



Ministry of Economy

# 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 2019

63 th Edition



Economic Policy  
Secretariat

Objective: Law 12,431/11

Present the number of projects authorized to raise funds in the capital markets, as well as the number and volume of debentures issued (Investment Projects and Infrastructure Investment Projects of Law 12,431 of 2011).

In particular, the market for incentive debentures for infrastructure is analyzed, in accordance with current legislation.

**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.
- CVM Ruling 400 - Public Offer. CVM Ruling 476 - limited public offering in which up to 50 professional investors can participate.
- 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.
- Infrastructure Bond (also referred to as Law # 12,431 article 2 debenture) - tax-exempt bond for resident natural persons. A ten-percentage point reduction for local companies. Funds raised must be used in infrastructure investments or in research, development and innovation-intensive economic production.
- Decree 8.874 / 2016, which regulates the tax benefit of DI's, currently covers seven sectors: (i) logistics and Transport; (ii) Urban Mobility; (iii) Energy; (iv) Telecoms; (v) Radiofusion; (vi) Water and Sewerage (vii) Irrigation (Article 2).



The incentivized debentures instituted by Law 12,431 / 2011, related to investment projects in general and specifically to investment projects in the area of infrastructure defined as priority and regulated by Decree No. 8.874 / 2016, enjoy tax benefits and constitute a funding mechanism long-term via the capital market, as an alternative to traditional sources of financing.

In february 2019, it was offered in the market with restricted distribution efforts 07 (seven) debentures of infrastructure, linked to the energy sector (transmission, oil and gas) and transport sector (railroad). The total volume of the supply distributed in the period was R\$ 3.5 billion. Between 2012 and february 2019, the total volume disbursed in infrastructure debentures, with ample and restrictive efforts was R\$ 53.6 billion.

Regarding total Issuances distruted 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\$ 19.1 billion of the total amount until february 2019, corresponding to 35.6% of all incentive debentures distributed 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 3.7% against 1.6% 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 7.4% , against an increase of 12.4% in the IDA-IPCA (National Consumer Price Index (IPCA)-CPI) Infrastructure and 11.2% in the IDA-IPCA Exclusive Infrastrucutre. 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 3.8%, compared to 0.3% and 3.5% for IDA-DI (Interbank Deposits - DI) and IDA-IPCA Exclusive Infrastructure, respectively.

Regardin Infrastructure Funds, the percentage investement in Debentures through february 2019 in Fixed Income Funds (Fundos de Renda Fixa - FIRF), was 77%, while investments in Direct Credit Funds reached 83%, of Net Equity (NE).

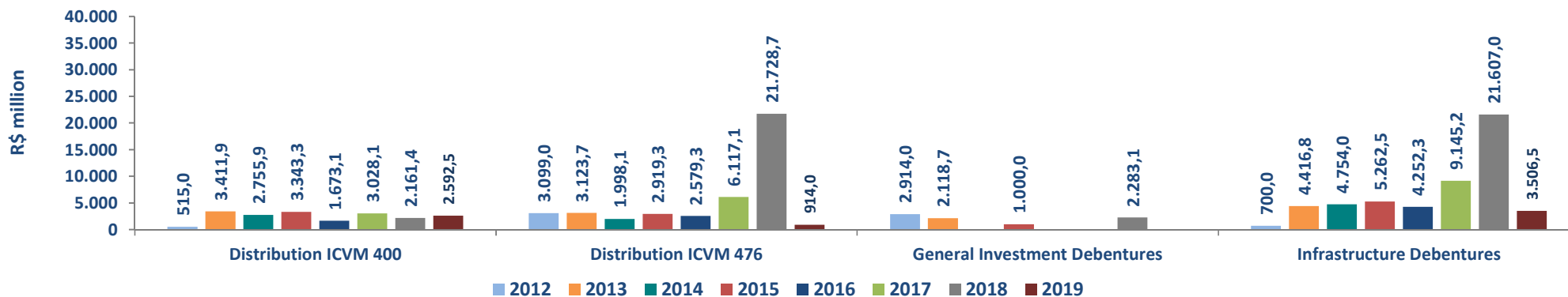
Law No. 12,431/11 prescribes a minimum investment of 85% of Net Equity in infrastructure projects (debentures, quota funds, and dirct credits), although in the firts two years from the first pay-in, the minimum permitted percentage of infrastructure assets relative to Net Equity is 67%.

The National Civil Aviation Agency (ANAC) made available on its website - ([www.anac.gov.br/assuntos/paginas-tematicas/concessoes](http://www.anac.gov.br/assuntos/paginas-tematicas/concessoes)) - the financial demonstrations of the airports granted. Such an initiative may contribute to the development of the secondary market for debentures in the sector.

Law # 12,431/2011 - Capex and Infrastructure Bonds: 2012 to 2019<sup>1</sup>

INFRASTRUCTURE DEBENTURE	Value (R\$ million)								Total Value
	2012	2013	2014	2015	2016	2017	2018	2019	
Distribution ICVM 400 <sup>2</sup>	515.0	3,411.9	2,755.9	3,343.3	1,673.1	3,028.1	2,161.4	2,592.5	19,481.1
Distribution ICVM 476 <sup>3</sup>	3,099.0	3,123.7	1,998.1	2,919.3	2,579.3	6,117.1	21,728.7	914.0	42,479.1
<b>Total.....</b>	<b>3,614.0</b>	<b>6,535.6</b>	<b>4,754.0</b>	<b>6,262.5</b>	<b>4,252.3</b>	<b>9,145.2</b>	<b>23,890.1</b>	<b>3,506.5</b>	<b>61,960.1</b>
General Investment Debentures	2,914.0	2,118.7	0.0	1,000.0	0.0	0.0	2,283.1	0.0	8,315.8
Infrastructure Debentures	700.0	4,416.8	4,754.0	5,262.5	4,252.3	9,145.2	21,607.0	3,506.5	53,644.3
<b>Total.....</b>	<b>3,614.0</b>	<b>6,535.6</b>	<b>4,754.0</b>	<b>6,262.5</b>	<b>4,252.3</b>	<b>9,145.2</b>	<b>23,890.1</b>	<b>3,506.5</b>	<b>61,960.1</b>

Capex and Infrastructure Bonds: 2012 to 2019



Source: Anbima - Brazilian Financial and Capital Markets Association and Ministerial Orders  
Elaborated by SPE/ME

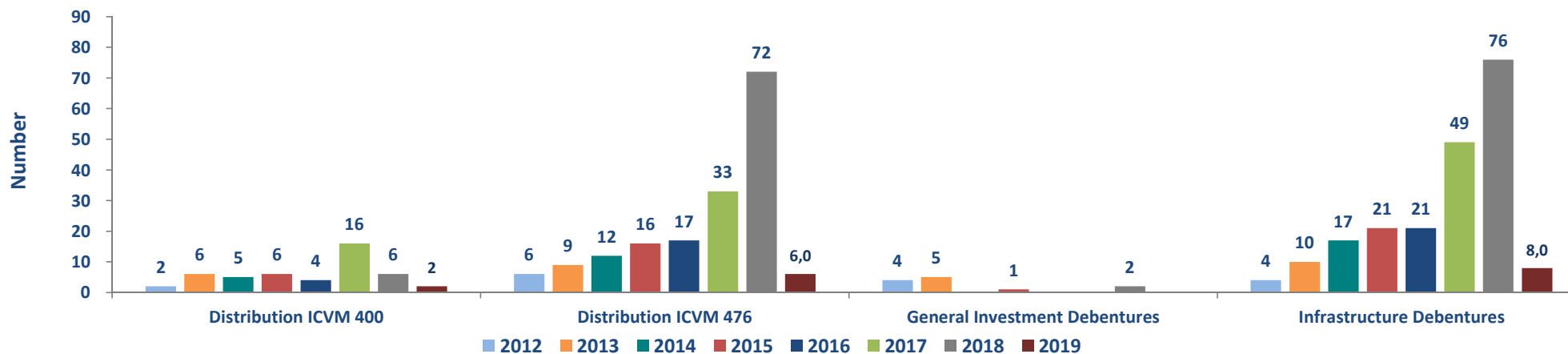
Note:

- (1) Volume by year of distribution
- (2) CVM Ruling 400 - Public Offer
- (3) CVM Ruling 476 - limited public offering in which up to 50 professional investors can participate.

Law # 12,431/2011 - Number of Capex and Infrastructure Bonds: 2012 to 2019<sup>1</sup>

INFRASTRUCTURE DEBENTURE	Number								Total Number
	2012	2013	2014	2015	2016	2017	2018	2019	
Distribution ICVM 400 <sup>2</sup>	2	6	5	6	4	16	6	2	47
Distribution ICVM 476 <sup>3</sup>	6	9	12	16	17	33	72	6	171
<b>Total.....</b>	<b>8</b>	<b>15</b>	<b>17</b>	<b>22</b>	<b>21</b>	<b>49</b>	<b>78</b>	<b>8</b>	<b>218</b>
General Investment Debentures	4	5	0	1	0	0	2	0	12
Infrastructure Debentures	4	10	17	21	21	49	76	8	206
<b>Total.....</b>	<b>8</b>	<b>15</b>	<b>17</b>	<b>22</b>	<b>21</b>	<b>49</b>	<b>78</b>	<b>8</b>	<b>218</b>

Number of Capex and Infrastructure Bonds: 2012 to 2019



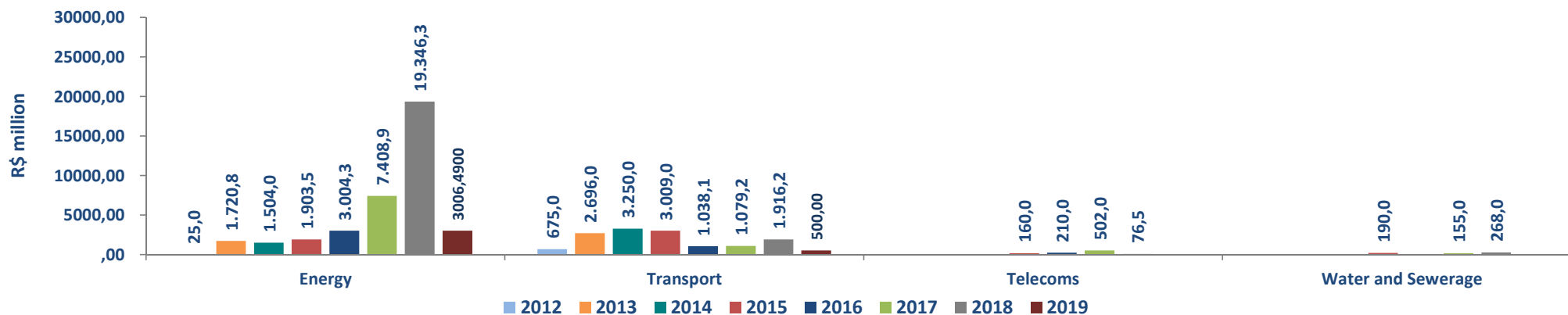
Source: Anbima - Brazilian Financial and Capital Markets Association and Ministerial Orders  
 Elaborated by SPE/ME

- Note:**
- (1) Quantity by year of distribution
  - (2) CVM Ruling 400 - Public Offer
  - (3) CVM Ruling 476 - limited public offering in which up to 50 professional investors can participate.

Law # 12,431/2011 - Infrastructure Bonds: 2012 to 2019<sup>1</sup>  
(by sector)

Sector Debenture	Value (R\$ million)								Total Value
	2012	2013	2014	2015	2016	2017	2018	2019	
Energy	25.0	1,720.8	1,504.0	1,903.5	3,004.3	7,408.9	19,346.3	3,006.5	37,919.2
Transport	675.0	2,696.0	3,250.0	3,009.0	1,038.1	1,079.2	1,916.2	500.0	14,163.5
Telecoms	0.0	0.0	0.0	160.0	210.0	502.0	76.5	0.0	948.5
Water and Sewerage	0.0	0.0	0.0	190.0	0.0	155.0	268.0	0.0	613.0
Total.....	700.0	4,416.8	4,754.0	5,262.5	4,252.3	9,145.2	21,607.0	3,506.5	53,644.3

Infrastructure Bonds - 2012 to 2019



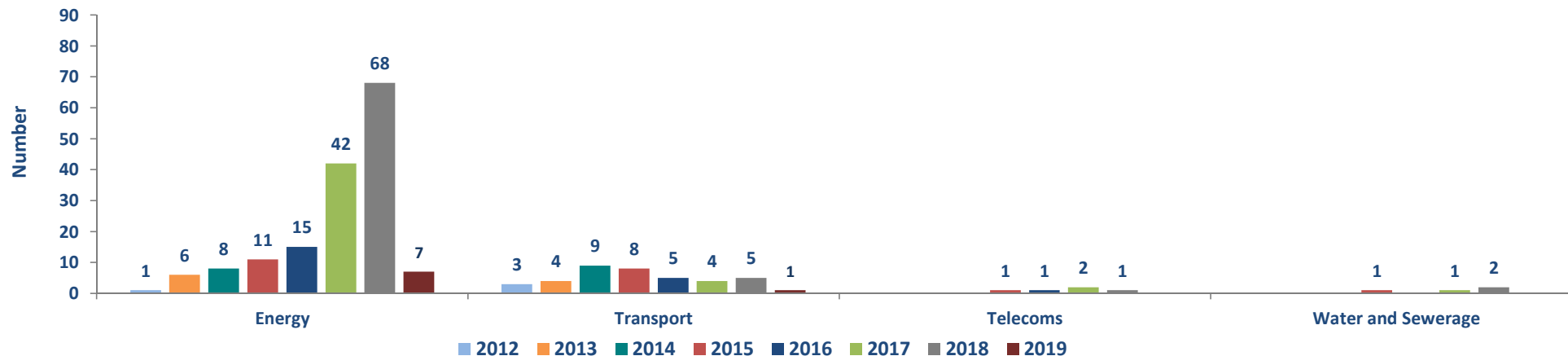
Source: Anbima and Ministerial Ordinances  
Elaborated by SPE/ME

Note:  
(1) Volume by year of distribution

Number of infrastructure Bonds - Law # 12,431/11: 2012 to 2019<sup>1</sup>  
(by sector)

Sector Debenture	Number								Total Number
	2012	2013	2014	2015	2016	2017	2018	2019	
Energy	1	6	8	11	15	42	68	7	158
Transport	3	4	9	8	5	4	5	1	39
Telecoms	0	0	0	1	1	2	1	0	5
Water and Sewerage	0	0	0	1	0	1	2	0	4
<b>Total.....</b>	<b>4</b>	<b>10</b>	<b>17</b>	<b>21</b>	<b>21</b>	<b>49</b>	<b>76</b>	<b>8</b>	<b>206</b>

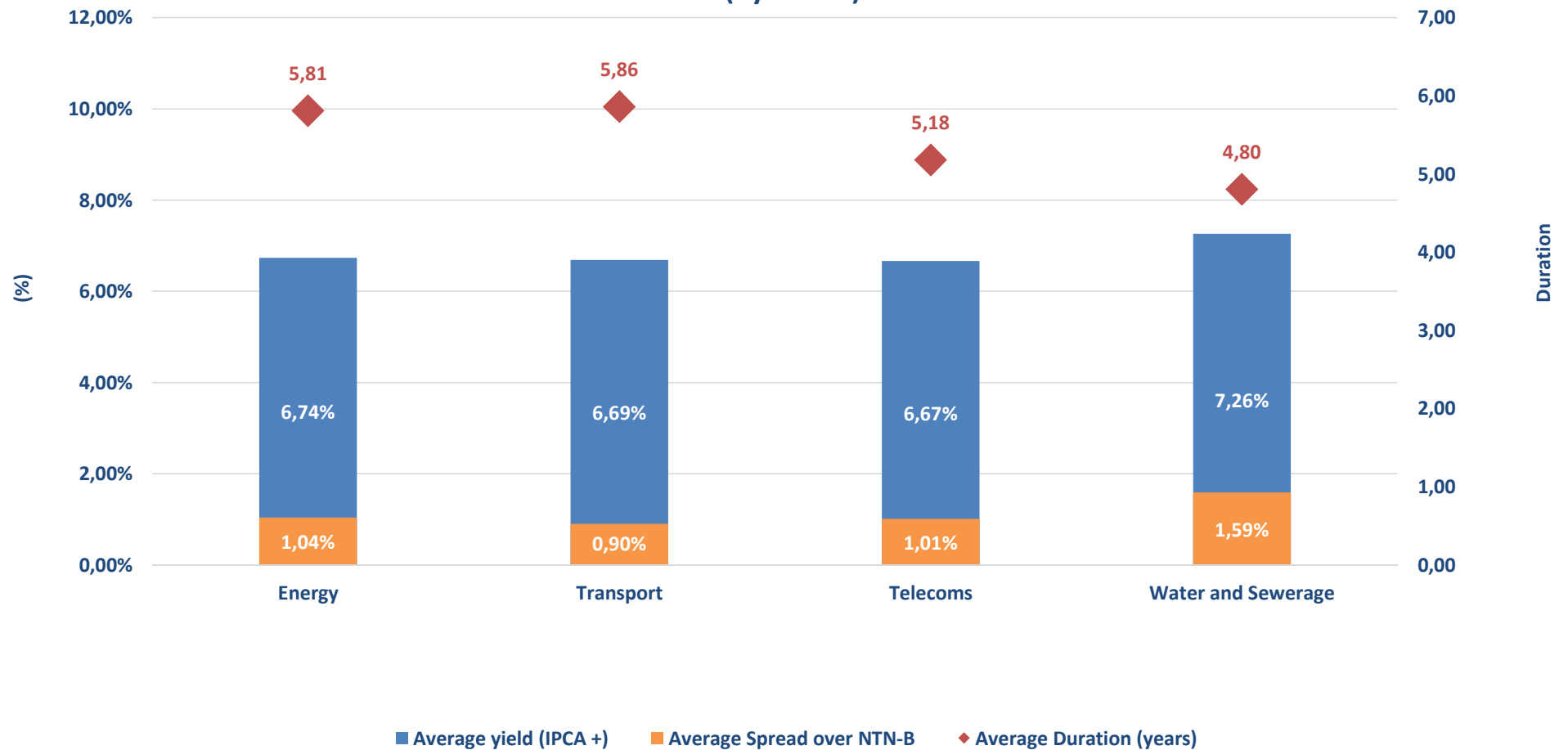
Number of infrastructure Bonds - 2012 to 2019



Source: Anbima and Ministerial Ordinances  
Elaborated by SPE/ME

Note:  
(1) Quantity by year of distribution

Average - Remuneration, Spread and Duration  
Debentures Infrastructure  
(by sector)

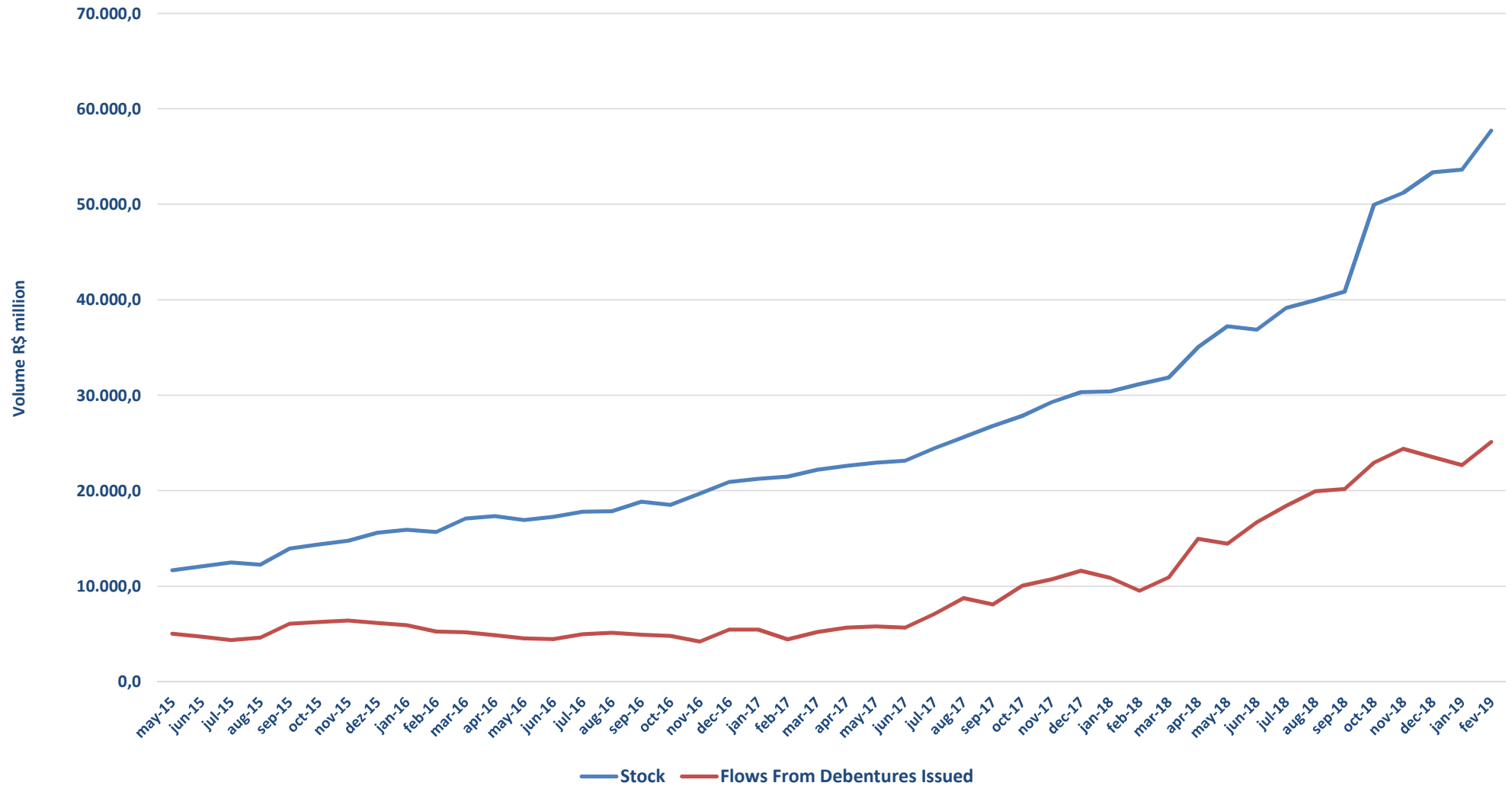


Source: Anbima  
Elaborated by SPE/ME

Note: Duration of macaulay expressed in years (252 d.u.)  
Consumer Price Index - CPI (IPCA)



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



Source: Anbima and Ministerial Ordinances

Elaborated by SPE/ME

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

## Capex Bonds: Law # 12,431/2011 - General Investment Debentures - 2012

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
Minerva S/A - (Early Redemption)	BEEF13	6/20/2012	1/29/2022	ICVM 476	10	450.0	Pré 16,95%	Foods	BB (bra) Fitch
Rio Canoas Energia S/A.	RCNE22	8/15/2012	12/15/2024	ICVM 476	12	75.0	IPCA + 7,89%	Energy	N/D
OGX Petróleo e Gás S/A - (Debet Restructuring)	OGXP11	9/28/2012	3/28/2022	ICVM 476	10	2,025.0	Pré 10,50%	Oil and Gas	A+ (bra) Fitch
BR Malls Participações S/A - (Early Redemption)	BRML13	12/17/2012	1/17/2024	ICVM 476	11	364.0	Pré 13,49%	Comercial Centers	AA+ (bra) Fitch
<b>Total.....</b>						<b>2,914.0</b>			

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) Consumer Price Index - CPI (IPCA)

## Capex Bonds: Law # 12,431/2011 - General Investment Debentures - 2013

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
Marfrig Global Foods S.A. (Expired)	MRFG14	4/15/2013	1/22/2019	ICVM 476	6	570.0	Pré 15,85%	Foods	AA+ (bra) Fitch
Centrad - Conc. Centro Adm. Distrito Federal S/A. - (Early Redemption)	CTRD11	7/11/2013	3/15/2018	ICVM 476	5	50.0	IPCA + 7,97%	Real Estate Industry	N/D
	CTRD21					50.0			
OAS S.A. - (Debet Restructuring)	OAEP18	7/25/2013	7/21/2024	ICVM 476	11	347.4	Pré 9,47%	Sanitation and Shipyard	BB+sf (bra) Fitch
	OAEP28					347.4			
Larargehoicim (BKA31L) S/A - (Resgate total Antecipado)	HOLC11	10/21/2013	10/1/2023	ICVM 476	10	450.0	Pré 14%	Cement	AAA
Raizen Energia S/A	RESA31	10/29/2013	10/15/2020	ICVM 400	7	304.0	IPCA + 6,38%	Production of Sugar and Ethanol	brAAA (S&P)
<b>Total.....</b>						<b>2,118.7</b>			

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) Consumer Price Index - CPI (IPCA)

## Capex Bonds: Law # 12,431/2011 - General Investment Debentures - 2015

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
AMBEV S/A	ABEV11	10/30/2015	10/30/2021	ICVM 476	6	1,000.0	Pré 14,47%	Drink	brAAA (S&P)
<b>Total.....</b>						<b>1,000.0</b>			

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) Consumer Price Index - CPI (IPCA)

## Capex Bonds: Law # 12,431/2011 - General Investment Debentures - 2018

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
Rede D'OR São Luiz S/A	HSLZA0	1/4/2018	1/13/2028	ICVM 476	10	1,628.1	Pré 11,82%	Health	AA (bra) Fitch
Heinz Brasil S/A	HENZ11	4/11/2018	4/15/2028	ICVM 476	10	655.0	Pré 11,50%	Foods	N/D
<b>Total.....</b>						<b>2,283.1</b>			

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) Consumer Price Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2012

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Linhas de Transmissão de Montes Claros S/A.	LTMC12	9/27/2012	4/15/2029	ICVM 476	17	12.9	25.0	IPCA + 8,75%	Energy	4.51%	AA+ (bra) Fitch
Rumo Malha Norte S/A.	FERR18	10/18/2012	10/18/2020	ICVM 476	8	5.7	160.0	Prefixado 10,10%	Transport	N/D	A (bra) Fitch
Concessionária Sistema Anhanguera - Bandeirantes S.A. - (Expired)	ANHB24	10/22/2012	10/15/2017	ICVM 400	5	4.3	135.0	IPCA + 2,71%	Transport	0.01%	brAAA (S&P)
Concessionária Auto Raposo Tavares S/A	CART12	12/26/2012	12/15/2024	ICVM 400	12	7.9	380.0	IPCA + 5,80%	Energy	2.41%	AA+ (bra) Fitch
<b>Total.....</b>							<b>700.00</b>				

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) 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.

(2) Consumer Price Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2013

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Santo Antonio Energia S/A.	SAES12	1/24/2013	12/27/2022	ICVM 476	10	6.2	420.0	IPCA + 6,20%	Energy	3.11%	N/D
Interligação Elétrica do Madeira S/A.	IEMD12	3/18/2013	3/18/2025	ICVM 476	12	7.0	350.0	IPCA + 5,50%	Energy	1.69%	AA+ (bra) Fitch
Concessionária Ecovias dos Imigrantes S/A.	ECOV12	5/7/2013	4/15/2020	ICVM 400	7	5.9	200.0	IPCA + 3,80%	Transport	0.00%	AAA (bra) Fitch
	ECOV22	5/7/2013	4/15/2024		11	5.7	681.0	IPCA + 4,28%		0.20%	
Concessionária Rodovias do Tietê S/A.	RDVT11	7/5/2013	6/15/2028	ICVM 400	15	7.4	1,065.0	IPCA + 8,00%	Transport	2.16%	Aa2 (br)- Moody's
CIA de Gás de São Paulo - Comgás - (Expired)	GASP23	10/9/2013	9/15/2018	ICVM 400	5	3.7	269.3	IPCA + 5,10%	Energy	0.00%	AA+ (bra) Fitch
	GASP33	10/10/2013	9/15/2020		7	5.6	142.5	IPCA + 5,57%		0.31%	
Concessionária Sistema Anhanguera - Bandeirantes S.A. - (Expired)	ANHB15	10/17/2013	10/15/2018	ICVM 400	5	4.5	450.0	IPCA + 4,88%	Transport	(0.38)%	AA+ (bra) Fitch
Norte Brasil Transmissora de Energia S/A	NRTB11	10/21/2013	9/15/2026	ICVM 476	13	7.4	100.0	IPCA + 7,15%	Energy	1.55%	AAA (bra) Fitch
	NRTB21				13	7.4	100.0			1.55%	
Odebrecht Transport S/A	ODTR11	11/14/2013	10/15/2025	ICVM 476	12	8.6	300.0	IPCA + 6,70%	Transport	1.55%	A+ (bra) Fitch
Jauru Transmissora de Energia S/A.	JAUR12	11/25/2013	12/15/2030	ICVM 476	18	10.4	39.0	IPCA + 8,00%	Energy	2.29%	AA- (bra) Fitch
	TEPE11						75.0				
Termalétrica Pernambuco III S.A. - (Early Redemption)	TEPE21	12/20/2013	11/15/2025	ICVM 400	12	5.0	75.0	IPCA + 9,11%	Energy	2.75%	AA+ (bra) Fitch
	TEPE31						75.0				
	TEPE41						75.0				
							75.0				
<b>Total.....</b>							<b>4,416.8</b>				

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) 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.

(2) Consumer Price Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2014

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Aeroportos Brasil - Viracopos S/A (Early Redemption)	VRCP11						75.0				
	VRCP21	2/5/2014	9/15/2025	ICVM 476	12	7.4	75.0	IPCA + 8,79%	Transport	2.27%	AA- (bra) Fitch
	VRCP31						75.0				
	VRCP41						75.0				
	75.0										
Vale S/A	VALE18	2/10/2014	1/15/2021	ICVM 400			600.0	IPCA + 6,46%	Transport	(0.15)%	brAAA (S&P)
	VALE28						150.0	IPCA + 6,57%		(0.10)%	
	VALE38						100.0	IPCA + 6,71%		0.00%	
	VALE48						150.0	IPCA + 6,78%		0.00%	
Concessionária do Aeroporto Internacional de Guarulhos S/A	AGRU11						75.0				
	AGRU21	3/21/2014	3/15/2025	ICVM 476	11	6.0	75.0	IPCA + 7,86%	Transport	1.40%	AA (bra) Fitch
	AGRU31						75.0				
	AGRU41						75.0				
	75.0										
Santo Antônio Energia S/A.	STEN13	5/2/2014	4/15/2022	ICVM 400			200.0	IPCA + 7,05%	Energy	0.85%	AA+ (bra) Fitch
	STEN23						500.0	IPCA + 7,49%		1.18%	
CPFL - Geração de Energia S/A	CPGE18	5/28/2014	4/28/2019	ICVM 476	5	4.5	70.0	IPCA + 5,86%	Energy	(0.09)%	AA+ (bra) Fitch
Ferreira Gomes Energia S/A	FGEN13	8/1/2014	12/15/2027	ICVM 400	14	7.9	210.9	IPCA + 6,47%	Energy	0.48%	AA+ (bra) Fitch
Rodonorte - Conces. de Rod. Integradas S/A	RDNT14	10/15/2014	10/15/2019	ICVM 476	5	4.4	130.0	IPCA + 5,69%	Transport	0.10%	Aaa (br) Moody's
Transmissora Sul Brasileira de Energia S/A	TSBE12	10/22/2014	9/15/2028	ICVM 476	14	8.2	77.6	IPCA + 6,80%	Energy	1.00%	AA+ (bra) Fitch
Concessionária de Rodovias do Oeste de São Paulo - Viaoeste S/A.	VOES25	10/27/2014	9/15/2019	ICVM 476	5	4.4	150.0	IPCA + 5,67%	Transport	0.00%	brAAA (S&P)
Conces. do Sistema Anhanguera-Bandeirantes S/A	ANHB16	10/27/2014	10/15/2019	ICVM 400	5	4.4	545.0	IPCA + 5,43%	Transport	(0.15)%	AAA (bra) Fitch
Conces. do Aeroporto Internacional de Guarulhos S/A.	AGRU12	10/27/2014	10/15/2026	ICVM 400	12	6.9	300.0	IPCA + 6,40%	Transport	0.90%	AA (bra) Fitch
Santa Vitória do Palmar Holding S/A.	SVIT11	10/31/2014	6/15/2028	ICVM 476	14	8.0	90.0	IPCA + 7,94%	Energy	1.92%	AA (bra) Fitch
Conces. de Rodovias do Interior Paulista S/A	IVIA24	11/4/2014	10/15/2019	ICVM 476	5	4.5	225.0	IPCA + 5,96%	Transport	0.12%	Aa (br) Moody's

## Continuation – 2014

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Linhas de Taubaté Transmissora de Energia S/A	LTTE14	12/15/2014	3/15/2030	ICVM 476	15	7.90	44.5	IPCA + 7,88%	Energy	1.50%	AA+ (bra) Fitch
Supervia-Concessionária de Transporte Ferroviário S/A	SPVI12	12/23/2014	12/15/2026	ICVM 476	12	6.04	300.0	IPCA + 7,50%	Transport	1.85%	AA- (bra) Fitch
Engie Brasil Energia S/A	TBLE15	12/23/2014	12/15/2024	ICVM 476	10	7.09	165.0	IPCA + 6,30%	Energy	0.00%	AAA (bra) Fitch
Renova Eólica Participações S/A	RNEP11	12/29/2014	12/15/2025	ICVM 476	11	5.40	73.0	IPCA + 7,61%	Energy	1.40%	AA- (bra) Fitch
	RNEP21				11	5.50	73.0	IPCA + 7,87%		1.65%	
<b>Total.....</b>							<b>4,754.0</b>				

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) 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.

(2) Consumer Price Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2015

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Empresa de Energia Cachoeira Caldeirão S/A	CADR13	1/26/2015	6/15/2030	ICVM 476	16	9.20	156.5	IPCA + 7,27%	Energy	1.40%	AA (bra) Fitch
MRS Logística S/A	MRSL27	2/15/2015	2/15/2025	ICVM 400	10	7.07	214.4	IPCA + 6,42%	Transport	0.35%	AA+ (bra) Fitch
	MRSL17	2/26/2015	2/15/2022		7	5.54	336.3	IPCA + 5,98%		0.00%	
Salus Infraestrutura Portuária S/A	SAIP11	3/15/2015	10/15/2024	ICVM 400	10	5.48	320.9	IPCA + 6,79%	Transport	0.50%	AA+sfii (br) Moody's
Autopista Planalto Sul S/A	APPS12	4/7/2015	12/15/2025	ICVM 476	11	7.50	100.0	IPCA + 8,17%	Transport	1.70%	AAA (bra) Fitch
Rodovias Integradas do Oeste S/A	RVIO14	4/24/2015	4/15/2020	ICVM 476	5	4.54	190.0	IPCA + 6,38%	Transport	0.15%	Aa1 (br) Moody's
Alupar Investimentos S/A	APAR16	5/14/2015	4/15/2021	ICVM 476	6	4.60	250.0	IPCA + 7,33%	Energy	0.90%	AA+ (bra) Fitch
VLI Multimodal S/A	VLIM11	7/16/2015	6/15/2020	ICVM 476	5	4.38	232.4	IPCA + 6,88%	Transport	0.30%	AA (bra) Fitch
Concessionária Rodovia dos Lagos S/A	RDLA12	7/24/2015	7/15/2020	ICVM 476	5	4.29	150.0	IPCA + 7,34%	Transport	0.14%	Aa2 (br) Moody's
Geradora Eólica Bons Ventos da Serra I S/A	GLIC11	7/30/2015	12/15/2026	ICVM 476	12	7.35	10.3	IPCA + 9,43%	Energy	3.00%	brBBB (S&P)
CIA de Saneamento do Tocantins - Saneatins	SNTI13	8/12/2015	7/31/2022	ICVM 476	7	4.40	50.0	IPCA + 10,33%	Water and Sewerage	3.00%	A (bra) Fitch
	SNTI23				7	4.40	140.0			3.00%	
Ventos de São Tome Holding S/A	TOME12	8/20/2015	12/15/2027	ICVM 476	12	6.30	89.0	IPCA + 8,86%	Energy	1.70%	AA (bra) Fitch
Vale S/A	VALE19	9/11/2015	8/15/2020	ICVM 400	5	4.37	800.0	IPCA + 6,62%	Transport	0.50%	AAA (bra) Fitch
	VALE29				7	5.74	550.0	IPCA + 6,63%		0.50%	
Chapada do Piauí I Holding S/A	CHPA11	9/17/2015	3/15/2029	ICVM 476	14	7.90	100.0	IPCA + 9,22%	Energy	1.75%	brAA (S&P)
NC Energia S/A	NCEN11	10/1/2015	12/15/2025	ICVM 476	10	5.70	31.6	IPCA + 7,89%	Energy	0.60%	Aa1 (br) Moody's
EDP Energias do Brasil S/A	ENBR24	10/13/2015	9/15/2021	ICVM 400	6	4.10	179.9	IPCA + 8,32%	Energy	1.00%	Aa3 (br) Moody's
	ENBR34	10/14/2015	9/15/2024		9	5.90	48.1	IPCA + 8,26%		1.00%	
Ultrafertil S/A	ULFT11	10/28/2015	6/15/2027	ICVM 476	12	6.40	115.0	IPCA + 9,06%	Transport	1.50%	AA- (bra) Fitch
Copel Telecomunicações S/A	CTEL11	11/10/2015	10/15/2024	ICVM 476	9	6.00	160.0	IPCA + 7,96%	Telecoms	0.60%	AA+ (bra) Fitch
Ventos de São Tito Holding S/A	VNTT11	12/14/2015	6/15/2028	ICVM 476	13	5.71	111.0	IPCA + 9,24%	Energy	1.70%	AA (bra) Fitch
AES Tietê S/A	TIET34	12/15/2015	12/15/2020	ICVM 400	5	4.20	301.8	IPCA + 8,43%		1.50%	ba1 (br) Moody's



## Continuation – 2015

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
CIA de Gás de São Paulo - Comgás	GASP14				5	4.36	269.6	IPCA + 7,14%		(0.30)%	
	GASP24	12/23/2015	12/15/2020	ICVM 400	7	5.35	242.4	IPCA + 7,48%	Energy	0.00%	AA+ (bra) Fitch
	GASP34				10	6.77	79.9	IPCA + 7,36%		0.00%	
Centrais Eólicas Caetité S/A	CAET12	12/30/2015	12/15/2028	ICVM 476	13	6.20	33.5	IPCA + 9,31%	Energy	1.80%	AA- (bra) Fitch
<b>Total.....</b>							<b>4,960.8</b>				

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

## Note:

(1) 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.

(2) Consumer Price Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2016

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Voltalia S. M. do Gostoso Participações S/A	VTLA11	3/23/2016	12/15/2028	ICVM 476	13	5.50	57.00	IPCA + 8,19%	Energy	2.00%	A+ (bra) Fitch
EDP Energias do Brasil S/A	ENBR15	4/7/2016	4/15/2022	ICVM 476	6	4.50	250.00	IPCA + 8,34%	Energy	1.70%	A (bra) Fitch
Algar Telecom S/A	ALGA15	6/9/2016	5/15/2022	ICVM 476	6	4.55	210.00	IPCA + 7,73%	Telecoms	1.40%	AA- (bra) Fitch
CTEEP-CIA Energia Paulista S/A	CTEE14	7/15/2016	7/15/2021	ICVM 476	5	4.40	148.27	IPCA + 6,04%	Energy	(0.10)%	AA+ (bra) Fitch
Engie Brasil Energia S/A	TBLE16	7/27/2016	7/15/2023	ICVM 476	7	5.00	246.60	IPCA + 6,26%	Energy	0.08%	AAA (bra) Fitch
	TBLE26	7/27/2016	7/15/2026		10	5.00	353.40	IPCA + 6,25%		0.08%	
VLI Operações Portuárias S/A	VLIO11	8/25/2016	8/15/2021	ICVM 476	5	4.40	175.00	IPCA + 6,05%	Transport	0.00%	AA+ (bra) Fitch
Matrincha Transmissora de Energia (TP Norte) S/A.	TPNO12	9/9/2016	6/15/2029	ICVM 476	13	7.60	180.00	IPCA + 7,58%	Energy	1.50%	AA+ (bra) Fitch
Coelba - Estado da Bahia	CEEB29	10/18/2016	10/15/2021	ICVM 476	5	4.20	100.00	IPCA + 6,75%	Energy	0.40%	AA- (bra) Fitch
CPFL - Geração de Energia S/A	CPGE19	10/20/2016	10/17/2021	ICVM 476	5	4.48	50.00	IPCA + 5,48%	Energy	(0.40)%	AAA (bra) Fitch
Companhia Energética do Maranhão - Cemar	CEMA17	11/1/2016	10/15/2021	ICVM 400	5	4.48	155.00	IPCA + 5,48%	Energy	(0.35)%	AA+ (bra) Fitch
	CEMA27	11/1/2016	10/15/2023		7	5.96	115.00	IPCA + 5,54%		(0.25)%	
TCP-Terminal de Contêineres de Paranaguá S/A	TCPA31	11/7/2016	10/15/2022	ICVM 400	6	4.60	428.05	IPCA + 7,82%	Transport	0.02	AA- (bra) Fitch
Autopista Fernão Dias S/A	APFD14	11/14/2016	9/15/2026	ICVM 476	10	7.16	65.00	IPCA + 7,53%	Transport	1.70%	brAA- (S&P)
Rodonorte - Conces. de Rodovias Integradas S/A	RDNT15	11/16/2016	11/15/2021	ICVM 476	5	4.37	100.00	IPCA + 6,06%	Transport	0.00%	brAA- (S&P)
Conces. de Rodovias do Oeste de São Paulo - Viaoeste	VOES16	12/5/2016	11/15/2021	ICVM 476	5	4.33	270.00	IPCA + 6,3%	Transport	0.10%	Aa1 (br) Moody's
Eólica Serra das Vacas Holding S/A	EOVC11	12/13/2016	6/15/2028	ICVM 476	12	5.32	23.00	IPCA + 8,37%	Energy	2.30%	AA- (bra) Fitch
	EOVC21	12/13/2016	6/15/2030	ICVM 476	14	7.74	45.00	IPCA + 8,58%		2.50%	
AES Tietê S/A	TIET15	12/14/2016	12/15/2023	ICVM 476	7	5.80	180.00	IPCA + 6,54%	Energy	0.25%	AA+ (bra) Fitch
Windepar Holding S/A	WDPR11	12/15/2016	12/15/2028	ICVM 476	12	6.90	67.50	IPCA + 7,63%	Energy	1.40%	AA+ (bra) Fitch
Celpa - Estado do Para	CLPP13	12/26/2016	12/15/2023	ICVM 400	5	4.38	199.07	IPCA + 6,70%	Energy	0.40%	A+ (bra) Fitch
	CLPP23			7	5.76	100.93	IPCA + 6,87%	0.65%			
Calango 6 Energia Renovável S/A	CLNG11	12/27/2016	6/27/2028	ICVM 476	12	6.48	43.50	IPCA + 8,73%	Energy	2.50%	AA+ (bra) Fitch
CIA de Gás de São Paulo - Comgás	GASP15	12/28/2016	12/15/2023	ICVM 400	7	5.90	675.00	IPCA + 5,87%	Energy	(0.50)%	AAA (bra) Fitch

Continuation – 2016

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Marechal Rondon Energia S/A	MRHL12	12/29/2016	6/30/2026	ICVM 476	10	6.40	15.0	IPCA + 8,00%	Energy	1.71%	N/D
<b>Total.....</b>							<b>4,252.3</b>				

Source: Anbima, Rating reports and Debentures Agreements  
 Elaborated by SPE/ME

**Note:**

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

(2) Consumer Price Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2017

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
TSLE-Sul Litorânea Energia S/A	TSLE11	1/12/2017	12/15/2030	ICVM 476	14	7.10	150.0	IPCA + 7,57%	Energy	1.40%	AA+ (bra) Fitch
Baraúnas II Energética S/A	BAUR11	1/16/2017	1/15/2027	ICVM 476	10	4.11	8.8	IPCA + 7,96%	Energy	2.00%	N/D
Banda de Couro Energética S/A	BNDC11	1/16/2017	12/15/2030	ICVM 476	14	4.11	14.5	IPCA + 7,96%	Energy	2.00%	N/D
Rio Grande Energia S/A	RIGE18	3/8/2017	2/15/2024	ICVM 476	7	5.54	130.0	IPCA + 5,35%	Energy	0.05%	AA (bra) Fitch
CIA Piratininga de Força e Luz	CPFP18	3/16/2017	2/15/2024	ICVM 476	7	5.55	60.0	IPCA + 5,29%	Energy	(0.10)%	AA (bra) Fitch
Paranaíba Energia S/A	PRTE12	3/17/2017	3/15/2028	ICVM 476	11	5.26	120.0	IPCA + 6,90%	Energy	1.50%	AA+ (bra) Fitch
Extremoz Transmissora Nordeste - ETN S/A	EXTZ11	3/22/2017	1/15/2029	ICVM 476	12	7.58	168.0	IPCA + 7,03%	Energy	1.80%	AA+ (bra) Fitch
CTEEP-CIA Energia Paulista S/A	CTEE15	3/30/2017	2/15/2024	ICVM 400	7	5.90	300.0	IPCA + 5,04%	Energy	(0.24)%	AAA (bra) Fitch
Algar Telecom S/A	ALGA26	4/19/2017	3/15/2024	ICVM 400	7	5.68	282.0	IPCA + 6,87%	Telecoms	1.50%	AA- (bra) Fitch
Ventos de São Clemente Holding S/A	VSCL11	4/24/2017	10/15/2030	ICVM 476	14	6.40	180.0	IPCA + 8,00%	Energy	2.56%	AA (bra) Fitch
Potami Energia S/A	PTMI11	5/11/2017	12/15/2026	ICVM 476	10	4.33	42.4	IPCA + 7,38%	Energy	2.00%	AA (bra) Fitch
CIA Energética de Pernambuco - Celpe	CEPE27	5/15/2017	1/15/2022	ICVM 476	5	4.31	90.0	IPCA + 6,18%	Energy	0.80%	AA- (bra) Fitch
Ventos de São Jorge Holding S/A	VSJH11	5/18/2017	7/15/2028	ICVM 476	11	6.84	45.0	IPCA + 9,00%	Energy	2.70%	AA (bra) Fitch
Itarema Geração Energia S/A	ITGE13	6/16/2017	12/15/2028	ICVM 476	12	5.98	111.8	IPCA + 7,81%	Energy	2.10%	AA (bra) Fitch
Ventos de São Vicente Energias Renováveis S/A	VTSS11	7/7/2017	6/15/2024	ICVM 476	7	5.80	100.0	IPCA + 5,47%	Energy	(0.20)%	AAA (bra) Fitch
CPFL Energias Renováveis S/A	ERSA17	7/17/2017	7/15/2022	ICVM 476	5	4.40	250.0	IPCA + 5,62%	Energy	0.00%	AA (bra) Fitch
Energisa S/A	ENGI18	7/19/2017	6/15/2022	ICVM 400	5	4.44	197.6	IPCA + 5,60%	Energy	0.00%	AA+ (bra) Fitch
	ENGI28				7	5.86	177.4	IPCA + 5,66%		0.10%	
Concessionária do Sistema Anhanguera-Bandeirantes S/A	ANHB18	7/28/2017	7/15/2022	ICVM 476	5	4.41	716.5	IPCA + 5,47%	Transport	0.20%	Aa1 (br) Moody's
Copel Telecomunicações S/A	CTEL12	8/8/2017	7/15/2022	ICVM 476	5	4.41	220.0	IPCA + 5,43%	Telecoms	0.70%	AA+ (bra) Fitch
Petróleo Brasileiro S/A - Petrobras	PETR15	8/25/2017	8/15/2022	ICVM 476	5	4.55	301.0	IPCA + 4,72%	Energy	0.05%	AA+ (bra) Fitch
	PETR25				7	6.02	1,089.9	IPCA + 5,21%		0.30%	
Complexo Morrinhos Energias Renováveis S/A	CXER12	8/31/2017	12/15/2027	ICVM 476	11	6.19	102.50	IPCA + 7,06%	Energy	1.85%	AA+ (bra) Fitch

## Continuation – 2017

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Nascentes do Xingu S/A	NASX13	8/31/2017	8/15/2024	ICVM 476	7	5.46	155.00	IPCA + 6,17%	Water and Sewerage	1.25%	AA (bra) Fitch
Salus Infraestrutura Portuária S/A	SAIP12	9/13/2017	10/15/2024	ICVM 400	7	4.30	31.17	IPCA + 5,75%	Transport	1.00%	AA+ (bra) Fitch
Lagoa 1 Energia Renovável S/A	LGEN11	9/29/2017	3/15/2029	ICVM 476	12	7.25	46.21	IPCA + 7,33%	Energy	0.03	AAA (bra) Fitch
Transmissora Aliança de Energia S/A	TAES14	10/9/2017	9/15/2024	ICVM 400	7	5.20	255.00	IPCA + 4,41%	Energy	(0.20)%	AAA (bra) Fitch
Rodonorte - Conces. de Rodovias Integradas S/A	RDNT26	10/19/2017	11/15/2021	ICVM 476	4	4.00	170.00	IPCA + 4,50%	Transport	0.10%	brAA- (S&P)
Cia. Paulista de Força e Luz	PALF18	10/24/2017	9/15/2022	ICVM 400	5	4.57	213.80	IPCA + 4,42%	Energy	0.00%	AAA (bra) Fitch
	PALF28				7	5.89	355.72	IPCA + 4,66%		0.00%	
	PALF38				10	7.43	130.48	IPCA + 5,05%		0.26%	
CIA Energética do RN - Cosern	CSRN17	10/24/2017	10/15/2022	ICVM 400	5	4.45	271.44	IPCA + 4,64%	Energy	0.25%	brAA- (S&P)
	CSRN27				7	5.95	98.56	IPCA + 4,91%		0.35%	
Energisa S/A	ENGI19	10/30/2017	10/15/2022	ICVM 400	5	4.57	61.81	IPCA + 4,49%	Energy	0.10%	AA+ (bra) Fitch
	ENGI29				7	6.10	11.52	IPCA + 4,71%		0.20%	
	ENGI39				10	8.05	21.44	IPCA + 5,11%		0.35%	
Arteris S/A	ARTR35	10/31/2017	10/15/2024	ICVM 400	7	5.67	161.54	IPCA + 5,09%	Transport	0.50%	AA- (bra) Fitch
CIA de Gás de São Paulo - Comgás	GASP16	10/31/2017	10/15/2024	ICVM 476	7	6.16	400.00	IPCA + 4,33%	Energy	0.20%	AAA (bra) Fitch
LIGHT Serviços de Eletricidade S/A	LIGHA3	11/1/2017	10/15/2022	ICVM 400	5	4.34	458.67	IPCA + 7,44%	Energy	2.90%	A- (bra) Fitch
Ventos de Santo Estevão Holding S/A	VSEH11	11/7/2017	7/15/2032	ICVM 476	15	7.57	160.00	IPCA + 6,98%	Energy	2.00%	AA+ (bra) Fitch
Omega Energia e Implantação 2 S/A	OMNG12	11/24/2017	12/15/2029	ICVM 476	12	5.83	220.00	IPCA + 7,11%	Energy	2.00%	AA+ (bra) Fitch
Eólica Serra das Vacas Holding II S/A	EVOL11	12/11/2017	6/15/2031	ICVM 476	14	6.77	48.00	IPCA + 7,31%	Energy	2.20%	AA (bra) Fitch
Equatorial Energia S/A	EQTL22	12/11/2017	11/15/2024	ICVM 476	7	6.50	104.50	IPCA + 5,77%	Energy	0.75%	A+ (bra) Fitch
Belo Monte Transmissora Energia SPE S/A	BLMN12	12/11/2017	12/15/2031	ICVM 476	14	6.84	580.00	IPCA + 7,14%	Energy	2.10%	AA+ (bra) Fitch
Esperanza Transmissora de Energia S/A	SPRZ11	12/12/2017	9/15/2030	ICVM 476	13	6.13	87.00	IPCA + 6,80%	Energy	1.75%	AA+ (bra) Fitch

## Continuation – 2017

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Odoya Transmissora de Energia S/A	ODYA11	12/12/2017	9/15/2031	ICVM 476	14	6.40	74.0	IPCA + 6,80%	Energy	1.75%	AA+ (bra) Fitch
Cia Energética do Ceará-Coelce	CEAR25	12/26/2017	12/15/2024	ICVM 476	7	5.13	150.0	IPCA + 6,00%	Energy	0.80%	AAA (bra) Fitch
Enel Green Power Maniçoba Eólica	EGME11	12/28/2017	12/15/2028	ICVM 476	11	5.22	10.8	IPCA + 7,62%	Energy	2.60%	AA- (bra) Fitch
Enel Green Power Damascena Eólica	ENDE11	12/28/2017	6/15/2029	ICVM 476	12	5.28	11.3	IPCA + 7,62%	Energy	2.60%	AA (bra) Fitch
<b>Total.....</b>							<b>9,145.2</b>				

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

**Note:**

(1) 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.

(2) Consumer Prince Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2018

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Cantareira Transmissora Energia S/A	CTRR11	1/9/2018	8/15/2032	ICVM 476	15	6.19	100.00	IPCA + 6,91%	Energy	1.65%	AA+ (bra) Fitch
Cia de Saneamento de Minas Gerais - Copasa	CSMGA1	2/8/2018	1/15/2024	ICVM 400	6	3.94	187.39	IPCA + 5,06%	Water and Sewerage	0.30%	AA (bra) Fitch
	CSMGA2		1/15/2026		8	4.82	80.61	IPCA + 5,27%		0.50%	
Concessionária de Rodovias Minas Gerais Goiás S/A	RMGG11	3/2/2018	12/15/2029	ICVM 476	12	6.57	90.00	IPCA + 9,00%	Transport	3.86%	N/D
Entrevias Concessionária de Rodovias S.A.	ENTV12	3/13/2018	12/15/2030	ICVM 476	13	7.11	1,000.00	IPCA + 7,75%	Transport	2.89%	AA (bra) Fitch
Concessionária da Linha 4 Metrô de SP S.A.	CNLM25	3/29/2018	4/15/2028	ICVM 476	10	5.42	500.00	IPCA + 7,07%	Transport	2.53%	AA (bra) Fitch
CELSE - Centrais Elétricas de Sergipe S.A.	CESE11	4/4/2018	4/15/2032	ICVM 476	14	5.94	3,337.00	Pré 9,85%	Energy	N/D	AA (bra) Fitch
Algar Telecom S/A	ALGA27	4/18/2018	3/15/2025	ICVM 476	7	5.26	76.48	IPCA + 5,34%	Telecoms	0.85%	brAA- (S&P)
CTEEP-CIA Energia Paulista S/A	CTEE17	4/23/2018	4/15/2025	ICVM 400	7	6.05	621.00	IPCA + 4,70%	Energy	0.06%	AAA (bra) Fitch
CEA II Centrais Elétricas Eólicas Assurua II SPE S.A.	CEAD11	5/16/2018	6/15/2030	ICVM 476	12	6.10	158.00	IPCA + 6,66%	Energy	1.90%	Aa2 (br) Moody's
EDP Transmissão S.A.	EDPT11	5/30/2018	5/15/2033	ICVM 476	15	6.80	115.00	IPCA + 7,03%	Energy	1.70%	Aa2 (br) Moody's
Ultrafertil S/A	ULFT12	6/4/2018	5/15/2025	ICVM 476	7	2.19	175.00	IPCA + 5,33%	Transport	0.30%	AA+ (bra) Fitch
AES Tietê S/A	TIET18	6/7/2018	5/15/2033	ICVM 476	15	6.50	200.00	IPCA + 6,02%	Energy	0.90%	Aa1 (br) Moody's
COELCE - Estado do Ceará	CEAR26	6/15/2018	6/15/2025	ICVM 476	7	5.80	270.00	IPCA + 6,20%	Energy	0.75%	AAA (bra) Fitch
Rio Paraná S.A.	RIPR21	6/15/2018	6/15/2025	ICVM 476	7	5.80	240.00	IPCA + 6,15%	Energy	0.75%	Ba1 (br) Moody's
Fospar S.A - Fertilizantes	FOSP11	6/25/2018	5/15/2026	ICVM 476	8	7.00	151.23	IPCA + 6,53%	Transport	0.50%	N/D
Cia Energética Jaguará S.A.	ENJG21	6/28/2018	6/15/2027	ICVM 476	9	5.50	634.00	IPCA + 6,50%	Energy	0.75%	AAA (bra) Fitch
Cia Energética Miranda S.A.	ENMI21	6/28/2018	6/15/2027	ICVM 476	9	5.70	386.00	IPCA + 6,50%	Energy	0.75%	AAA (bra) Fitch
Elektro Redes S/A	ELEK37	6/28/2018	5/15/2025	ICVM 476	7	4.50	300.00	IPCA + 5,95%	Energy	0.50%	AA- (bra) Fitch
Centrais Eólicas Assurá I S.A.	SSRU11	6/29/2018	11/28/2030	ICVM 476	13	6.58	35.00	IPCA + 7,81%	Energy	1.90%	Ba3 (br) Moody's
Cia Energética Sinop S.A.	CSNP12	7/3/2018	6/15/2032	ICVM 476	14	7.30	236.00	IPCA + 7,94%	Energy	2.10%	AA (bra) Fitch
Transmissora Aliança de Energia S/A	TAES15	7/17/2018	7/15/2025	ICVM 400	7	6.50	525.77	IPCA + 5,95%	Energy	0.30%	AAA (bra) Fitch
Verde 08 Energia S.A.	VDEN12	7/19/2018	7/15/2025	ICVM 476	7	5.80	140.00	IPCA + 5,96%	Energy	0.25%	AAA (bra) Fitch

## Continuation – 2018

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Transmissão José Maria de Melo de Eletricidade S.A.	TJMM11	7/23/2018	3/15/2036	ICVM 476	18	8.20	395.00	IPCA + 8,28%	Energy	2.50%	N/D
CIA Energética do RN - Cosern	CSRN18	7/23/2018	7/15/2023	ICVM 476	5	4.50	130.00	IPCA + 5,98%	Energy	0.50%	N/D
Engie Brasil Energia S.A.	EGIE17	7/25/2018	7/15/2025	ICVM 400	7	5.60	515.35	IPCA + 5,66%	Energy	0.92%	AAA (bra) Fitch
	EGIE27		7/15/2028		10	8.20	231.26	IPCA + 5,90%	Energy	0.28%	
Central Hidrelétrica Sucuri S.A.	CHSU11	7/27/2018	11/30/2027	ICVM 476	9	4.53	2.50	IPCA + 8,42%	Energy	0.73%	N/D
Central Hidrelétrica Sucuri S.A.	CHSU21	7/27/2018	12/29/2027	ICVM 476	9	4.53	2.26	IPCA + 8,42%	Energy	0.73%	N/D
Central Hidrelétrica Palmeira do Tocantins S.A.	CHPT11	7/30/2018	11/30/2027	ICVM 476	9	4.53	2.86	IPCA + 8,42%	Energy	0.73%	AA- (bra) Fitch
Central Hidrelétrica Palmeira do Tocantins S.A.	CHPT21	7/30/2018	12/29/2027	ICVM 476	9	4.53	2.59	IPCA + 8,42%	Energy	0.73%	AA- (bra) Fitch
Central Hidrelétrica Palmeira do Tocantins S.A.	CHPT31	7/30/2018	1/28/2028	ICVM 476	10	4.53	2.58	IPCA + 8,42%	Energy	0.73%	AA- (bra) Fitch
Central Hidrelétrica Palmeira do Tocantins S.A.	CHPT41	7/30/2018	3/3/2028	ICVM 476	10	4.53	2.59	IPCA + 8,42%	Energy	0.73%	AA- (bra) Fitch
Central Hidrelétrica Palmeira do Tocantins S.A.	CHPT51	7/30/2018	3/29/2028	ICVM 476	10	4.53	2.56	IPCA + 8,42%	Energy	0.73%	AA- (bra) Fitch
Central Hidrelétrica Palmeira do Tocantins S.A.	CHPT61	7/30/2018	4/28/2028	ICVM 476	10	4.53	2.84	IPCA + 8,42%	Energy	0.73%	AA- (bra) Fitch
Central Hidrelétrica Sucuri S.A.	CHSU31	7/30/2018	1/28/2028	ICVM 476	10	4.53	2.26	IPCA + 8,42%	Energy	0.73%	N/D
Central Hidrelétrica Sucuri S.A.	CHSU41	7/30/2018	3/3/2028	ICVM 476	10	4.53	2.26	IPCA + 8,42%	Energy	0.73%	N/D
Central Hidrelétrica Sucuri S.A.	CHSU51	7/30/2018	3/29/2028	ICVM 476	10	4.53	2.24	IPCA + 8,42%	Energy	0.73%	N/D
Central Hidrelétrica Sucuri S.A.	CHSU61	7/30/2018	4/28/2028	ICVM 476	10	4.53	2.49	IPCA + 8,42%	Energy	0.73%	N/D
Santa Vitória do Palmar Energias Renováveis S.A.	SAVI13	7/30/2018	9/15/2031	ICVM 476	13	5.60	105.00	IPCA + 5,95%	Energy	0.60%	AAA (bra) Fitch
Serras Holding S.A.	SRRH11	8/3/2018	7/31/2032	ICVM 476	14	6.80	40.00	IPCA + 7,64%	Energy	2.02%	AAA (bra) Fitch
Argo Transmissão de Energia S.A.	TRGO11	8/24/2018	12/15/2031	ICVM 476	13	7.60	454.50	IPCA + 7,02%	Energy	1.40%	AA+ (bra) Fitch
CIA Energética de Pernambuco - Celpe	CEPE19	8/29/2018	7/15/2025	ICVM 476	7	4.91	600.00	IPCA + 6,04%	Energy	0.50%	N/D



## Continuation – 2018

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
EDP SP Distribuição de Energia S.A.	EBEN19	8/31/2018	8/15/2025	ICVM 476	7	5.11	260.00	IPCA + 5,91%	Energy	0.60%	N/D
EDP ES Distribuição de Energia S.A.	ESCE17	8/31/2018	7/15/2025	ICVM 476	7	5.11	190.00	IPCA + 5,91%	Energy	0.60%	N/D
Cia Eletrc. Est. Da Bahia - Coelba	CEEBA1	9/3/2018	8/15/2025	ICVM 476	7	5.10	800.00	IPCA + 6,22%	Energy	0.50%	N/D
CIA Piratininga de Força e Luz	CPFPA0	9/5/2018	8/15/2025	ICVM 476	7	5.50	197.00	IPCA + 5,80%	Energy	0.20%	N/D
RGE Sul Distribuidora de Energia S/A	AESL17	9/6/2018	8/15/2025	ICVM 476	7	5.50	219.60	IPCA + 5,80%	Energy	(0.02)%	N/D
Empresa de Energia São Manoel S/A	ESAM14	9/10/2018	6/15/2033	ICVM 476	15	5.80	340.00	IPCA + 7,31%	Energy	1.60%	AA (bra) Fitch
Copacabana Geração de Energia e Participações S.A.	CGEP12	9/13/2018	4/15/2033	ICVM 476	15	6.32	127.78	IPCA + 8,47%	Energy	2.60%	N/D
ETC - Emp. Transmissora Capixaba S.A.	CPXB22	9/19/2018	9/15/2025	ICVM 476	7	5.50	85.30	IPCA + 6,17%	Energy	0.30%	N/D
ETAP - Empr. Transmissora Agreste Potiguar S.A.	ETAP22	9/19/2018	9/15/2025	ICVM 476	7	5.50	114.70	IPCA + 6,17%	Energy	0.30%	AAA (bra) Fitch
Guaraciaba Transmissora de Energia TP Sul S.A	TPSU12	10/3/2018	12/15/2030	ICVM 476	12	6.10	118.00	IPCA + 7,39%	Energy	1.50%	AA (bra) Fitch
Sobral I Solar Energia SPE S.A	SISE11	10/4/2018	12/15/2033	ICVM 476	15	5.10	135.00	IPCA + 7,89%	Energy	1.95%	AAA (bra) Fitch
Copel Geração e Transmissão S.A.	CPGT15	10/11/2018	9/15/2025	ICVM 476	7	4.25	290.00	IPCA + 7,65%	Energy	1.85%	AA- (bra) Fitch
Pirapora Solar Holding S.A	PRAS11	10/15/2018	8/15/2034	ICVM 476	16	N/D	220.00	IPCA + 5,77%	Energy	N/D	N/D
TCC - Transmissora Caminho do Café S.A.	TRCC11	10/17/2018	9/15/2028	ICVM 476	10	7.12	680.00	IPCA + 6,53%	Energy	0.70%	AAA (bra) Fitch
TPE - Transmissora Paraíso de Energia S.A.	TPEN11	10/17/2018	9/15/2028	ICVM 476	10	7.12	1,070.00	IPCA + 6,53%	Energy	0.70%	AAA (bra) Fitch
Energisa Sul-Sudeste S.A	EDVP14	10/19/2018	9/15/2025	ICVM 476	7	4.90	70.00	IPCA + 5,08%	Energy	0.20%	N/D
Energisa Sergipe S.A.	ENSE16	10/19/2018	9/15/2025	ICVM 476	7	4.90	65.00	IPCA + 5,08%	Energy	0.20%	AAA (bra) Fitch
Energisa Mato Grosso do Sul S.A.	ESULA1	10/19/2018	9/15/2025	ICVM 476	7	4.90	155.00	IPCA + 5,08%	Energy	0.20%	N/D
Energisa Mato Grosso S.A.	CEMT19	10/19/2018	9/15/2025	ICVM 476	7	4.90	385.00	IPCA + 5,08%	Energy	0.20%	N/D
Energisa Tocantins S.A.	CTNS14	10/19/2018	9/15/2025	ICVM 476	7	4.90	240.00	IPCA + 5,09%	Energy	0.20%	N/D
Energisa Minas Gerais S.A.	FLCLA0	10/19/2018	9/15/2025	ICVM 476	7	4.90	50.00	IPCA + 5,09%	Energy	0.20%	N/D
Energisa Paraíba S.A.	SAEL15	10/19/2018	9/15/2025	ICVM 476	7	4.90	135.00	IPCA + 5,08%	Energy	0.20%	N/D

## Continuation – 2018

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Sertão I Solar Energia SPE S.A.	SRTI11	10/23/2018	12/12/2032	ICVM 476	14	5.60	130.00	IPCA + 7,09%	Energy	1.20%	AAA (bra) Fitch
LIGHT Serviços de Eletricidade S/A	LIGHA5	10/24/2018	10/15/2025	ICVM 476	7	4.71	540.00	IPCA + 6,83%	Energy	1.10%	AA+ (bra) Fitch
EDP Transmissão Aliança SC S.A.	EDPA11	10/25/2018	10/15/2028	ICVM 476	10	8.27	1,200.00	IPCA + 6,72%	Energy	0.01%	N/D
Integração Transmissora Energia S.A.	ITGT11	11/1/2018	10/15/2025	ICVM 476	7	N/D	100.00	IPCA + 5,42%	Energy	N/D	N/D
Parnaíba I Geração Energia S.A.	PNBI11	11/26/2018	11/15/2025	ICVM 476	7	4.10	315.00	IPCA + 7,22%	Energy	2.50%	N/D
Subestação Água Azul SPE S.A.	SAAS11	12/26/2018	12/15/2029	ICVM 476	11	5.80	35.00	IPCA + 6,40%	Energy	1.50%	N/D
EDTE - Diamantina de Transmissão de Energia S.A.	EDTE12	12/26/2018	12/15/2028	ICVM 476	10	8.44	315.00	IPCA + 5,29%	Energy	0.50%	N/D
Energisa Transmissão Energia S.A.	ETEN11	12/27/2018	12/15/2025	ICVM 476	7	N/D	75.50	IPCA + 4,92%	Energy	N/D	N/D
Energisa Transmissão Energia S.A.	ETEN21	12/27/2018	12/15/2025	ICVM 476	7	N/D	51.46	IPCA + 5,14%	Energy	N/D	N/D
Energisa Transmissão Energia S.A.	ETEN31	12/27/2018	12/15/2025	ICVM 476	7	N/D	123.04	IPCA + 4,98%	Energy	N/D	N/D
ETB - Empresa de Transmissão Baiana S.A.	ETBA12	12/27/2018	2/15/2029	ICVM 476	10	8.80	715.00	IPCA + 5,34%	Energy	0.60%	N/D
<b>Total.....</b>							<b>21,607.0</b>				

Source: Anbima, Rating reports and Debentures Agreements

Elaborated by SPE/ME

Note:

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

(2) Consumer Prince Index - CPI (IPCA)

## Infrastructure Bonds: Law # 12,431/2011 - Infrastructure Investment Projects - 2019

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Duration <sup>1</sup> (years)	Value (R\$ million)	Yield <sup>2</sup>	Sector	Spread Over NTN-B	Rating (local)
Januba Transmissora de Energia S.A.	JTEE11	1/16/2019	7/15/2033	ICVM 476	15	8.10	224.0	IPCA + 4,50%	Energy	0.20%	N/D
Equatorial Transmissora 1 SPE S.A.	EQTS11	2/2/2019	1/15/2033	ICVM 476	14	7.92	55.0	IPCA + 4,85%	Energy	0.48%	N/D
Equatorial Transmissora 3 SPE S.A.	EQSP11	2/4/2019	1/15/2033	ICVM 476	14	7.92	45.0	IPCA + 4,80%	Energy	0.43%	N/D
Equatorial Transmissora 3 SPE S.A.	EQSP21	2/4/2019	1/15/2034	ICVM 476	15	8.03	45.0	IPCA + 4,65%	Energy	0.28%	N/D
Equatorial Transmissora 2 SPE S.A.	EQTN11	2/4/2019	1/15/2033	ICVM 476	14	7.92	45.0	IPCA + 4,85%	Energy	0.48%	N/D
Petróleo Brasileiro S/A - Petrobras	PETR16	2/12/2019	1/15/2026	ICVM 400	7	N/D	898.4	IPCA + 4,05%	Energy	N/D	N/D
Petróleo Brasileiro S/A - Petrobras	PETR26	2/12/2019	1/15/2029	ICVM 400	10	N/D	1,694.1	IPCA + 4,22%	Energy	N/D	N/D
Rumo Malha Norte S/A.	RUMOB1	2/22/2019	2/15/2026	ICVM 476	7	N/D	500.0	IPCA + 4,68%	Transport	N/D	N/D
<b>Total.....</b>							<b>3,506.5</b>				

Source: Anbima, Rating reports and Debentures Agreements

Elaborated by SPE/ME

Note:

(1) 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.

(2) Consumer Price Index - CPI (IPCA)



## Green Certificated Infrastructure Debentures

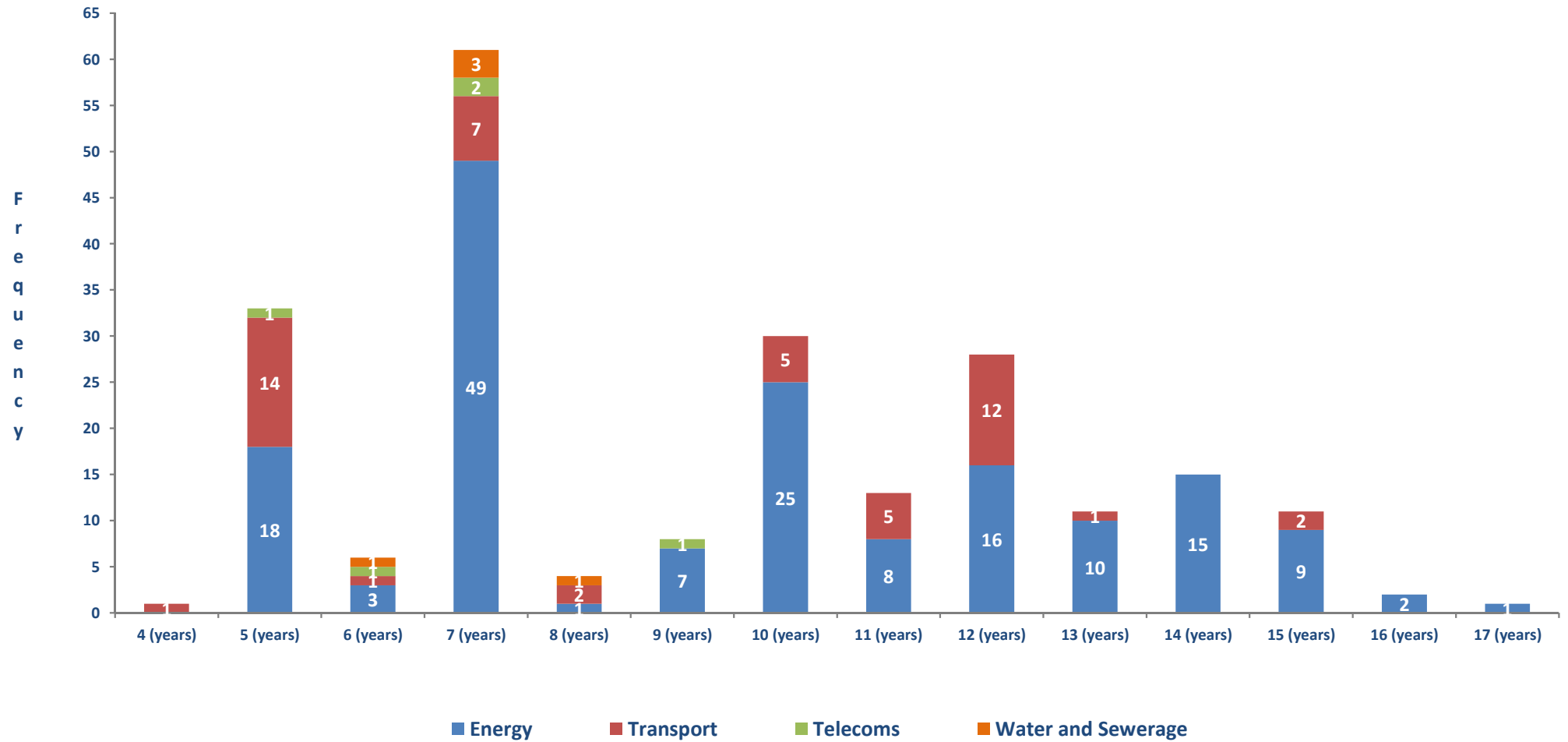


Issuer	Ticker	Distribution Date	Value (R\$ million)	Sector
Potami Energia S/A	PTMI11	5/11/2017	42.4	Energy
Itarema Geração Energia S/A	ITGE13	6/16/2017	111.8	Energy
Omega Energia e Implantação 2 S/A	OMNG12	11/24/2017	220.0	Energy
Eólica Serra das Vacas Holding II S/A	EVOL11	12/11/2017	48.0	Energy
Enel Green Power Maniçoba Eólica	EGME11	12/28/2017	10.8	Energy
Enel Green Power Damascena Eólica	ENDE11	12/28/2017	11.3	Energy
CTEEP-CIA Energia Paulista S/A	CTEE17	4/23/2018	621.0	Energy
<b>Total.....</b>			<b>1,065.19</b>	

Source: Anbima, Rating reports and Debentures Agreements  
Elaborated by SPE/ME

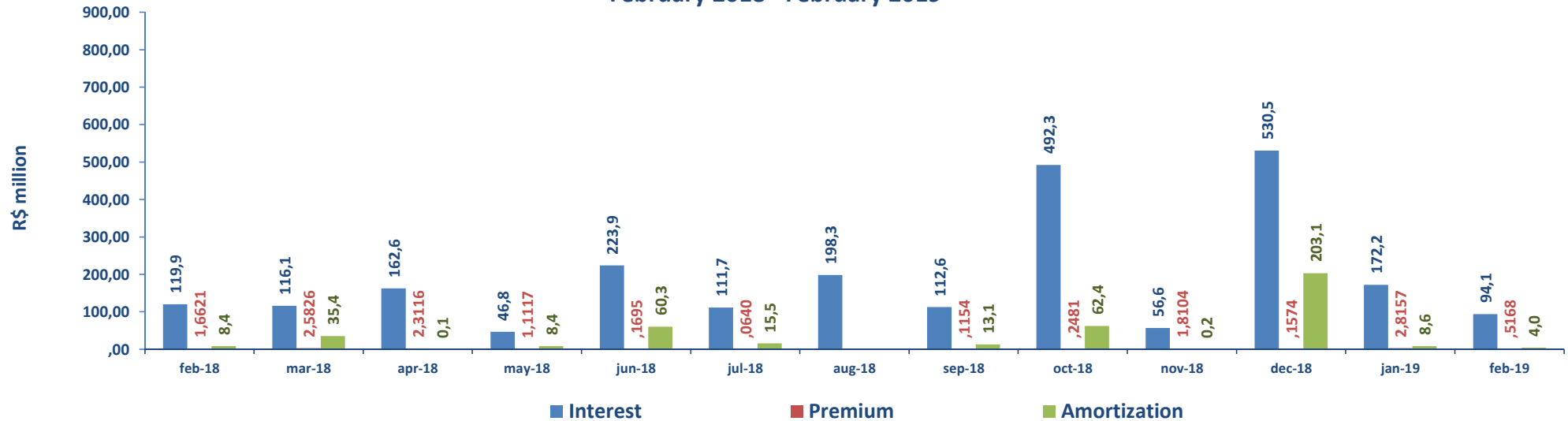
Nota: (1) These debentures are already included in the respective slides above linked to the year of their distribution.

Maturity - Infrastructure Debentures by Issue Series ( in years)  
2012 to February 2019 - Law # 12,431 /2011

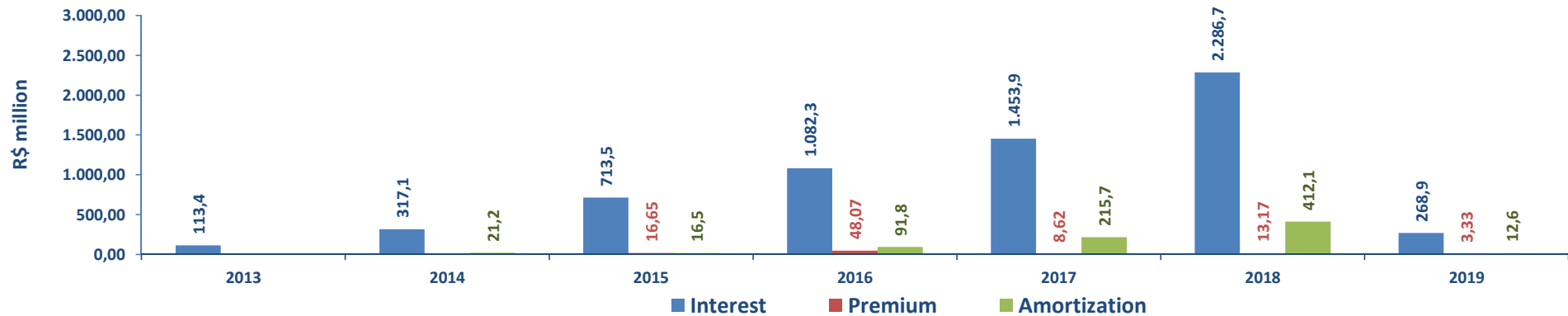


Source: Source : Scripture of the Debentures  
Elaborated by SPE/ME

Interest, Premium, Amortization Payments - Infrastructure Debentures  
February 2018 - February 2019

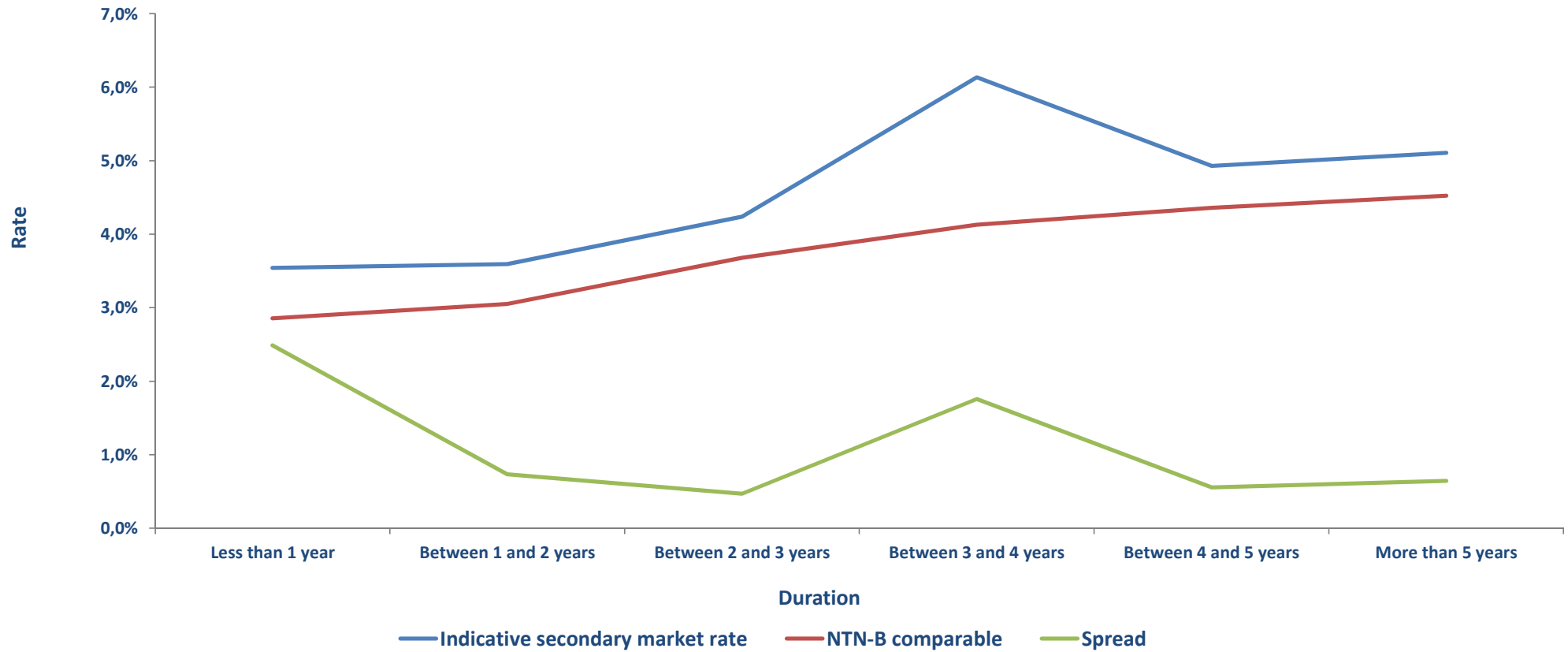


Interest, Premium, Amortization Payments (by year) - Infrastructure Debentures  
2013 and February 2019



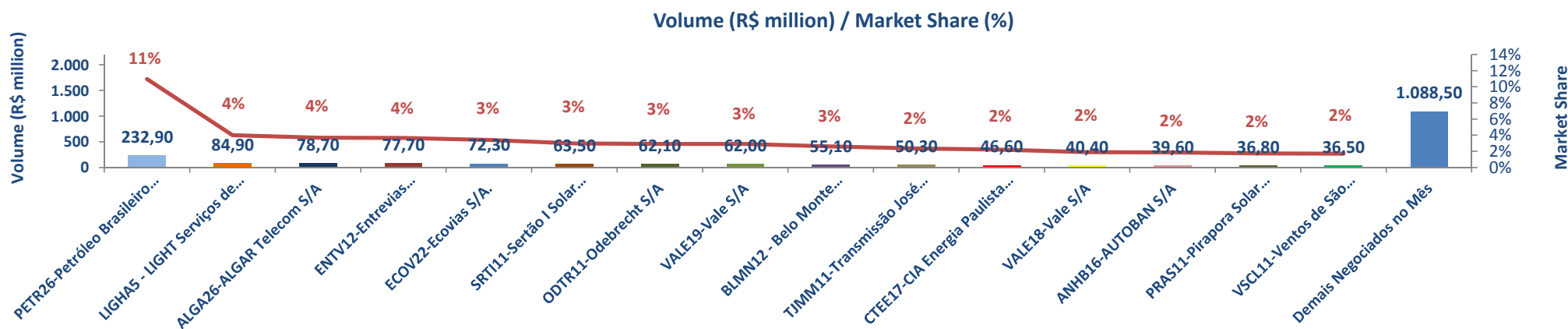
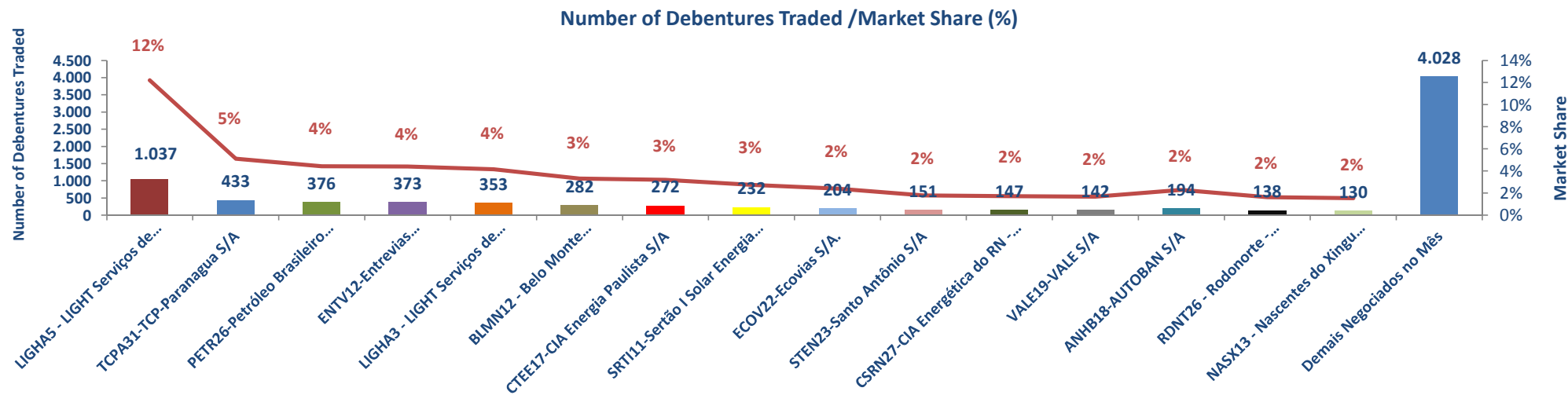
Source: Anbima  
Elaborated by SPE/ME

Spread Curve on NTN-B Comparable - (Secondary Market - third four-month period of 2018)  
Infrastructure Debentures



Source: Anbima  
Elaborated by SPE/ME

Secondary Market - Quantity and Volume of Debentures Traded - February 2019  
 Infrastructure Debentures - Law # 12,431/2011  
 15 most actively traded



Source : Anbima and Cetip  
 Elaborated by SPE/ME

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

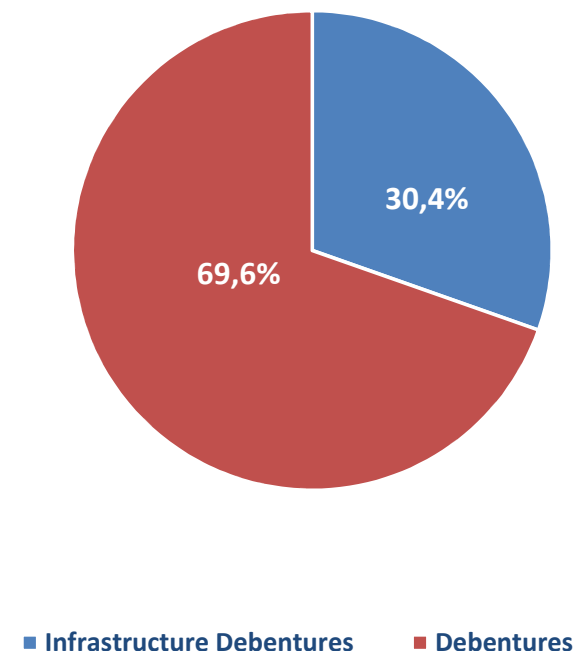


Debentures Secondary Market - Trading Volume and Turnover

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	
2017/02	1,675.2	221,744.7	0.8%	602.3	21,466.7	2.8%	2,277.5
2017/03	1,548.7	253,831.3	0.6%	786.7	22,184.6	3.5%	2,335.4
2017/04	3,175.1	219,198.1	1.4%	741.3	22,612.3	3.3%	3,916.4
2017/05	1,725.7	221,776.1	0.8%	841.3	22,938.2	3.7%	2,567.0
2017/06	1,584.9	220,265.9	0.7%	566.1	23,137.9	2.4%	2,151.0
2017/07	1,252.5	220,560.3	0.6%	969.7	24,431.3	4.0%	2,222.2
2017/08	2,611.7	227,542.7	1.1%	1,284.5	25,590.4	5.0%	3,896.2
2017/09	3,136.0	227,854.9	1.4%	935.2	26,773.4	3.5%	4,071.2
2017/10	4,534.1	230,354.7	2.0%	1,187.5	27,835.5	4.3%	5,721.6
2017/11	3,786.9	231,567.5	1.6%	1,542.3	29,266.3	5.3%	5,329.2
2017/12	7,361.9	242,485.9	3.0%	1,852.2	30,316.5	6.1%	9,214.1
2018/01	2,582.4	243,323.2	1.1%	1,374.6	30,388.3	4.5%	3,957.0
2018/02	2,200.7	246,084.2	0.9%	1,519.9	31,166.6	4.9%	3,720.6
2018/03	3,380.2	251,234.4	1.3%	2,250.8	31,849.8	7.1%	5,631.0
2018/04	3,523.8	251,455.2	1.4%	1,707.3	35,017.6	4.9%	5,231.1
2018/05	3,592.3	254,144.9	1.4%	1,530.9	37,224.2	4.1%	5,123.2
2018/06	4,468.7	257,571.5	1.7%	1,618.8	36,865.7	4.4%	6,087.5
2018/07	2,492.4	258,354.8	1.0%	1,596.6	39,137.7	4.1%	4,089.0
2018/08	3,842.5	262,431.0	1.5%	1,460.0	39,964.9	3.7%	5,302.5
2018/09	3,146.7	268,416.5	1.2%	1,693.6	40,847.4	4.1%	4,840.4
2018/10	5,256.8	287,855.3	1.8%	2,272.4	49,954.4	4.5%	7,529.2
2018/11	6,901.0	288,664.8	2.4%	1,846.3	51,210.3	3.6%	8,747.3
2018/12	4,143.5	499,475.2	0.8%	3,350.8	53,352.5	6.3%	7,494.3
2019/01	4,319.1	509,625.3	0.8%	2,349.8	53,630.2	4.4%	6,668.9
2019/02	4,807.2	298,881.4	1.6%	2,121.7	57,718.4	3.7%	6,928.9

Trading Volume  
February/2017 to February/2019



Source: Anbima

Elaborated by SPE/ME

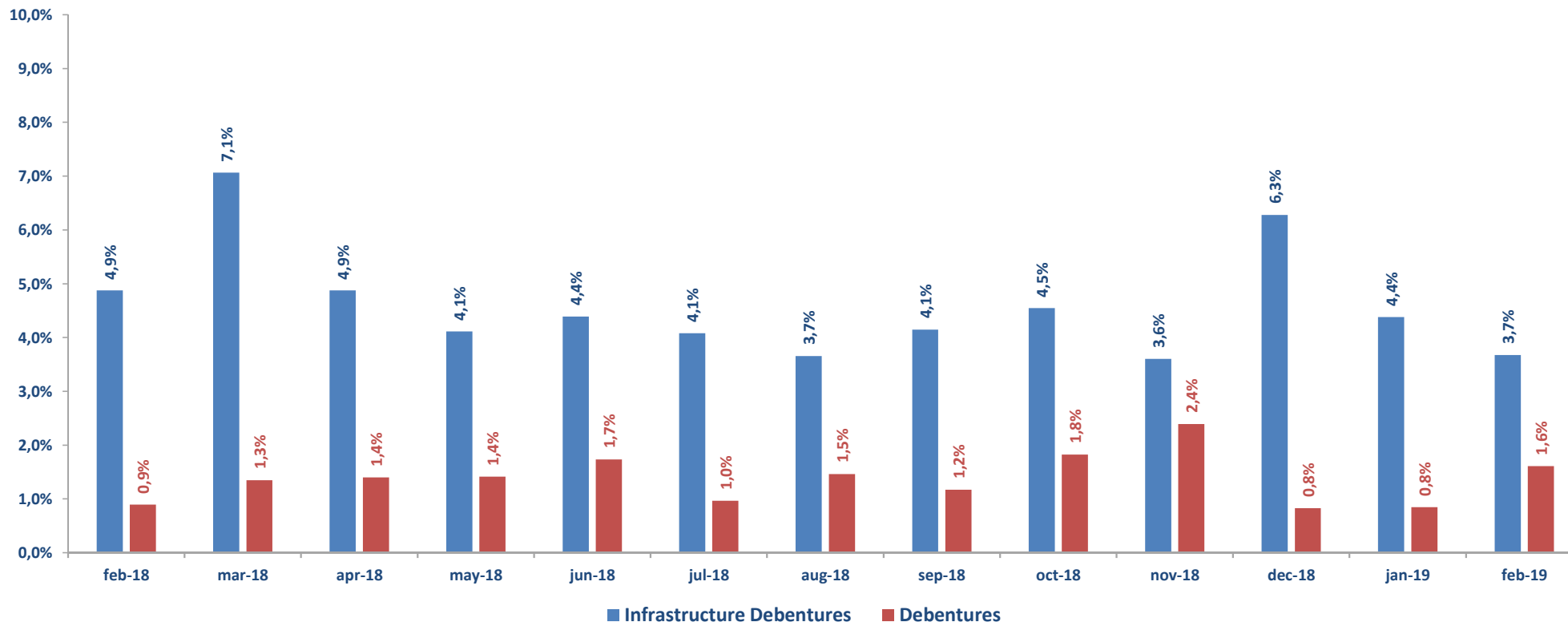
Note :

(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>)



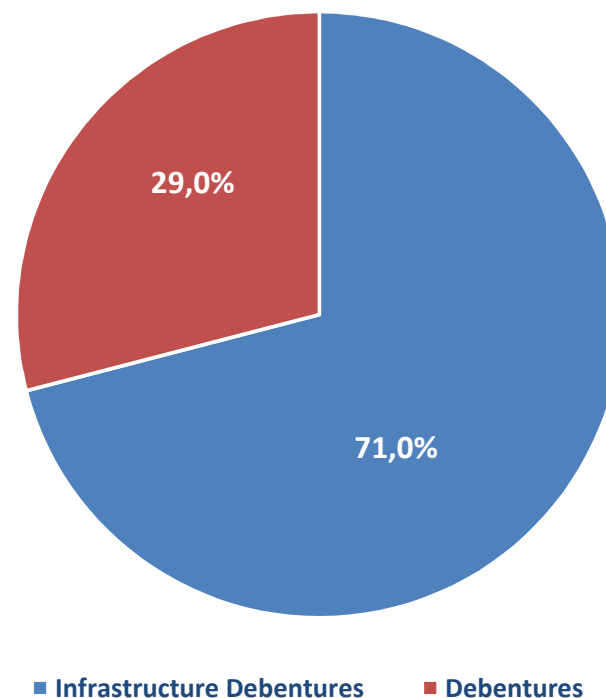
Source: Anbima  
 Elaborated by SPE/ME

**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 - Share of Trades

Share of Trades <sup>1</sup>			
Period	Debentures	Infrastructure debentures-Law # 12,431/11 <sup>2</sup>	Share Total of Trades
	Share of Trades	Share of Trades	
2017/02	3,907	6,555	10,462
2017/03	5,223	7,519	12,742
2017/04	4,497	6,524	11,021
2017/05	5,450	7,915	13,365
2017/06	4,705	5,997	10,702
2017/07	4,602	7,429	12,031
2017/08	5,296	9,930	15,226
2017/09	4,719	7,556	12,275
2017/10	3,729	9,186	12,915
2017/11	3,188	11,355	14,543
2017/12	3,187	11,774	14,961
2018/01	6,639	8,367	15,006
2018/02	3,221	10,066	13,287
2018/03	3,771	12,375	16,146
2018/04	3,164	10,681	13,845
2018/05	3,099	12,377	15,476
2018/06	2,929	11,164	14,093
2018/07	3,081	12,671	15,752
2018/08	4,825	11,986	16,811
2018/09	3,270	8,321	11,591
2018/10	5,553	15,855	21,408
2018/11	4,034	12,019	16,053
2018/12	4,341	12,161	16,502
2019/01	3,394	12,479	15,873
2019/02	4,187	11,919	16,106

Share of Trades  
February/2017 to February/2019



Source: Anbima  
Elaborated by SPE/ME

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.

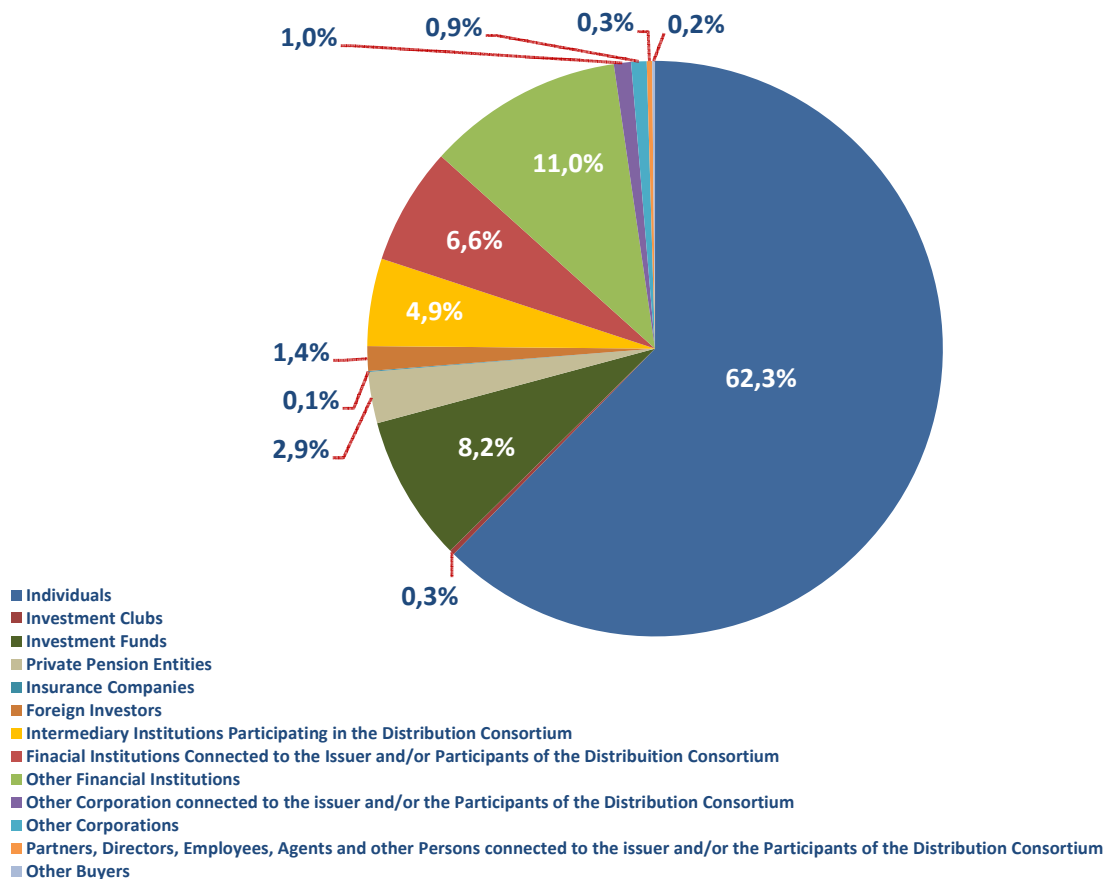
Breakdown by type of Investor - Infrastructure Debentures  
Law # 12,431/2011

Summary of breakdown - ICVM 400

Investor	%	R\$ million
Individuals	62.3%	9,191.0
Investment Clubs	0.3%	40.5
Investment Funds	8.2%	1,212.9
Private Pension Entities	2.9%	422.9
Insurance Companies	0.1%	7.7
Foreign Investors	1.4%	205.7
Intermediary Institutions Participating in the Distribution Consortium	4.9%	722.8
Financial Institutions Connected to the Issuer and/or Participants of the Distribution Consortium	6.6%	974.9
Other Financial Institutions	11.0%	1,626.8
Other Corporation connected to the issuer and/or the Participants of the Distribution Consortium	1.0%	143.2
Other Corporations	0.9%	127.8
Partners, Directors, Employees, Agents and other Persons connected to the issuer and/or the Participants of the Distribution Consortium	0.3%	44.3
Other Buyers	0.2%	23.7
<b>Total.....</b>	<b>100.0%</b>	<b>14,744.1</b>

Source: Anbima. Leading Banks and closing announcement  
Elaborated by SPE/ME

Summary of Breakdown - ICVM 400

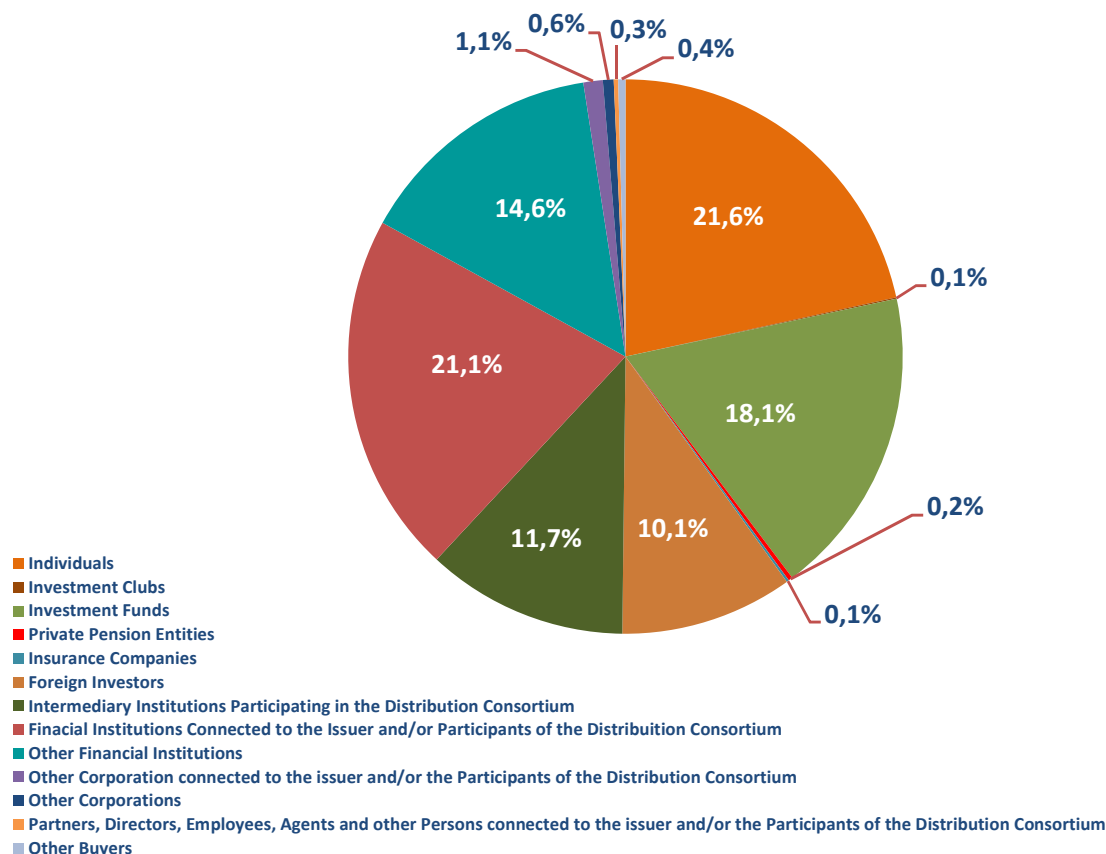


Breakdown by type of Investor - Infrastructure Debentures  
Law # 12,431/2011

Summary of breakdown - ICVM 476

Investor	%	R\$ million
Individuals	21.6%	7,686.6
Investment Clubs	0.1%	28.5
Investment Funds	18.1%	6,433.8
Private Pension Entities	0.2%	87.6
Insurance Companies	0.1%	51.0
Foreign Investors	10.1%	3,583.1
Intermediary Institutions Participating in the Distribution Consortium	11.7%	4,182.2
Financial Institutions Connected to the Issuer and/or Participants of the Distribution Consortium	21.1%	7,511.0
Other Financial Institutions	14.6%	5,187.6
Other Corporation connected to the issuer and/or the Participants of the Distribution Consortium	1.1%	405.2
Other Corporations	0.6%	222.2
Partners, Directors, Employees, Agents and other Persons connected to the issuer and/or the Participants of the Distribution Consortium	0.3%	89.5
Other Buyers	0.4%	149.5
<b>Total.....</b>	<b>100.0%</b>	<b>35,617.6</b>

Summary of Breakdown - ICVM 476



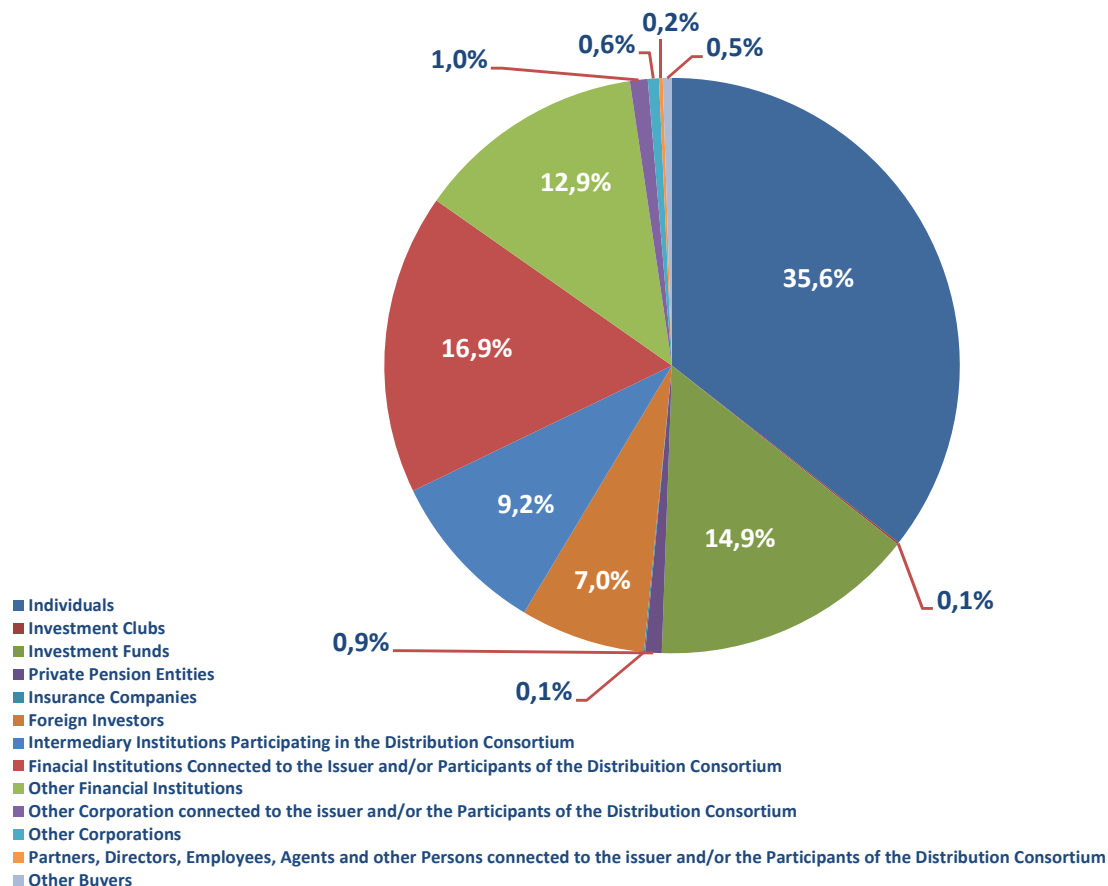
Source: Anbima. Leading Banks and closing announcement  
Elaborated by SPE/ME

Breakdown by type of Investor - Infrastructure Debentures  
Law # 12,431/2011

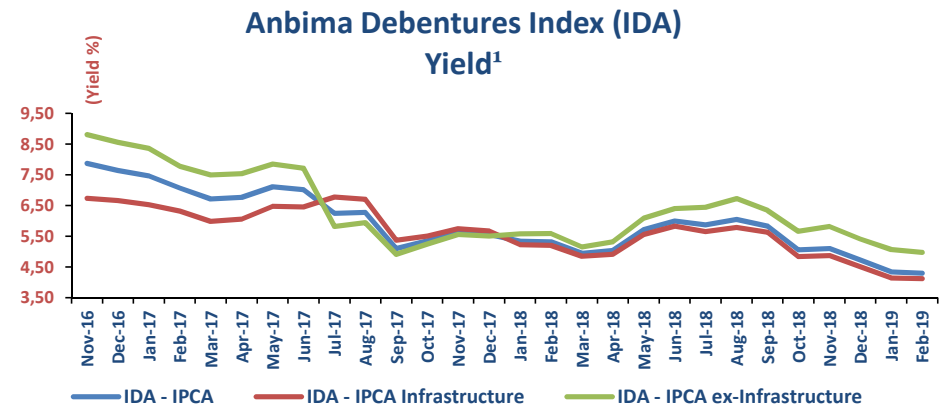
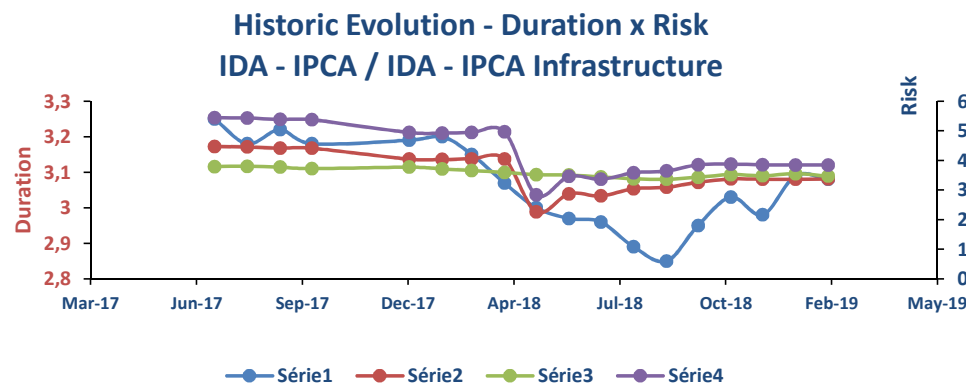
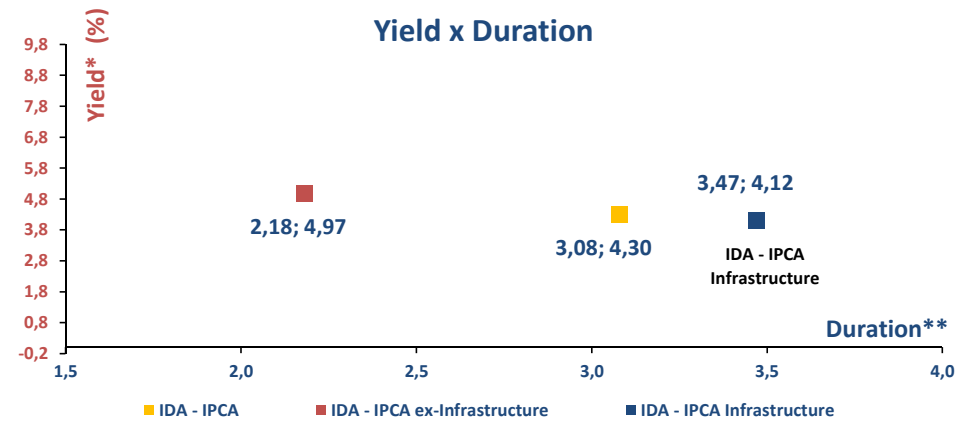
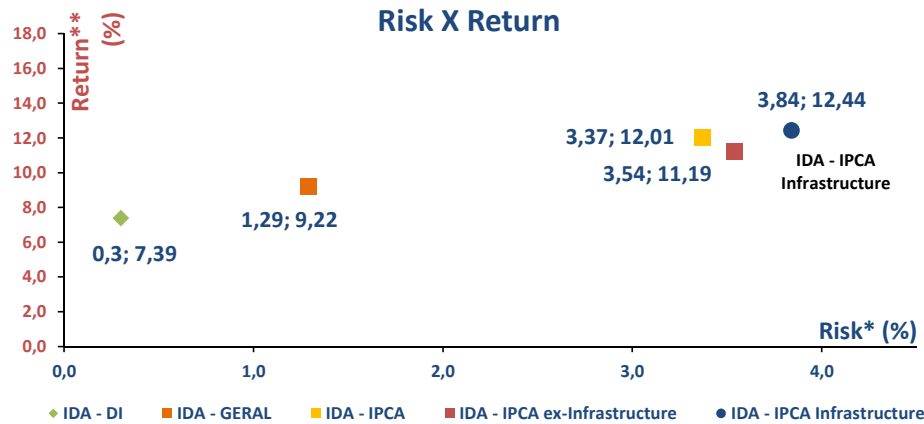
Summary of breakdown - ICVM 400 and ICVM 476

Investor	%	R\$ million
Individuals	35.6%	19,074.2
Investment Clubs	0.1%	51.7
Investment Funds	14.9%	8,002.8
Private Pension Entities	0.9%	493.3
Insurance Companies	0.1%	41.4
Foreign Investors	7.0%	3,771.6
Intermediary Institutions Participating in the Distribution Consortium	9.2%	4,953.1
Financial Institutions Connected to the Issuer and/or Participants of the Distribution Consortium	16.9%	9,060.7
Other Financial Institutions	12.9%	6,936.7
Other Corporation connected to the issuer and/or the Participants of the Distribution Consortium	1.0%	531.1
Other Corporations	0.6%	332.7
Partners, Directors, Employees, Agents and other Persons connected to the issuer and/or the Participants of the Distribution Consortium	0.2%	116.5
Other Buyers	0.5%	278.5
<b>Total.....</b>	<b>100.0%</b>	<b>53,644.3</b>

Summary of breakdown - ICVM 400 and ICVM 476



Anbima Debentures Index (IDA)



Source: Anbima  
Elaborated by SPE/ME

- \* Annualized volatility of daily returns for the last twelve months
- \*\* 12-month cumulative return
- \*\*\* Weighted average of the index component fees for their respective holdings in the indices
- \*\*\*\* Duration of macaulay expressed in years (252 d.u.)
- \*\*\*\*\* (1) Gross income tax data

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 indexes - DI (Interbank Deposits and IPCA - Consumer Price Index).

**Approved Projects up to May 2018 - 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	2018	2019		
<b>Transportation</b>	<b>11,643.5</b>	<b>12,103.7</b>	<b>18,952.0</b>	<b>13,024.6</b>	<b>5,400.7</b>	<b>29,568.1</b>	<b>13,048.1</b>	<b>66.7</b>	<b>67,369.8</b>	<b>103,807.3</b>
Toll Road	10,171.1	8,453.3	4,726.4	974.7	4,972.7	18,021.6	5,630.6	0.0	33,354.3	52,950.3
Railways	1,472.4	3,650.4	2,785.8	11,796.9	0.0	11,546.5	6,331.4	0.0	21,996.5	37,583.5
Airports	0.0	0.0	8,887.9	0.0	0.0	0.0	0.0	0.0	8,887.9	8,887.9
Ports	0.0	0.0	2,551.9	253.0	428.1	0.0	1,086.1	66.7	3,131.1	4,385.6
<b>Energy</b>	<b>44,746.5</b>	<b>41,259.0</b>	<b>13,494.7</b>	<b>73,117.9</b>	<b>12,743.6</b>	<b>44,977.3</b>	<b>63,437.6</b>	<b>16,115.7</b>	<b>154,086.0</b>	<b>309,892.4</b>
Electric Power Transmission Line	1,329.6	3,753.9	592.0	432.7	802.7	24,157.9	7,685.0	7,083.5	26,091.9	45,837.3
Hydroelectric Power Plants	42,973.4	19,028.6	3,740.5	46,916.7	1,353.9	445.8	21,789.6	0.0	80,786.7	136,248.5
Thermoelectric	0.0	4,123.9	1,111.1	5,075.5	3,246.3	860.9	4,520.5	1,088.8	6,433.8	20,026.9
Small Hydro	0.0	125.5	68.5	893.6	587.6	939.2	461.1	486.6	621.9	3,562.0
Gas	0.0	2,033.5	0.0	2,209.4	0.0	0.0	0.0	0.0	4,243.0	4,243.0
Wind Farms	443.6	5,193.7	7,982.5	11,614.8	6,383.1	4,295.6	10,969.6	3,752.9	15,601.3	50,635.8
Pipelines	0.0	7,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,000.0
Oil	0.0	0.0	0.0	5,975.3	0.0	0.0	0.0	0.0	5,975.3	5,975.3
Distribution	0.0	0.0	0.0	0.0	370.0	11,755.7	11,840.3	3,704.0	13,276.1	27,670.1
Energy Photovoltaics	0.0	0.0	0.0	0.0	0.0	2,522.1	6,171.5	0.0	1,056.0	8,693.6
Telecons	0.0	0.0	0.0	2,882.1	2,147.6	1,733.0	3,603.0	0.0	10,243.3	10,365.7
Telecoms	0.0	0.0	0.0	2,882.1	2,147.6	1,733.0	3,603.0	0.0	10,243.3	10,365.7
<b>Sanitation/Urban Mobility</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1,095.4</b>	<b>125.8</b>	<b>1,405.5</b>	<b>269.4</b>	<b>0.0</b>	<b>1,855.7</b>	<b>2,896.0</b>
Water and Sewerage	0.0	0.0	0.0	288.1	125.8	1,405.5	269.4	0.0	1,048.4	2,088.7
Urban Mobility	0.0	0.0	0.0	807.3	0.0	0.0	0.0	0.0	807.3	807.3
<b>Total.....</b>	<b>56,390.1</b>	<b>53,362.7</b>	<b>32,446.6</b>	<b>90,120.1</b>	<b>20,417.7</b>	<b>77,683.9</b>	<b>80,358.1</b>	<b>16,182.4</b>	<b>233,554.8</b>	<b>426,961.5</b>

Source: Ministerial Orders issued and Linked Entities  
 Elaborated by SPE/ME



**Approved Projects up to May 2018 - Law # 12,431/2011**  
 (Includes projects having or not having issued infrastructure Debentures)

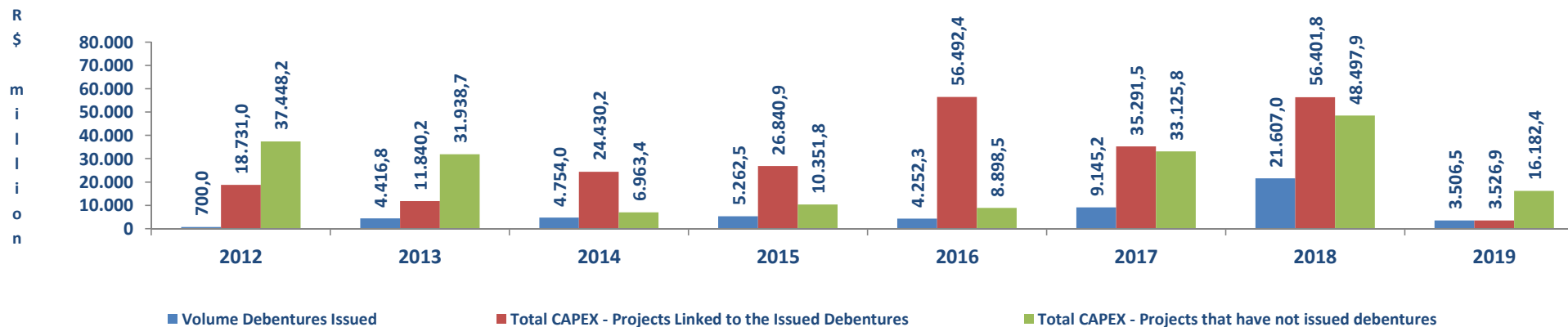
Sectors	Approved Projects								Quantity Portarias with Issuance of Debentures	Total Approved Projects
	2012	2013	2014	2015	2016	2017	2018	2019		
<b>Transportation</b>	<b>3</b>	<b>5</b>	<b>11</b>	<b>5</b>	<b>4</b>	<b>10</b>	<b>10</b>	<b>1</b>	<b>35</b>	<b>49</b>
Toll Road	2	4	5	3	3	8	1	0	23	26
Railways	1	1	2	1	0	2	3	0	6	10
Airports	0	0	2	0	0	0	0	0	2	2
Ports	0	0	2	1	1	0	6	1	4	11
<b>Energy</b>	<b>12</b>	<b>74</b>	<b>90</b>	<b>159</b>	<b>94</b>	<b>126</b>	<b>129</b>	<b>42</b>	<b>298</b>	<b>726</b>
Electric Power Transmission Line	3	9	2	3	8	51	24	10	57	110
Hydroelectric Power Plants	4	2	5	11	3	2	8	0	24	35
Thermoelectric	0	5	1	3	2	1	2	1	4	15
Small Hydro	0	1	1	9	6	4	3	4	7	28
Gas	0	1	0	1	0	0	0	0	2	2
Wind Farms	5	55	81	131	73	41	73	24	164	483
Pipelines	0	1	0	0	0	0	0	0	0	1
Oil	0	0	0	1	0	0	0	0	1	1
Distribution	0	0	0	0	2	27	19	3	31	51
Energy Photovoltaics	0	0	0	0	0	20	39	0	8	59
<b>Telecons</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>5</b>
Telecoms	0	0	0	1	1	1	2	0	4	5
<b>Sanitation/Urban Mobility</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>12</b>
Water and Sewerage	0	0	0	1	3	5	2	0	6	11
Urban Mobility	0	0	0	1	0	0	0	0	1	1
<b>Total.....</b>	<b>15</b>	<b>79</b>	<b>101</b>	<b>167</b>	<b>102</b>	<b>142</b>	<b>143</b>	<b>43</b>	<b>344</b>	<b>792</b>

Source: Ministerial Orders issued and Linked Entities  
 Elaborated by SPE/ME

Summary Table - Volume issued of infrastructure debentures - Law # 12,431 / 2011 Capex linked to the issued debentures and Projects that have not issued debentures

Status of Projects	Investment (R\$ million)								Investment Total (R\$ million)
	2012	2013	2014	2015	2016	2017	2018	2019	
Volume - debentures issued	700.0	4,416.8	4,754.0	5,262.5	4,252.3	9,145.2	21,607.0	3,506.5	53,644.3
CAPEX - Projects Linked to the issued Debentures	18,731.0	11,840.2	24,430.2	26,840.9	56,492.4	35,291.5	56,401.8	3,526.9	233,554.8
CAPEX - Projects that have not issued Debentures	37,448.2	31,938.7	6,963.4	10,351.8	8,898.5	33,125.8	48,497.9	16,182.4	193,406.7

Approved Projects - Volume Emission and Capex

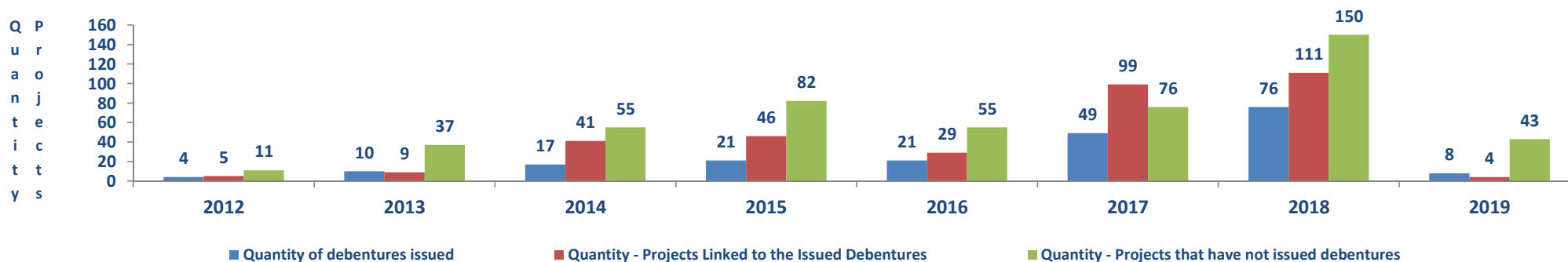


Source: Ministerial Orders issued and Linked Entities  
Elaborated by SPE/ME

Summary Table - Quantity issued of infrastructure debentures - Law # 12,431 / 2011 Quantity of projects linked to the issued debentures and 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	2018	2019	
Quantity of Debentures Issued	4	10	17	21	21	49	76	8	206
Quantity - Projects Linked to the Issued Debentures	5	9	41	46	29	99	111	4	344
Quantity - Projects that have not issued Debentures	11	37	55	82	55	76	150	43	509

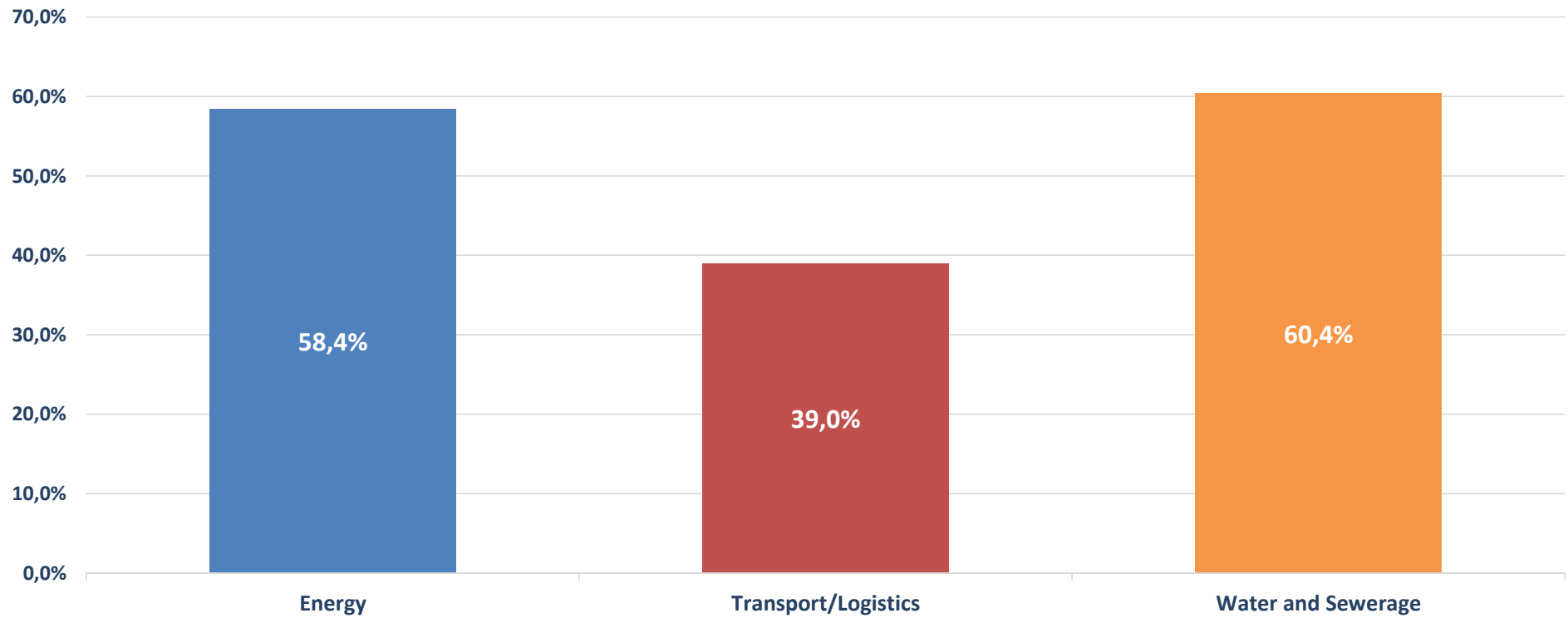
Approved Projects - Quantity Emission and Quantity Waiting Emission



Source: Ministerial Orders issued and Linked Entities  
 Elaborated by SPE/ME

**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 projects.

Financial leverage in infrastructure projects  
(Sector)



Source: Ministerial Orders issued and Linked Entities  
Elaborated by SPE/ME

## Real Estate Receivables Certificate - CRI's according to Law # 12,431/2011

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

Sectors	Lead Coordinator	Quantity Issued	Total Offer (R\$ million)	Yield	Capitalization	Debtor	Due Date	Project
Oil and Gas	Banco Bradesco BBI S.A.	7,049	2,349.7	TR + 9,5 %	Anual	Petrobrás	2/26/2031	Comperj
Oil and Gas	Banco Bradesco BBI S.A.	4,949	1,649.7	TR + 9,5 %	Anual	Petrobrás	3/26/2031	RNEST - Refinaria Abreu e Lima
Drink	Banco Bradesco BBI S.A.	191	191.6	TR + 9,4 %	Anual	Cervejarias Reunidas Skol Caracu	1/15/2030	Projeto Rural Uberlândia
Real estate	Banco Bradesco BBI S.A.	78	78.0	TR + 9,5 %	Semestral	CCP Magnólia Empreendimentos Imobiliários Ltda	12/12/2031	Shopping Metropolitan Barra/RJ
Real estate	Banco Bradesco BBI S.A.	272	272.0	TR + 9,5 %	Semestral	Cyrela Commercial Properties S/A Empreendimentos e Participações	12/12/2031	Cédula de Crédito Imobiliário - CCI 02
Steel	Banco Bradesco BBI S.A.	59	59.0	TR + 9,8 %	Anual	Usinas Siderúrgicas de Minas Gerais - Usiminas	4/27/2025	Cédula de Crédito Bancário - CCB
Chemical and Pharmaceutical	Banco Bradesco BBI S.A.	170	170.0	TR + 9,6 %	Anual	Brainfarma, Cosmed e Hypermarcas	12/26/2026	Cédula de Crédito imobiliário - CCI Brainfarma
Metals and Mining	Banco Bradesco BBI S.A.	700	700.0	TR + 8,8 %	Anual	Vale S/A	4/20/2022	Complexo Portuário de Ponta Madeira/MA
Total .....		13,468	5,470.0					

Source : Cibrasec

Elaborated by SPE/ME

## 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&amp;I.

## Brazilian Infrastructure Bonds Investment Funds - Fixed-Income Investment - Law # 12,431/2011 - February 2019

Infrastructure Bonds Investment funds	Debentures (Infrastructure Bonds)	Time Deposits and Other Financial Securities	Quotas of Investment 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 - CA Indosuez Master c. Privado	583.23	0.00	0.00	59.45	2.36	0.03	645.07	90%
FIRF - VIC C. Privado	53.43	0.00	0.90	0.00	8.08	(0.01)	62.40	86%
FIRF - BNP Paribas Plus C. Privado	15.19	0.00	0.00	0.05	1.90	(0.09)	17.05	89%
FIRF - Bradesco C. Privado	101.93	0.00	0.00	3.43	9.50	(0.05)	114.81	89%
FIRF - CSHG AS 7.7 C. Privado	37.49	0.00	0.00	0.00	3.59	(0.01)	41.08	91%
FIRF - CSHG 392 C. Privado	312.48	0.00	0.00	0.00	2.33	(0.03)	314.78	99%
FIRF - XP C. Privado	310.97	0.00	7.87	3.40	0.00	(1.38)	320.87	97%
FIRF - Fator C. Privado	113.78	1.60	1.76	7.22	2.93	(0.06)	127.24	89%
FIRF - TFO CSHG C. Privado	48.58	0.00	0.00	0.00	1.89	(0.01)	50.46	96%
FIRF - CSHG Omega C. Privado	194.99	0.00	4.01	0.00	3.00	(0.86)	201.15	97%
FIRF - Brasil Plural Master C. Privado	39.02	0.00	0.30	1.60	2.57	(0.01)	43.49	90%
FIRF - Turmalina C. Privado	115.40	7.78	1.73	0.00	2.13	(0.03)	127.01	91%
FIRF - SDEUX C. Privado	10.02	0.00	0.00	0.41	0.85	0.11	11.38	88%
FIRF - Sul América C. Privado	13.53	0.32	0.00	2.54	1.38	(0.01)	17.75	76%
FIRF - XPCE II C. Privado	192.94	10.00	19.10	51.05	15.00	16.26	304.34	63%
FIRF - Pedra Negra C. Privado	126.57	0.00	4.90	12.08	0.00	129.50	273.05	46%
FIRF - Bonsucesso C. Privado	30.02	0.00	0.82	0.53	0.00	(0.04)	31.34	96%
FIRF - Alocação C. Privado	184.38	10.72	5.08	0.00	0.00	(0.91)	199.26	93%
FIRF - Água C. Privado	23.07	0.00	0.00	2.43	1.46	(0.02)	26.95	86%
FIRF - Newbery C. Privado	252.25	0.00	33.65	25.55	0.00	0.07	311.52	81%
FIRF - Órama C. Privado	33.67	0.77	3.30	0.00	0.00	(0.26)	37.49	90%
FIRF - Brasil Plural Master II C. Privado	225.48	0.00	0.67	15.60	9.44	(0.29)	250.90	90%
FIRF - AZ Quest Master C. Privado	108.68	0.00	5.57	1.65	29.24	(24.61)	120.52	90%
FIRF - VIC Supra C. Privado	332.33	0.00	20.42	0.00	26.40	(0.00)	379.14	88%
FIRF - BNP Paribas C. Privado	212.22	0.00	0.00	4.46	24.01	(0.50)	240.18	88%
FIRF - Daycoval C. Privado	47.14	0.00	0.17	1.03	6.44	(0.03)	54.74	86%
FIRF - RB Capital Master C. Privado	168.80	0.00	1.69	5.45	2.59	0.01	178.55	95%
FIRF - Brasil Plural Master TFO C. Privado	71.71	0.00	0.30	6.34	3.52	(0.03)	81.84	88%

## Continuation - Brazilian Infrastructure Bonds Investment Funds - Fixed-Income Investment - February 2019

Infrastructure Bonds Investment funds	Debentures (Infrastructure Bonds)	Time Deposits and Other Financial Securities	Quotas of Investment 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 - Safra Master C. Privado	348.86	0.00	0.00	53.43	77.48	(0.34)	479.43	73%
FIRF - Pasárgada C. Privado	16.73	0.00	1.26	0.00	0.00	(0.01)	17.98	93%
FIRF - RB Capital Vitória C. Privado	201.35	6.26	1.38	6.39	5.89	(0.94)	220.34	91%
FIRF - Crodo C. Privado	44.92	0.00	2.94	0.00	0.00	(0.02)	47.84	94%
FIRF - TAO Infra C. Privado	76.08	0.00	0.42	13.85	0.28	(0.03)	90.61	84%
FIRF - SPEED Infra C. Privado	34.93	0.00	2.86	0.00	0.21	(0.01)	37.99	92%
FIRF - II Alocação C. Privado	175.96	7.02	6.25	5.55	0.00	(1.83)	192.94	91%
FIRF - Precioso C. Privado	4.16	0.00	31.35	0.00	0.00	17.08	52.60	8%
FIRF - Votorantim Hedge C. Privado	100.28	19.84	31.72	103.01	11.03	(0.17)	265.72	38%
FIRF - G5 Infra C. Privado	33.11	0.63	2.89	0.85	5.95	(0.00)	43.42	76%
FIRF - Safra Premium C. Privado	133.09	0.00	0.00	20.73	6.21	(0.33)	159.69	83%
FIRF - Monte Alegre C. Privado	43.67	0.00	7.72	0.45	0.50	0.38	52.72	83%
FIRF - IDA C. Privado	19.62	0.00	8.13	0.00	0.00	(0.01)	27.74	71%
FIRF - HIGH Income C. Privado	66.18	0.00	7.12	2.92	0.00	(0.02)	76.20	87%
FIRF - Iridium Pioneer C. Privado	244.85	2.16	4.83	81.10	0.00	10.19	343.13	71%
FIRF - ZETA C. Privado	20.34	0.00	0.00	3.17	0.11	(0.00)	23.63	86%
FIRF - Esposende C. Privado	99.18	0.00	0.00	13.57	0.00	(1.01)	111.74	89%
FIRF - XXV de Janeiro C. Privado	6.30	0.00	0.35	0.30	0.71	0.38	8.04	78%
FIRF - XP Infra 60 C. Privado	87.55	1.83	0.53	8.04	2.80	0.01	100.75	87%
FIRF - Finor C. Privado	44.19	2.28	2.87	9.77	0.00	(0.02)	59.08	75%
FIRF - III Alocação C. Privado	15.74	0.00	2.01	41.47	0.00	(0.03)	59.19	27%
FIRF - AndBank - C. Privado	18.11	0.00	3.60	0.92	0.00	0.01	22.63	80%
FIRF - Silver OAK C. Privado	7.82	0.00	0.21	2.93	0.00	(0.01)	10.96	71%
FIRF - AF 1644 Multimercado	26.08	0.00	0.67	10.93	0.00	(0.02)	37.66	69%
FIRF - Riska C. Privado	9.55	0.00	0.95	6.78	0.00	(0.01)	17.28	55%
FIRF - 8.613 Multimercado	49.11	0.00	13.95	10.31	0.00	0.77	74.14	66%
FIRF - EPL C. Privado	24.05	0.00	6.08	13.93	0.00	(0.02)	44.04	55%

## Continuation - Brazilian Infrastructure Bonds Investment Funds - Fixed-Income Investment - February 2019

Infrastructure Bonds Investment funds	Debentures (Infrastructure Bonds)	Time Deposits and Other Financial Securities	Quotas of Investment 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 - Sparta Master A. C. Privado	507.52	35.10	29.39	21.12	0.00	(1.73)	591.39	86%
FIRF - DLM C. Privado	109.15	18.75	2.21	10.55	0.30	(0.13)	140.83	78%
FIRF - Devant C. Privado	7.92	1.14	0.20	0.67	0.97	1.35	12.25	65%
FIRF - ARX Elbrus C. Privado	23.78	1.13	0.72	1.79	0.00	(0.02)	27.39	87%
FIRF - Journey Capital Endurance C. Privado	5.24	0.00	0.42	0.30	2.65	(0.02)	8.60	61%
FIRF - Deri C. Privado	10.66	0.00	9.81	0.00	0.00	(0.01)	20.45	52%
FIRF - Avião III C. Privado	19.31	0.00	31.30	0.00	0.00	(0.01)	50.60	38%
FIRF - VBA C. Privado	1.77	0.00	3.40	15.36	0.00	(0.01)	20.52	9%
FIRF - Quasar C. Privado	89.19	26.73	10.68	14.97	0.00	(0.10)	141.48	63%
FIRF - Neblus C. Privado	9.86	0.00	4.09	0.00	0.00	(0.05)	13.89	71%
FIRF - G5 SHLIMS C. Privado	5.49	3.61	4.81	0.30	0.03	0.97	15.21	36%
<b>Total .....</b>	<b>6,700.97</b>	<b>157.66</b>	<b>349.38</b>	<b>679.72</b>	<b>275.73</b>	<b>140.96</b>	<b>8,304.43</b>	

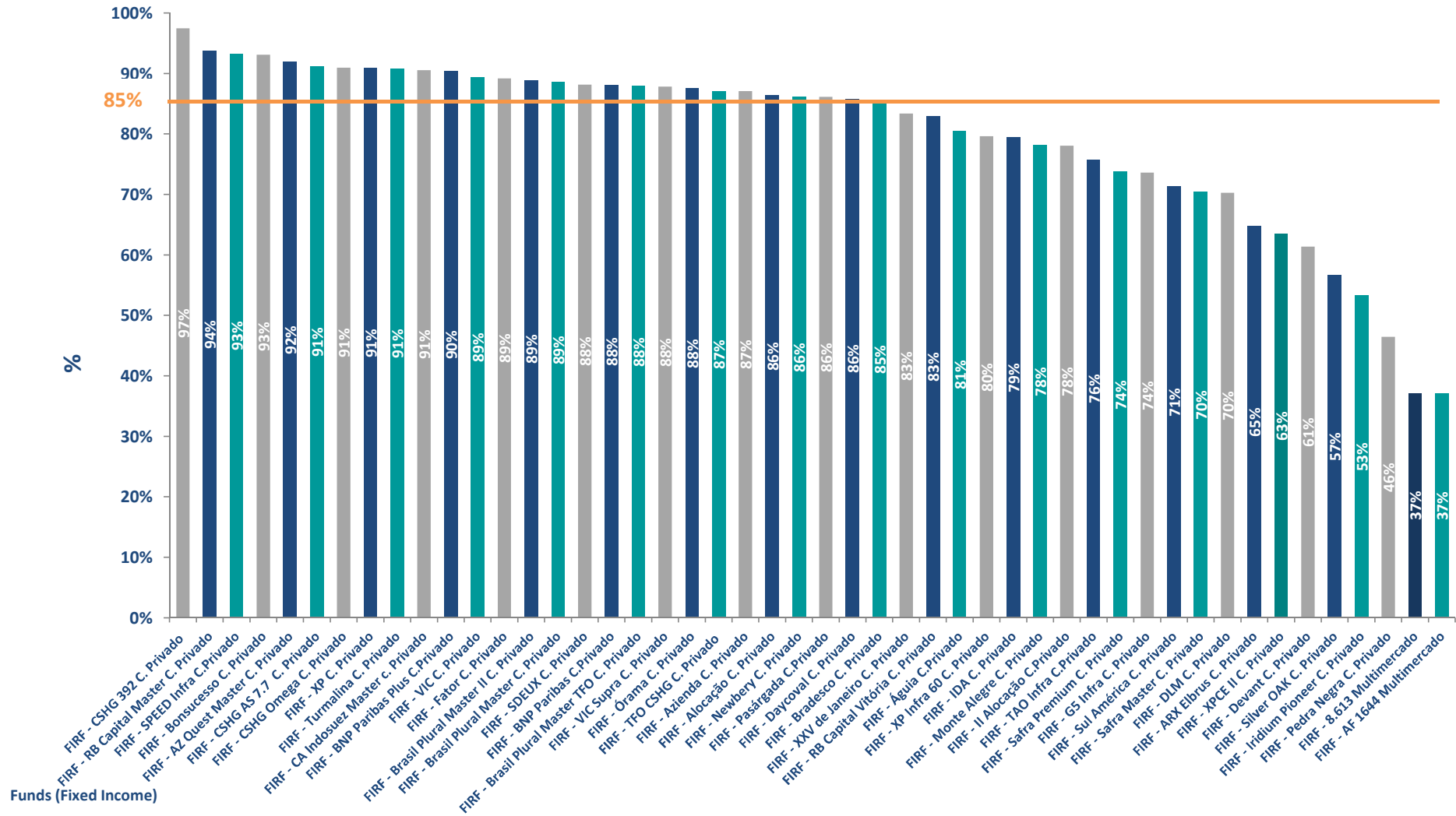
Source : Brazilian Securities Commission - CVM  
Elaborated by SPE/ME

**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 : Brazilian Securities Commission - CVM  
Elaborated by SPE/ME

## Infrastructure Credit Rights Investment Fund – FIDC - Law # 12,431/2011 - February 2019

Infrastructure Credit Rights Investment Fund	Credit Rights	Time Deposits and Other Financial	Quotas of Investment 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)	
FIDC - BB Infra Votorantim Highland	416.91	0.00	0.00	0.00	17.61	(68.99)	365.53	114%
FIDC - Kinea Infra I	473.75	0.00	0.00	200.19	12.31	0.00	686.24	69%
<b>Total .....</b>	<b>890.66</b>	<b>0.00</b>	<b>0.00</b>	<b>200.19</b>	<b>29.91</b>	<b>(68.99)</b>	<b>1,051.77</b>	

Source : Brazilian Securities Commission - CVM

Elaborated by SPE/ME

**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 - February 2019

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 Energia Renovável	805.79	0.15	0.00	0.00	0.00	0.00	0.00	(5.88)	800.06
FIP-IE Infra BB Votorantim Energia Sust. II	158.44	64.64	0.00	0.00	0.00	0.00	0.00	(13.73)	209.36
FIP-IE Infra BB Votorantim Energia Sust. III	154.07	77.98	0.00	0.00	0.00	0.00	0.00	(14.93)	217.12
FIP-IE Infra BB Votorantim Energia Sust. I	32.55	14.53	0.00	0.00	0.00	0.00	0.00	(2.93)	44.14
FIP-IE Infra Pátria Energia Renovável	58.82	0.00	0.00	0.00	0.00	0.00	0.06	(0.02)	58.87
FIP-IE Infra CZ Fundo Investimentos	15.11	0.00	0.00	0.00	0.00	0.00	0.00	(0.01)	15.10
FIP-IE Infra XP OMEGA I	128.57	0.05	0.00	0.00	0.00	0.00	0.00	0.36	128.98
FIP-IE Infra ANESSA	121.66	0.00	0.04	0.00	0.00	0.00	0.00	0.06	121.76
FIP-IE Infra Olime	10.00	9.10	0.00	0.00	0.00	0.00	0.00	(0.06)	19.03
FIP-IE Infra Porto Sudeste Royalties	243.13	1.01	0.00	0.00	0.00	0.00	0.00	(0.14)	244.00
FIP-IE Prisma Hélios	0.00	0.00	0.00	3.19	0.00	89.82	0.00	(0.81)	92.20
FIP-IE Infra TRX Infra I	24.42	0.00	0.00	0.00	0.00	0.00	0.00	(0.22)	24.20
FIP-IE Infra Prosperidade	124.07	0.73	0.00	0.00	0.00	0.00	0.00	(0.05)	124.75
<b>Total .....</b>	<b>1,876.64</b>	<b>168.18</b>	<b>0.04</b>	<b>3.19</b>	<b>0.00</b>	<b>89.82</b>	<b>0.06</b>	<b>(38.37)</b>	<b>2,099.57</b>

Source : Brazilian Securities Commission - CVM

Produced by SPE/ME

**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.

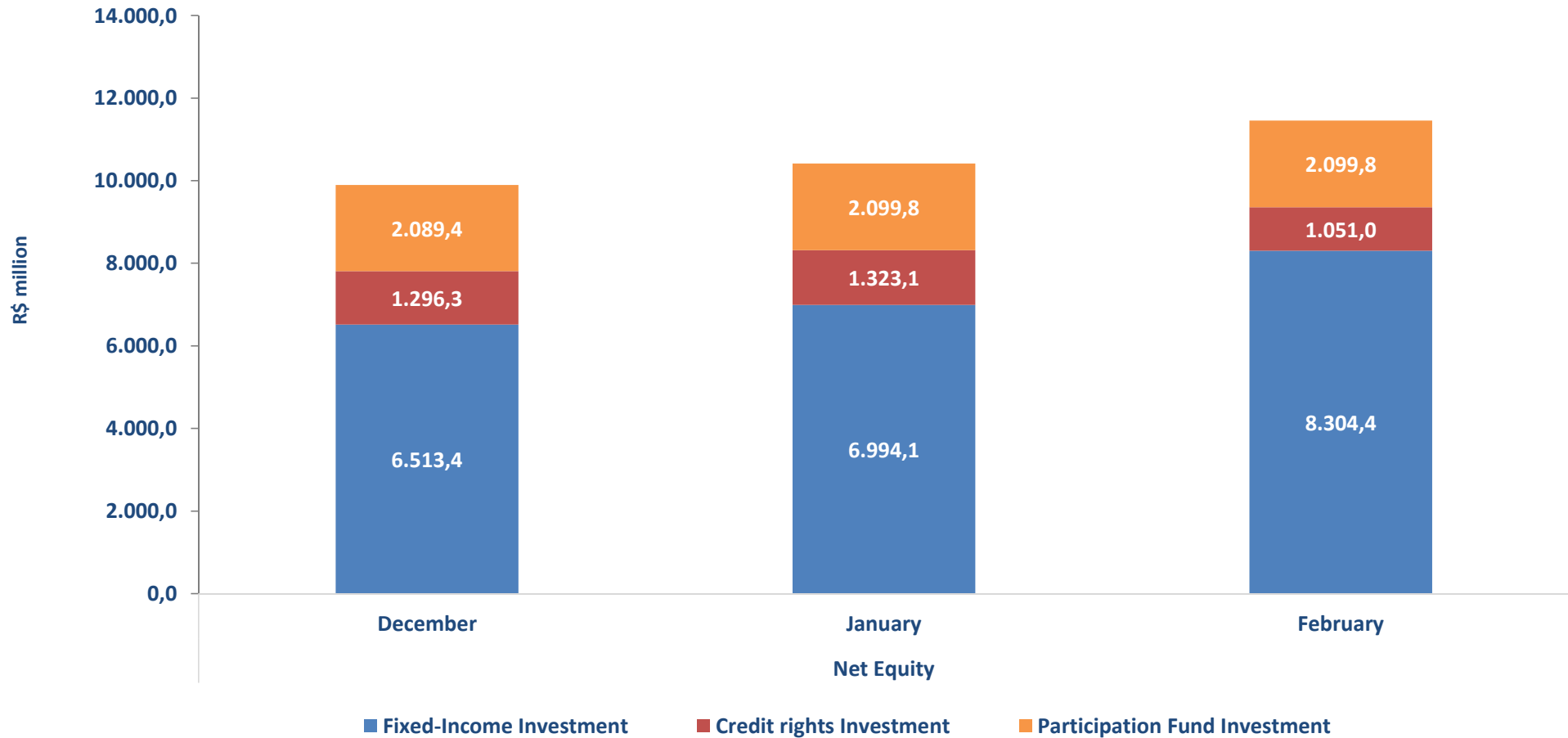
(iii) The FIP-IE and FIP-PD&amp;I must maintain a minimum of 90% of its net worth invested in shares, subscription bonds, debentures (convertible or not into shares) or other bonds issued by either a publicly or closely-held company.

(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 Infrastructure Bonds Investment Funds - Net Worth Growth  
December 2018 and January/February 2019



Source: Brazilian Securities Commission - CVM  
Produced by SPE/ME

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