------|
| CIA de Gás de São Paulo - Comgás | GASP14 | 12/15/2015    | ICVM 400   | 5                | 4.36                          | 269.6               | IPCA + 7,14% | Energia | (0.30)%           | AA+ (bra)<br>Fitch  |
|                                  | GASP24 |               |            | 7                | 5.35                          | 242.4               | IPCA + 7,48% |         | 0.00%             |                     |
|                                  | GASP34 |               |            | 10               | 6.77                          | 79.9                | IPCA + 7,36% |         | 0.00%             |                     |
| AES Tietê S/A                    | TIET34 | 12/15/2015    | ICVM 400   | 5                | 4.20                          | 301.8               | IPCA + 8,43% | Energia | 1.50%             | Aa2 (br)<br>Moody's |
| <b>Total.....</b>                |        |               |            |                  |                               | <b>5,006.1</b>      |              |         |                   |                     |

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 innovation-intensive economic production.

(2) In this presentation we consider duration (Macaulay 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 Price Index - CPI (IPCA)

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

| Issuer  | Ticker           | Emission Date | Offer type           | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield                        | Sector           | Spread Over NTN-B | Rating (local)   |
|---|------------------|---------------|----------------------|------------------|-------------------------------|---------------------|------------------------------|------------------|-------------------|------------------|
| Voltalia S. M. do Gostoso Participações S/A           | VTLA11           | 3/8/2016      | ICVM 476             | 13               | 5.50                          | 57.0                | IPCA + 8,19%                 | Energia          | 2.00%             | AA (bra) Fitch   |
| EDP Energias do Brasil S/A                            | ENBR15           | 3/22/2016     | ICVM 476             | 6                | 4.50                          | 250.0               | IPCA + 8,34%                 | Energia          | 1.70%             | A2 (br) Moody's  |
| Algar Telecom S/A                                     | ALGA15           | 5/15/2016     | ICVM 476             | 6                | 4.55                          | 210.0               | IPCA + 7,73%                 | Telecomunicações | 1.40%             | brAA- (S&P)      |
| Engie Brasil Energia S/A                              | TBLE16           | 7/15/2016     | ICVM 476             | 7                | 5.00                          | 246.6               | IPCA + 6,26%                 | Energia          | 0.08%             | AAA (bra) Fitch  |
| Engie Brasil Energia S/A                              | TBLE26           | 7/15/2016     | ICVM 476             | 10               | 5.00                          | 353.4               | IPCA + 6,25%                 | Energia          | 0.08%             | AAA (bra) Fitch  |
| CTEEP-CIA Energia Paulista S/A                        | CTEE14           | 7/15/2016     | ICVM 476             | 5                | 4.40                          | 148.3               | IPCA + 6,04%                 | Energia          | (0.10)%           | AA+ (bra) Fitch  |
| VLI Operações Portuárias S/A                          | VLIO11           | 8/15/2016     | ICVM 476             | 5                | 4.40                          | 175.0               | IPCA + 6,05%                 | Transporte       | 0.00%             | AA+ (bra) Fitch  |
| TP Norte Energia S/A                                  | TPNO12           | 5/15/2016     | ICVM 476             | 13               | 7.60                          | 180.0               | IPCA + 7,58%                 | Energia          | 1.50%             | AA+ (bra) Fitch  |
| Companhia Energética do Maranhão - Cemar              | CEMA17<br>CEMA27 | 10/15/2016    | ICVM 400<br>ICVM 400 | 5<br>7           | 4.48<br>5.96                  | 155.0<br>115.0      | IPCA + 5,48%<br>IPCA + 5,54% | Energia          | -0.35%<br>-0.25%  | AA+ (bra) Fitch  |
| CPFL - Geração de Energia S/A                         | CPGE19           | 10/17/2016    | ICVM 476             | 5                | 4.48                          | 50.0                | IPCA + 5,48%                 | Energia          | -0.40%            | N/D              |
| TCP-Terminal de Contêineres de Paranaguá S/A          | TCPA31           | 10/15/2016    | ICVM 400             | 6                | 4.60                          | 428.1               | IPCA + 7,82%                 | Transporte       | 1.80%             | brAA- (S&P)      |
| Autopista Fernão Dias S/A                             | APFD14           | 5/15/2016     | ICVM 476             | 10               | 7.16                          | 65.0                | IPCA + 7,53%                 | Transporte       | 1.70%             | brAA- (S&P)      |
| Rodonorte - Concessionária de Rodovias Integradas S/A | RDNT15           | 11/15/2016    | ICVM 476             | 5                | 4.37                          | 100.0               | IPCA + 6,06%                 | Transporte       | N/D               | brAA- (S&P)      |
| Conc. de Rodovias do Oeste de São Paulo - Viaoeste    | VOES16           | 11/15/2016    | ICVM 476             | 5                | 4.33                          | 270.0               | IPCA + 6,3%                  | Transporte       | N/D               | Aa1 (br) Moody's |
| Eólica Serra das Vacas Holding S/A                    | EOVC11<br>EOVC21 | 6/15/2016     | ICVM 476             | 12<br>14         | 5.32<br>7.74                  | 23.0<br>45.0        | IPCA + 8,37%<br>IPCA + 8,58% | Energia          | 2.30%<br>2.50%    | AA- (bra) Fitch  |
| AES Tietê S/A   | TIET15           | 11/15/2016    | ICVM 476             | 7                | 5.80                          | 180.0               | IPCA + 6,54%                 | Energia          | 0.25%             | AA+ (bra) Fitch  |
| Coelba - Estado da Bahia                              | CEEB29           | 10/15/2016    | ICVM 476             | 5                | 4.20                          | 100.0               | IPCA + 6,75%                 | Energia          | 0.40%             | brAA- (S&P)      |



## Continuation – 2016

| Issuer                           | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield        | Sector  | Spread Over NTN-B | Rating (local)   |
|----------------------------------|--------|---------------|------------|------------------|-------------------------------|---------------------|--------------|---------|-------------------|------------------|
| Celpa - Estado do Para           | CLPP13 | 10/15/2016    | ICVM 476   | 5                | 4.38                          | 199.1               | IPCA + 6,70% | Energia | 0.40%             | A+ (bra) Fitch   |
|                                  | CLPP23 |               |            | 7                | 5.76                          | 100.9               | IPCA + 6,87% | Energia | 0.65%             |                  |
| Windepar Holding S/A             | WDPR11 | 12/15/2016    | ICVM 476   | 12               | 6.90                          | 67.5                | IPCA + 7,63% | Energia | 1.40%             | AA+ (bra) Fitch  |
| Marechal Rondon Energia S/A      | MRHL12 | 12/15/2016    | ICVM 476   | 9                | N/D                           | 15.0                | IPCA + 8,00% | Energia | N/D               | N/D              |
| CIA de Gás de São Paulo - Comgás | GASP15 | 12/15/2016    | ICVM 400   | 7                | 5.90                          | 675.0               | IPCA + 5,87% | Energia | -0.50%            | brBB (S&P)       |
| Calango 6 Energia Renovável S/A  | CLNG11 | 12/27/2016    | ICVM 476   | 12               | 6.48                          | 43.5                | IPCA + 8,73% | Energia | 2.50%             | A+ (bra) Fitch   |
| TSLE-Sul Litorânea Energia S/A   | TSLE11 | 12/15/2016    | ICVM 476   | 14               | 7.10                          | 150.0               | IPCA + 7,57% | Energia | 1.40%             | Aa1 (br) Moody's |
| <b>Total.....</b>                |        |               |            |                  |                               | <b>4,402.29</b>     |              |         |                   |                  |

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 innovation-intensive economic production.

(2) In this presentation we consider duration (Macaulay 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 Price Index - CPI (IPCA)

Infrastructure Bonds: Law # 12,431/2011 - Project Bonds - (Article 2)<sup>1</sup> - 2017

| Issuer                         | Ticker | Emission Date | Offer type | Maturity (years) | Duration <sup>2</sup> (years) | Value (R\$ million) | Yield        | Sector  | Spread Over NTN-B | Rating (local) |
|--------------------------------|--------|---------------|------------|------------------|-------------------------------|---------------------|--------------|---------|-------------------|----------------|
| Baraúnas II energética S/A     | BAUR11 | 1/15/2017     | ICVM 476   | 10               | 4.11                          | 8.8                 | IPCA + 7,96% | Energia | 2.00%             | N/D            |
| Banda de Couro Energética S/A  | BNDC11 | 1/15/2017     | ICVM 476   | 10               | 4.11                          | 14.5                | IPCA + 7,96% | Energia | 2.00%             | N/D            |
| Paranaíba Energia S/A          | PRTE12 | 1/15/2017     | ICVM 476   | 11               | 5.26                          | 120.0               | IPCA + 6,90% | Energia | 1.50%             | A+ (bra) Fitch |
| Rio Grande Energia S/A         | RIGE18 | 2/15/2017     | ICVM 476   | 7                | N/D                           | 130.0               | IPCA + 5,35% | Energia | N/D               | AA (bra) Fitch |
| CIA Piratininga de Força e Luz | CPFP18 | 2/15/2017     | ICVM 476   | 7                | 5.55                          | 60.0                | IPCA + 5,29% | Energia | (0.10)%           | AA (bra) Fitch |
| <b>Total.....</b>              |        |               |            |                  |                               | <b>333.3</b>        |              |         |                   |                |

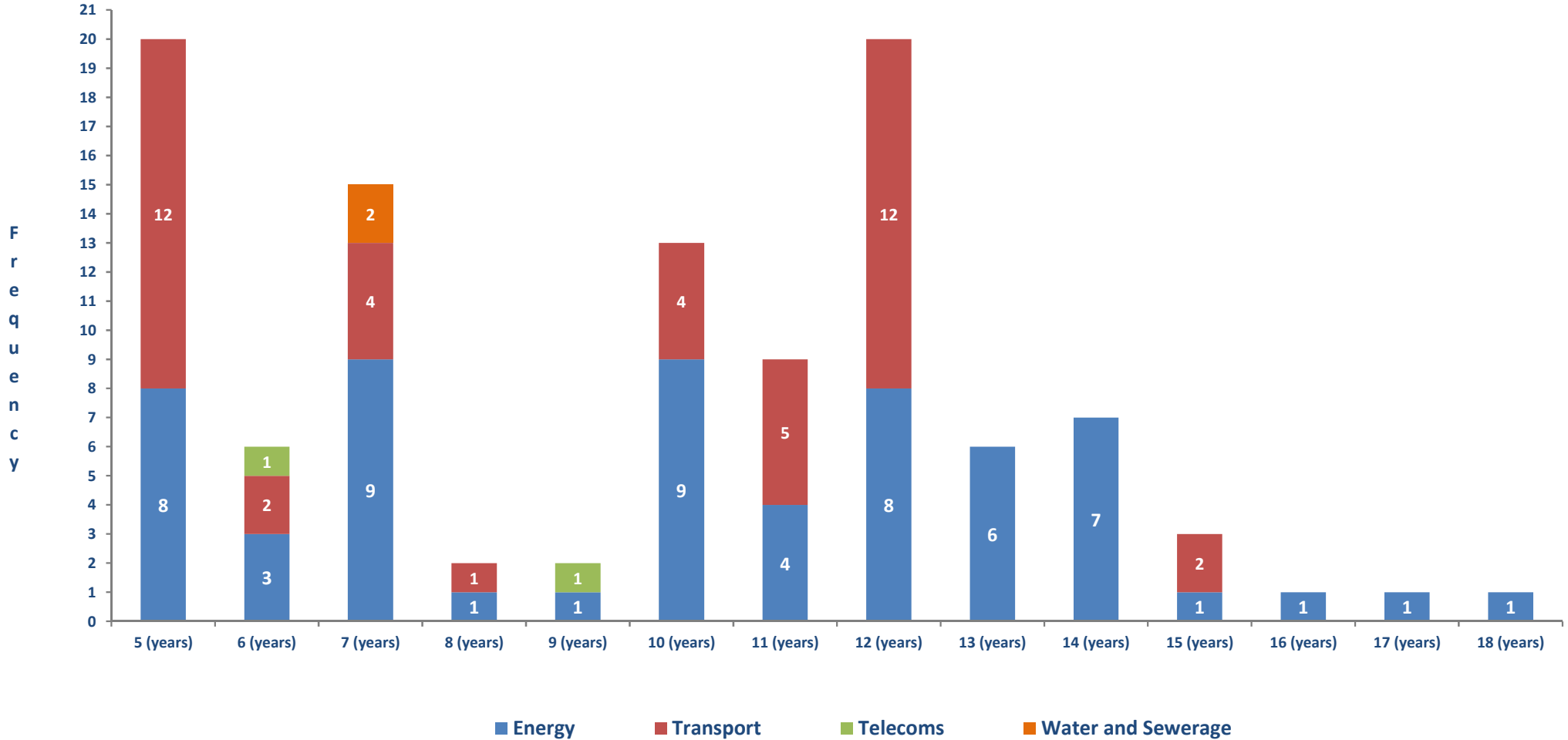
Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by COGTL/Seae/MF

**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 innovation-intensive economic production.

(2) In this presentation we consider duration (Macaulay 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.

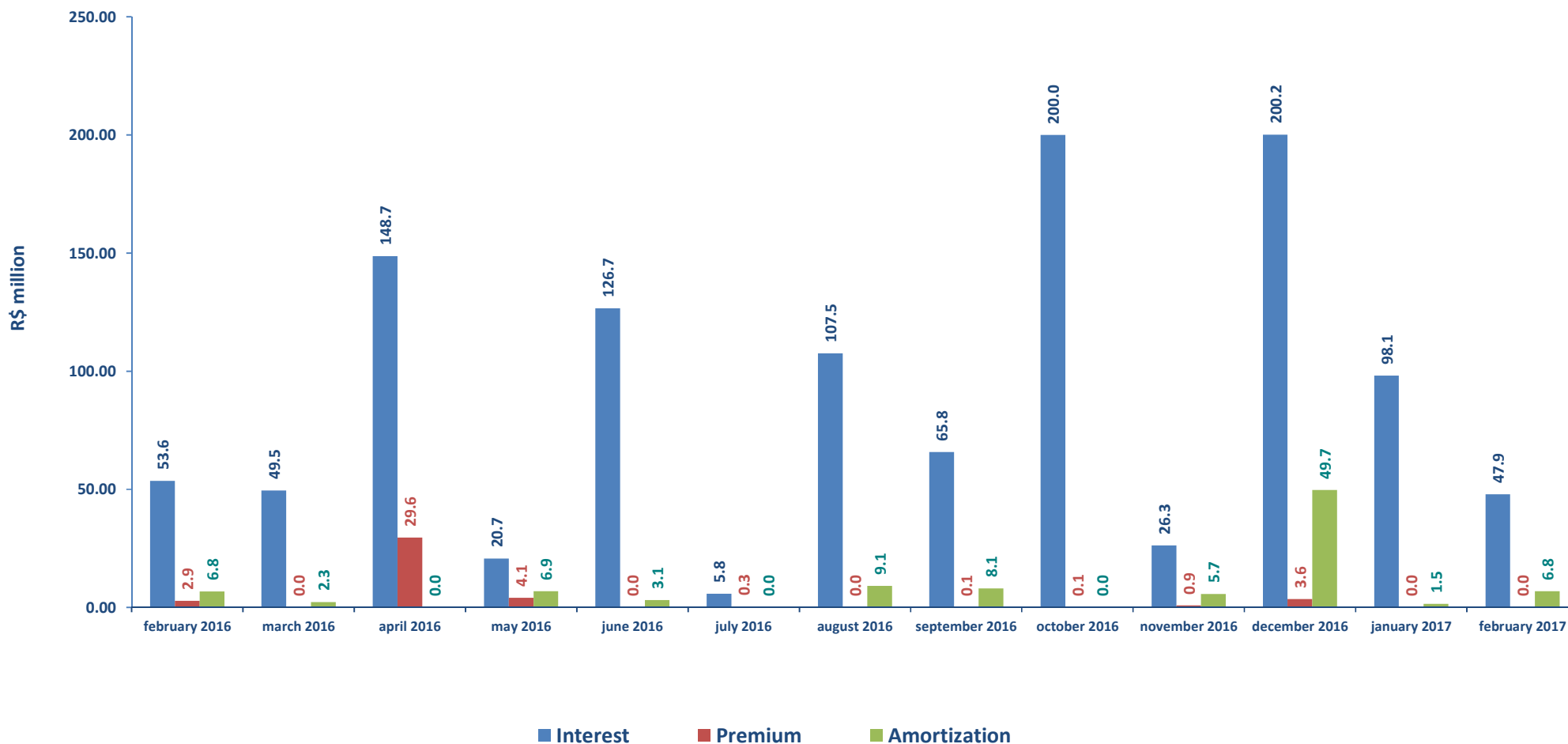
(3) Consumer Prince Index - CPI (IPCA)

Maturity - Infrastructure Debentures by Issue Series ( in years) - 2012 to 2017  
Law # 12,431 /2011 (Article 2)



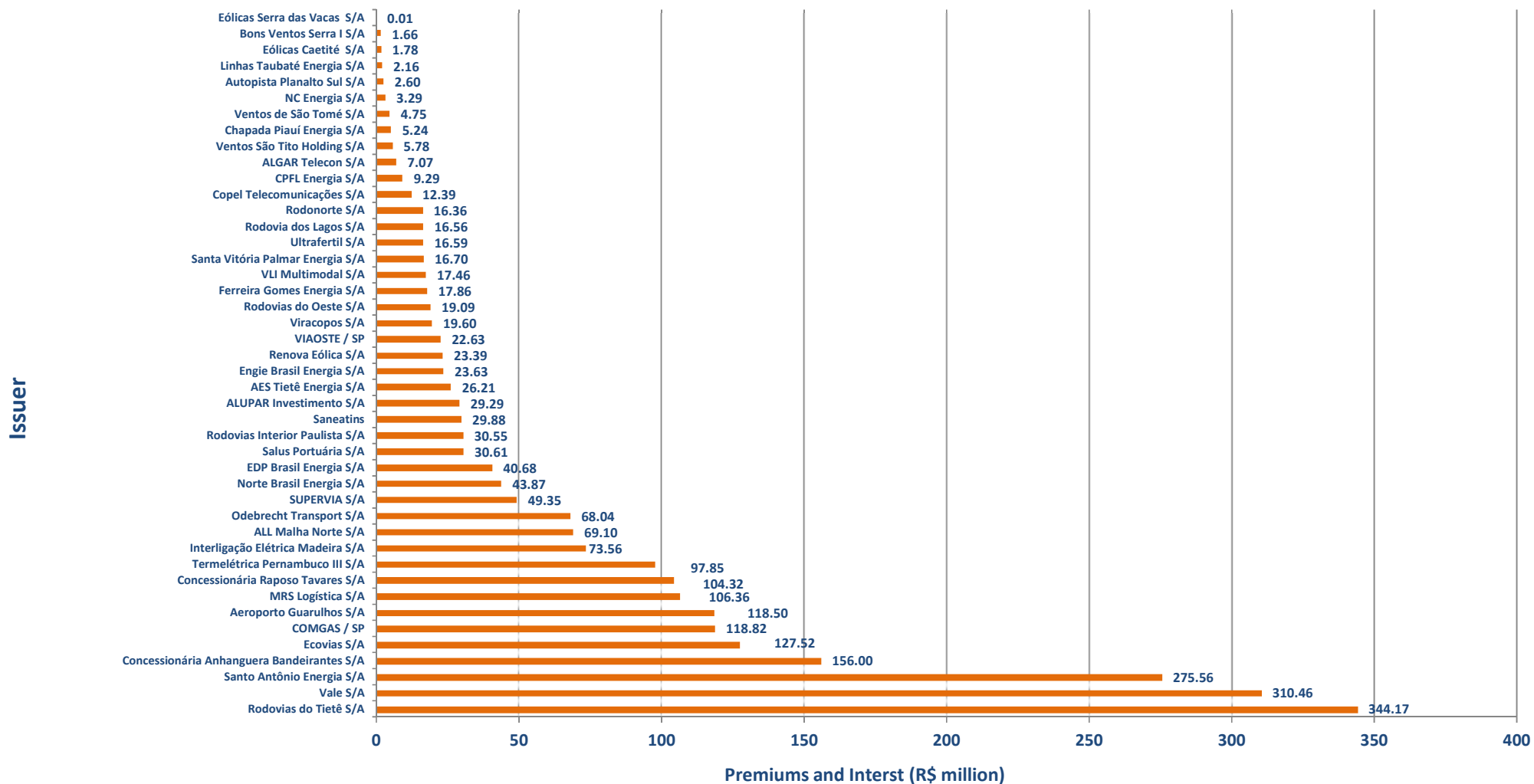
Source: Debentures Issue Indenture  
Elaborated by COGTL/Seae/MF

Interest, Premium, Amortization Payments - Infrastructure Debentures  
February 2016 - February 2017



Source: Anbima  
Elaborated by COGTL/Seae/MF

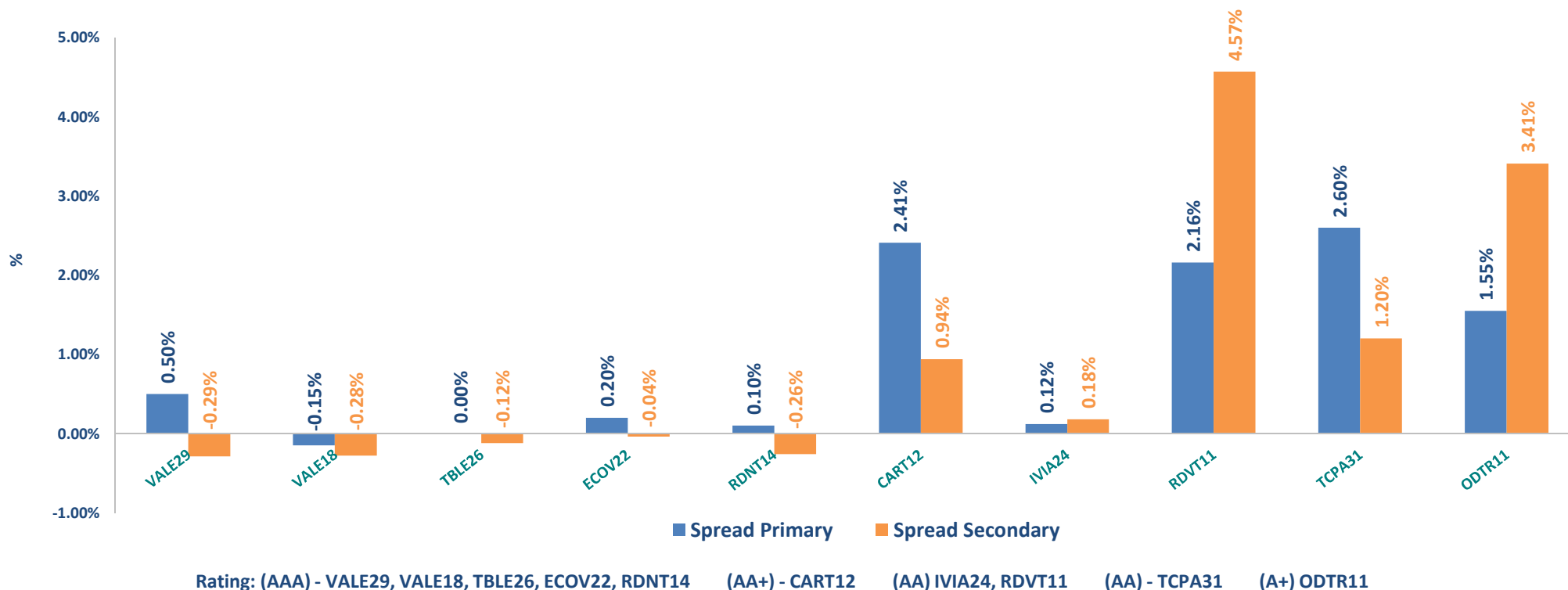
Flow Payments (Interest and Premium) - Infrastructure Debentures between January/2013 and February/2017  
Law # 12,431/2011 (Article 2) - (R\$ million)



Source: Anbima  
Elaborated by COGTL/Seae/MF

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

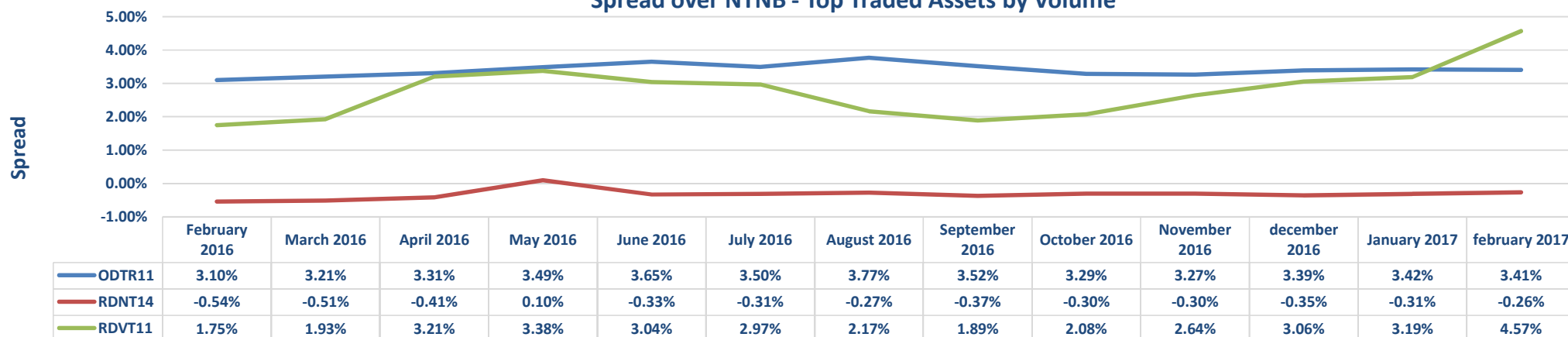
Criterion applied to graph - ten (10) top traded assets per month by volume - Infrastructure Debenture - Article 2 of Law # 12,431/2011



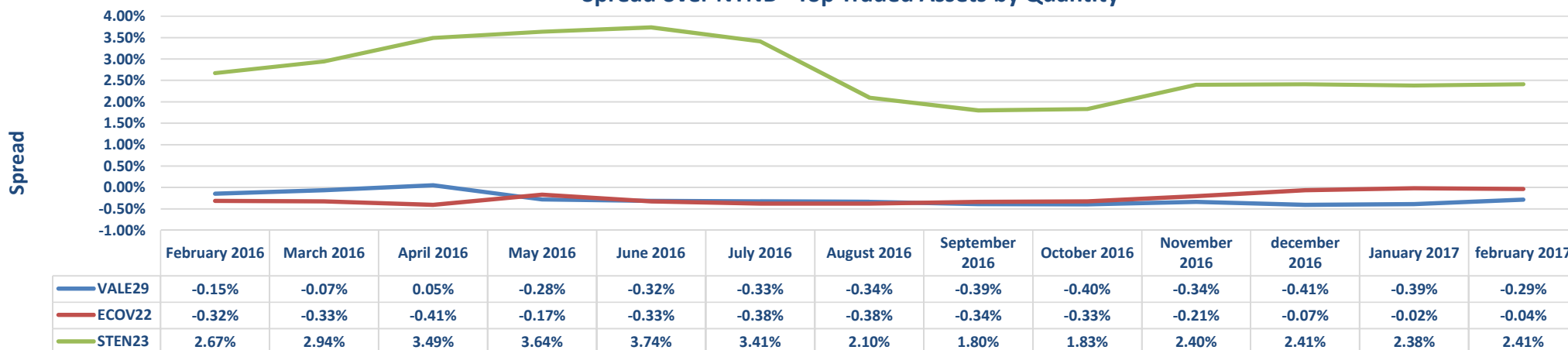
Source: Anbima and Cetip (Clearing House for the Custody and Financial Settlement of Securities)  
 Elaborated by COGTL/Seae/MF

- Note:**
- (1) *Bookbuilding* final interest rate defined.
  - (2) Rate observed in Secondary Market considers average premium over NTN-b duration equivalent of negotiations held february 1 through 24, 2017.

Spread over NTNB - Top Traded Assets by Volume

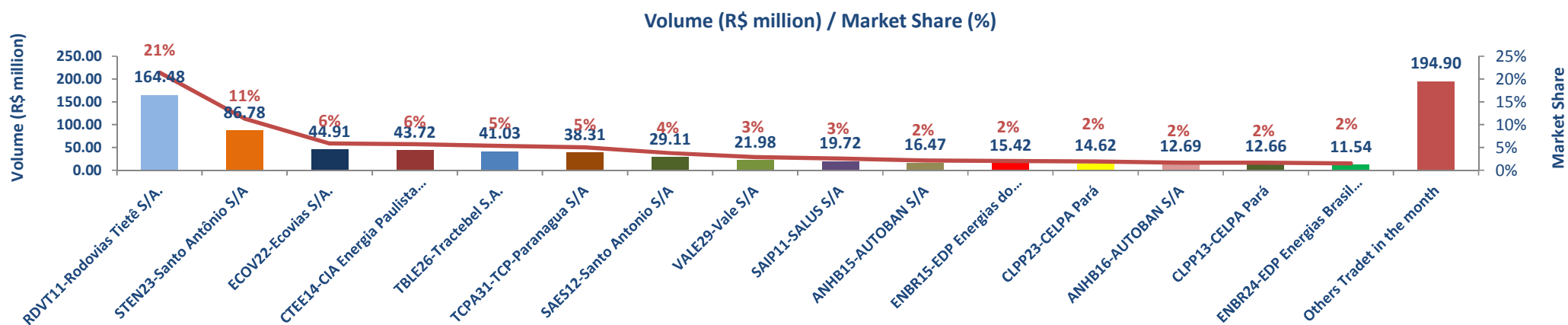
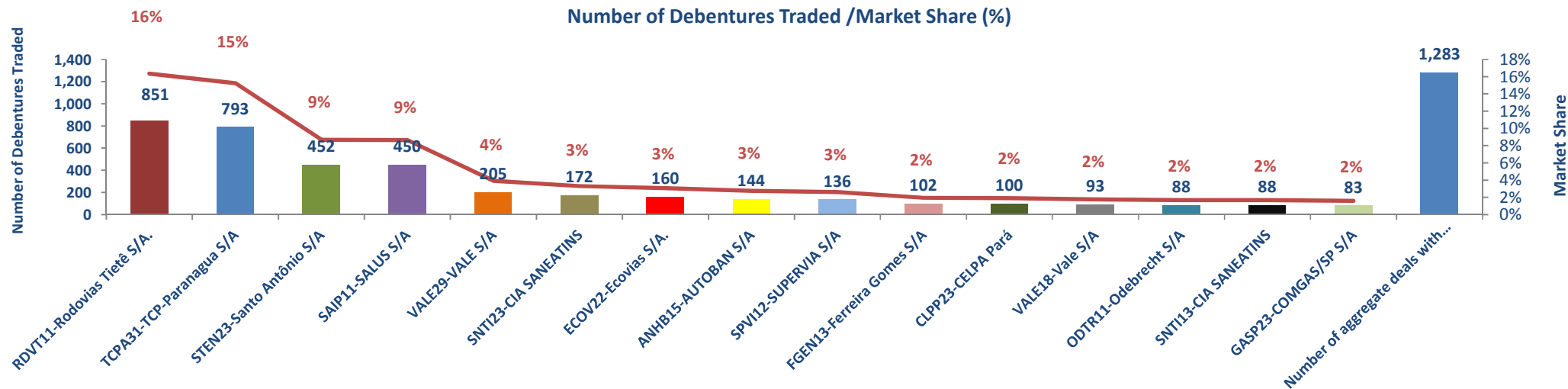


Spread over NTNB - Top Traded Assets by Quantity



Source: Anbima and Cetip  
Elaborated by COGTL/Seae/MF

Secondary Market - Quantity and Volume of Debentures Traded - February 2017  
 Infrastructure Debentures - Law # 12,431/2011 (Article 2)  
 15 most actively traded



Source : Anbima and Cetip  
 Elaborated by COGTL/Seae/MF

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

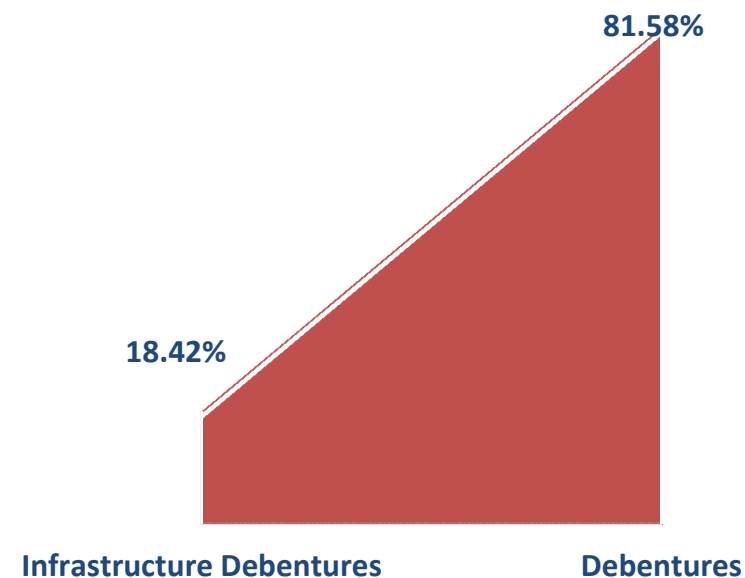


Debentures Secondary Market - Trading Volume and Turnover

R\$ million

| Period  | Trading Volume <sup>1</sup> |               |          |  |                            |          | Total Trading Volumes |
|---------|-----------------------------|---------------|----------|--|----------------------------|----------|-----------------------|
|         | Debentures                  |               |          | Infrastructure Debentures-Law # 12,431/11 <sup>2</sup> |                            |          |                       |
|         | Trading Volume              | Market Volume | Turnover | Trading Volume   | Market Volume <sup>3</sup> | Turnover |                       |
| 2015/02 | 1,212.4                     | 236,159.1     | 0.51%    | 333.6  | 10,400.4                   | 3.21%    | 1,546.0               |
| 2015/03 | 1,126.4                     | 237,120.2     | 0.48%    | 617.7  | 11,317.2                   | 5.46%    | 1,744.1               |
| 2015/04 | 2,199.7                     | 234,753.9     | 0.94%    | 640.9  | 11,686.4                   | 5.48%    | 2,840.6               |
| 2015/05 | 1,399.6                     | 234,618.6     | 0.60%    | 537.3  | 11,654.6                   | 4.61%    | 1,936.9               |
| 2015/06 | 5,480.0                     | 259,766.2     | 2.11%    | 347.5  | 12,077.3                   | 2.88%    | 5,827.5               |
| 2015/07 | 2,406.2                     | 229,030.8     | 1.05%    | 394.4  | 12,481.8                   | 3.16%    | 2,800.6               |
| 2015/08 | 2,303.0                     | 233,686.8     | 0.99%    | 308.7  | 12,241.8                   | 2.52%    | 2,611.7               |
| 2015/09 | 4,026.0                     | 231,080.0     | 1.74%    | 390.4  | 13,928.6                   | 2.80%    | 4,416.4               |
| 2015/10 | 1,900.8                     | 230,792.9     | 0.82%    | 416.1  | 14,379.4                   | 2.89%    | 2,316.9               |
| 2015/11 | 3,308.7                     | 230,510.2     | 1.44%    | 388.4  | 14,767.4                   | 2.63%    | 3,697.1               |
| 2015/12 | 5,373.2                     | 234,677.2     | 2.29%    | 582.5  | 15,611.9                   | 3.73%    | 5,955.7               |
| 2016/01 | 2,188.1                     | 229,072.1     | 0.96%    | 471.0  | 15,915.2                   | 2.96%    | 2,659.2               |
| 2016/02 | 2,098.4                     | 233,591.0     | 0.90%    | 696.7  | 15,668.4                   | 4.45%    | 2,795.1               |
| 2016/03 | 2,382.4                     | 231,593.0     | 1.03%    | 572.6  | 17,091.6                   | 3.35%    | 2,955.0               |
| 2016/04 | 1,925.6                     | 226,327.9     | 0.85%    | 560.9  | 17,338.4                   | 3.23%    | 2,486.5               |
| 2016/05 | 2,091.8                     | 225,773.6     | 0.93%    | 638.8  | 16,918.6                   | 3.78%    | 2,730.6               |
| 2016/06 | 4,684.3                     | 217,774.1     | 2.15%    | 634.3  | 17,255.7                   | 3.68%    | 5,318.6               |
| 2016/07 | 1,454.2                     | 220,812.8     | 0.66%    | 869.7  | 17,794.0                   | 4.89%    | 2,323.9               |
| 2016/08 | 1,137.1                     | 223,462.4     | 0.51%    | 591.3  | 17,842.5                   | 3.31%    | 1,728.4               |
| 2016/09 | 1,228.9                     | 223,224.8     | 0.55%    | 482.0  | 18,834.6                   | 2.56%    | 1,710.9               |
| 2016/10 | 1,417.9                     | 220,376.3     | 0.64%    | 538.4  | 18,522.0                   | 2.91%    | 1,956.3               |
| 2016/11 | 1,920.4                     | 220,753.0     | 0.87%    | 536.2  | 19,688.5                   | 2.72%    | 2,456.6               |
| 2016/12 | 2,516.3                     | 223,287.8     | 1.13%    | 654.7  | 20,911.9                   | 3.13%    | 3,171.0               |
| 2017/01 | 2,525.2                     | 221,887.2     | 1.14%    | 735.7  | 21,252.2                   | 3.46%    | 3,260.9               |
| 2017/02 | 1,675.2                     | 221,744.7     | 0.76%    | 602.3  | 21,466.7                   | 2.81%    | 2,277.5               |

Trading Volume  
Feb./2015 to Feb./2017

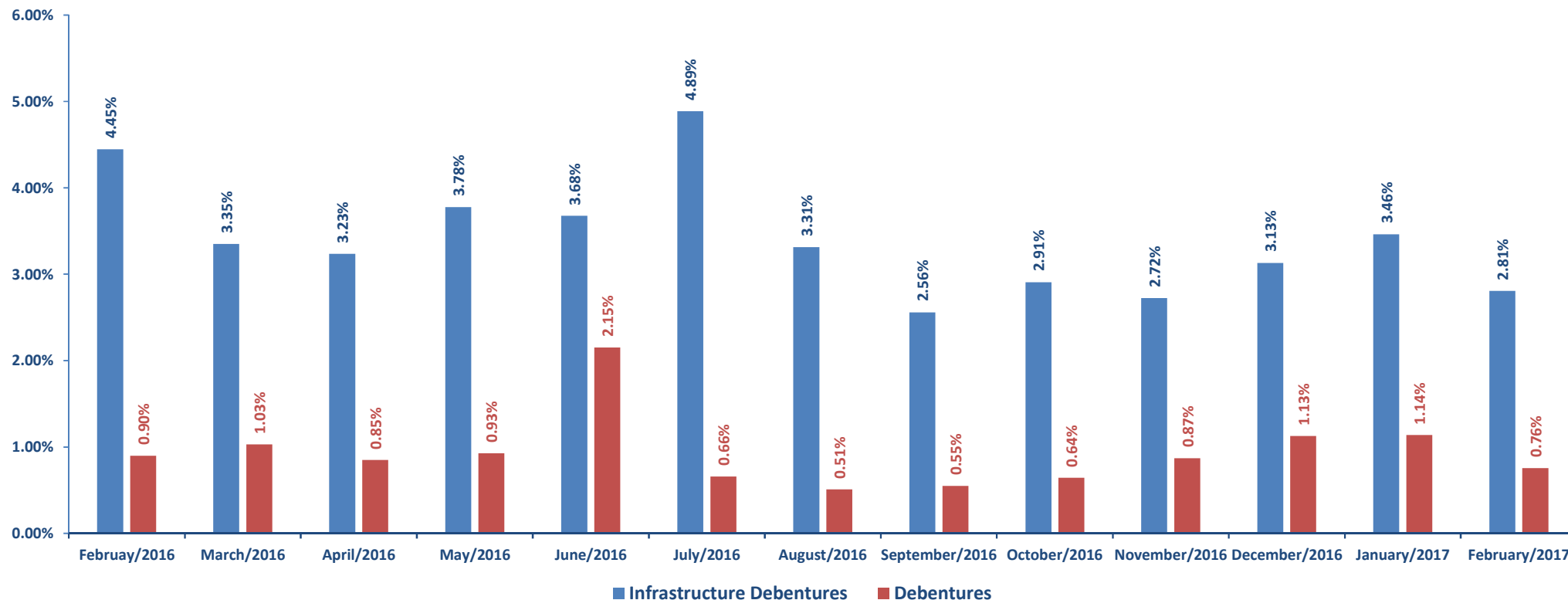


Source: Anbima Elaborated by COGTL/Seae/MF

Note :

(1) Type of transaction (Intra-group and Extra-group): The intra-group transactions are negotiated between institutions belonging to the same financial conglomerate and extra-group transactions 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. (3) Financial stock 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

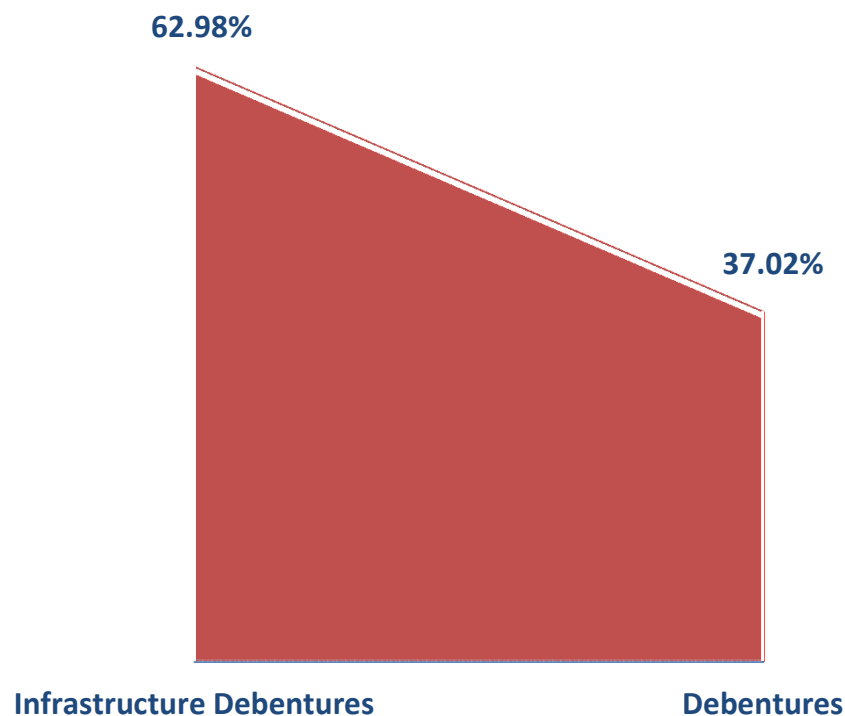
**Note :**

(1) Type of transaction (Intra-group and Extra-group): The intra-group transactions are negotiated between institutions belonging to the same financial conglomerate and extra-group transactions 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. (3) Financial stock of infrastructure debentures.

Infrastructure Debentures Secondary Market - Number of Trades

| Period  | Number of Trades <sup>1</sup> |   | Total  |
|---------|-------------------------------|---|--------|
|         | Debentures                    | Infrastructure debentures-Law #<br>12,431/11 <sup>2</sup> |        |
|         | Number of Trades              | Number of Trades  |        |
| 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  |
| 2016/09 | 1,881                         | 4,163   | 6,044  |
| 2016/10 | 3,874                         | 4,616   | 8,490  |
| 2016/11 | 3,889                         | 5,094   | 8,983  |
| 2016/12 | 6,860                         | 4,378   | 11,238 |
| 2017/01 | 7,051                         | 4,838   | 11,889 |
| 2017/02 | 6,555                         | 3,907   | 10,462 |

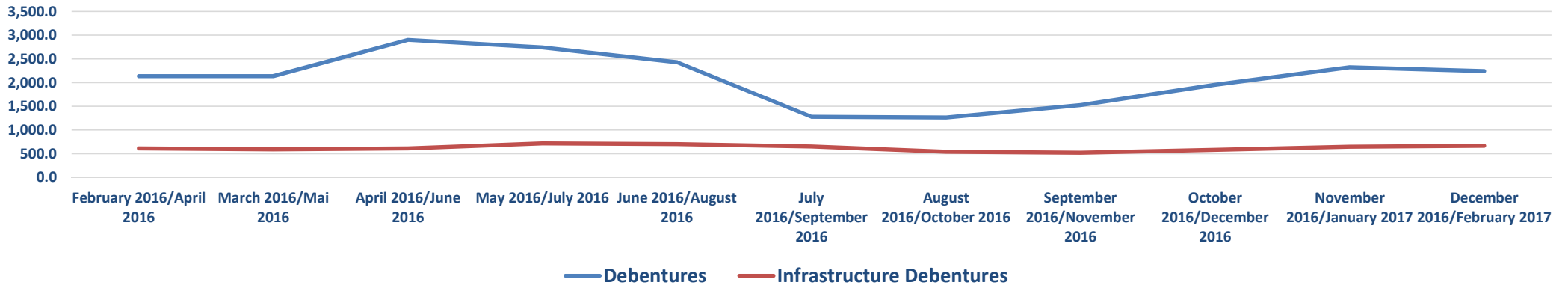
Number of Trades  
Feb./2015 to Feb./2017



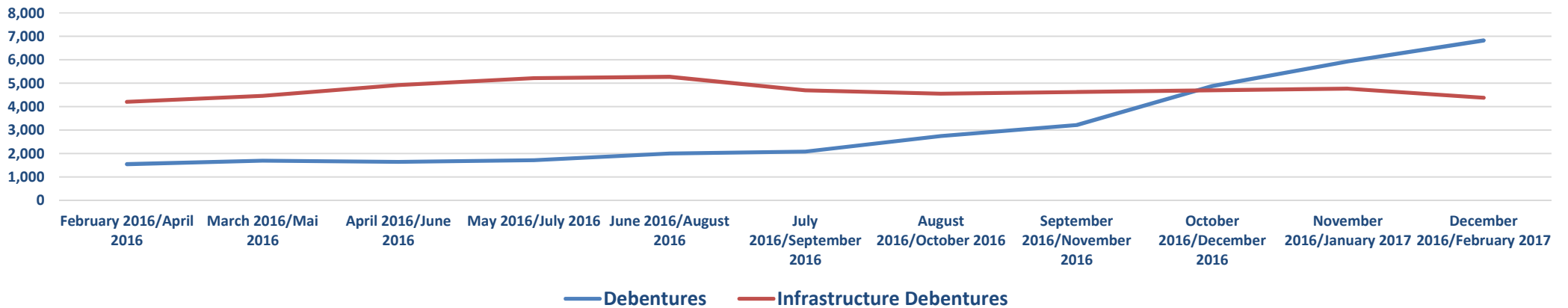
Source: Anbima  
Elaborated by COGTL/Seae/MF

**Note:**  
(1) Type of transaction (Intra-group and Extra-group): The intra-group transactions are negotiated between institutions belonging to the same financial conglomerate and extra-group transactions 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.

**Volume of Debentures Traded - Secondary Market  
(Volume - Rolling Average in Last 03 Months)**

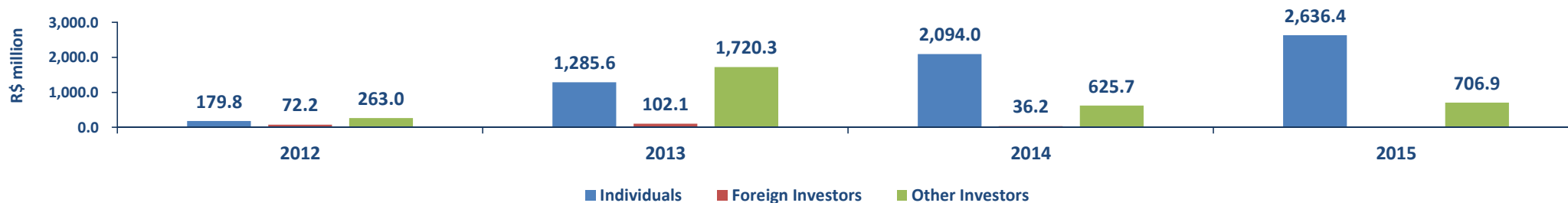


**Number of Debentures Traded - Secondary Market  
(Quantity - Rolling Average in Last (3) Months)**



Source: Anbima  
Elaborated by COGTL/Seae/MF

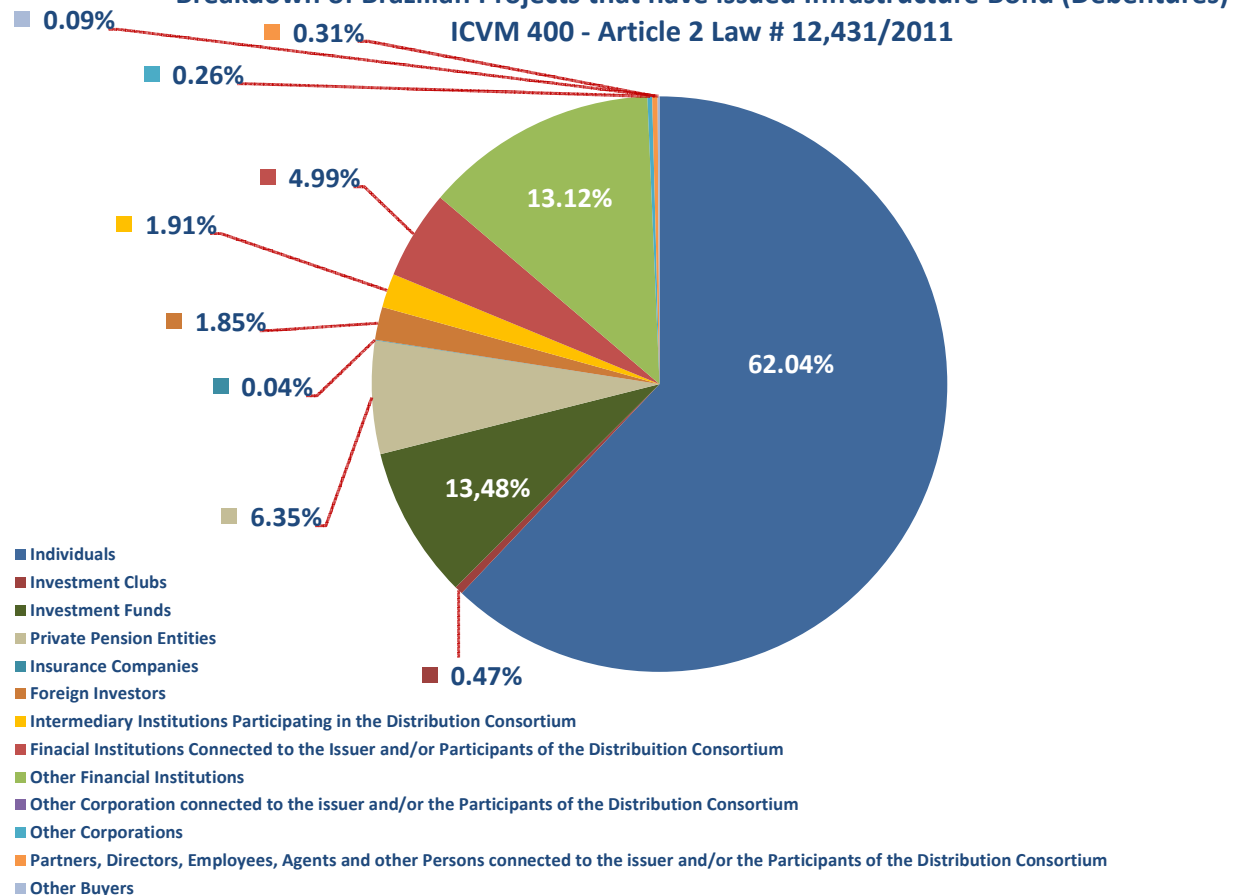
Breakdown by Type of Investor - ICVM 400 - Article 2 Law # 12,431/2011



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

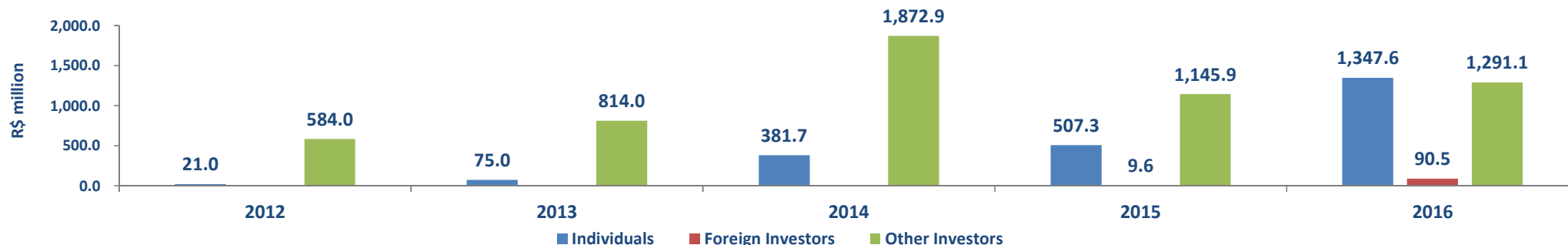
| Investor  | %              | R\$ million      |
|---|----------------|------------------|
| Individuals   | 62.04%         | 6,883.83         |
| Investment Clubs  | 0.47%          | 52.43            |
| Investment Funds  | 8.56%          | 949.69           |
| Private Pension Entities  | 6.35%          | 704.42           |
| Insurance Companies   | 0.04%          | 4.68             |
| Foreign Investors   | 1.85%          | 205.28           |
| Intermediary Institutions Participating in the Distribution   | 1.91%          | 212.05           |
| Financial Institutions Connected to the Issuer and/or Participants of the Distribution Consortium                                       | 4.99%          | 553.17           |
| Other Financial Institutions  | 13.12%         | 1,456.03         |
| Other Corporation connected to the issuer and/or the Participants of the Distribution Consortium  | 0.00%          | 0.01             |
| Other Corporations  | 0.26%          | 29.08            |
| Partners, Directors, Employees, Agents and other Persons connected to the issuer and/or the Participants of the Distribution Consortium | 0.31%          | 34.13            |
| Other Buyers  | 0.09%          | 10.21            |
| <b>Total.....</b>   | <b>100.00%</b> | <b>11,095.01</b> |

Breakdown of Brazilian Projects that have issued Infrastructure Bond (Debentures) ICVM 400 - Article 2 Law # 12,431/2011



Source : Anbima, Leading Banks and closing announcement  
Elaborated by COGTL/Seae/MF

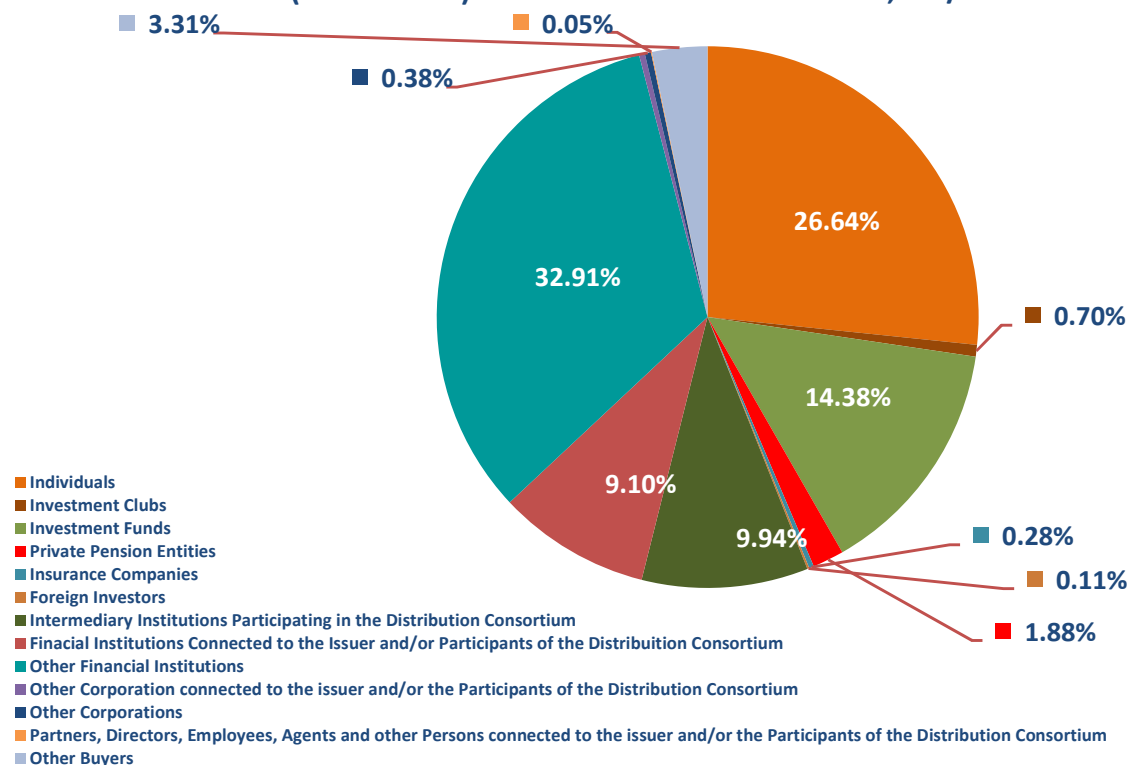
Breakdown by Type of Investor - ICVM 476 - Article 2 Law # 12,431/2011



Summary: Infrastructure Debentures - Portfolio Allocation ICVM 476 - Article 2 Law # 12,431/11

| Investor  | %              | R\$ million     |
|---|----------------|-----------------|
| Individuals   | 26.64%         | 2,337.63        |
| Investment Clubs  | 0.70%          | 61.10           |
| Investment Funds  | 14.38%         | 1,261.54        |
| Private Pension Entities  | 1.88%          | 164.62          |
| Insurance Companies   | 0.28%          | 25.00           |
| Foreign Investors   | 0.11%          | 9.61            |
| Intermediary Institutions   |                |                 |
| Participating in the Distribution Consortium  | 9.94%          | 872.02          |
| Financial Institutions Connected to the Issuer and/or Participants of the Distribution Consortium                                       | 9.10%          | 798.10          |
| Other Financial Institutions  | 32.91%         | 2,887.51        |
| Other Corporation connected to the issuer and/or the Participants of the Distribution Consortium  | 0.33%          | 29.22           |
| Other Corporations  | 0.38%          | 33.50           |
| Partners, Directors, Employees, Agents and other Persons connected to the issuer and/or the Participants of the Distribution Consortium | 0.05%          | 4.00            |
| Other Buyers  | 3.31%          | 290.00          |
| <b>Total.....</b>   | <b>100.00%</b> | <b>8,773.84</b> |

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



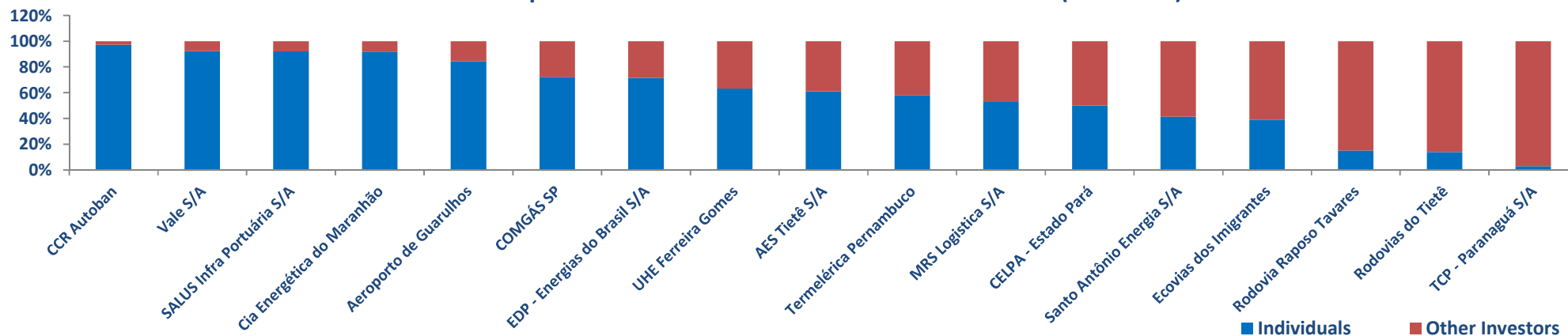
Source : Anbima, Leading Banks and closing announcement

Elaborated by COGTL/Seae/MF

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

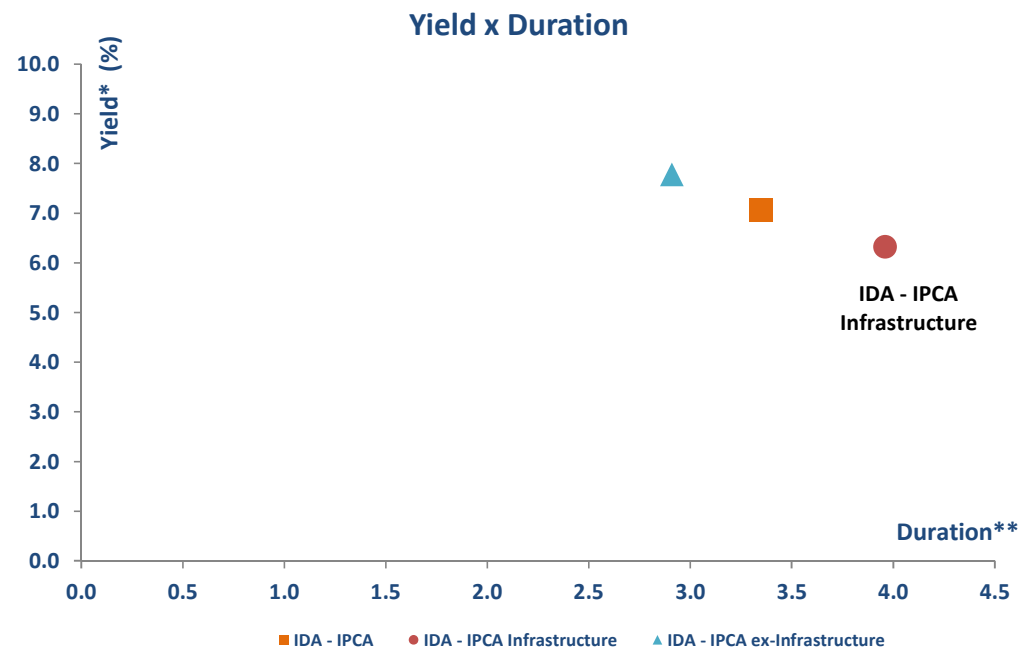
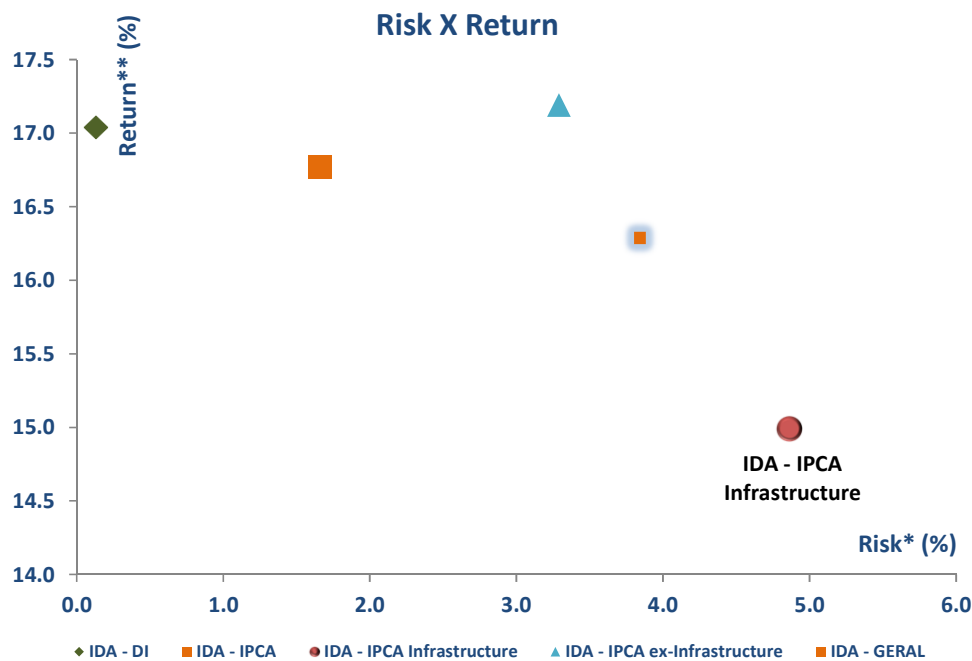
| Adquirentes                | Individuals | Other Investors | Total Investors |
|----------------------------|-------------|-----------------|-----------------|
| CCR Autoban                | 97.25%      | 2.75%           | 100%            |
| CART                       | 92.20%      | 7.80%           | 100%            |
| Ecovias dos Imigrantes     | 91.99%      | 8.01%           | 100%            |
| Cia Energética do Maranhão | 91.85%      | 8.15%           | 100%            |
| Rodovias do Tietê          | 84.37%      | 15.63%          | 100%            |
| COMGÁS SP                  | 72.33%      | 27.67%          | 100%            |
| Termelétrica Pernambuco    | 71.42%      | 28.58%          | 100%            |
| Santo Antônio Energia S/A  | 63.26%      | 36.74%          | 100%            |
| Vale S/A                   | 61.00%      | 39.00%          | 100%            |
| UHE Ferreira Gomes         | 58.05%      | 41.95%          | 100%            |
| Aeroporto de Guarulhos     | 52.84%      | 47.16%          | 100%            |
| CELPA - Estado Pará        | 50.00%      | 50.00%          | 100%            |
| Santo Antônio Energia S/A  | 41.38%      | 58.62%          | 100%            |
| Ecovias dos Imigrantes     | 39.07%      | 60.93%          | 100%            |
| Rodovia Raposo Tavares     | 15.13%      | 84.87%          | 100%            |
| Rodovias do Tietê          | 14.03%      | 85.97%          | 100%            |
| TCP - Paranaguá S/A        | 2.88%       | 97.12%          | 100%            |

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



Source: Anbima  
 Elaborated by COGTL/Seae/MF

ANBIMA Debentures Index (IDA)



| Variable | IDA - DI | IDA - GERAL | IDA - IPCA | IDA - IPCA ex-Infrastructure | IDA - IPCA Infrastructure |
|----------|----------|-------------|------------|------------------------------|---------------------------|
| Return   | 17.04    | 16.77       | 16.29      | 17.19                        | 14.99                     |
| Risk     | 0.13     | 1.66        | 3.84       | 3.29                         | 4.86                      |

Source: Anbima  
Elaborated by COGTL/Seae/MF

\* Annualized volatility of daily returns for the last twelve months  
\*\* 12-month cumulative return

**Note:**

Analysis based on ANBIMA IDA Debentures, composed of a family of indexes representing market price trends for a debenture portfolio. It is divided into two sub-indexes according to the respective securities indexers - DI (Interbank Deposits and IPCA - Consumer Price Index).

| Variable | IDA - IPCA | IDA - IPCA ex-Infrastructure | IDA - IPCA Infrastructure |
|----------|------------|------------------------------|---------------------------|
| Yield    | 7.07       | 7.78                         | 6.32                      |
| Duration | 3.35       | 2.91                         | 3.96                      |

Source: ANBIMA.  
Elaborated by COGTL/SEAE/MF

\* Weighted average of the index component fees for their respective holdings in the indices  
\*\* Duration of macaulay expressed in years (252 d.u.)



## Approved Projects up to February 2017 - Article 2 Law # 12,431/2011

(Includes projects having or not having issued infrastructure Debentures)

| Sectors   | Investments million |                 |                 |                  |                 |                | Total CAPEX Issued | Total Investments BRL million |
|---|---------------------|-----------------|-----------------|------------------|-----------------|----------------|--------------------|-------------------------------|
|   | 2012                | 2013            | 2014            | 2015             | 2016            | 2017           |                    |                               |
| <b>Ministry of Transportation</b>                                     | <b>5,550.6</b>      | <b>13,353.7</b> | <b>20,613.9</b> | <b>40,116.5</b>  | <b>11,245.8</b> | <b>0.0</b>     | <b>53,464.4</b>    | <b>90,880.4</b>               |
| Toll Road   | 4,078.2             | 9,703.3         | 6,480.9         | 25,949.3         | 5,817.7         | 0.0            | 21,983.7           | 52,029.4                      |
| Railways  | 1,472.4             | 3,650.4         | 2,693.2         | 11,796.9         | 0.0             | 0.0            | 19,613.0           | 19,613.0                      |
| Airports  | 0.0                 | 0.0             | 8,887.9         | 143.4            | 5,000.0         | 0.0            | 8,887.9            | 14,031.3                      |
| Ports   | 0.0                 | 0.0             | 2,551.9         | 2,226.8          | 428.1           | 0.0            | 2,979.9            | 5,206.7                       |
| <b>Ministry of Mines and Energy</b>                                   | <b>44,746.5</b>     | <b>41,259.0</b> | <b>43,494.7</b> | <b>72,355.0</b>  | <b>12,549.3</b> | <b>1,103.6</b> | <b>79,524.8</b>    | <b>215,508.0</b>              |
| Electric Power Transmission Line                                      | 1,329.6             | 3,753.9         | 592.0           | 449.2            | 608.4           | 0.0            | 5,112.1            | 6,733.0                       |
| Hydroelectric Power Plants  | 42,973.4            | 19,028.6        | 3,740.5         | 47,166.7         | 1,353.9         | 0.0            | 60,619.5           | 114,263.1                     |
| Thermoelectric  | 0.0                 | 4,123.9         | 1,111.1         | 5,075.5          | 3,246.3         | 0.0            | 2,387.9            | 13,556.7                      |
| Small Hydro   | 0.0                 | 125.5           | 68.5            | 877.1            | 587.6           | 0.0            | 258.3              | 1,658.6                       |
| Gas   | 0.0                 | 2,033.5         | 0.0             | 2,209.4          | 0.0             | 0.0            | 4,243.0            | 4,243.0                       |
| Wind Farms  | 443.6               | 5,193.7         | 7,982.5         | 11,577.1         | 6,383.1         | 1,103.6        | 6,534.1            | 32,683.6                      |
| Pipelines   | 0.0                 | 7,000.0         | 0.0             | 0.0              | 0.0             | 0.0            | 0.0                | 7,000.0                       |
| Oil   | 0.0                 | 0.0             | 30,000.0        | 5,000.0          | 0.0             | 0.0            | 0.0                | 35,000.0                      |
| Distribution  | 0.0                 | 0.0             | 0.0             | 0.0              | 370.0           | 0.0            | 370.0              | 370.0                         |
| <b>Ministry of Science, Technology, Innovation and Communications</b> | <b>0.0</b>          | <b>800.0</b>    | <b>1,605.0</b>  | <b>2,882.1</b>   | <b>2,147.6</b>  | <b>0.0</b>     | <b>5,029.7</b>     | <b>7,434.7</b>                |
| Telecommunication   | 0.0                 | 800.0           | 1,605.0         | 2,882.1          | 2,147.6         | 0.0            | 5,029.7            | 7,434.7                       |
| <b>Ministry of Cities</b>   | <b>0.0</b>          | <b>0.0</b>      | <b>0.0</b>      | <b>18,288.3</b>  | <b>4,864.8</b>  | <b>0.0</b>     | <b>288.1</b>       | <b>23,153.1</b>               |
| Water and Sewerage  | 0.0                 | 0.0             | 0.0             | 406.0            | 125.8           | 0.0            | 288.1              | 531.7                         |
| Urban Mobility  | 0.0                 | 0.0             | 0.0             | 17,882.4         | 4,739.0         | 0.0            | 0.0                | 22,621.4                      |
| <b>Total.....</b>   | <b>50,297.1</b>     | <b>55,412.7</b> | <b>65,713.5</b> | <b>133,641.9</b> | <b>30,807.4</b> | <b>1,103.6</b> | <b>138,307.1</b>   | <b>336,976.2</b>              |

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

**Approved Projects up to February 2017 - Article 2 Law # 12,431/2011**

(Includes projects having or not having issued infrastructure Debentures)

| Sectors   | Approved Projects |           |            |            |            |           | Quantity Portarias with Issuance of Debentures | Total Approved Projects <sup>1</sup> |
|---|-------------------|-----------|------------|------------|------------|-----------|--|--------------------------------------|
|   | 2012              | 2013      | 2014       | 2015       | 2016       | 2017      |  |                                      |
| <b>Ministry of Transportation</b>                                     | <b>3</b>          | <b>6</b>  | <b>11</b>  | <b>15</b>  | <b>12</b>  | <b>2</b>  | <b>27</b>                                      | <b>49</b>                            |
| Toll Road   | 2                 | 5         | 5          | 12         | 6          | 1         | 17   | 31                                   |
| Railways  | 1                 | 1         | 2          | 1          | 4          | 0         | 5  | 9                                    |
| Airports  | 0                 | 0         | 2          | 1          | 1          | 0         | 2  | 4                                    |
| Ports   | 0                 | 0         | 2          | 1          | 1          | 1         | 3  | 5                                    |
| <b>Ministry of Mines and Energy</b>                                   | <b>12</b>         | <b>74</b> | <b>91</b>  | <b>160</b> | <b>98</b>  | <b>20</b> | <b>111</b>                                     | <b>455</b>                           |
| Electric Power Transmission Line                                      | 3                 | 9         | 2          | 4          | 9          | 10        | 18   | 37                                   |
| Hydroelectric Power Plants  | 4                 | 2         | 5          | 12         | 5          | 0         | 17   | 28                                   |
| Thermoelectric  | 0                 | 5         | 1          | 3          | 2          | 0         | 2  | 11                                   |
| Small Hydro   | 0                 | 1         | 1          | 8          | 6          | 0         | 4  | 16                                   |
| Piped Gas   | 0                 | 1         | 0          | 1          | 0          | 0         | 2  | 2                                    |
| Wind Farms  | 5                 | 55        | 81         | 131        | 74         | 10        | 66   | 356                                  |
| Pipelines   | 0                 | 1         | 0          | 0          | 0          | 0         | 0  | 1                                    |
| Oil   | 0                 | 0         | 1          | 1          | 0          | 0         | 0  | 2                                    |
| Distribution  | 0                 | 0         | 0          | 0          | 2          | 0         | 2  | 2                                    |
| <b>Ministry of Science, Technology, Innovation and Communications</b> | <b>0</b>          | <b>1</b>  | <b>2</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>  | <b>2</b>                                       | <b>6</b>                             |
| Telecommunication   | 0                 | 1         | 2          | 1          | 1          | 1         | 2  | 6                                    |
| <b>Ministry of Cities</b>   | <b>0</b>          | <b>0</b>  | <b>0</b>   | <b>5</b>   | <b>4</b>   | <b>1</b>  | <b>1</b>                                       | <b>10</b>                            |
| Water and Sewerage  | 0                 | 0         | 0          | 2          | 3          | 1         | 1  | 6                                    |
| Urban Mobility  | 0                 | 0         | 0          | 3          | 1          | 0         | 0  | 4                                    |
| <b>Total.....</b>   | <b>15</b>         | <b>81</b> | <b>104</b> | <b>181</b> | <b>115</b> | <b>24</b> | <b>141</b>                                     | <b>520</b>                           |

Source: Ministerial Orders issued and Linked Entities

Elaborated by COGTL/Seae/MF

Note: (1) Issued Administrative Rules: 521

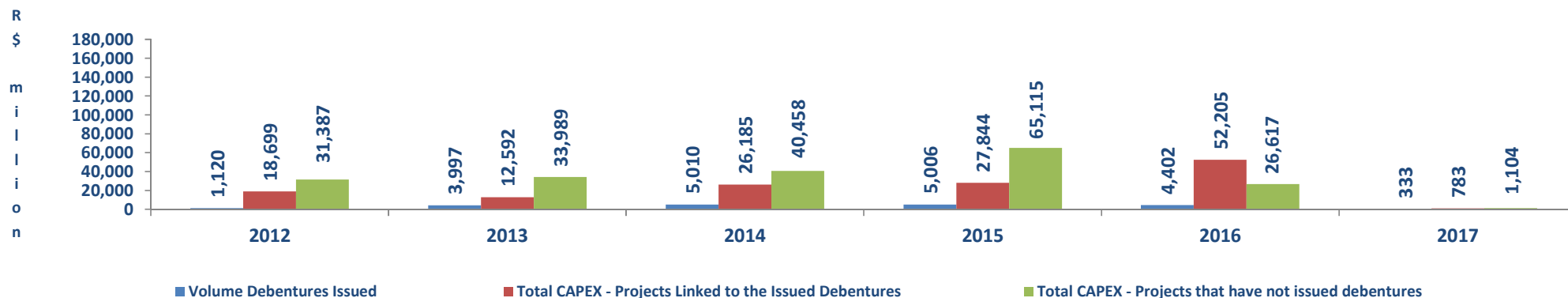
Canceled and Revised Administrativa Rules: 04;

Current Administrative Rules: 517

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

| Status of Projects                                     | Investment (R\$ million) |           |           |           |           |          | Investment Total (R\$ million) |
|--|--------------------------|-----------|-----------|-----------|-----------|----------|--------------------------------|
|  | 2012                     | 2013      | 2014      | 2015      | 2016      | 2017     |                                |
| Volume debentures issued                               | 1,120.00                 | 3,996.80  | 5,010.45  | 5,006.05  | 4,402.29  | 333.25   | 19,868.84                      |
| Total CAPEX - Projects Linked to the issued Debentures | 18,699.36                | 12,591.59 | 26,184.69 | 27,843.51 | 52,204.73 | 783.19   | 138,307.07                     |
| Total CAPEX - Projects that have not issued Debentures | 31,386.88                | 33,988.70 | 40,458.13 | 65,114.92 | 26,616.97 | 1,103.56 | 198,669.16                     |

### Approved Projects - Volume Emission / CAPEX

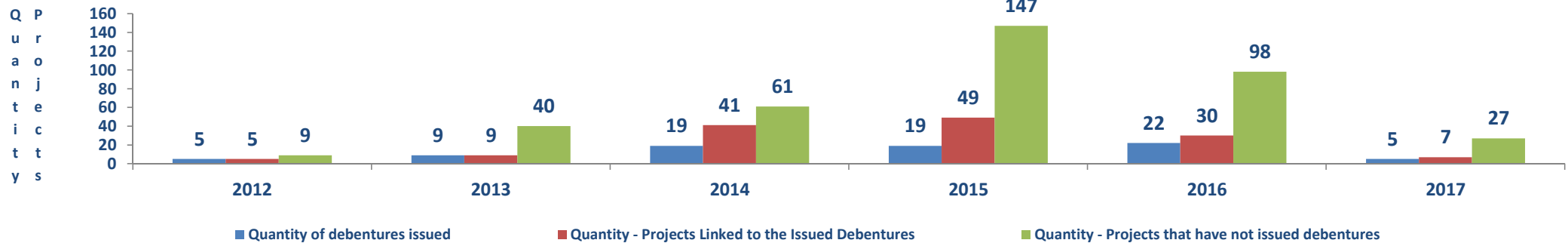


Source: Ministerial Orders issued and Linked Entities  
 Elaborated by COGTL/Seae/MF

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

| Status of Projects                                  | Quantity of issued debentures and approved projects |      |      |      |      |      | Quantity |
|---|---|------|------|------|------|------|----------|
|   | 2012  | 2013 | 2014 | 2015 | 2016 | 2017 |          |
| Quantity of Debentures Issued                       | 5   | 9    | 19   | 22   | 22   | 5    | 82       |
| Quantity - Projects Linked to the Issued Debentures | 5   | 9    | 41   | 30   | 30   | 7    | 122      |
| Quantity - Projects that have not issued Debentures | 9   | 40   | 61   | 98   | 98   | 27   | 333      |

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



Source: Ministerial Orders issued and Linked Entities

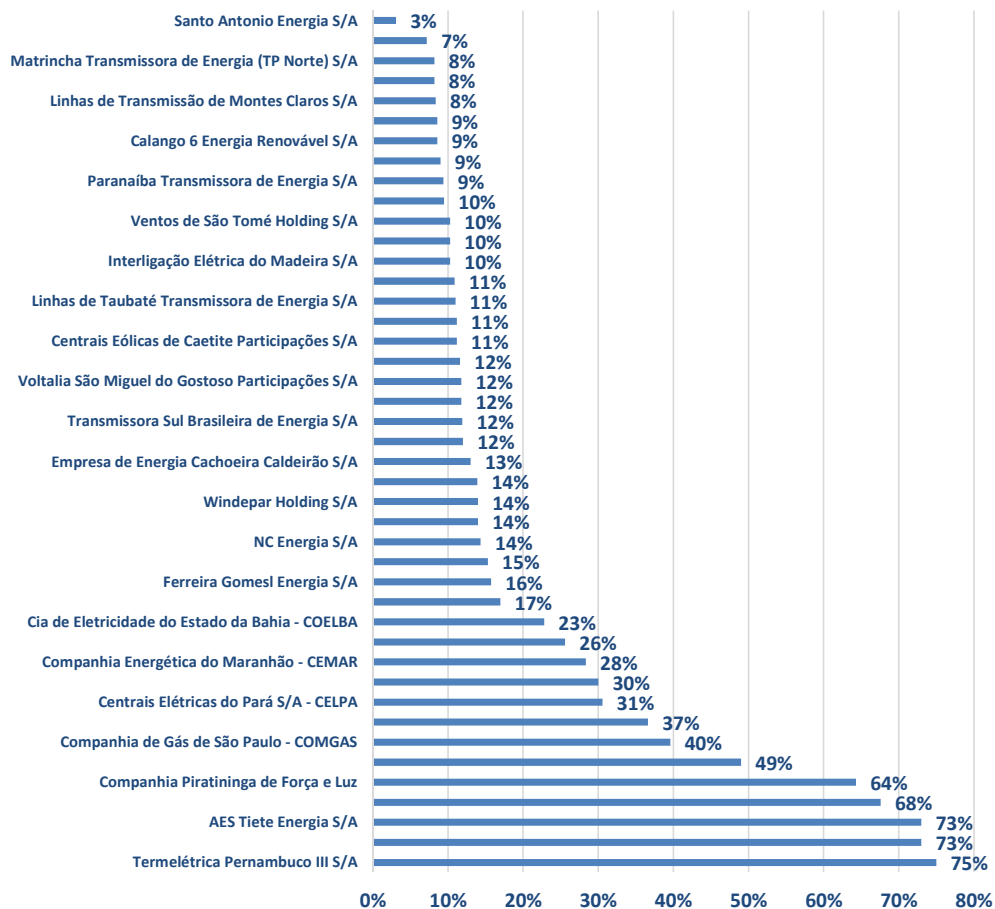
Elaborated by COGTL/Seae/MF

**Note :**

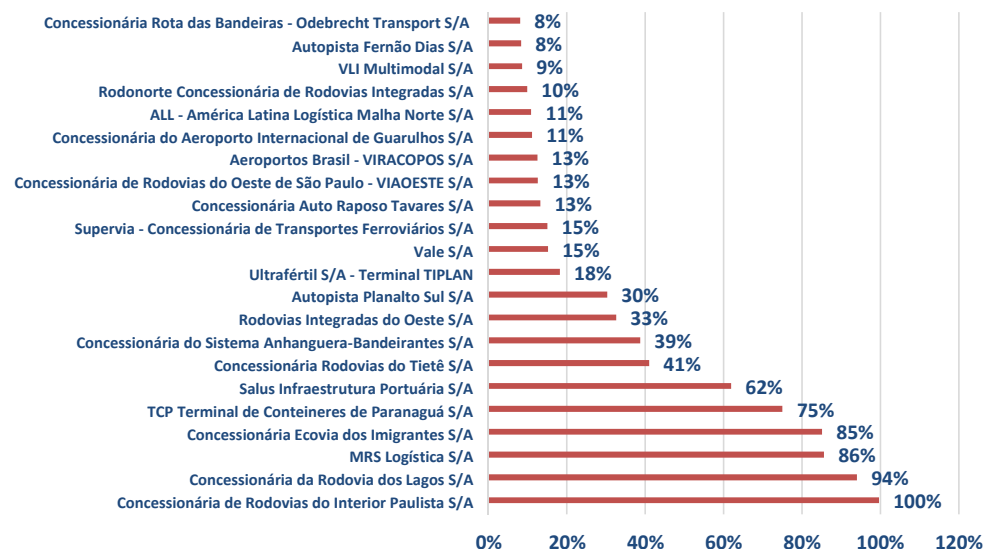
The difference between the amount of debentures issued and the number of Administrative Rules issued and Projects related to the debentures issued, is due to having more than one ordinance and project linked to a single debenture - example: Ventos de São Tomé Holding S / A (TOME12 ). We had 01 debenture issued for 07 (seven) Administrative Rules, therefore, 07 (seven) authorized project.

**Infrastructure Debentures Article 2 Law # 12,431/2011**  
**Infrastructure bonds issued by total project costs**  
**Sectors of Energy, Transport, Water and Sewerage and Telecoms**

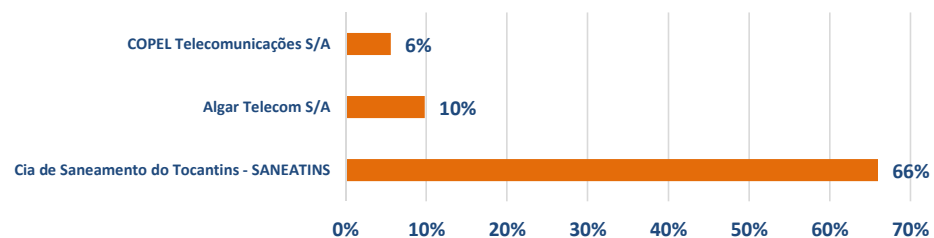
**Energy**



**Transport**



**Water and Sewerage and Telecoms**



Source: Prospectures and Deeds of issuance of debentures, rating reports, concession contracts and Coordinating Banks  
 Elaborated by COGTL/Seae/MF

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

Summary of the Real Estate Receivables Certificates<sup>1</sup> - CRI 's

| Sectors            | Shareholders of Petrobras  | Issuer   | Series           | Issued Value - R\$ million | Term Loan | Yield                          | Value of Investments <sup>2</sup> | Use of Resources  |
|--------------------|--|----------|------------------|----------------------------|-----------|--------------------------------|-----------------------------------|---|
|                    |  |          | 232 <sup>a</sup> | 2,350.00                   | 17 years  | TR <sup>(i)</sup> + 9,5 % year | Até R\$ 25 billion                | Civil construction project of the Petrochemical Complex of Rio de Janeiro - COMPERJ - in Itaboraí (in the State of Rio de Janeiro). |
| Oil and Gas        | Brazilian Government; BNDES Participations S/A - BNDESPAR; Brazilian Development Bank's - BNDES; Social Participation Fund (FPS), managed by BNDES; Brazilian sovereign wealth fund - Fiscal Fund for Investment and Stabilization - (FFIE); ADR (common stock); ADR (preferred stock); FMP - FGTS Petrobras; Non-Resident Investor (CMN Resolution # 2,689 <sup>a</sup> , dated October 31, 2001) and Other Investors: Individuals and corporation. | CIBRASEC | 234 <sup>a</sup> | 1,650.00                   | 17 years  | TR + 9,5 % year                | R\$ 26 billion                    | Civil construction project of Abreu e Lima Refinery in the metropolitan region of Recife - PE (in the State of Pernambuco).         |
| <b>Total .....</b> |  |          |                  | <b>4,000.00</b>            |           |                                |                                   |   |

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

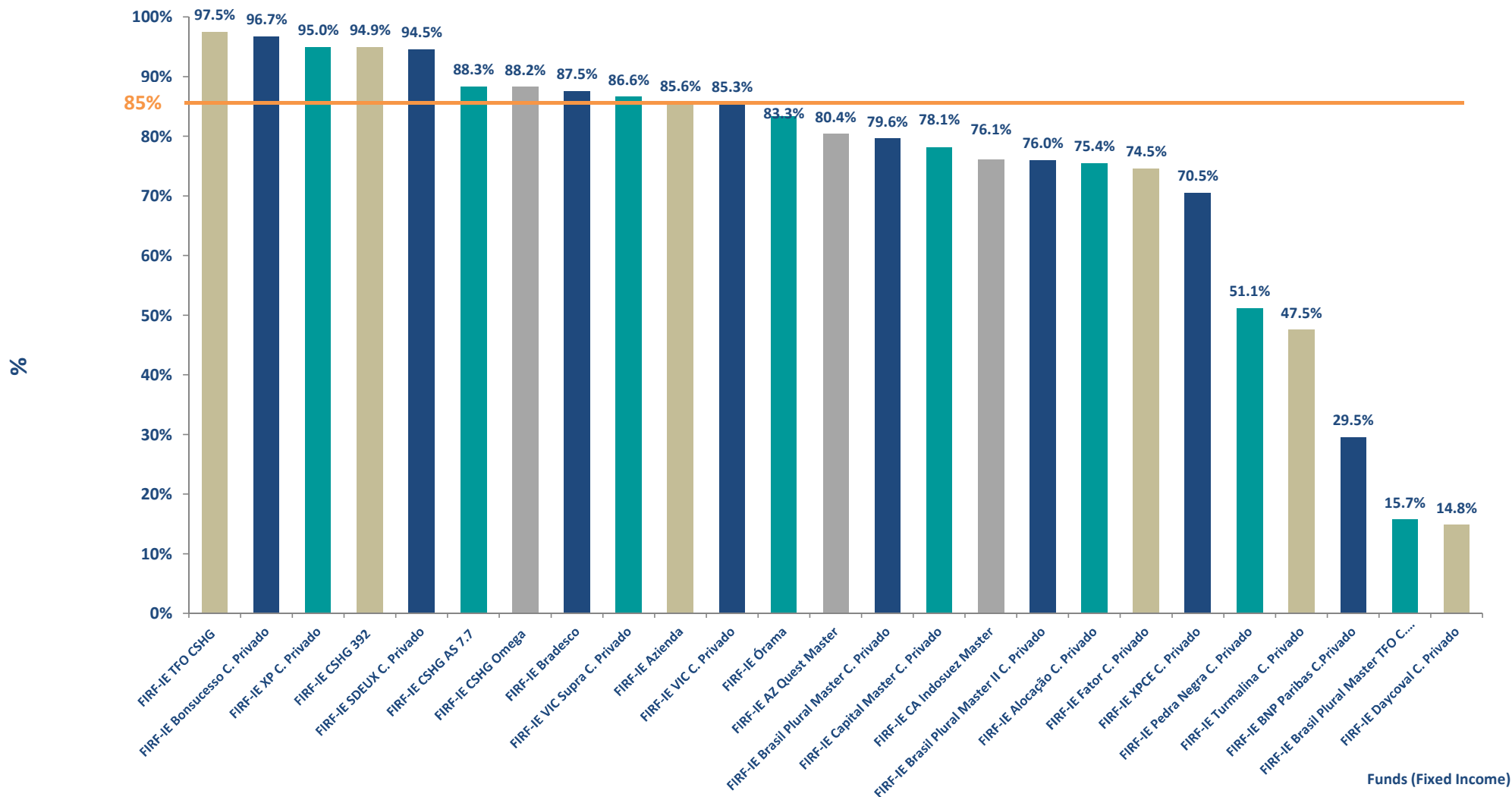
| Infrastructure Bonds Investment funds       | Infrastructure Debentures | Time Deposits and Other Financial Securities | Fund of Funds | Government Securities Repurchase | Brazilian Government Bonds | Other         | Net Equity      | Debentures / Net Equity |
|---|---------------------------|--|---------------|----------------------------------|----------------------------|---------------|-----------------|-------------------------|
|   | (R\$ million)             | (R\$ million)                                | (R\$ million) | (R\$ million)                    | (R\$ million)              | (R\$ million) | (R\$ million)   |                         |
| FIRF-IE Bradesco                            | 83.71                     | 0.00   | 0.00          | 3.07                             | 8.92                       | (0.05)        | 95.65           | 88%                     |
| FIRF-IE XP C. Privado                       | 147.18                    | 0.00   | 5.23          | 3.67                             | 0.00                       | (1.09)        | 154.98          | 95%                     |
| FIRF-IE CSHG AS 7.7                         | 28.35                     | 0.00   | 0.00          | 3.66                             | 0.10                       | (0.00)        | 32.11           | 88%                     |
| FIRF-IE CSHG 392                            | 196.70                    | 0.00   | 0.00          | 2.77                             | 7.72                       | (0.01)        | 207.18          | 95%                     |
| FIRF-IE TFO CSHG                            | 44.81                     | 0.00   | 0.00          | 0.00                             | 1.17                       | (0.01)        | 45.98           | 97%                     |
| FIRF-IE Azienda                             | 35.66                     | 0.00   | 0.00          | 3.66                             | 2.36                       | (0.01)        | 41.67           | 86%                     |
| FIRF-IE CSHG Omega                          | 144.61                    | 0.00   | 0.00          | 18.49                            | 0.82                       | (0.02)        | 163.89          | 88%                     |
| FIRF-IE CA Indosuez Master                  | 61.47                     | 2.65   | 1.00          | 12.99                            | 2.65                       | (0.01)        | 80.76           | 76%                     |
| FIRF-IE Brasil Plural Master C. Privado     | 92.76                     | 14.72  | 0.10          | 2.62                             | 6.14                       | 0.23          | 116.57          | 80%                     |
| FIRF-IE Bonsucesso C. Privado               | 17.46                     | 0.00   | 0.61          | 0.00                             | 0.00                       | (0.02)        | 18.05           | 97%                     |
| FIRF-IE Alocação C. Privado                 | 127.04                    | 11.69  | 17.64         | 12.09                            | 0.00                       | (0.09)        | 168.38          | 75%                     |
| FIRF-IE Fator C. Privado                    | 90.87                     | 2.38   | 0.00          | 3.40                             | 24.17                      | 1.11          | 121.93          | 75%                     |
| FIRF-IE SDEUX C. Privado                    | 8.80                      | 0.00   | 0.00          | 0.34                             | 0.16                       | 0.01          | 9.31            | 95%                     |
| FIRF-IE Órama                               | 8.99                      | 0.00   | 0.47          | 1.35                             | 0.00                       | (0.01)        | 10.79           | 83%                     |
| FIRF-IE VIC C. Privado                      | 26.41                     | 0.00   | 3.00          | 1.24                             | 0.00                       | 0.30          | 30.95           | 85%                     |
| FIRF-IE XPCE C. Privado                     | 76.47                     | 10.88  | 12.80         | 3.43                             | 0.00                       | 4.96          | 108.54          | 70%                     |
| FIRF-IE Pedra Negra C. Privado              | 64.02                     | 0.00   | 2.35          | 17.76                            | 0.00                       | 41.06         | 125.19          | 51%                     |
| FIRF-IE Turmalina C. Privado                | 30.06                     | 18.85  | 0.00          | 0.00                             | 14.37                      | 0.00          | 63.27           | 48%                     |
| FIRF-IE VIC Supra C. Privado                | 64.33                     | 0.00   | 9.96          | 0.00                             | 0.00                       | 0.02          | 74.32           | 87%                     |
| FIRF-IE AZ Quest Master                     | 28.75                     | 1.76   | 1.32          | 0.30                             | 1.35                       | 2.29          | 35.77           | 80%                     |
| FIRF-IE Brasil Plural Master TFO C. Privado | 6.20                      | 0.00   | 0.31          | 31.06                            | 1.90                       | (0.02)        | 39.44           | 16%                     |
| FIRF-IE Daycoval C. Privado                 | 0.77                      | 0.57   | 0.40          | 1.62                             | 1.87                       | (0.00)        | 5.23            | 15%                     |
| FIRF-IE Capital Master C. Privado           | 34.49                     | 0.60   | 9.06          | 0.00                             | 0.00                       | (0.01)        | 44.14           | 78%                     |
| FIRF-IE BNP Paribas C. Privado              | 21.60                     | 8.76   | 0.00          | 42.99                            | 0.00                       | (0.08)        | 73.27           | 29%                     |
| FIRF-IE Brasil Plural Master II C. Privado  | 119.70                    | 19.74  | 0.14          | 3.43                             | 13.90                      | 0.62          | 157.54          | 76%                     |
| <b>Total .....</b>                          | <b>1,561.21</b>           | <b>92.61</b>                                 | <b>64.39</b>  | <b>169.93</b>                    | <b>87.60</b>               | <b>49.18</b>  | <b>2,024.92</b> |                         |

Source : CVM - Securities and Exchange Commission of Brazil

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, there is a 180 days period to fulfill the investment requirements above.

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



Source : CVM  
Elaborated by COGTL/Seae/MF



## FIC-FI -Fund of Funds - Law # 12,431/2011

| Infrastructure funds                  | Fund of Funds | Time Deposits and<br>Other Financial<br>Securities | Government<br>Securities<br>Repurchase | Brazilian<br>Government Bonds | Other         | Net Equity    | Fund of Funds / Net<br>Equity |
|---------------------------------------|---------------|--|--|-------------------------------|---------------|---------------|-------------------------------|
|                                       | (R\$ million) | (R\$ million)                                      | (R\$ million)                          | (R\$ million)                 | (R\$ million) | (R\$ million) |                               |
| FIC-IE XP Multimercado                | 151.90        | 0.00   | 0.00                                   | 0.00                          | (0.26)        | 151.64        | 100%                          |
| FIC-IE TFO Multimercado               | 26.34         | 0.00   | 0.00                                   | 0.00                          | (0.01)        | 26.33         | 100%                          |
| FIC-IE CA Indosuez Infra Multimercado | 80.76         | 0.00   | 0.00                                   | 0.29                          | (0.13)        | 80.92         | 100%                          |
| FIC-IE Brasil Plural 30 Multimercado  | 87.05         | 0.00   | 0.00                                   | 0.00                          | (0.35)        | 86.70         | 100%                          |
| FIC-IE Geração Futuro Multimercado    | 29.52         | 0.00   | 0.00                                   | 0.00                          | 0.23          | 29.75         | 99%                           |
| FIC-IE RB Capital Multimercado        | 44.27         | 0.00   | 0.00                                   | 0.00                          | 0.15          | 44.43         | 100%                          |
| FIC-IE AZ Quest Multimercado          | 14.36         | 0.00   | 0.00                                   | 0.00                          | (0.02)        | 14.33         | 100%                          |
| FIC-IE Brasil Plural 45 Multimercado  | 86.66         | 0.00   | 0.00                                   | 0.00                          | (0.11)        | 86.55         | 100%                          |
| FIC-IE DLM Multimercado               | 9.99          | 0.00   | 0.00                                   | 0.00                          | (0.00)        | 9.99          | 100%                          |
| FIC-IE Geração Futuro II              | 68.60         | 0.00   | 0.00                                   | 0.00                          | 2.12          | 70.72         | 97%                           |
| <b>Total.....</b>                     | <b>599.46</b> | <b>0.00</b>  | <b>0.00</b>                            | <b>0.29</b>                   | <b>1.61</b>   | <b>601.36</b> |                               |

Source : 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, there is a 180 days period 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 Financial | Fund of Funds | Government Securities Repurchase | Brazilian Government Bonds | Other         | Net Equity    | Credit Rights / Net Equity |
|--|---------------|-----------------------------------|---------------|----------------------------------|----------------------------|---------------|---------------|----------------------------|
|  | (R\$ million) | (R\$ million)                     | (R\$ million) | (R\$ million)                    | (R\$ million)              | (R\$ million) | (R\$ million) |                            |
| <b>Total Geral</b>                           | <b>398.89</b> | <b>0.00</b>                       | <b>0.00</b>   | <b>0.00</b>                      | <b>13.02</b>               | <b>1.68</b>   | <b>413.59</b> | <b>96%</b>                 |
| <b>Total .....</b>                           | <b>398.89</b> | <b>0.00</b>                       | <b>0.00</b>   | <b>0.00</b>                      | <b>13.02</b>               | <b>1.68</b>   | <b>413.59</b> |                            |

Source : CVM

Elaborated by COGTL/Seae/MF

**Note :**

- (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&I<sup>1</sup> under the terms of Laws # 11,478/2007 and # 12,431/2011

| Infrastructure funds <sup>2</sup>            | Stocks          | Investment Fund Quotas | Federal Government Bonds | Government Securities Repurchase | Simple Debentures | Other Applications | Forward Market Buyer | Other 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          | 0.35                   | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (0.04)          | 107.42          |
| FIP-IE Infra Votorantim Saneamento           | 0.00            | 0.01                   | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | 0.00            | 0.01            |
| FIP-IE Infra BB Votorantim Energia Sust. I   | 61.72           | 74.63                  | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (2.37)          | 133.98          |
| FIP-IE Infra BB Votorantim Energia Sust. II  | 88.54           | 101.53                 | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (3.36)          | 186.72          |
| FIP-IE Infra BB Votorantim Energia Sust. III | 85.12           | 109.07                 | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (5.20)          | 188.99          |
| 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               | 2,936.49        | 0.57                   | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (0.15)          | 2,936.91        |
| 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                    | 111.80          | 0.44                   | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (5.02)          | 107.22          |
| FIP-IE Infra Origem                          | 239.76          | 0.22                   | 0.00                     | 0.00                             | 0.00              | 0.00               | 0.00                 | (175.06)        | 64.93           |
| <b>Total .....</b>                           | <b>4,214.32</b> | <b>287.46</b>          | <b>0.06</b>              | <b>0.00</b>                      | <b>0.00</b>       | <b>0.00</b>        | <b>0.19</b>          | <b>(191.50)</b> | <b>4,310.54</b> |

Source : CVM

Elaborated by COGTL/Seae/MF

**Note:**

(1) FIP-IE: Investment Fund (investment in infrastructure) and FIP-PD &amp; I: Investment Fund for Participation in Research, Development and Innovation-Intensive Economic Production.

(2) (i) The FIP-IE and FIP-PD&amp;I must have a minimum of 5 quota holders and no quota holder may hold more than 40% of the quotas issued by Fund (FIP-IE or FIP-PD&amp;I) or earnings above 40% of the fund's earnings.

(ii) The FIP-IE and FIP-PD&amp;I must be closed-end fund.

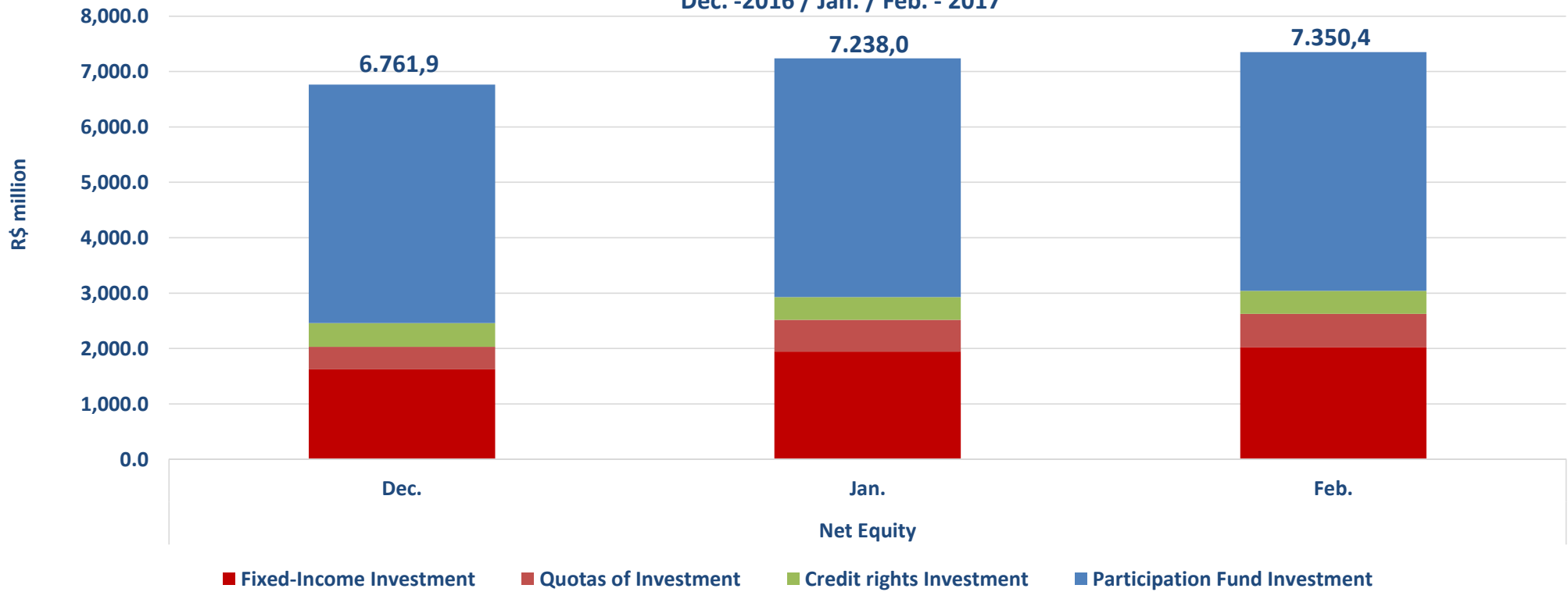
(iii) The FIP-IE and FIP-PD&amp;I must maintain a minimum of 90% of its net worth invested in shares, subscription bonds, debentures (convertible or not into shares) or other bonds issued by either a publicly or closely-held company.

(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&amp;I must participate 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.

Brazilian Fund of Funds - Net Equity  
Dec. -2016 / Jan. / Feb. - 2017



Source: CVM  
Elaborated by COGTL/Seae/MF

**Secretary for Economic Monitoring**

*Mansueto Facundo de Almeida Júnior*

**Undersecretary**

*Angelo José Mont'alverne Duarte*

**Coordinator (substitute)**

*Jônatas Bezerra de Souza*

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*Alexandre Araújo Carneiro*

*Francisco Mendes de Alencar Filho*

*Marco Antonio de Gouvêa*

**Support**

*André Gustavo Borba Assumpção Haui*