



MINISTRY OF FINANCE

# Newsletter Debentures

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

December 2022

109<sup>th</sup> Edition

SECRETARIA DE  
POLÍTICA ECONÔMICA

MINISTÉRIO DA  
FAZENDA



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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).

CMN Resolution 4,751 of September 30, 2019, authorizes the possibility of early settlement of debentures may occur, at the sole discretion of the issuer, provided that the following requirements are cumulatively met;

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

If there is an express provision in the debentures indenture;

Prepayment rate less than or equal to the sum of the federal government bond rate matched by the same debenture index with the duration closest to the debenture duration at the early settlement date, with the spread over the federal government bond matched by the same index as the debenture with the duration closest to the duration of the security on the issue date;

Provision in the Deed of Issue instrument of possible early settlement dates at intervals of not less than six months between them and the calculation formula that will be used at the time of settlement;

The requirements in the last two items above may be disregarded provided that debenture holders representing at least seventy-five percent (75%) of the outstanding debentures approve the settlement, by deliberation at the debenture holders' meeting or adhering to the offer. purchase made by the issuing company, in compliance with the rules issued by the Securities Commission;

This resolution applies only to debentures issued from the 30th of september, 2019.

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 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).

Decree nº 10.387 / 2020, modifies Decree 8.874 / 2016, to provide for incentives to finance infrastructure projects with environmental and social benefits.

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 December 2022, 7 (seven) infrastructure debentures were offered to the market with a restricted distribution effort, linked to the energy , transport and sanitation. The total volume of the offer distributed in the period was R \$ 4.8 billion. Between 2012 and December 2022, the total volume distributed in infrastructure and investment debentures, with broad and restricted efforts, was R \$ 211.4 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\$ 46.9 billion of the total amount until December 2022, corresponding to 25% of all incentive debentures distributed since 2012.

In the secondary market, in December, incentivized debentures had a turnover of 3.5% against 3.2% for non-incentivized debentures.

In relation to the ANBIMA Return Index (IDA), in the last 12 months, the IDA-IPCA Infraestrutura showed an appreciation of 5.0%, compared to an increase of 14.7% in the IDA-DI and of 6.4% in the IDA-IPCA ex- infraestrutura. In terms of risk, in the last 12 months, the IDA-IPCA Infraestrutura reached a risk rate of around 4.9%, while the IDA-DI and IDA-IPCA ex- infraestrutura reached 0.1% and 4.9%, respectively.

Regardin Infrastructure Funds, the percentage investement in Debentures through December 2022 in Fixed Income Funds (Fundos de Renda Fixa - FIRF), was 83%, while investments in Direct Credit Funds reached 95%, of Net Equity (NE).

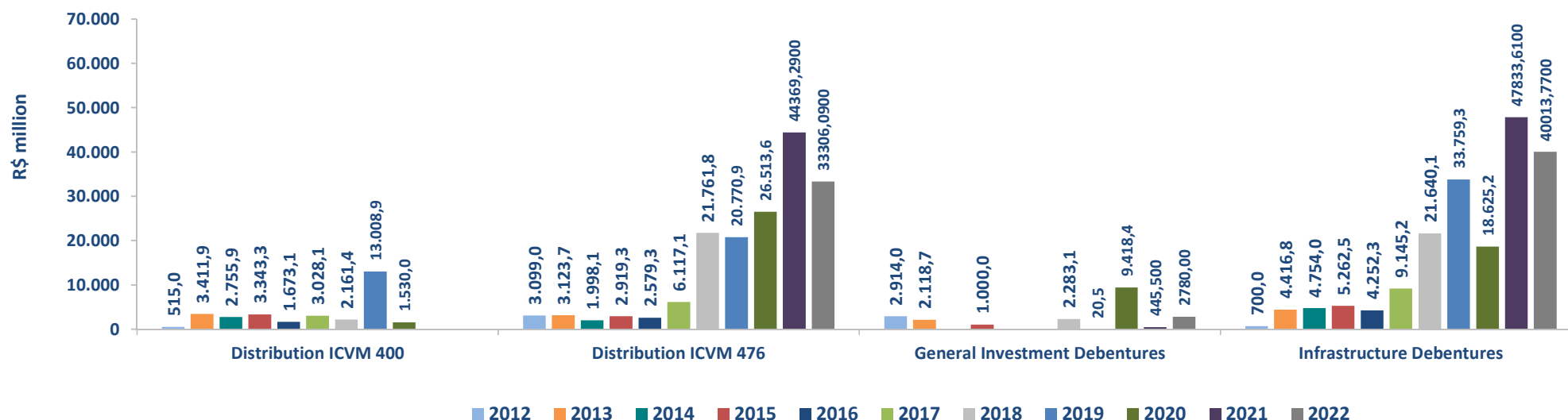
Law No. 12,431/11 prescribes a minimum investment of 85% of Net Equity in infrastructure projects (debentures, quota funds, and dirct credits), although in the firts two years from the first pay-in, the minimum permitted percentage of infrastructure assets relative to Net Equity is 67%.

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.

Capex and Infrastructure Bonds: 2012 to 2022<sup>1</sup>

INFRASTRUCTURE DEBENTURE	Value (R\$ million)									Total Value
	2012/2013/2014	2015	2016	2017	2018	2019	2020	2021	2022	
Distribution ICVM 400 <sup>2</sup>	6,682.8	3,343.3	1,673.1	3,028.1	2,161.4	13,008.9	1,530.0	3,909.8	9,487.7	44,824.9
Distribution ICVM 476 <sup>3</sup>	8,220.8	2,919.3	2,579.3	6,117.1	21,761.8	20,770.9	26,513.6	44,369.3	33,306.1	166,558.0
<b>Total.....</b>	<b>14,903.5</b>	<b>6,262.5</b>	<b>4,252.3</b>	<b>9,145.2</b>	<b>23,923.2</b>	<b>33,779.8</b>	<b>28,043.5</b>	<b>48,279.1</b>	<b>42,793.8</b>	<b>211,382.9</b>
General Investment Debentures	5,032.7	1,000.0	0.0	0.0	2,283.1	20.5	9,418.4	445.5	2,780.0	20,980.2
Infrastructure Debentures	9,870.8	5,262.5	4,252.3	9,145.2	21,640.1	33,759.3	18,625.2	47,833.6	40,013.8	190,402.8
<b>Total.....</b>	<b>14,903.5</b>	<b>6,262.5</b>	<b>4,252.3</b>	<b>9,145.2</b>	<b>23,923.2</b>	<b>33,779.8</b>	<b>28,043.5</b>	<b>48,279.1</b>	<b>42,793.8</b>	<b>211,382.9</b>

Capex and Infrastructure Bonds: 2012 to 2022



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

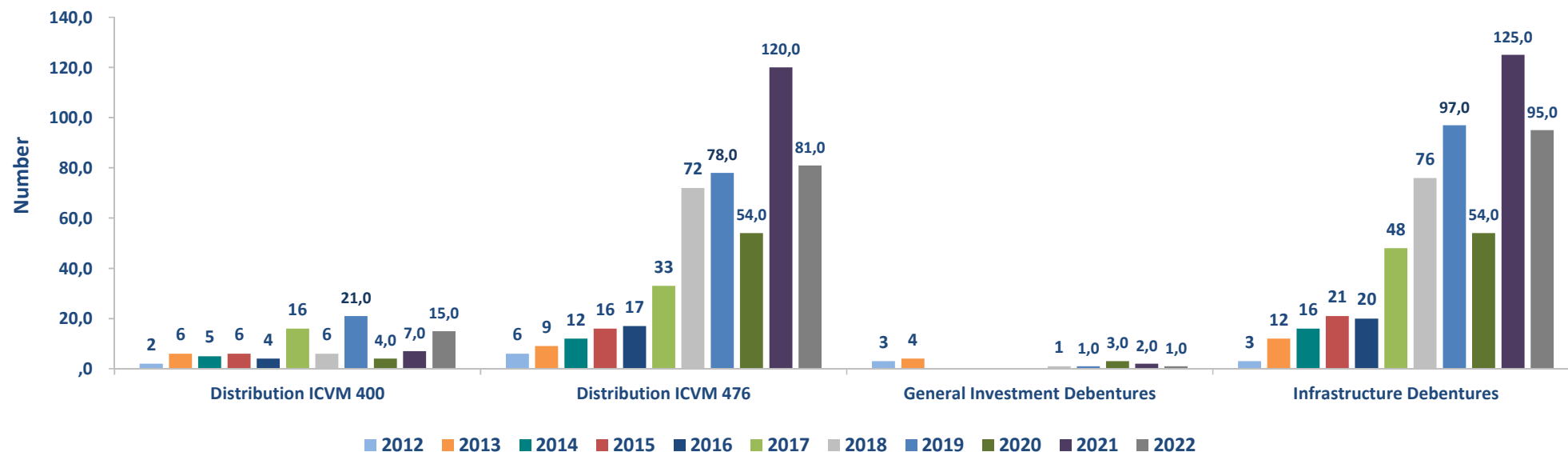
Note:

- (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.

Number of Infrastructure Bonds: 2012 to 2022<sup>1</sup>

INFRASTRUCTURE DEBENTURE	Number									Total Number
	2012/2013/2014	2015	2016	2017	2018	2019	2020	2021	2022	
Distribution ICVM 400 <sup>2</sup>	13	6	4	16	6	21	4	7	15	92
Distribution ICVM 476 <sup>3</sup>	27	16	17	33	72	78	54	120	81	498
<b>Total.....</b>	<b>40</b>	<b>22</b>	<b>21</b>	<b>49</b>	<b>78</b>	<b>99</b>	<b>58</b>	<b>127</b>	<b>96</b>	<b>590</b>
General Investment Debentures	9	1	0	0	2	1	4	2	1	20
Infrastructure Debentures	31	21	21	49	76	98	54	125	95	570
<b>Total.....</b>	<b>40</b>	<b>22</b>	<b>21</b>	<b>49</b>	<b>78</b>	<b>99</b>	<b>58</b>	<b>127</b>	<b>96</b>	<b>590</b>

Number of Infrastructure Bonds: 2012 to 2022



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

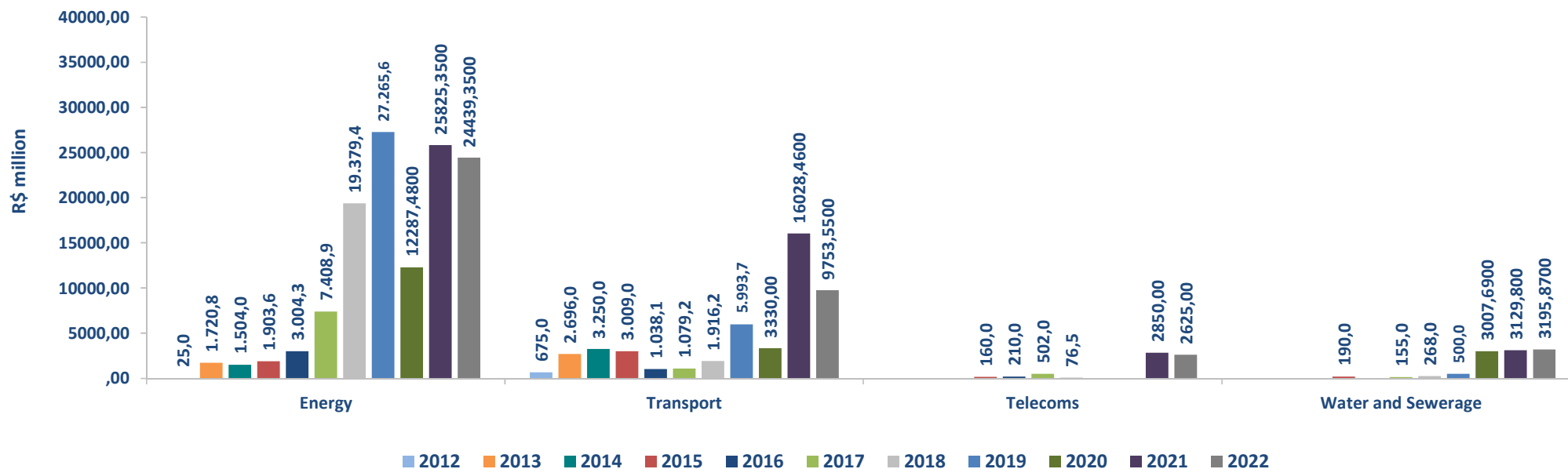
Note:

- (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.

Infrastructure Bonds: 2012 to 2022<sup>1</sup>  
(by sector)

Sector Debenture	Value (R\$ million)									Total Value
	2012/2013/ 2014	2015	2016	2017	2018	2019	2020	2021	2022	
Energy	3,249.8	1,903.6	3,004.3	7,408.9	19,379.4	27,265.6	12,287.5	25,825.4	24,439.4	124,763.7
Transport	6,621.0	3,009.0	1,038.1	1,079.2	1,916.2	5,993.7	3,330.0	16,028.5	9,753.6	48,769.2
Telecoms	0.0	160.0	210.0	502.0	76.5	0.0	0.0	2,850.0	2,625.0	6,423.5
Water and Sewerage	0.0	190.0	0.0	155.0	268.0	500.0	3,007.7	3,129.8	3,195.9	10,446.4
<b>Total.....</b>	<b>9,870.8</b>	<b>5,262.5</b>	<b>4,252.3</b>	<b>9,145.2</b>	<b>21,640.1</b>	<b>33,759.3</b>	<b>18,625.2</b>	<b>47,833.6</b>	<b>40,013.8</b>	<b>190,402.8</b>

Infrastructure Bonds - 2012 to 2022



Source: Anbima and Ministerial Ordinances

Elaborated by SPE/ME

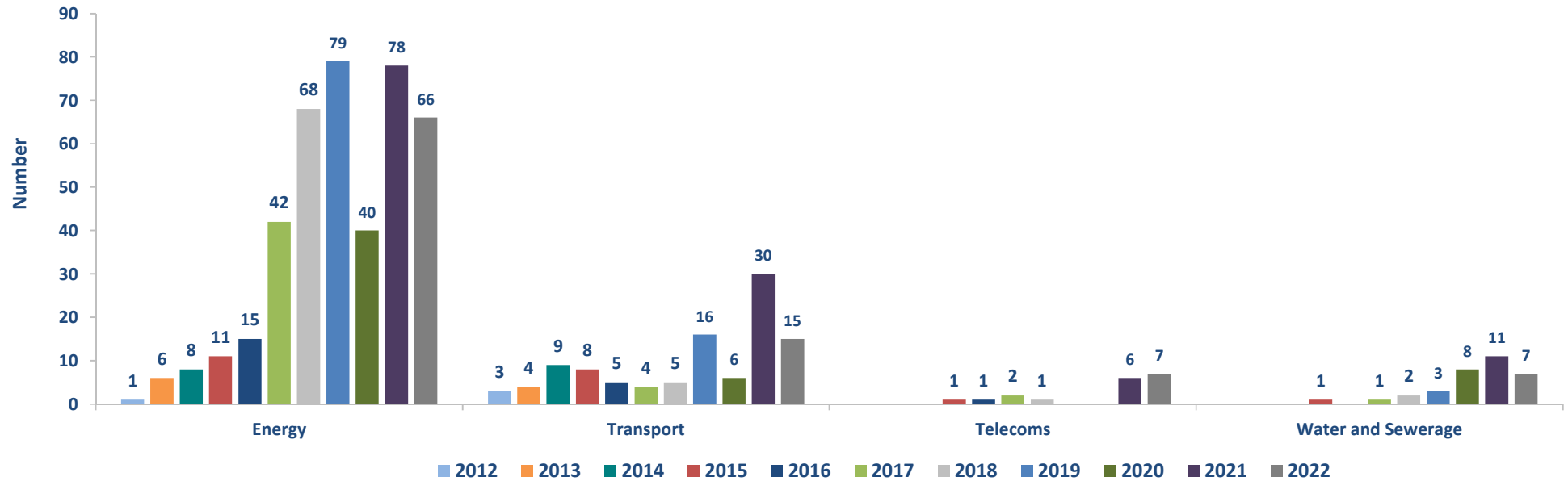
Note:

(1) Volume by year of distribution

Number of infrastructure Bonds: 2012 to 2022<sup>1</sup>  
(by sector)

Sector Debenture	Number									Total Number
	2012/2013/ 2014	2015	2016	2017	2018	2019	2020	2021	2022	
Energy	15	11	15	42	68	79	40	78	66	414
Transport	16	8	5	4	5	16	6	30	15	105
Telecoms	0	1	1	2	1	0	0	6	7	18
Water and Sewerage	0	1	0	1	2	3	8	11	7	33
<b>Total.....</b>	<b>31</b>	<b>21</b>	<b>21</b>	<b>49</b>	<b>76</b>	<b>98</b>	<b>54</b>	<b>125</b>	<b>95</b>	<b>570</b>

Number of infrastructure Bonds - 2012 to 2022

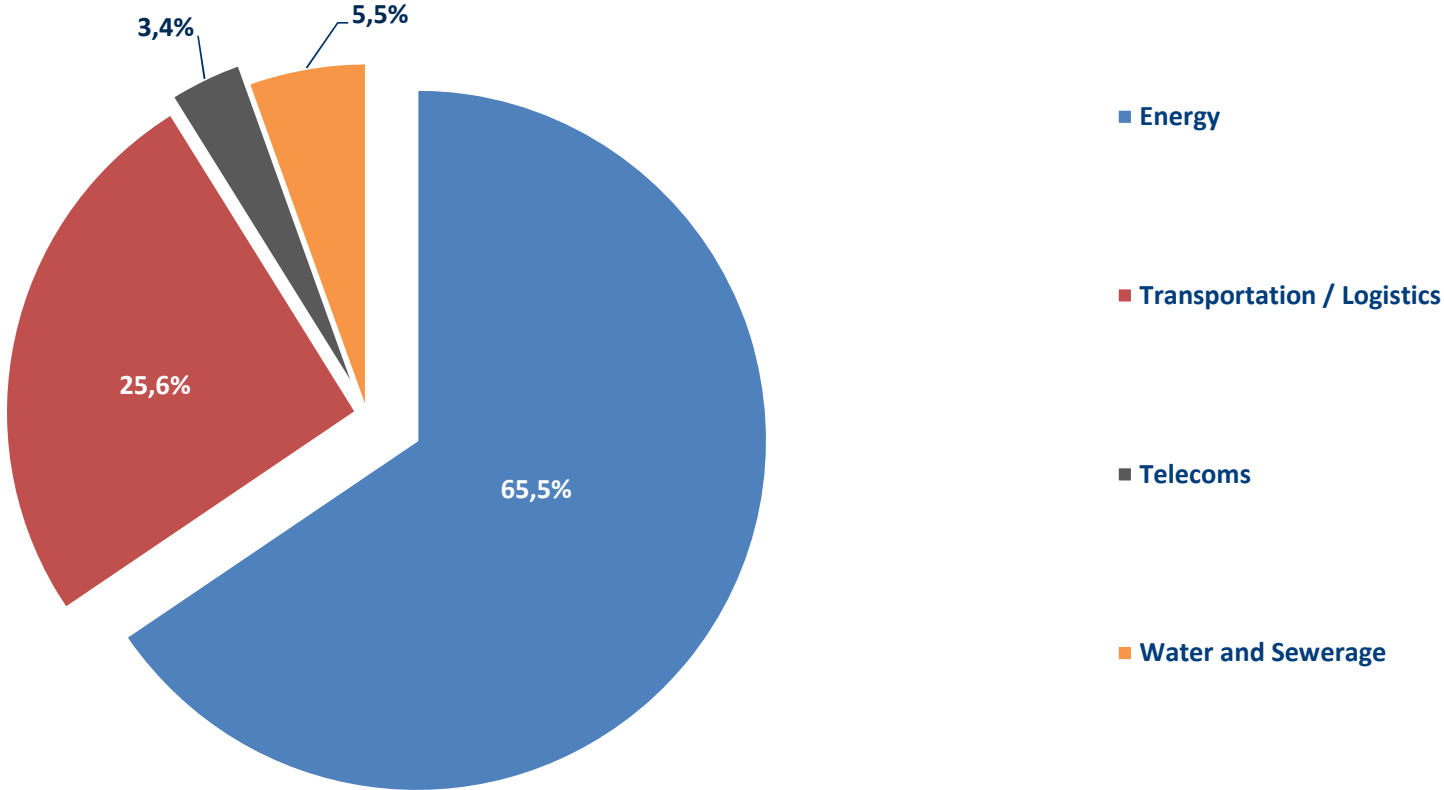


Source: Anbima and Ministerial Ordinances  
Elaborated by SPE/ME

Note:  
(1) Quantity by year of distribution

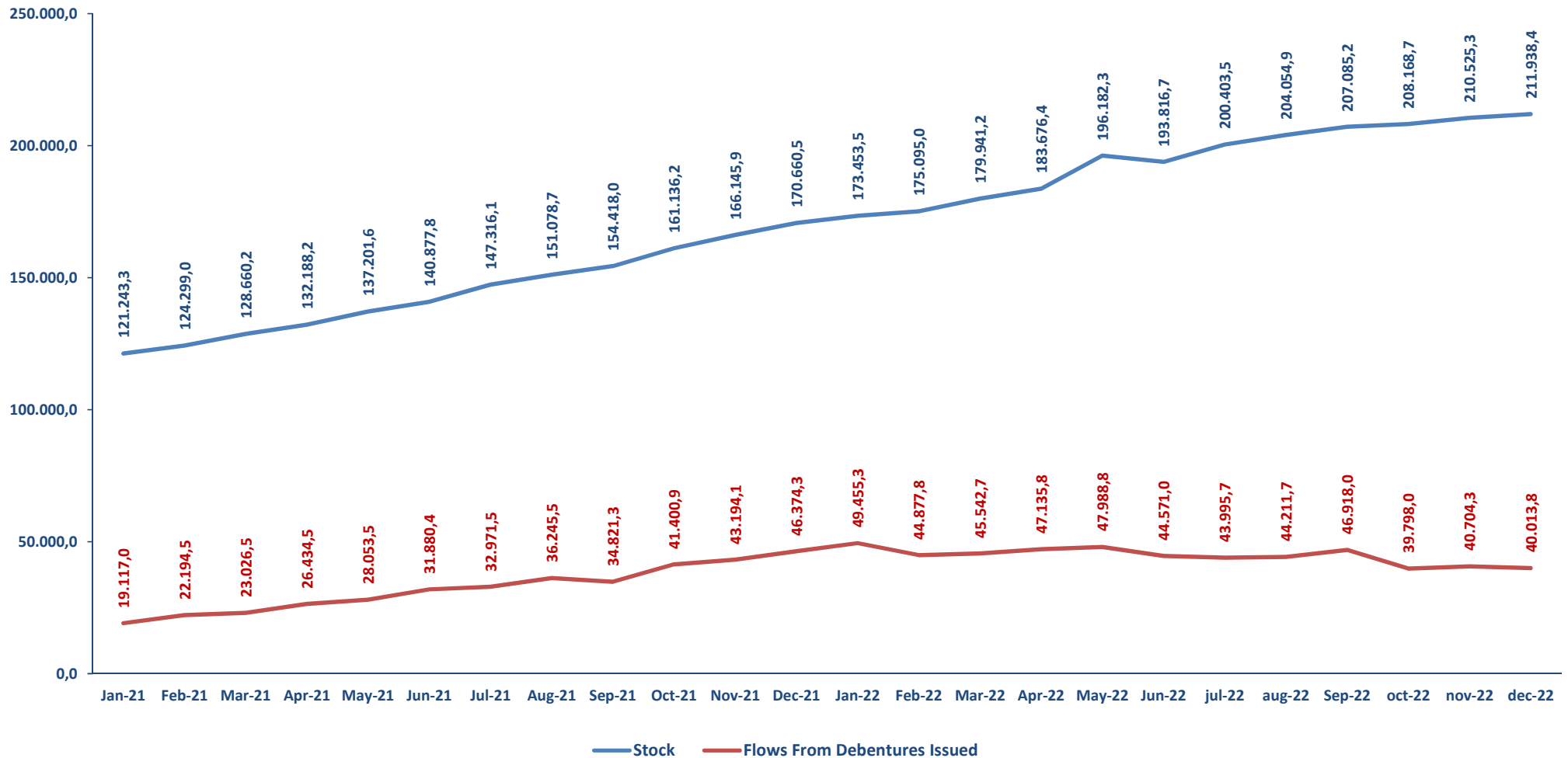


% Debentures Issuance in Infrastructure Projects - 2012 to December 2022



Source: Anbima and Ministerial Ordinances  
Elaborated by SPE/ME

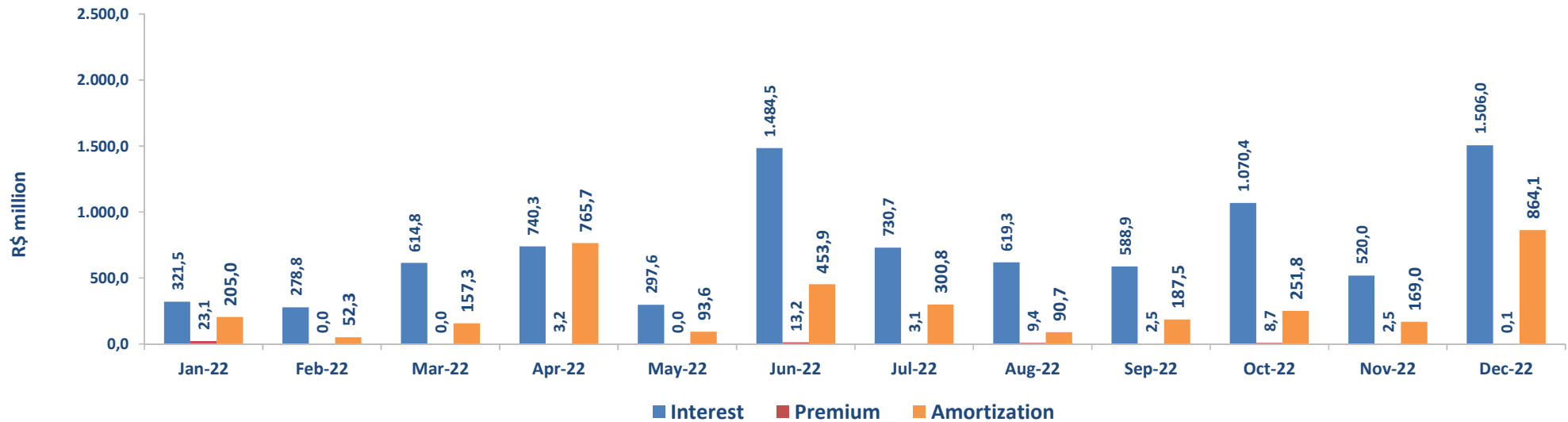
Stock and volume - Infrastructure Debentures (Volume - Rolling Average in the last 12 (twelve) months)



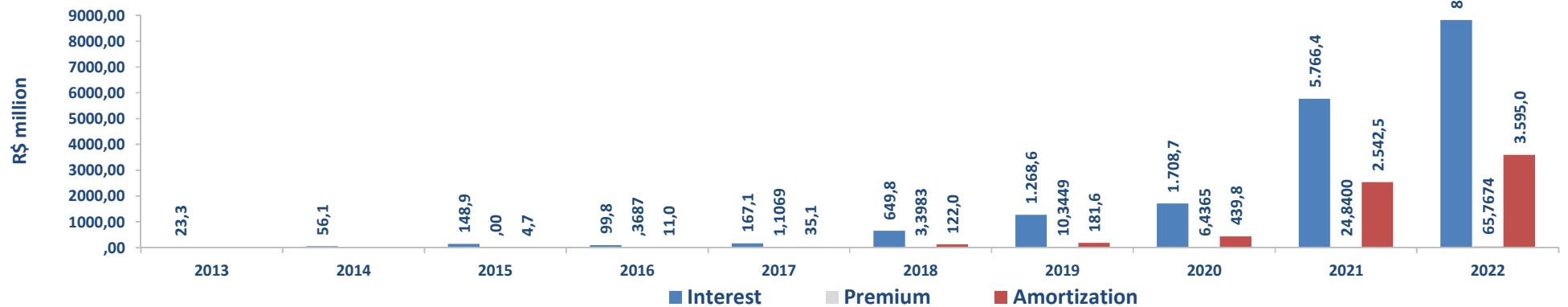
Source: Anbima and Ministerial Ordinances  
Elaborated by SPE/ME

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

Interest, Premium, Amortization Payments - Infrastructure Debentures

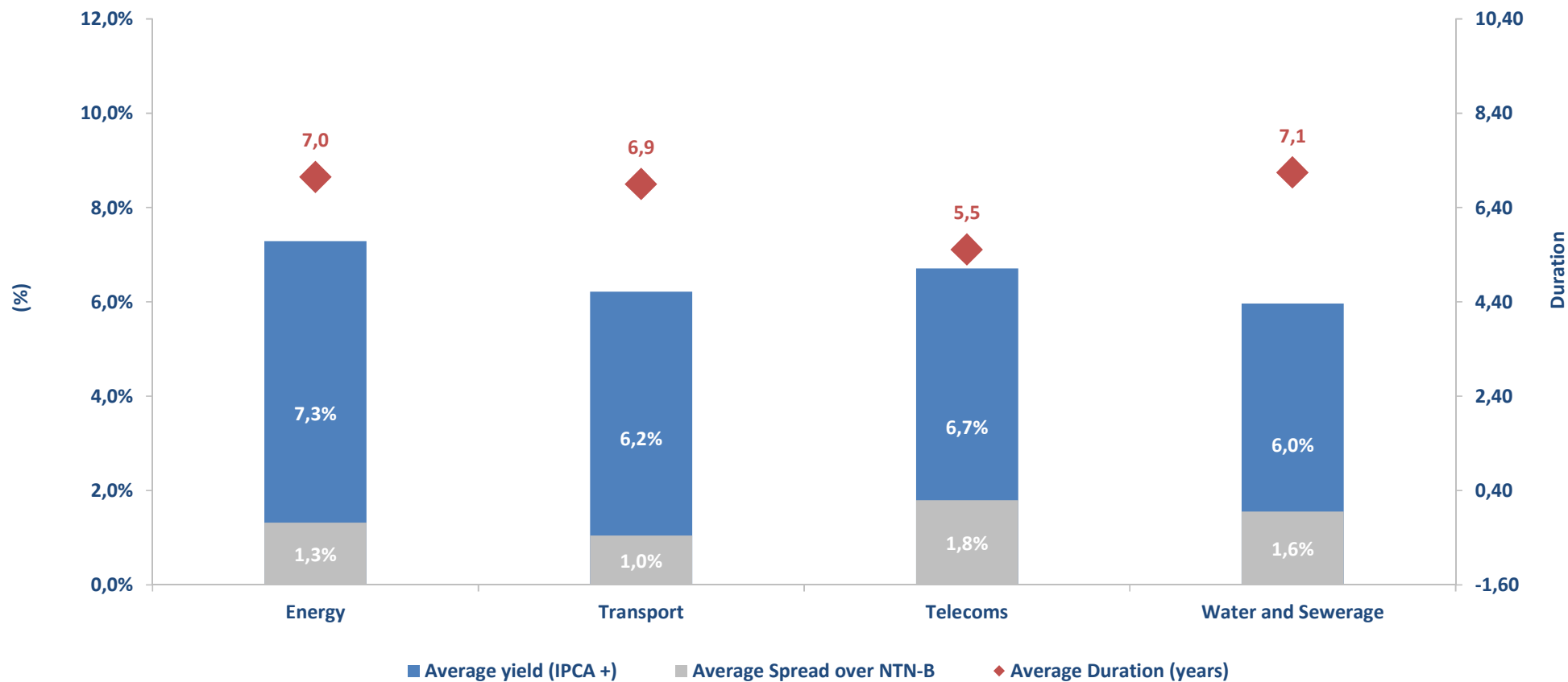


Interest, Premium, Amortization Payments (by year) - Infrastructure Debentures 2013 and December 2022



Source: Anbima  
Elaborated by SPE/ME

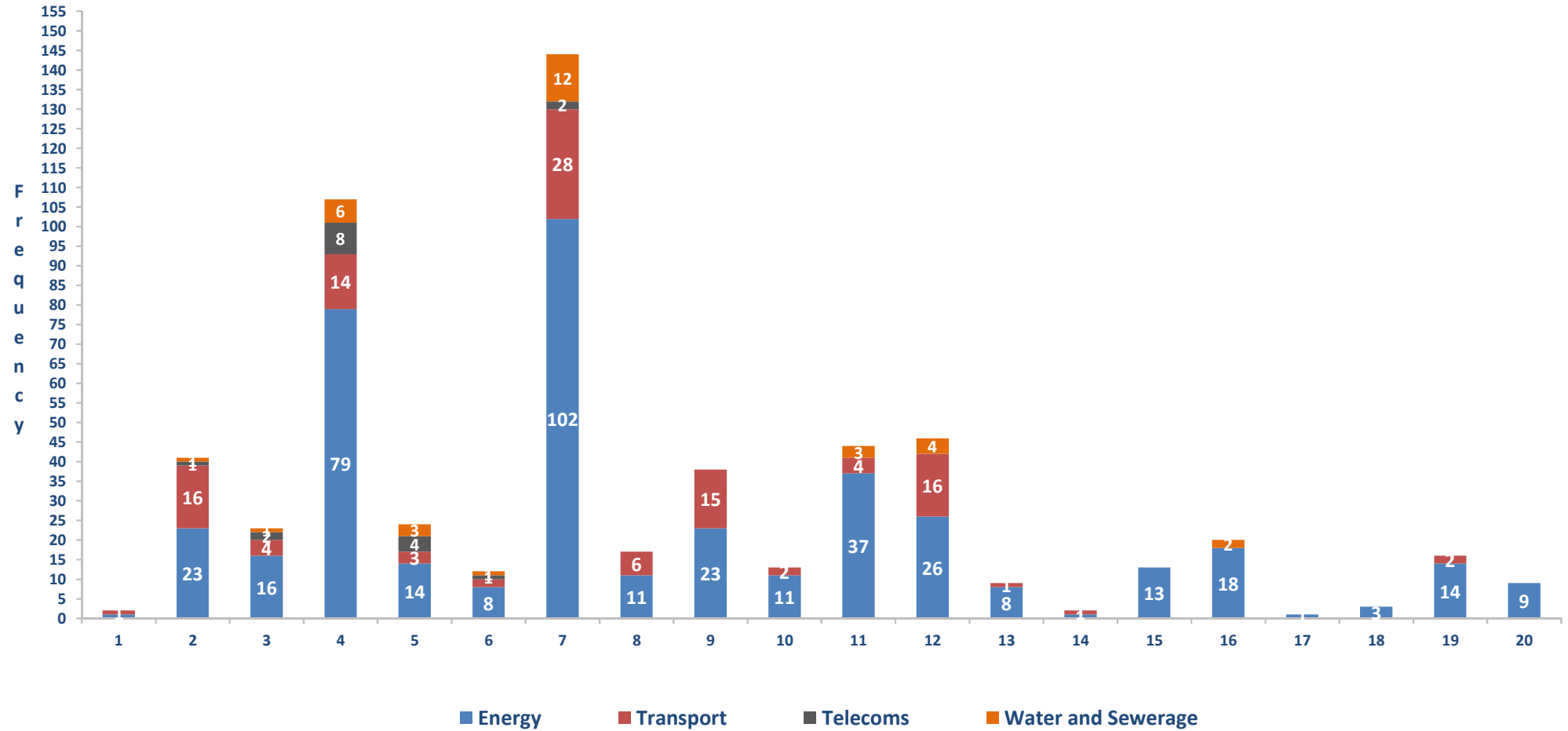
Average - Remuneration, Spread and Duration  
Debentures Infrastructure  
(by sector)



Source: Anbima  
Elaborated by SPE/ME

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

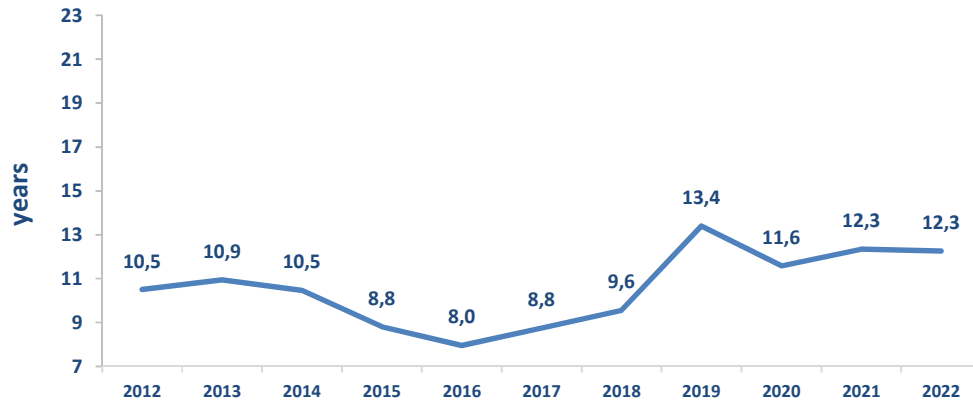
Maturity - Infrastructure Debentures by Issue Series ( in years)  
2012 to December 2022



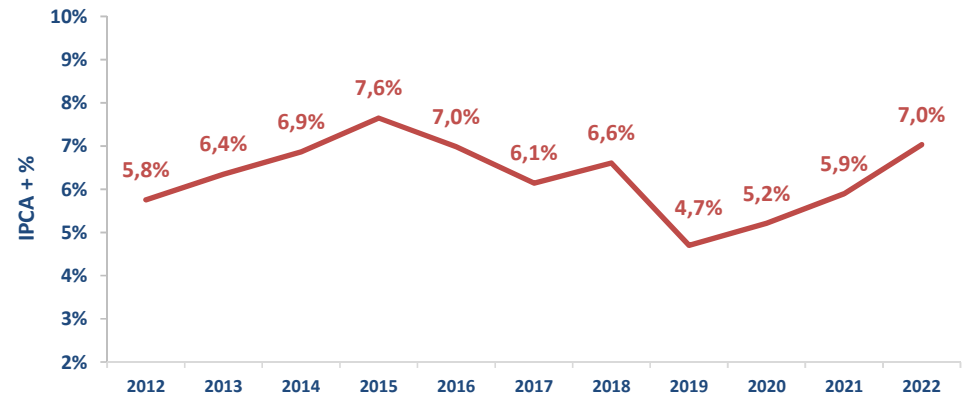
Source: Scripture of the Debentures  
Elaborated by SPE/ME

### Primary Market - Remuneration, Duration and Spread 2012 to December 2022

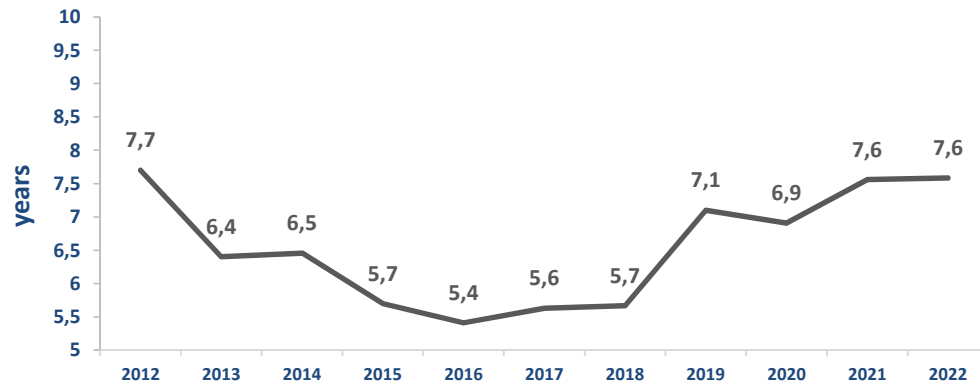
Average term



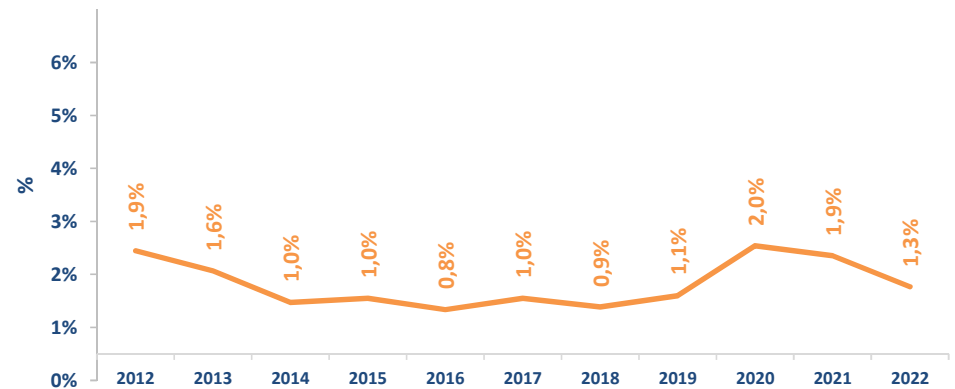
Average yield (IPCA +)



Average Duration



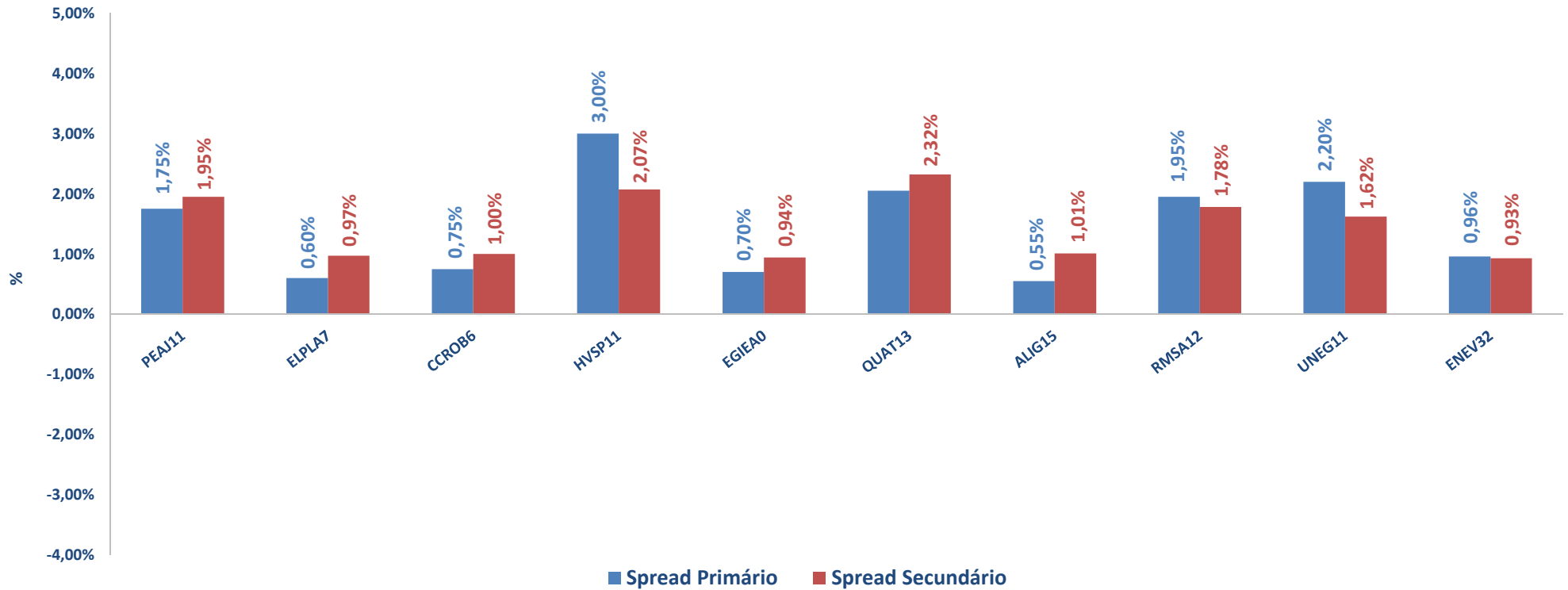
Average Spread (Over NTNB)



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

### 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 )

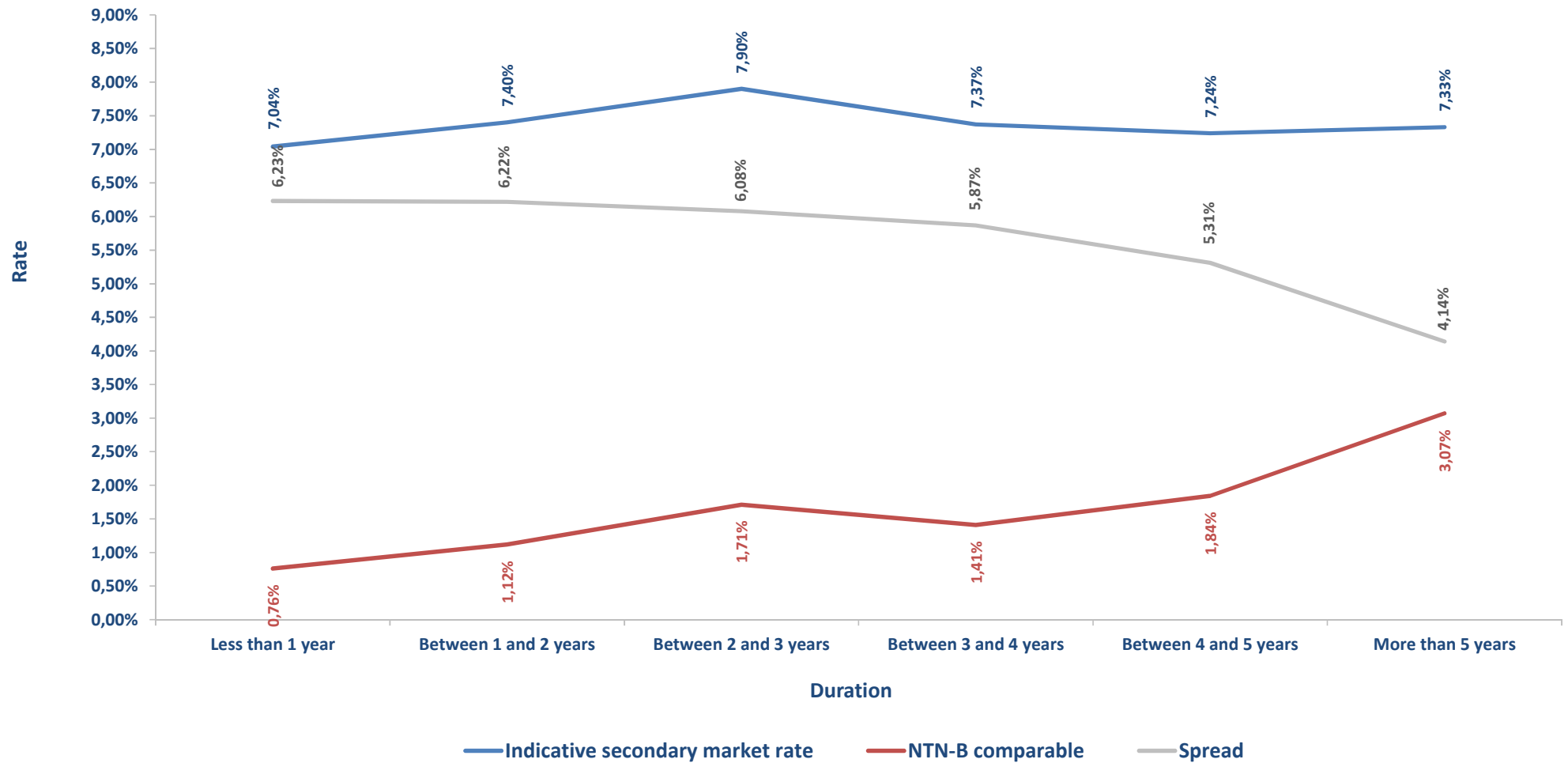


Rating: (AAA) ELPLA7, EGIEA0, ALIG15, ENEV32 (AA+) CCROB6 (AA-) RMSA12 (A-) QUAT13

Source: Anbima and Cetip  
Elaborated by SPE/ME

Note:  
 (1) **Bookbuilding** final interest rate defined.  
 (2) Rate observed in Secondary Market considers average premium over NTN-b duration equivalent of negotiations held December 1 through 30, 2022.

Spread Curve on NTN-B Comparable - (Secondary Market - third quarter of 2022)  
Infrastructure Debentures

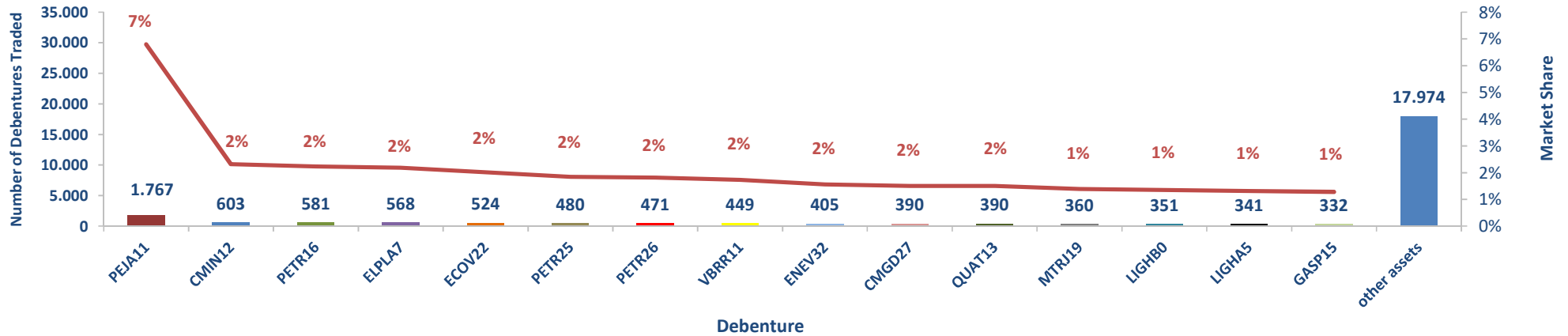


Source: Anbima  
Elaborated by SPE/ME

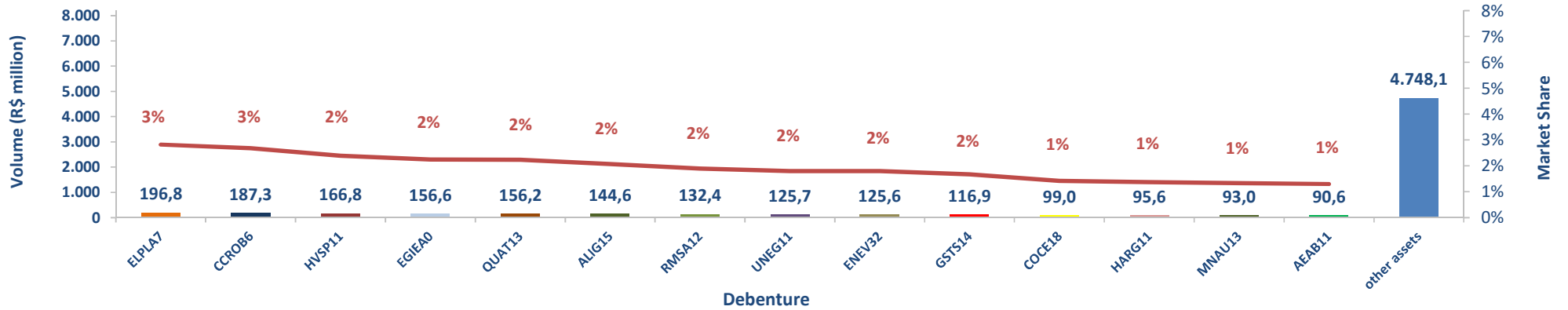


Secondary Market - Quantity and Volume of Debentures Traded - December 2022  
 Infrastructure Debentures - Law # 12,431/2011  
 15 most actively traded

Number of Debentures Traded / Market Share (%)



Volume / Market Share (%)



Source : Anbima and Cetip  
 Elaborated by SPE/ME

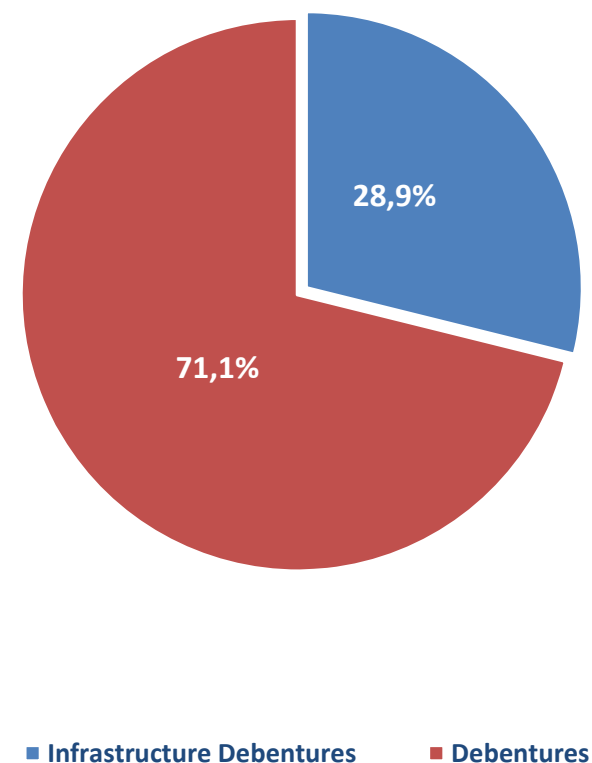
Note: Includes Intra-group and Extra-group transactions (Without Leasing).

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	
2021/01	5,896.7	379,298.5	1.6%	4,677.1	121,243.3	3.9%	10,573.8
2021/02	7,728.8	482,434.4	1.6%	5,178.1	124,299.0	4.2%	12,906.9
2021/03	9,215.9	405,016.3	2.3%	6,678.8	128,660.2	5.2%	15,894.7
2021/04	9,108.1	388,806.8	2.3%	5,711.7	132,188.2	4.3%	14,819.8
2021/05	14,903.0	407,277.5	3.7%	5,811.5	137,201.6	4.2%	20,714.5
2021/06	15,447.8	416,683.2	3.7%	5,183.2	140,877.8	3.7%	20,631.0
2021/07	13,863.9	422,248.1	3.3%	4,754.8	147,316.1	3.2%	18,618.7
2021/08	16,229.1	441,048.6	3.7%	6,598.8	151,078.7	4.4%	22,827.9
2021/09	15,741.9	447,557.4	3.5%	6,403.1	154,418.0	4.1%	22,145.0
2021/10	14,952.2	462,652.3	3.2%	5,797.4	161,136.2	3.6%	20,749.6
2021/11	17,495.6	484,729.6	3.6%	5,614.9	166,145.9	3.4%	23,110.5
2021/12	16,131.1	497,058.8	3.2%	6,908.4	170,660.5	4.0%	23,039.6
2022/01	13,026.5	501,909.3	2.6%	5,447.7	173,453.5	3.1%	18,474.3
2022/02	14,525.5	510,105.7	2.8%	5,483.4	175,095.0	3.1%	20,009.0
2022/03	18,306.9	525,777.8	3.5%	8,431.1	179,941.2	4.7%	26,738.0
2022/04	18,750.5	535,563.6	3.5%	7,833.9	183,676.3	4.3%	26,584.4
2022/05	19,796.5	551,158.6	3.6%	8,614.8	196,182.3	4.4%	28,411.3
2022/06	22,170.0	571,411.9	3.9%	7,402.7	193,816.7	3.8%	29,572.7
2022/07	21,804.5	585,321.5	3.7%	6,713.9	200,403.5	3.4%	28,518.4
2022/08	25,313.1	597,537.1	4.2%	10,238.1	204,054.9	5.0%	35,551.2
2022/09	19,055.9	608,628.2	3.1%	5,995.5	207,085.2	2.9%	25,051.4
2022/10	16,290.9	604,189.2	2.7%	5,046.0	208,168.7	2.4%	21,336.9
2022/11	15,306.6	602,237.0	2.5%	6,565.1	210,525.3	3.1%	21,871.6
2022/12	19,624.8	619,711.7	3.2%	7,411.0	211,938.4	3.5%	27,035.8

Trading Volume  
January/2021 to December/2022



Source: Anbima

Elaborated by SPE/ME

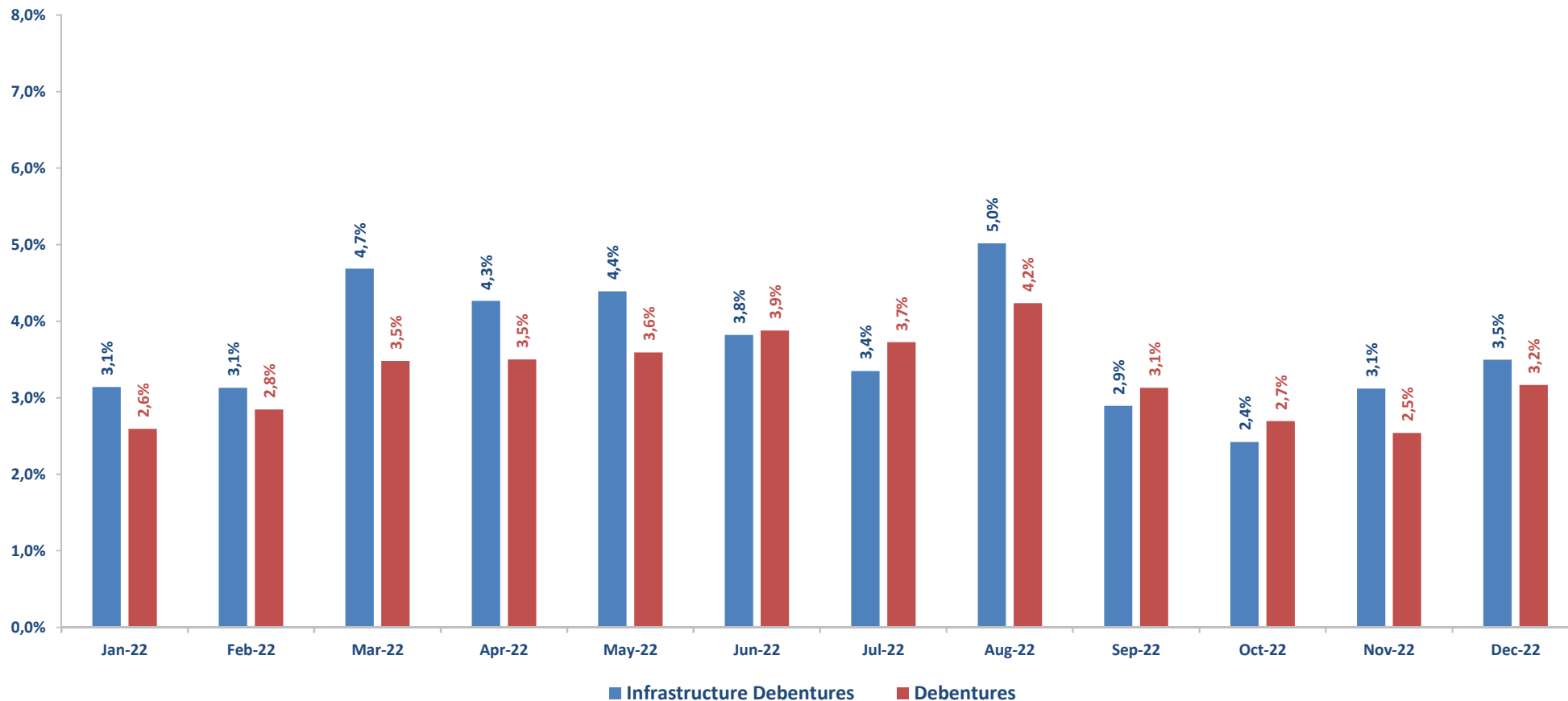
Note :

(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

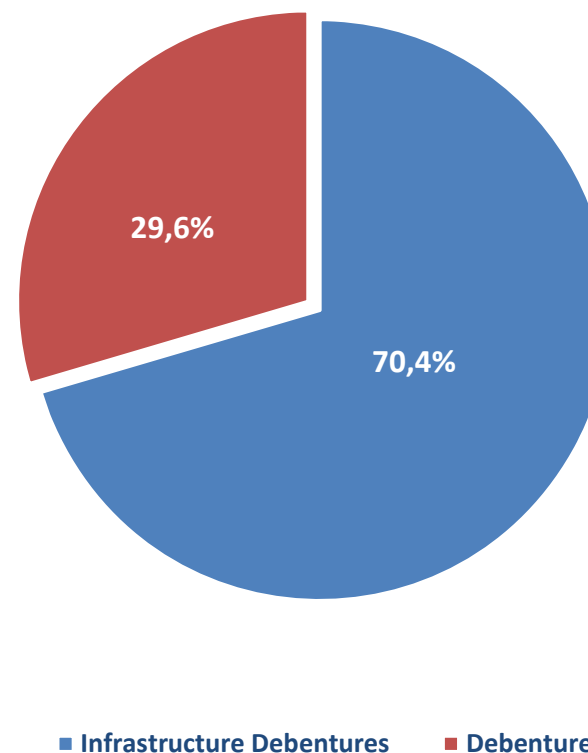
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Infrastructure Debentures Secondary Market - Share of Trades

Period	Share of Trades <sup>1</sup>		Share Total of Trades
	Debentures	Infrastructure debentures-Law # 12,431/11 <sup>2</sup>	
	Share of Trades	Share of Trades	
2021/01	8,087	25,075	33,162
2021/02	7,893	25,689	33,582
2021/03	10,762	33,610	44,372
2021/04	9,249	29,917	39,166
2021/05	12,686	33,804	46,490
2021/06	10,369	32,719	43,088
2021/07	12,050	27,894	39,944
2021/08	12,873	35,888	48,761
2021/09	13,875	34,612	48,487
2021/10	11,355	44,179	55,534
2021/11	11,329	36,105	47,434
2021/12	14,016	39,503	53,519
2022/01	13,524	33,792	47,316
2022/02	16,238	34,181	50,419
2022/03	19,197	49,826	69,023
2022/04	18,459	44,385	62,844
2022/05	18,876	46,747	65,623
2022/06	18,996	43,655	62,651
2022/07	19,799	36,649	56,448
2022/08	25,872	41,458	67,330
2022/09	17,767	34,757	52,524
2022/10	18,094	30,019	48,113
2022/11	19,743	36,009	55,752
2022/12	22,284	35,503	57,787

Share of Trades  
January/2020 to December/2022



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  
2012 to December 2022

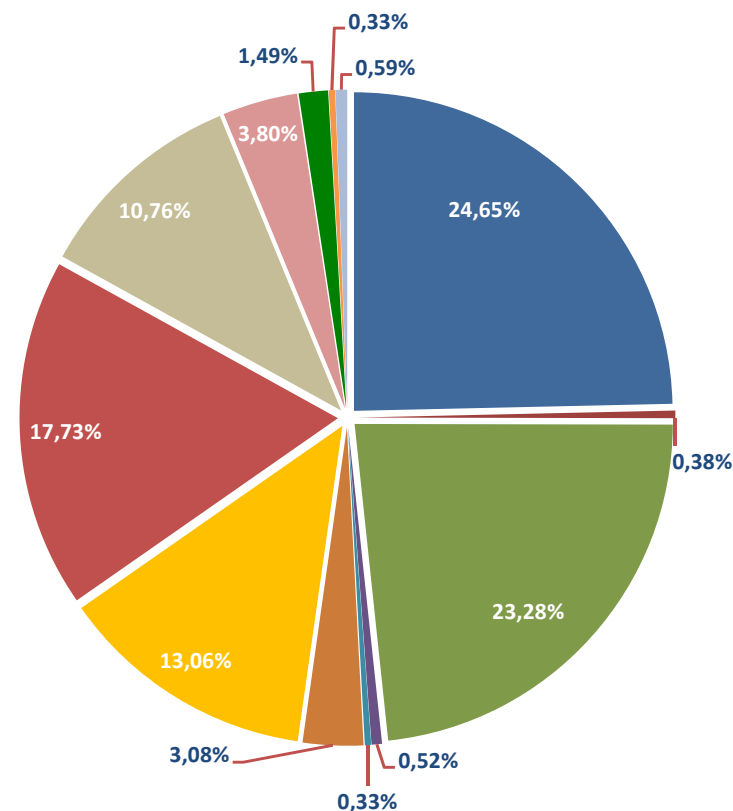
Summary of breakdown - ICVM 400 and ICVM 476

Investor	%	R\$ million
Individuals	24.65%	46,931.7
Investment Clubs	0.38%	727.8
Investment Funds	23.28%	44,318.7
Private Pension Entities	0.52%	996.9
Insurance Companies	0.33%	637.4
Foreign Investors	3.08%	5,860.4
Intermediary Institutions Participating in the Distribution Consortium	13.06%	24,865.9
Financial Institutions Linked to the Issuer and/or Consortium participants	17.73%	33,754.2
Other Financial Institutions	10.76%	20,480.6
Other Legal Entities Related to the broadcaster and/or participants in the consortium	3.80%	7,244.1
Other Legal Entities	1.49%	2,836.2
Partners, Directors, Employees linked to the broadcaster	0.33%	625.0
Other Investors	0.59%	1,124.0
<b>Total.....</b>	<b>100.0%</b>	<b>190,402.8</b>

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

Summary of breakdown - ICVM 400 and ICVM 476

- Individuals
- Investment Clubs
- Investment Funds
- Private Pension Entities
- Insurance Companies
- Foreign Investors
- Intermediary Institutions Participating in the Distribution Consortium
- Financial Institutions Linked to the Issuer and/or Consortium participants
- Other Financial Institutions
- Other Legal Entities Related to the broadcaster and/or participants in the consortium
- Other Legal Entities
- Partners, Directors, Employees linked to the broadcaster
- Other Investors



Breakdown by type of Investor - Infrastructure Debentures  
January to December 2022

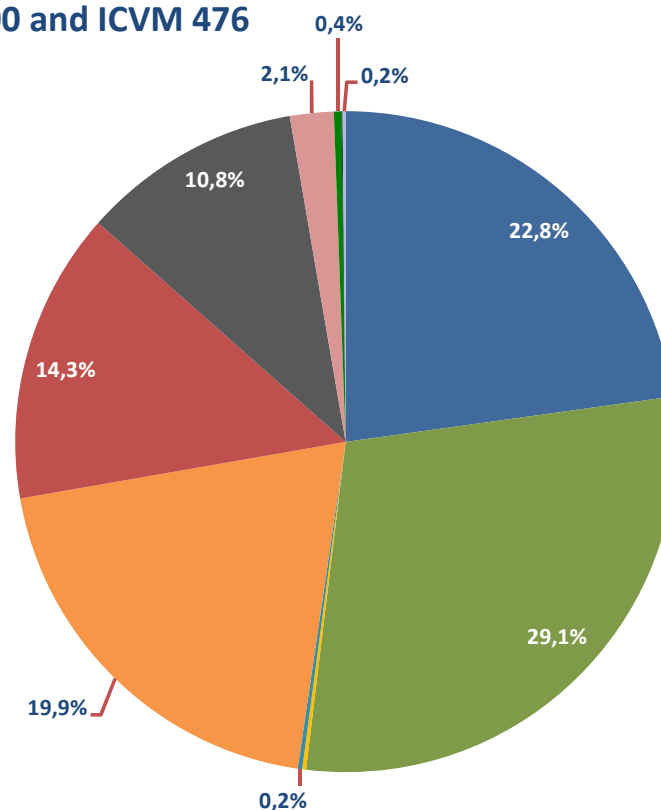
Summary of breakdown - ICVM 400 and ICVM 476

Investor	%	R\$ million
Individuals	22.8%	9,125.0
Investment Clubs	0.0%	0.0
Investment Funds	29.1%	11,653.0
Private Pension Entities	0.2%	74.7
Insurance Companies	0.2%	82.3
Foreign Investors	0.0%	0.0
Intermediary Institutions Participating in the Distribution Consortium	19.9%	7,976.3
Financial Institutions Linked to the Issuer and/or Consortium participants	14.3%	5,712.7
Other Financial Institutions	10.8%	4,305.9
Other Legal Entities Related to the broadcaster and/or participants in the consortium	2.1%	855.0
Other Legal Entities	0.4%	150.4
Partners, Directors, Employees linked to the broadcaster	0.0%	15.1
Other Investors	0.2%	63.6
<b>Total.....</b>	<b>100.0%</b>	<b>40,013.8</b>

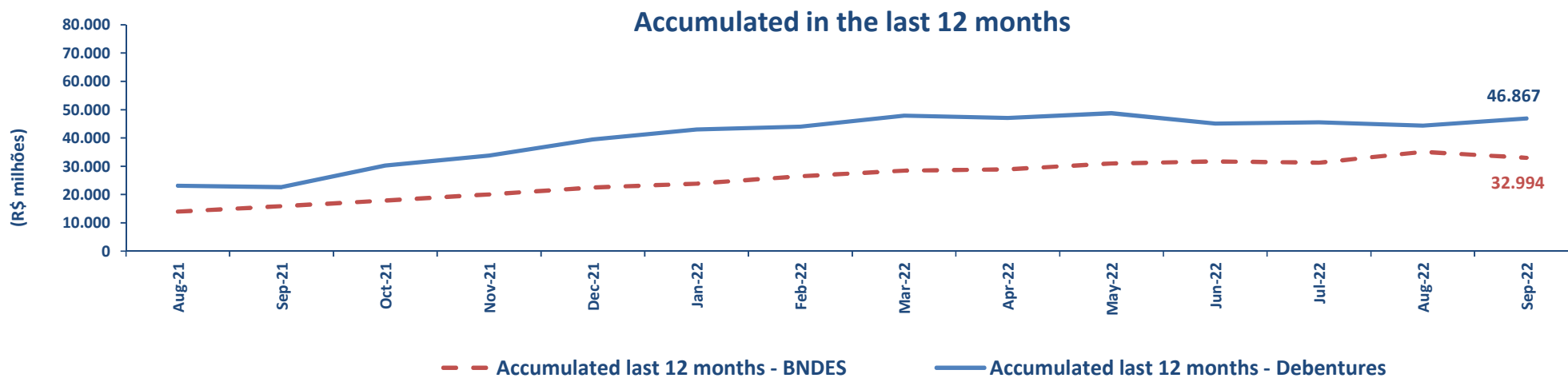
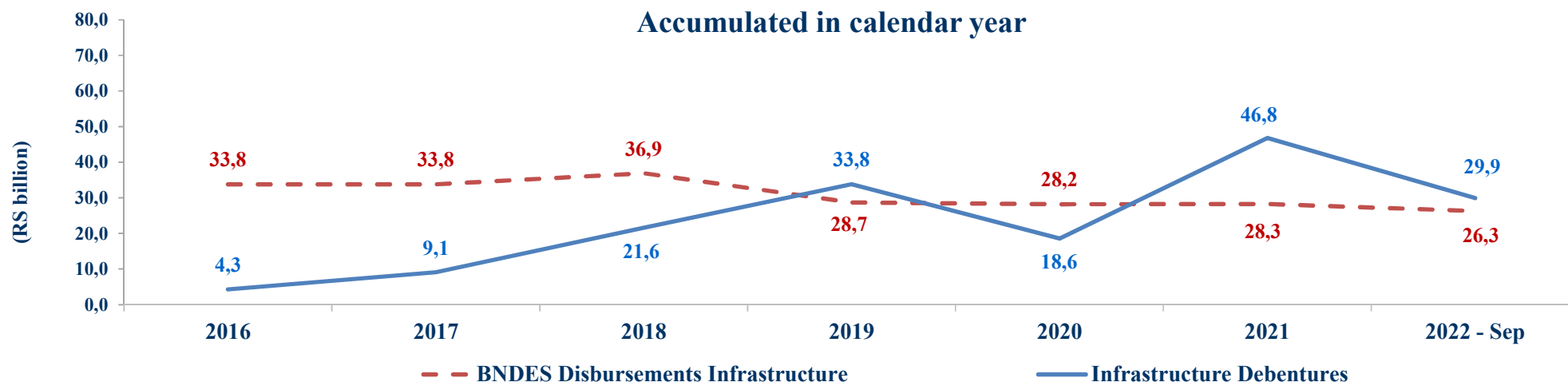
Source: Anbima. Leading Banks and closing announcement  
Elaborated by SPE/ME

Summary of breakdown - ICVM 400 and ICVM 476

- Individuals
- Investment Clubs
- Investment Funds
- Private Pension Entities
- Insurance Companies
- Foreign Investors
- Intermediary Institutions Participating in the Distribution Consortium
- Financial Institutions Linked to the Issuer and/or Consortium participants
- Other Financial Institutions
- Other Legal Entities Related to the broadcaster and/or participants in the consortium
- Other Legal Entities
- Partners, Directors, Employees linked to the broadcaster
- Other Investors

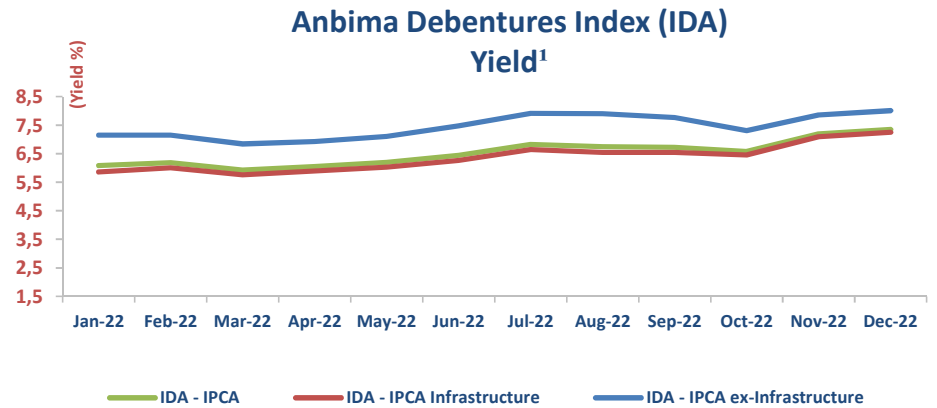
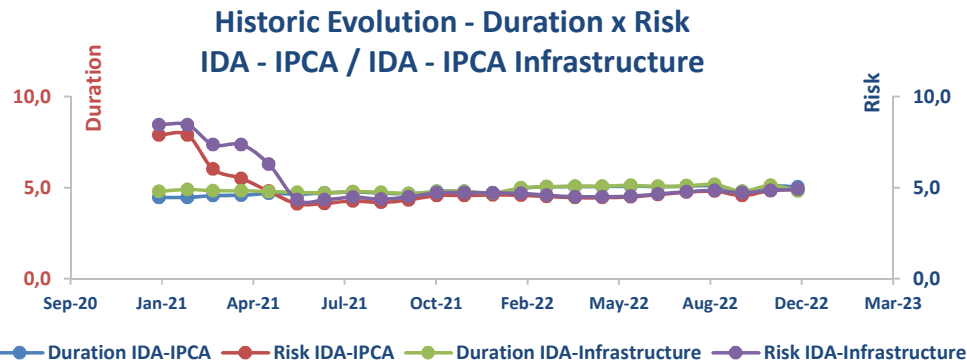
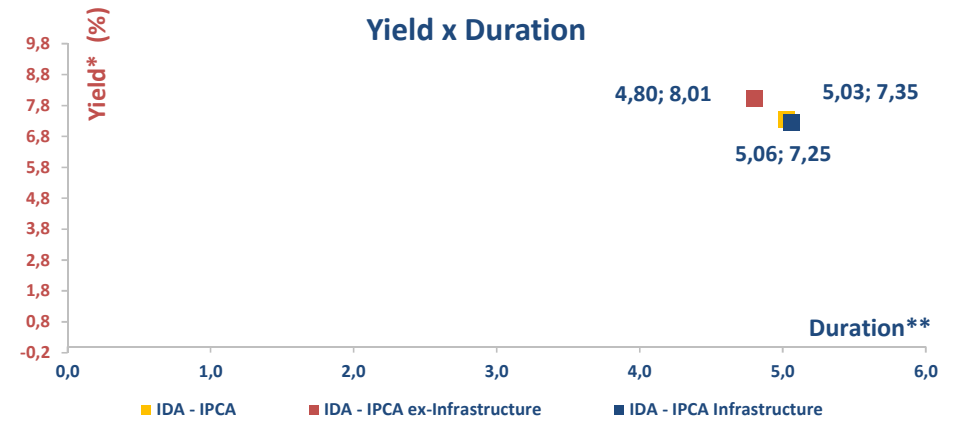
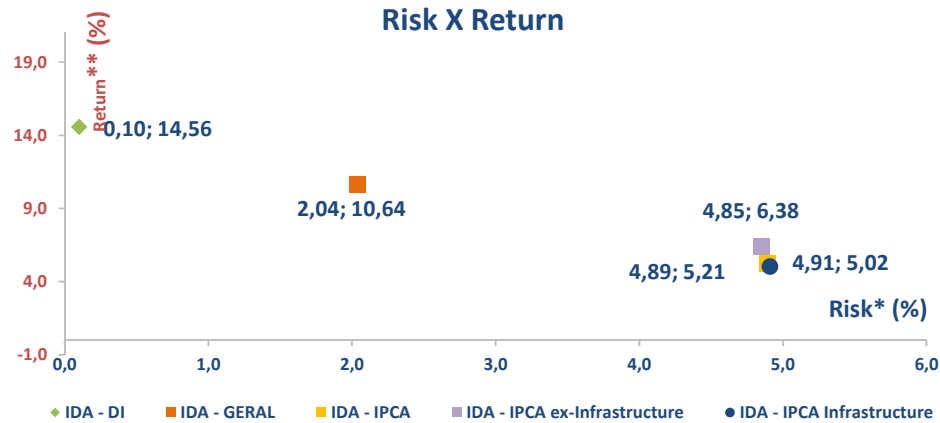


**BNDES' Disbursements with Infrastructure**



Source: Anbima and BNDES  
Elaborated by SPE/ME

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



**Approved Projects up to December 2022**  
(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	2019	2021	2022		
<b>Transportation</b>	<b>49,662.5</b>	<b>5,400.7</b>	<b>29,568.1</b>	<b>13,048.1</b>	<b>19,273.2</b>	<b>18,263.9</b>	<b>40,612.6</b>	<b>17,968.2</b>	<b>141,923.8</b>	<b>193,797.2</b>
Toll Road	18,264.2	4,972.7	18,021.6	5,630.6	13,898.5	7,873.4	27,665.5	6,353.4	79,371.0	102,679.8
Railways	19,705.6	0.0	11,546.5	6,331.4	3,818.0	8,047.0	3,720.6	8,449.6	39,143.0	61,618.6
Airports	8,887.9	0.0	0.0	0.0	0.0	0.0	7,125.1	1,700.0	14,529.9	17,713.0
Ports	2,804.9	428.1	0.0	1,086.1	1,556.7	2,343.5	2,101.4	1,465.2	8,879.9	11,785.8
<b>Energy</b>	<b>172,798.6</b>	<b>13,009.4</b>	<b>56,542.3</b>	<b>65,478.5</b>	<b>72,270.1</b>	<b>35,423.7</b>	<b>50,510.1</b>	<b>63,011.6</b>	<b>345,400.6</b>	<b>529,044.3</b>
Electric Power Transmission Line	6,108.1	806.1	35,243.8	9,446.8	22,695.7	6,008.1	6,319.1	20,588.7	71,656.4	107,216.5
Hydroelectric Power Plants	112,659.2	1,353.9	445.8	21,789.6	2,700.2	704.8	1,636.7	0.0	120,394.7	141,290.2
Thermoelectric	10,310.4	3,246.3	860.9	4,596.0	6,726.8	2,442.3	4,735.5	6,545.0	16,546.1	39,463.2
Small Hydro	1,211.1	587.6	939.2	610.3	1,354.0	667.1	0.0	0.0	2,164.5	5,369.2
Gas	4,243.0	0.0	0.0	0.0	5,143.3	850.0	0.0	0.0	10,236.3	10,236.3
Wind Farms	25,291.7	6,645.5	4,774.7	10,969.6	9,258.3	12,394.2	3,928.8	999.7	29,671.2	74,262.4
Pipelines	7,000.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7,000.0
Oil	5,975.3	0.0	0.0	0.0	0.0	0.0	0.0	8,682.0	14,657.3	14,657.3
Distribution infrastructure	0.0	370.0	11,755.7	11,840.3	15,560.2	4,621.7	22,362.0	23,046.7	52,130.0	89,556.7
Photovoltaics Energy	0.0	0.0	2,522.1	6,225.9	3,401.9	2,178.7	5,501.0	1,794.2	10,667.1	21,623.7
Atomic Energy	0.0	0.0	0.0	0.0	2,700.0	0.0	0.0	0.0	2,700.0	2,700.0
Bioenergy	0.0	0.0	0.0	0.0	2,729.8	5,556.6	6,027.0	1,355.4	14,577.1	15,668.8
Telecoms	2,882.1	2,147.6	1,733.0	3,603.0	0.0	2,557.5	9,360.6	3,411.6	25,073.0	25,695.4
Telecoms	2,882.1	2,147.6	1,733.0	3,603.0	0.0	2,557.5	9,360.6	3,411.6	25,073.0	25,695.4
<b>Sanitation/Urban Mobility</b>	<b>1,095.4</b>	<b>125.8</b>	<b>1,405.5</b>	<b>6,871.5</b>	<b>7,576.3</b>	<b>4,566.3</b>	<b>20,709.2</b>	<b>11,170.3</b>	<b>35,085.4</b>	<b>54,820.2</b>
Water and Sewerage	288.1	125.8	1,405.5	269.4	7,576.3	2,421.4	2,989.2	2,986.1	15,800.4	18,061.7
Urban Mobility	807.3	0.0	0.0	6,602.1	0.0	2,144.9	15,976.1	8,090.9	17,637.9	33,621.4
Street Lighting	0.0	0.0	0.0	0.0	0.0	1,300.0	1,743.9	93.3	1,647.1	3,137.2
<b>Total.....</b>	<b>226,438.7</b>	<b>20,683.5</b>	<b>89,248.8</b>	<b>89,001.1</b>	<b>99,119.5</b>	<b>60,811.5</b>	<b>121,192.4</b>	<b>95,561.7</b>	<b>547,482.8</b>	<b>803,357.0</b>

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

**Approved Projects up to December 2022**  
(Includes projects having or not having issued infrastructure Debentures)

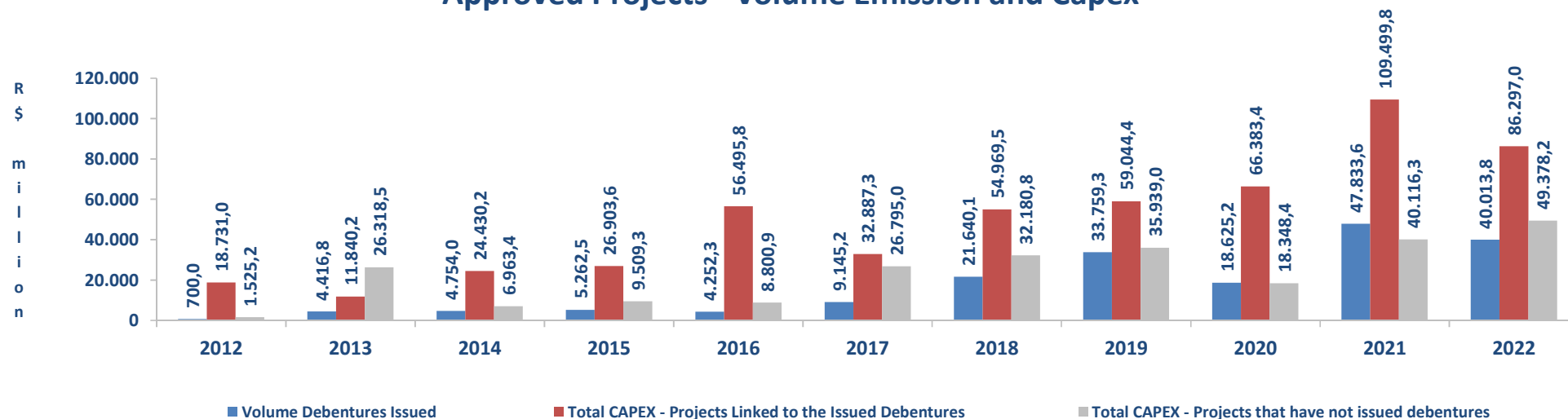
Sectors	Approved Projects								Quantity Portarias with Issuance of Debentures	Total Approved Projects
	2012/2013/ 2014/2015	2014	2015	2016	2017	2018	2019	2021		
<b>Transportation</b>	<b>24</b>	<b>4</b>	<b>10</b>	<b>11</b>	<b>16</b>	<b>15</b>	<b>24</b>	<b>12</b>	<b>86</b>	<b>116</b>
Toll Road	14	3	8	1	7	7	11	5	49	56
Railways	5	0	2	4	4	3	3	5	16	26
Airports	2	0	0	0	0	0	3	1	4	6
Ports	3	1	0	6	5	5	7	1	17	28
<b>Energy</b>	<b>335</b>	<b>94</b>	<b>147</b>	<b>167</b>	<b>184</b>	<b>146</b>	<b>186</b>	<b>225</b>	<b>613</b>	<b>1,484</b>
Electric Power Transmission Line	17	8	52	24	34	16	26	20	122	197
Hydroelectric Power Plants	22	3	2	7	4	2	2	3	34	45
Thermoelectric	9	2	1	2	7	7	3	7	15	38
Small Hydro	11	6	4	3	15	6	0	1	20	46
Gas	2	0	0	0	2	2	0	0	5	6
Wind Farms	272	73	41	73	62	84	61	76	243	742
Pipelines	1	0	0	0	0	0	0	0	0	1
Oil	1	0	0	0	0	0	0	2	3	3
Distribution infrastructure	0	2	27	19	27	5	41	30	86	151
Photovoltaics Energy	0	0	20	39	27	16	39	83	56	224
Atomic Energy	0	0	0	0	1	0	0	0	1	1
Bioenergy	0	0	0	0	5	8	14	3	28	30
Telecoms	1	1	1	2	0	4	6	4	17	19
Telecoms	1	1	1	2	0	4	6	4	17	19
<b>Sanitation/Urban Mobility</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>10</b>	<b>14</b>	<b>20</b>	<b>8</b>	<b>49</b>	<b>65</b>
Water and Sewerage	1	3	5	2	10	10	12	5	39	48
Urban Mobility	1	0	0	1	0	3	1	1	5	7
Street Lighting	0	0	0	0	0	1	7	2	5	10
<b>Total.....</b>	<b>362</b>	<b>102</b>	<b>163</b>	<b>183</b>	<b>210</b>	<b>179</b>	<b>236</b>	<b>249</b>	<b>765</b>	<b>1,684</b>

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

Summary Table - Volume issued of infrastructure debentures - 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	2020	2021	2022	
Volume - debentures issued	9,871	5,262.5	4,252.3	9,145.2	21,640.1	33,759.3	18,625.2	47,833.6	40,013.8	190,402.8
CAPEX - Projects Linked to the issued Debentures	55,001	26,903.6	56,495.8	32,887.3	54,969.5	59,044.4	66,383.4	109,499.8	86,297.0	547,482.1
CAPEX - Projects that have not issued Debentures	34,807	9,509.3	8,800.9	26,795.0	32,180.8	35,939.0	18,348.4	40,116.3	49,378.2	255,874.9

### Approved Projects - Volume Emission and Capex

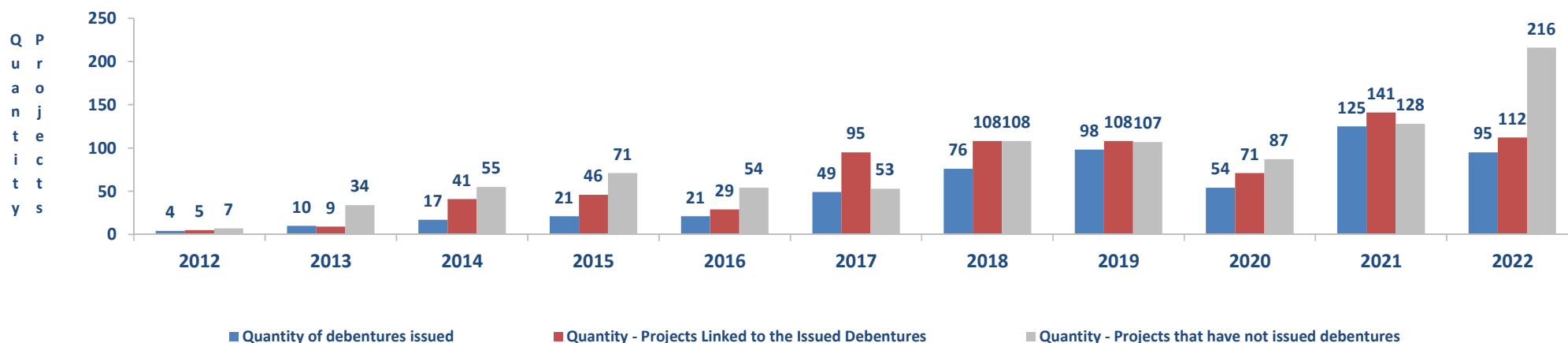


Source: Ministerial Orders issued and Linked Entities  
Elaborated by SPE/ME

Summary Table - Quantity issued of infrastructure debentures - 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	2020	2021	2022	
Volume - debentures issued	31	21	21	49	76	98	54	125	95	570
CAPEX - Projects Linked to the issued Debentures	55	46	29	95	108	108	71	141	112	765
CAPEX - Projects that have not issued Debentures	96	71	54	53	108	107	87	128	216	920

### Approved Projects - Quantity Emission and Quantity Waiting Emission



Source: Ministerial Orders issued and Linked Entities

Elaborated by SPE/ME

**Note :**

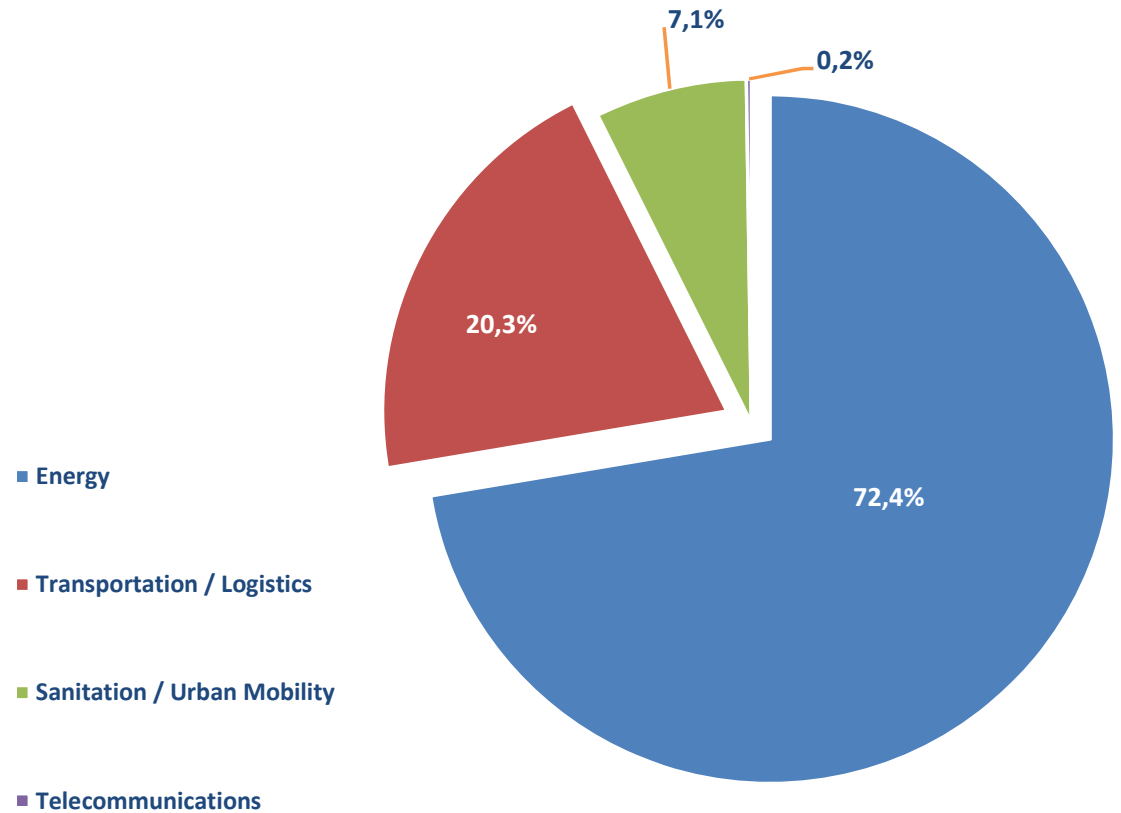
The difference between the amount of debentures issued and the number of Administrative Rules issued and Projects related to the debentures issued, is due to having more than one ordinance and project linked to a single debenture - example: Ventos de São Tomé Holding S / A (TOME12). We had 01 debenture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

**Debenture Issue Potential - (Capex)<sup>1</sup>  
Infrastructure Projects Already Authorized  
(By Sector)**

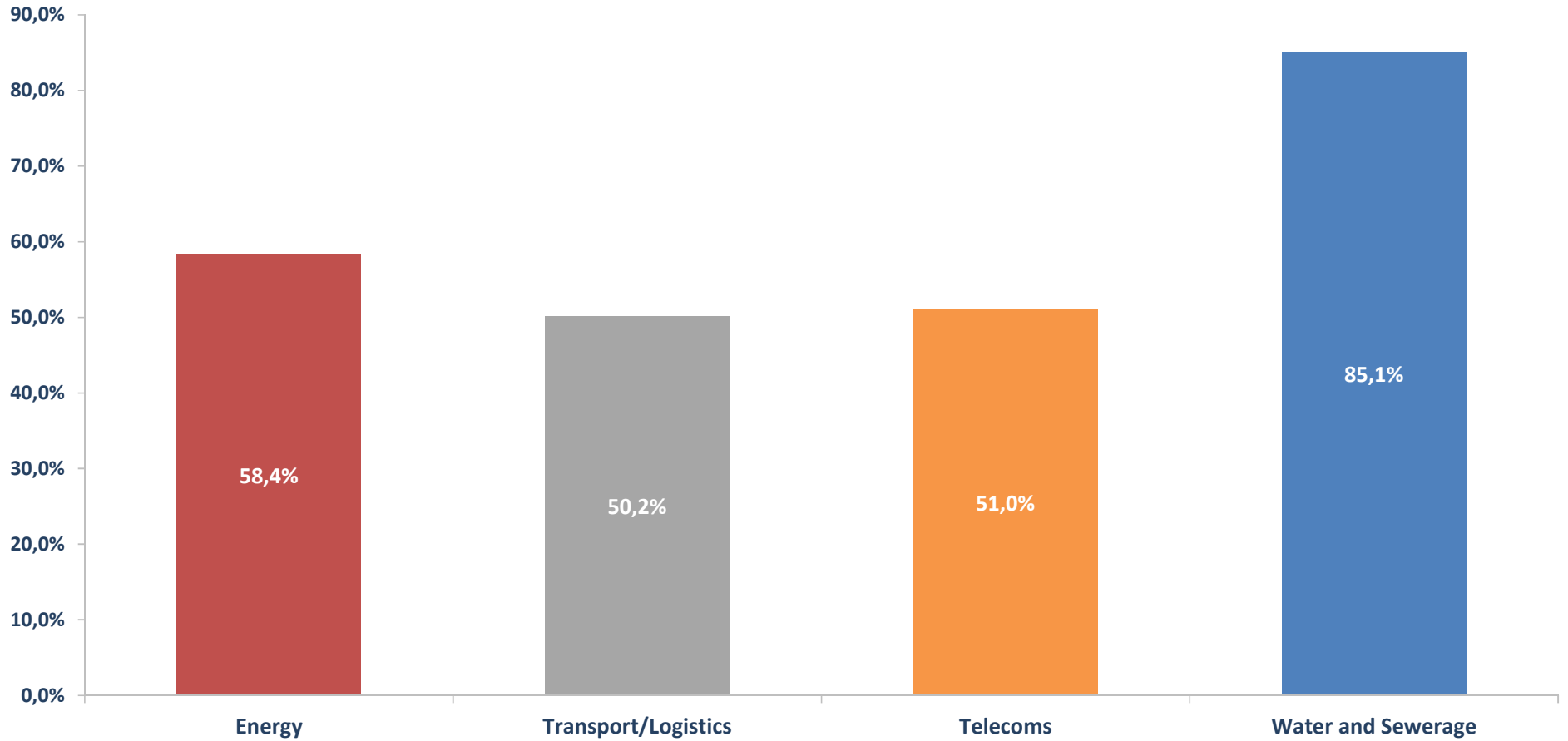
Sector	Capex Awaiting the emission (R\$ million)	(%)
Energy	185,134.4	72.4%
Transportation / Logistics	51,873.4	20.3%
Sanitation / Urban Mobility	18,244.7	7.1%
Telecommunications	622.4	0.2%
<b>Total.....</b>	<b>255,874.9</b>	<b>100%</b>

Source: Anbima and Ministerial ordinances  
Elaborated by SPE/ME

(1) Total Capex of Ordinances Awaiting Debenture Issuance.



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
<b>Total .....</b>		<b>13,468</b>	<b>5,470.0</b>					

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 - December 2022

Infrastructure Bonds Investment funds	Quota-holder	Debentures	Net Equity	Debentures / Net Equity	Infrastructure Bonds Investment funds	Quota-holder	Debentures	Net Equity	Debentures / Net Equity
		(R\$ million)	(R\$ million)				(R\$ million)	(R\$ million)	
CA Indosuez Master	799	363.3	412.9	88%	TAO Infra FI Inc Rf	5	62.3	68.3	91%
VIC Infra Inv Inc Rf	660	350.5	385.4	91%	SPEED Infra FI Rf Infra Inc	1	42.4	44.3	96%
BNP Paribas Plus Deb FI	26	11.9	13.5	88%	Precioso FI Inc Rf	4	24.3	26.0	94%
Bradesco Rf C. Priv	32	75.0	80.0	94%	G5 Infra FI	197	124.1	127.0	98%
CSHG AS 7.7 Rf	1	61.8	70.3	88%	Safra Infra Premium FI	88	96.4	102.1	94%
CSHG Inf 392 Rf	2	277.1	334.4	83%	Monte Alegre FI Rf Inc	2	73.4	82.3	89%
XP Deb Inc M FI	14,740	558.1	583.6	96%	Capitânea Deb Inc FI	1,375	59.8	63.0	95%
Fator Deb Inc Rf	138	10.2	11.3	90%	IDA Deb Inc FI	8	48.8	51.9	94%
CSHG Omega Infra Rf	6	170.2	186.3	91%	Iridium Pioneer Deb Inc FI	3,762	108.4	117.9	92%
FI Turmalina Inv Exterior	5	81.7	93.5	87%	ZETA FI	2	135.5	149.3	91%
Sul América Deb FI	1,491	50.7	54.9	92%	Journey Cap Nammos	8	17.4	19.9	87%
XPCE II FI	3	230.7	414.3	56%	XP 60 Deb Inc Hedge M I FI	1,989	103.5	114.6	90%
Pedra Negra FI Infra	19	652.9	691.7	94%	Finor FI	6	108.4	133.1	81%
Butia Deb FI Rf	3,033	50.2	52.5	96%	Santander Hermes Rf FI	1	1,221.3	1,223.7	100%
Águia FI Infra	2	11.2	12.2	91%	Santander FI Infla Rf FI	4,411	389.3	424.6	92%
CA I Deb Inc M II FI Inf Rf	799	303.6	341.6	89%	Santander Deb Inc CDI Rf FI	14,358	1,540.4	1,722.2	89%
Scorpio Deb Inc FI	1	1,317.1	3,940.6	33%	Silver OAK Deb Inc FI	3	25.6	28.9	89%
Órama Deb Inc FI	2,239	32.6	33.4	98%	AF 1644 Deb Inc FI	1	64.0	70.3	91%
Plural Master II Deb Inc	4,675	93.3	98.5	95%	Riska Deb Inc FI	9	39.9	42.8	93%
AZ Quest M Deb Inc FI	4,601	228.0	291.0	78%	Deb Inc Pedra Azul FI	3	63.3	67.7	93%
JBFO Alocação Supra Rf Infra	869	1,847.1	2,081.7	89%	EPL Deb Inc FI	1	54.0	58.3	93%
BNP Paribas FI Deb Rf	1,066	392.0	431.5	91%	Agadir Rf FI Inc Em Infra	5	72.9	81.8	89%
Dayacoval Deb Inc FI	2,998	68.2	69.4	98%	Brasil Plu D In H M FI Mult	2,005	34.3	36.5	94%
RB Cap M Deb Inc FI	779	45.2	51.3	88%	Sparta M A Deb Inc	2	507.4	553.4	92%
Brasil PL M Deb Inc TFO FI	1	109.7	119.6	92%	Inter Hedge Rf	29,663	72.2	81.7	88%
Kinea Infra I	1	2,111.4	2,178.7	97%	Devant Deb Inc FI Rf	245	6.1	7.2	85%
Safra Infra M FI	1,021	291.3	306.3	95%	Panama K F Inc Inv e Inf Rf	1	49.5	50.8	97%
Pasárgada Deb Inc	1	30.8	33.7	92%	BTG Pac Master Rf	4,707	365.7	367.8	99%
RB Cap Vitória Deb Inc FI	4,158	78.0	84.8	92%	Journey Cap Endur Rf	1,577	41.8	47.2	89%
Crodo FI	1	67.8	74.3	91%	Deri Deb Inc FI	2	42.1	44.8	94%



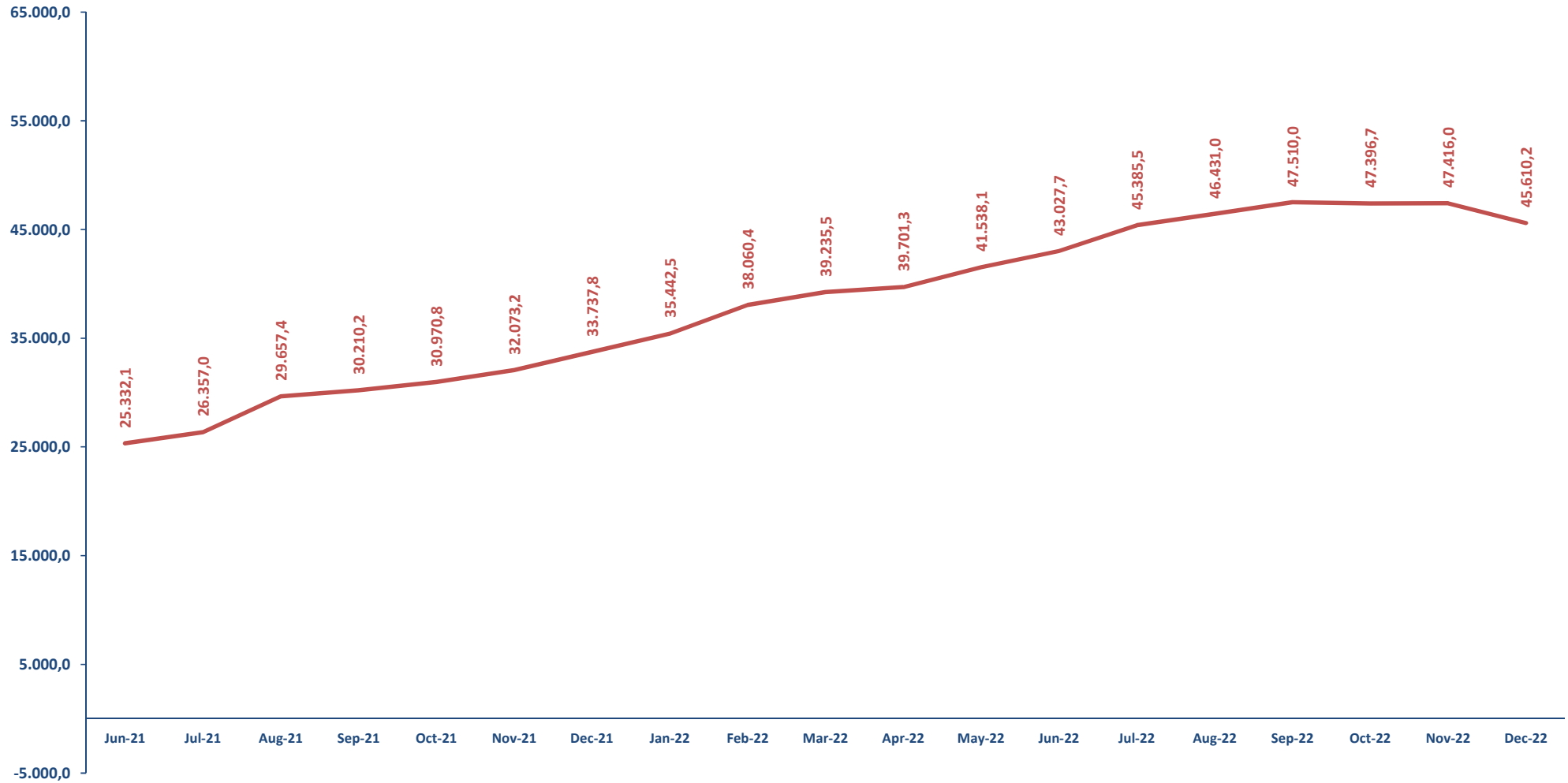
## Continuation - Brazilian Infrastructure Bonds Investment Funds - Fixed-Income Investment - December 2022

Infrastructure Bonds Investment funds	Quota-holder	Debentures	Net Equity	Debentures / Net Equity	Infrastructure Bonds Investment funds	Quota-holder	Debentures	Net Equity	Debentures / Net Equity
		(R\$ million)	(R\$ million)				(R\$ million)	(R\$ million)	
VBA Deb Inc FI	1	24.0	27.4	88%	ANLGC123 Infra Rf	2	12.7	14.5	88%
Safra Infra M II FI Mult	125	107.4	113.8	94%	Journey CA Ed J R M FI Rf	934	38.1	43.0	89%
Triplaris K FI Em I Rf	1	51.9	54.0	96%	Icatu Seguros FI Infra Rf	1	340.5	375.1	91%
Quasar Deb Inc FI Rf	613	15.3	17.0	90%	Novo Fundo Infra Rf	169	82.6	93.1	89%
Neblus Deb Inc FI	1	11.7	13.1	89%	Icatu Vanguarda FI Infra Rf	1,306	138.0	145.7	95%
G5 SHLIMS FI Inc Infra	1	23.6	25.9	91%	Juquehy FI Infra Rf	3	32.4	34.6	94%
BB Primordium Rf FI Inc	3	214.3	233.3	92%	PSN Kinea Rf	1	72.3	75.0	96%
G3 Kinea FI Infra	3	91.9	94.2	98%	Ingazinho Kinea Rf	2	57.0	59.0	97%
Degas Kinea Infra Rf	1	45.6	47.0	97%	David Kinea FI Rf	2	85.7	88.1	97%
Fapatris Kinea Infra Rf	1	54.0	55.6	97%	Icatu Vanguarda PG Rf	510	403.5	679.7	59%
Prata 51 Kinea FI Inc Rf	1	86.9	89.1	98%	Murajuba Kinea FI Infra Rf	1	73.7	75.9	97%
Setola Kinea FI RF	4	65.7	67.7	97%	CSHG 2465 Rf	2	107.6	116.0	93%
Rosa dos Ventos Kinea FI Rf	1	45.5	46.9	97%	Journey Capital Vitreo Rf	820	47.9	48.9	98%
ARX Hedge Deb Inc FI Rf	4,970	297.9	299.4	100%	BTG Pactual InfraB Rf	14	5.8	6.3	92%
JGP Deb Incet M FI Rf	34	9.0	9.9	91%	HIGH Income FI Infra Rf	12	5.9	6.4	91%
ARX Elb M II Deb Inc FI	18,343	1,247.0	1,268.2	98%	Longevitate K FI Rf	8	30.6	31.4	98%
Huayna Kinea Infra Rf	4	45.5	48.0	95%	ARX Elbrus FI RF	861	49.4	51.1	97%
Bram Rf Deb Inc Infra	16,162	2,026.1	2,354.1	86%	XP Master I FI RF	1	284.1	305.1	93%
Voto FI Inc Hedge Plus Rf	178	53.5	60.3	89%	SapucaiaS968 Kinea Rf	1	44.1	45.5	97%
BB Top Rf FI Inc Infra	2,939	189.9	206.9	92%	Rio Kinea FI Rf	1	54.0	55.6	97%
Syco Inc Invest Em Infra Rf	3	19.9	21.6	92%	São Miguel Kinea FI Rf	3	70.9	73.1	97%
Itaú Infra Rf	1	898.8	917.2	98%	LMP Kinea FI Rf	2	30.4	31.5	97%
Cordia Deb Inc FI Rf	3	55.5	61.7	90%	Zaatar Kinea FI Rf	1	54.4	55.8	97%
Safra Infra M III Rf FI	85	180.9	189.8	95%	Papacalu Kinea FR Rf	4	64.9	66.7	97%
Safra Premiun Prof II Rf FI	72	100.9	104.1	97%	Branre FI Rf	1	15.7	16.9	93%
Alfa Gemini Master	1	77.5	88.5	88%	Romanee Kinea FI Rf	1	30.8	31.8	97%
Safra Infra Master Rf	776	71.6	76.2	94%	Tarumã FI Rf	1	10,697.8	11,272.1	95%
Visconde FI Inc Infra Rf	1	30.6	33.0	93%	Infra Plus Rf	19	111.3	123.3	90%
RFT Volga FI Rf	58	79.4	88.3	90%	Icatu Vanguarda TFO FI Rf	1	134.8	151.5	89%
BTG Pac D IN M FI De Inv Rf	2,292	114.1	116.2	98%	GDI Kinea Rf	7	38.8	42.3	92%
Infra Kinea Rf	1	332.6	345.7	96%	NU Asset Infra Rf	1	43.7	54.4	80%
Vênus FI Infra Rf	4	51.1	58.6	87%	Capitânea Ínfra Master II Rf	1	143.6	150.2	96%



Infrastructure Funds - Fixed-Income Investment

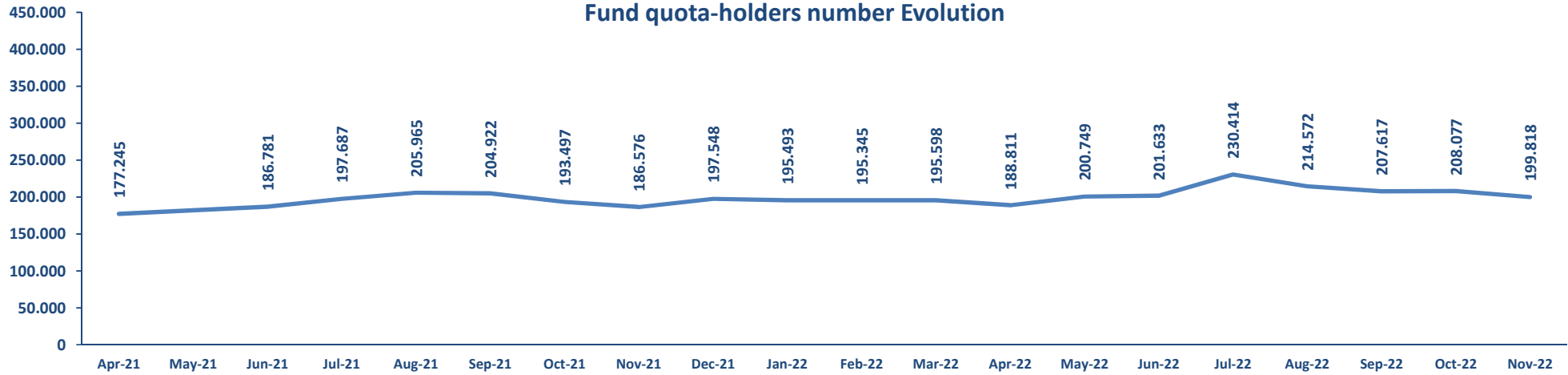
Net Equity Evolution - (x R\$ million)



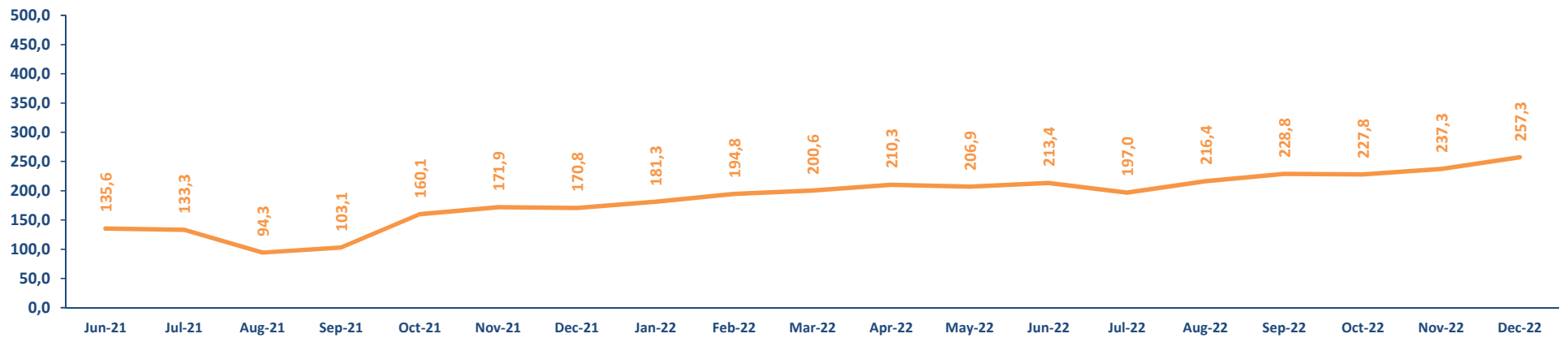
Source : Brazilian Securities Commission - CVM  
 Elaborated by SPE/ME

Infrastructure Funds - Fixed-Income Investment

Fund quota-holders number Evolution



Average Ticket - (x R\$ Thousand)



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

## Infrastructure Credit Rights Investment Fund – FIDC - December 2022

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)	
BB Infra Votorantim Highland	163.0	0.0	0.0	0.0	10.2	(0.6)	172.7	94%
Vinci Energia Sustentável	564.3	0.0	21.7	0.0	0.0	(0.4)	585.6	96%
<b>Total .....</b>	<b>727.3</b>	<b>0.0</b>	<b>21.7</b>	<b>0.0</b>	<b>10.2</b>	<b>-1.0</b>	<b>758.2</b>	<b>95%</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 - December 2022

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 Infra Energias Renováveis	244.7	2.4	0.0	0.0	0.0	0.0	0.0	57.3	304.3
FIP Infra BB Votorantim Energia Sust II	154.7	13.4	0.0	0.0	0.0	0.0	0.0	(0.6)	167.5
FIP Infra BB Votorantim Energia Sust III	148.7	14.0	0.0	0.0	0.0	0.0	0.0	(0.5)	162.2
FIP Infra BB Votorantim Energia Sust I	31.8	2.9	0.0	0.0	0.0	0.0	0.0	(0.1)	34.6
FIP CZ infra	56.8	0.0	0.0	0.0	0.0	0.0	0.0	(0.1)	56.7
FIP ANESSA Infra	173.9	0.2	0.0	0.0	0.0	0.0	0.0	(145.8)	28.3
FIP Porto Sudeste Royalties Infra	764.4	0.3	0.0	0.0	0.0	0.0	0.0	(0.2)	764.5
FIP Paranaguá Infra	25.1	0.2	0.1	0.0	0.0	0.0	0.0	(0.5)	24.8
FIP Prisma Hélios Infra	0.4	0.0	0.0	0.6	0.0	0.0	0.0	(0.2)	0.9
FIP Logística Granéis I Infra	12.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	13.4
FIP Prosperidade Infra	200.4	1.0	0.0	0.0	0.0	0.0	0.0	(6.9)	194.6
FIP Origem Infra	171.5	0.0	0.0	0.0	0.0	0.0	0.0	(0.2)	171.3
FIP Pátria Infra	1,723.7	1.1	0.0	0.0	396.0	0.0	0.0	39.9	2,160.6
FIP Fram Capital Marapé Infra	0.0	0.0	0.0	0.0	0.0	20.1	0.0	(0.1)	20.1
FIP XP Infra II	191.9	0.0	0.0	23.3	252.6	0.0	0.0	(12.4)	455.4
FIP Perfin Ares I	548.9	0.0	0.0	6.5	0.0	0.0	0.0	(0.2)	555.2
FIP CSHG Perfin Aplo 14	164.5	0.0	0.0	0.7	0.0	0.0	0.0	(7.2)	158.0
FIP Perfin Ares 2	1,235.0	0.0	0.0	21.5	0.0	0.0	0.0	(0.4)	1,256.2
FIP Solar I Infra	80.7	6.7	0.0	0.0	0.0	0.0	0.0	(3.5)	83.9
FIP Quebra Dentes Infra	49.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	49.2
FIP Power Infra	0.0	41.1	0.0	0.0	0.0	0.0	0.0	14.0	55.0
FIP Lyon Capital I Infra	0.0	0.0	0.0	0.0	0.0	70.7	0.0	(41.6)	29.1
FIP Vinci Energia Infra	826.8	0.0	0.0	24.0	0.0	0.0	0.0	(20.6)	830.1
FIP XP Infra III	0.0	80.9	0.0	0.0	0.0	94.7	0.0	(5.3)	170.3
FIP BRZ Infra Portos	800.1	0.0	0.0	40.5	0.0	0.0	0.0	(0.0)	840.6
FIP Prisma Energia Infra	577.3	0.2	0.0	0.0	0.0	0.0	0.0	(5.5)	572.0
FIP Endurance Infra	0.0	0.0	0.0	0.4	402.2	0.0	0.0	(0.1)	402.4
FIP Rodovias do Tietê Infra	0.0	0.0	0.0	0.0	0.5	0.0	0.0	(0.3)	0.2
FIP Perfin Mercury Infra	428.3	0.0	0.0	0.5	0.0	0.0	0.0	(0.2)	428.6
FIP Kavon Infra	31.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	31.9

Continuation - FIP-IE and FIP-PD&I<sup>1</sup> under the terms of Laws # 11,478/2007 and # 12,431/2011 - December 2022

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 Fram Capital Trademaster	0.0	0.0	0.7	0.0	0.0	13.8	0.0	(0.0)	14.5
FIP Santense Infra	0.1	0.3	0.0	0.0	0.0	0.0	0.0	(0.1)	0.3
FIP Pátria Infra	83.6	0.0	0.0	0.4	0.0	0.0	0.0	0.1	84.1
FIP Pátria Infra Core Feeder Fundo	0.0	96.7	0.0	0.0	0.0	0.0	0.0	0.0	96.7
FIP Energia Renováveis III Infra	22.8	20.3	0.0	0.0	58.6	0.0	0.0	(0.1)	101.7
FIP N. Saneamento Infra	13.6	1.0	0.0	0.0	0.0	0.0	0.0	(9.4)	5.2
FIP Guar Infra	21.1	0.0	0.0	0.1	0.0	0.0	0.0	(0.0)	21.2
FIP Perfin Mercury UV Infra	23.1	0.0	0.0	0.3	0.0	0.0	0.0	(2.4)	21.0
FIP Polaris Infra	58.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	59.4
FIP Fram Capital Fredrik	0.0	0.0	0.0	0.0	0.0	114.4	0.0	4.0	118.4
FIP Ptria Infra Core Feeder II	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0	20.5
FIP Perfin Discovery Mercury	0.2	0.0	0.0	1.1	0.0	0.0	0.0	(1.0)	0.4
FIP Vinci Infra gua e Saneamento	0.0	0.0	0.0	0.9	0.0	7.1	0.0	(0.3)	7.7
FIP Wave Infra	0.0	2.6	0.0	0.0	289.3	0.0	0.0	(0.1)	291.8
FIP Aviva Infra	0.0	0.1	0.0	0.0	0.0	0.0	0.0	7.3	7.4
FIP Jatob Energia Renovvel	21.5	0.0	0.0	0.0	0.0	0.0	0.0	(0.1)	21.5
FIP Arien Energy Ventures I	77.3	0.9	0.0	0.0	0.0	0.0	0.0	(11.2)	67.0
FIP Serra Elica	50.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	50.3
FIP Navi Energias Sustentveis Infra	0.0	0.0	0.0	1.5	0.0	4.5	0.0	(0.0)	6.0
<b>Total .....</b>	<b>9,014.5</b>	<b>307.4</b>	<b>0.8</b>	<b>123.0</b>	<b>1,399.2</b>	<b>325.3</b>	<b>0.0</b>	<b>(153.1)</b>	<b>11,017.0</b>

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

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

(2) (i) The FIP-IE and FIP-PD&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&I) or earnings above 40% of the fund's earnings.

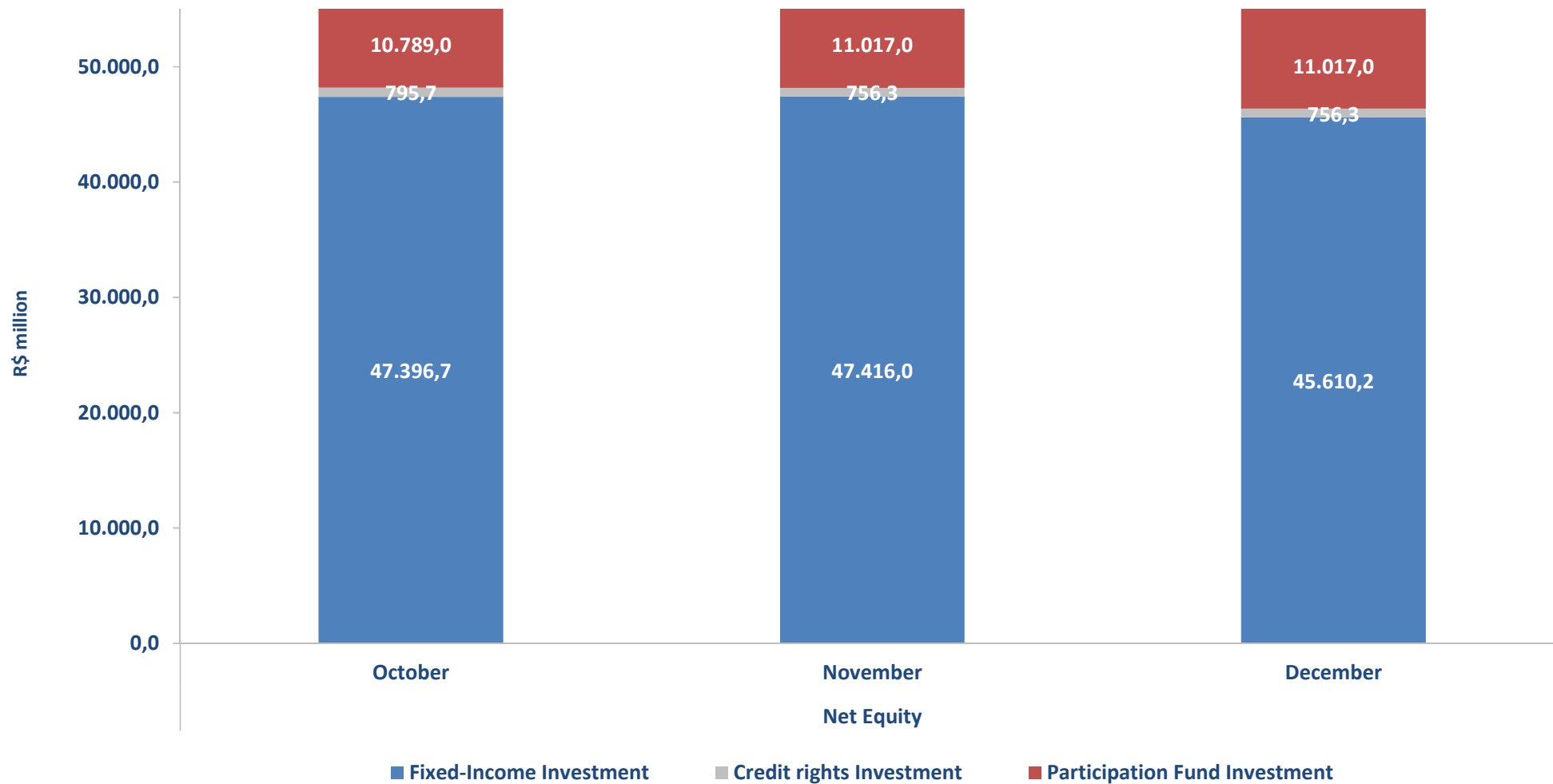
(ii) The FIP-IE and FIP-PD&I must be closed-end fund.

(iii) The FIP-IE and FIP-PD&I must maintain a minimum of 90% of its net worth invested in shares, subscription bonds, debentures (convertible or not into shares) or other bonds issued by either a publicly 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&I must participate in the decision-making process of the issuer company with effective influence on the definition of its strategic policy and management.

Brazilian Infrastructure Bonds Investment Funds - Net Worth Growth



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



## Annex 1

## Infrastructure Bonds: Infrastructure Investment Projects - 2022

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)
Usina Coruipé Açúcar e Álcool	SAUC14	1/4/2022	2/15/2028	ICVM 476	6	3.96	100.0	IPCA + 10,08%	Energy	4.50%	BB (bra) Fitch
Jalles Machado S.A.	JALL11 JALL21	1/5/2022	12/15/2028 12/15/2031	ICVM 400	7 10	6.92 8.39	309.6 141.4	IPCA + 5,59% IPCA + 5,80%	Energy	0.55% 0.70%	A+ (bra) Fitch
Energisa Sul-Sudeste - Distribuidora Energia S.A.	EDVP17	1/10/2022	1/15/2032	ICVM 476	10	8.34	81.0	IPCA + 6,10%	Energy	0.63%	AAA (bra) Fitch
Energisa Sergipe - Distribuidora Energia S/A	ENSEA1	1/10/2022	7/15/2027	ICVM 476	5	8.36	68.0	IPCA + 5,74%	Energy	0.63%	AAA (bra) Fitch
Energisa Paraíba - Distribuidora Energia S/A	SAELA1	1/10/2022	1/15/2030	ICVM 476	8	7.16	63.0	IPCA + 6,01%	Energy	0.60%	AAA (bra) Fitch
Mez 5 Energia LTDA.	MEZ511	1/10/2022	1/15/2046	ICVM 476	24	9.10	373.0	IPCA + 7,07%	Energy	1.35%	AAA (bra) Fitch
CCR S/A	CCROB6	1/12/2022	1/15/2036	ICVM 476	14	8.18	1,716.0	IPCA + 6,44%	Transport	0.75%	AA+ (bra) Fitch
Engie Cidades Inteligentes Infra Uberlândia S.A	EUBE11	1/15/2022	1/15/2034	ICVM 476	12	5.24	65.0	IPCA + 6,44%	Energy	0.85%	AAA (bra) Fitch
Algar Telecom S.A.	ALGAC2	1/15/2022	1/15/2032	ICVM 476	10	8.36	315.0	IPCA + 5,88%	Telecoms	0.43%	brAAA (S&P)
CIA de Saneamento do Parana-SANEPAR	SAPRB3	1/19/2022	1/15/2032	ICVM 476	10	9.89	300.0	IPCA + 5,89%	Water and Sewerage	0.25%	AAA (bra) Fitch
Mez 1 Energia LTDA.	MEZU12	1/20/2022	7/15/2043	ICVM 476	22	8.72	62.0	IPCA + 7,39%	Energy	1.65%	AAA (bra) Fitch
IP Sul Conces. Iluminação Pública S.A.	IPIL11	2/1/2022	12/15/2035	ICVM 476	14	5.83	80.0	IPCA + 7,27%	Energy	1.75%	AA+ (bra) Fitch
Usina Santa Adélia S.A.	USAS11	2/14/2022	2/15/2028	ICVM 476	6	3.98	200.0	IPCA + 6,89%	Energy	1.70%	AA (bra) Fitch
GBS Participações S.A.	GBSP11	2/11/2022	3/15/2044	ICVM 476	22	8.86	600.0	IPCA + 7,27%	Energy	1.40%	AAA (bra) Fitch
MEZ 4 Eenergia S.A.	MEZQ11	2/25/2022	1/15/2044	ICVM 476	22	8.30	36.5	IPCA + 7,26%	Energy		AAA (bra) Fitch
São Martinho S/A	SMTO14 SMTO24	3/21/2022	1/15/2032 1/15/2037	ICVM 400	10 15	9.79 13.05	648.0 552.0	IPCA + 5,97% IPCA + 6,11%	Energy	0.40% 0.65%	AAA (bra) Fitch AAA (bra) Fitch
Usina Fotovoltaica Cormandel S.A.	CRMD11	3/25/2022	11/15/2037	ICVM 476	16	6.28	220.0	IPCA + 8,82%	Energy		AAA (bra) Fitch
Transbrasiliana Conces. Rodovias S.A	TBCR18	3/25/2022	3/25/2028	ICVM 476	6	5.68	275.4	IPCA + 9,6%	Transport		
Usina Açucareira S. Manoel S/A	UASM11	3/28/2022	3/15/2028	ICVM 476	6	4.59	75.0	IPCA + 6,27%	Energy		AA (bra) Fitch

## Continuation – 2022

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)
Hélio Valgas Solar Participações S.A.	HVSP11	3/10/2022	6/15/2038	ICVM 476	16	6.86	1,287.2	IPCA + 8,26%	Energy		
CIA. Eletric. Est. da Bahia-COELBA	CEEBC4	3/30/2022	4/15/2032	ICVM 476	10	6.57	400.0	IPCA + 6,28%	Energy		brAAA (S&P)
CIA. Energética de Pernambuco-CELPE	CEPEC2	3/30/2022	4/15/2032	ICVM 476	10	8.39	400.0	IPCA + 6,28%	Energy	3.00%	brAAA (S&P)
Aliança Geração Energia S.A.	ALIG15	4/1/2022	4/15/2036	ICVM 476	14	6.66	240.0	IPCA + 6,13%	Energy	1.55%	AAA (bra) Fitch
RDVE Subholding S.A.	RDVE11	4/4/2022	4/15/2038	ICVM 476	16	6.51	430.0	IPCA + 7,04%	Energy	1.68%	AA (bra) Fitch
Concessionária Rodovia dos Tamoios S.A.	RODT12	4/11/2022	5/15/2032	ICVM 476	10	5.65	100.0	IPCA + 7,81%	Transport	0.55%	A+ (bra) Fitch
Raizen Energia S/A	RESA17	4/12/2022	3/15/2029	ICVM 400	7	6.89	768.1	IPCA + 5,92%	Energy	1.70%	AAA (bra) Fitch
	RESA27		3/15/2032		10	8.34	428.6	IPCA + 5,96%		2.10%	
Energisa S.A.	ENGIA6	4/13/2022	4/15/2029	ICVM 476	7	5.52	309.4	IPCA + 6,16%	Energy	0.30%	AAA (bra) Fitch
	ENGIB6		4/15/2032		10	8.34	190.6	IPCA + 6,28%		0.40%	
Energisa MT-Distribuidora S.A.	ENMTA5	4/13/2022	4/15/2029	ICVM 476	7	5.52	164.4	IPCA + 6,16%	Energy	0.55%	
	ENMTB5		4/15/2032		10	8.34	95.6	IPCA + 6,28%		0.65%	
Proton Energy Participações S.A.	PENP11	4/22/2022	3/15/2030	ICVM 476	8	3.93	50.7	IPCA + 6,23%	Energy	0.55%	AAA (bra) Fitch
MEZ 3 Energia S.A	METZ11	4/25/2022	4/15/2044	ICVM 476	22	8.50	36.5	IPCA + 7,16%	Energy	0.65%	AAA (bra) Fitch
Eletropaulo Metropol. Eletr. S.P. S/A	ELPLA7	4/28/2022	4/15/2032	ICVM 476	10	8.34	800.0	IPCA + 6,14%	Energy	0.60%	
Águas de Teresina Saneamento SPE S.A.	GTST14	5/4/2022	5/15/2032	ICVM 476	10	8.34	409.3	IPCA + 6,52%	Water and Sewerage	0.90%	AA (bra) Fitch
	GTST24		5/15/2037		15	11.45	190.7	IPCA + 6,85%		1.10%	
Transmissora Aliança de Energia Elétrica S/A	TAEEB2	5/9/2022	4/15/2029	ICVM 400	7	6.91	630.8	IPCA + 5,60%	Water and Sewerage	0.25%	AAA (bra) Fitch
	TAEEC2		4/15/2032		10	8.37	300.4	IPCA + 5,75%		0.30%	
	TAEED2		4/15/2037		15	13.25	318.8	IPCA + 5,85%		0.40%	
Unifique Telecomunicações S.A.	UNTE12	5/10/2022	4/15/2029	ICVM 476	7	3.99	150.0	IPCA + 6,57%	Energy		brAA- (S&P)
CIA Energética do Ceara-COELCE	COCE18	5/16/2022	4/15/2032	ICVM 476	10	8.36	600.0	IPCA + 6,21%	Energy	0.55%	AAA (bra) Fitch
CPFL Geração de Energia S/A	CPFGA2	5/19/2022	4/15/2031	ICVM 476	9	7.43	489.0	IPCA + 6,03%	Telecoms	0.48%	AAA (bra) Fitch
RGE Sul Distribuidora de Energia S/A	RIGEA3	5/19/2022	4/15/2029	ICVM 476	7	6.22	493.0	IPCA + 5,99%	Energy	0.46%	AAA (bra) Fitch

## Continuation – 2022

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)
Copel Distribuição S/A	CPLD37	5/23/2022	5/15/2032	ICVM 476	10	8.32	298.6	IPCA + 6,17%	Energy	0.60%	AAA (bra) Fitch
CEMIG Distribuição S/A	CMGD28	5/30/2022	6/15/2029	ICVM 476	7	6.19	500.0	IPCA + 6,11%	Energy	0.54%	AA+ (bra) Fitch
AGEO Leste Terminais Armazens Gerais S.A.	AGLT12	6/8/2022	6/15/2032	ICVM 476	10	5.54	150.0	IPCA + 6,61%	Transport	0.75%	brAAA (S&P)
AES Cajuína AB1 Holdings S.A.	AEAB11	6/14/2022	6/15/2044	ICVM 476	22	9.11	950.0	IPCA + 7,07%	Energy	1.20%	AA (bra) Fitch
Cia. Energética RN-COSERN	CSRNC0	6/15/2022	7/15/2029	ICVM 476	7	6.23	220.0	IPCA + 6,62%	Energy	0.44%	brAAA (S&P)
Elektro Redes S.A.	EKTRC1	6/15/2022	7/17/2029	ICVM 476	7	6.23	300.0	IPCA + 6,62%	Energy	0.44%	brAA (S&P)
Ciclus Ambiental do Brasil S.A.	CCLS21	6/20/2022	7/15/2031	ICVM 476	10	9.00	100.0	IPCA + 6,84%	Water and Sewerage	1.50%	brAA+ (S&P)
MOB Participações S.A.	MOBP13	6/20/2022	6/15/2029	ICVM 476	7	4.92	110.0	IPCA + 6,84%	Telecoms	1.12%	AA+ (bra) Fitch
Concea. Ecovias do Araguaia S.A.	ECAR11	7/5/2022	7/17/2051	ICVM 476	29	11.22	593.2	IPCA + 6,66%	Transport		AA (bra) Fitch
Açucareira Quata S/A	QUAT13	7/11/2022	7/15/2034	ICVM 476	12	5.69	450.0	IPCA + 7,87%	Energy	2.05%	A- (bra) Fitch
BR Vias Holding VRD S.A	HVRD15	7/16/2022	4/15/2036	ICVM 476	14	6.78	75.0	IPCA + 9,00%	Transport		
Ipiranga Agroindustrial S.A.	IPIA13	7/20/2022	8/15/2029	ICVM 476	7	5.50	200.0	IPCA + 7,40%	Energy		
Petro Rio Jaguar Petróleo S.A.	PEJA11	7/20/2022	8/15/2032	ICVM 476	10	6.14	1,500.0	IPCA + 7,41%	Energy	1.75%	
ENEVA S.A.	ENEV18	7/21/2022	7/15/2032	ICVM 400	10	8.36	718.5	IPCA + 6,53%	Energy	0.65%	AAA (bra) Fitch
	ENEV28		7/15/2032		10	13.17	471.5	IPCA + 6,59%		0.75%	
Ventos de São João XXIII Energias Renováveis S.A.	VSJX11	7/29/2022	7/15/2042	ICVM 476	20	6.85	109.5	IPCA + 8,08%	Energy	2.22%	AA (bra) Fitch
Triple Play Brasil Participações S.A.	CONX12	8/10/2022	8/15/2029	ICVM 476	7	4.80	550.0	IPCA + 7,68%	Telecoms	1.80%	brA+ (S&P)
Via Brasil BR 163 Conces. Rodovias S.A.	VBRR11	8/11/2022	12/15/2030	ICVM 400	9	6.05	850.0	IPCA + 8,59%	Transport	2.20%	brA+ (S&P)
CSN Mineração S.A.	CMIN12	8/12/2022	7/15/2032	ICVM 400	10	9.89	745.0	IPCA + 6,88%	Transport	0.55%	AAA (bra) Fitch
	CMIN22		7/15/2037		15	13.09	655.0	IPCA + 7,07%		0.70%	
Marituba Transmissão Energia S.A.	MRTR11	8/12/2022	7/15/2044	ICVM 476	22	8.85	150.0	IPCA + 7,24%	Energy	1.35%	brAAA (S&P)
Conces. Iluminação Pública Conecta Aracaju S.A.	ARAJ11	8/16/2022	12/15/2031	ICVM 476	10	4.34	40.0	IPCA + 8,01%	Energy	2.10%	
Conces. Conecta Feira de Santana S.A.	TANA11	8/16/2022	12/15/2031	ICVM 476	10	4.28	40.0	IPCA + 8,01%	Energy		

## Continuation – 2022

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)
Jalles Machado S.A.	JALL13	8/17/2022	9/15/2032	ICVM 476	10	7.67	350.0	IPCA + 6,49%	Energy	0.75%	AA- (bra) Fitch
Weclix Telecom S.A	WETE11	8/24/2022	10/15/2028	ICVM 476	6	4.65	200.0	IPCA + 10,92%	Telecoms	4.80%	
Conces. Águas de Juturnaiba S/A	CAJS12	9/1/2022	9/15/2037	ICVM 476	15	6.29	155.1	IPCA + 6,85%	Water and Sewerage	0.95%	AAA (bra) Fitch
Ligga Telecomunicações S.A	CPTM15	9/5/2022	9/15/2030	ICVM 476	8	6.34	1,000.0	IPCA + 8,60%	Telecoms	2.30%	
ENEVA S.A.	ENEV19		9/15/2032		10	8.34	755.0	IPCA + 6,90%		0.95%	
	ENEV29	9/6/2022	9/15/2037	ICVM 476	15	13.14	570.0	IPCA + 7,00%	Energy	1.05%	AAA (bra) Fitch
	ENEV39		9/15/2042		20	19.90	575.0	IPCA + 7,15%		1.20%	
Autopista Fernão Dias S/A	APFD19	9/19/2022	9/15/2031	ICVM 476	9	5.74	1,000.0	IPCA + 6,39%	Transport	0.68%	AA- (bra) Fitch
2W Energia S.A	WWAV13	9/19/2022	1/15/2038	ICVM 476	15	5.58	216.0	IPCA + 10,56%	Energy	4.00%	AA (bra) Fitch
Rio Alto STL Holding I S.A	RAHD11	10/5/2022	10/15/2040	ICVM 476	18	6.94	465.0	IPCA + 7,85%	Energy	2.00%	AAA (bra) Fitch
Equatorial Alagoas Distribuidora Energia S.A.	CEAL21	10/18/2022	10/15/2034	ICVM 476	12	8.74	100.0	IPCA + 6,36%	Transport	1.64%	AA- (bra) Fitch
Concessionária Rota dos Coqueiros S.A.	RTCQ12	10/18/2022	10/15/2037	ICVM 476	15	7.39	60.0	IPCA + 7,87%	Transport		AA- (bra) Fitch
América NET S.A.	ANET12	11/1/2022	11/15/2030	ICVM 476	8	5.58	300.0	IPCA + 8,96%	Telecoms	2.50%	brA (S&P)
BRK Ambiental - Região Metropolitana Maceió S.A.	RMSA12	11/7/2022	6/15/2042	ICVM 400	20	8.96	1,950.0	IPCA + 7,61%	Water and Sewerage	1.95%	AA- (bra) Fitch
CEMIG Geração e Transmissão S/A	CMTR29	11/16/2022	12/15/2029	ICVM 476	7	6.96	300.0	IPCA + 7,62%	Energy	1,20%	AA+ (bra) Fitch
CIA Melhoramentos Norte do Paraná	CMNP14	11/18/2022	6/15/2029	ICVM 476	7	3.76	230.0	IPCA + 7,57%	Energy		
Pampa Transmissão Energia S.A	PAMP11	11/22/2022	9/15/2046	ICVM 476	24	10.15	636.0	IPCA + 6,15%	Energy		
Alex Energia Participações S.A.	ALEX11	11/25/2022	6/15/2046	ICVM 476	24	10.57	450.0	IPCA + 5,71%	Energy		
Concessionária dos Aeroportos Amazônia S.A.	AEAM12	11/25/2022	11/15/2046	ICVM 476	24	9.42	457.0	IPCA + 7,17%	Transport		AA (bra) Fitch
	AEAM22					9.42	143.0				
Enauta Participações S.A.	ENAT11	11/23/2022	12/15/2029	ICVM 476	7	4.61	736.7	IPCA + 9,83%	Energy	3.25%	Ba3 (br) Moody's
BRK Ambiental - Uruguaina S.A.	BRKU11	11/30/2022	7/15/2037	ICVM 476	15	8.08	90.8	IPCA + 7,50%	Water and Sewerage	1.40%	A+ (bra) Fitch
MEZ T1 Transmissora Participações S.A.	MEZP11	12/5/2022	11/15/2046	ICVM 476	24	8.33	250.0	IPCA + 9,33%	Energy	3.00%	AAA (bra) Fitch

## Continuation – 2022

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. Estadual Distribuição Energia Elétrica - CEEE D	CEED12	12/12/2022	12/15/2029	ICVM 476	7	2.77	250.0	IPCA + 7,15%	Energy	1.45%	AA+ (bra) Fitch
Conces. Linhas 8 e 9 Sistema Trens Metropolitanos SP S.A.	CLTM13	12/16/2022	10/15/2048	ICVM 476	26	11.45	2,500.0	IPCA + 6,43%	Transport		
Rumo Malha Paulista S/A	GASC14	12/19/2022	6/15/2032	ICVM 476	10	4.97	434.0	IPCA + 5,99%	Transport		AAA (bra) Fitch
São Martinho S/A	SMTO15	12/21/2022	12/15/2030	ICVM 476	8	6.57	500.0	IPCA + 7,47%	Energy		AAA (bra) Fitch
<b>Total.....</b>							<b>40,013.8</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: Infrastructure Investment Projects - 2021

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)
Açucareira Quata S.A.	QUAT12	1/6/2021	11/15/2025	ICVM 476	5	4.30	201.8	IPCA + 7,21%	Energy	4.74%	A- (bra) Fitch
Pau Rainha Geração e Comércio de Energia S.A.	RAIN12	1/15/2021	12/15/2034	ICVM 476	14	5.80	87.5	IPCA + 10,25%	Energy	7.03%	
	RAIN22				14	6.40	57.5	IPCA + 7,25%		4.12%	
Santa Luz Geração e Comércio de Energia S.A.	SLZG12	1/15/2021	12/15/2034	ICVM 476	14	5.80	87.5	IPCA + 10,25%	Energy	7.03%	
	SLZG22				14	6.40	57.5	IPCA + 7,25%		4.12%	
Bonfim Geração e Comércio de Energia S.A.	BGCE12	1/15/2021	12/15/2034	ICVM 476	14	5.80	87.5	IPCA + 10,25%	Energy	7.03%	
	BGCE22				14	6.40	57.5	IPCA + 7,25%		4.12%	
Canta Geração e Comércio de Energia S.A.	CGCE12	1/15/2021	12/15/2034	ICVM 476	14	5.80	87.5	IPCA + 10,25%	Energy	7.03%	
	CGCE22				14	6.40	57.5	IPCA + 7,25%		4.12%	
MOB Participações S.A	MOBP12	1/19/2021	1/15/2029	ICVM 476	8	4.60	100.0	IPCA + 6,20%	Telecoms	3.79%	
Echoenergia Participações S/A	ECHP12	1/28/2021	12/15/2030	ICVM 476	10	N/D	80.0	IPCA + 4,75%	Energy	2.36%	A+ (bra) Fitch
	ECHP22		1/15/2031		10		60.0	IPCA + 4,75%		2.36%	
Rumo S.A	RUMOA5	2/3/2021	12/15/2030	ICVM 400	10	7.54	376.5	IPCA + 3,60%	Transport	0.35%	AAA (bra) Fitch
	RUMOB5				10	10.30	823.5	IPCA + 4,00%		0.39%	
CIA Transmissão Energia Elétrica Paulista	CTEEA0	2/10/2021	7/15/2044	ICVM 476	24	9.37	672.5	IPCA + 5,07%	Energy		AAA (bra) Fitch
Concessão Metroviária RJ S.A.	MTRJ19	2/10/2021	1/15/2031	ICVM 476	10	5.79	1,200.0	IPCA + 7,09%	Transport	4.00%	brAAA (S&P)
EDP - SP Distribuição Energia S.A.	EBENA1	2/12/2021	1/15/2026	ICVM 476	5	4.09	700.0	IPCA + 3,91%	Energy	0.50%	Ba2 (br) Moody's
EDP - ES Distribuição Energia S.A.	ESCEA0	2/12/2021	7/15/2025	ICVM 476	4	4.13	500.0	IPCA + 3,26%	Energy		Ba2 (br) Moody's
Concessionária Rodovia MS 306 S/A	CNRD11	2/18/2021	1/15/2035	ICVM 476	14	7.88	315.0	IPCA + 6,00%	Transport	2.74%	A+ (bra) Fitch
Aliança Geração Energia S.A.	ALIG13	2/18/2021	1/15/2035	ICVM 476	14	6.60	270.0	IPCA + 4,00%	Energy	0.95%	AAA (bra) Fitch
Delta Sucrenergia S/A	SRGI12	3/8/2021	3/15/2027	ICVM 476	6	4.58	250.0	IPCA + 4,09%	Energy		
CIA Riograndense de Saneamento - CORSAN	RSAN34	3/18/2021	2/15/2028	ICVM 476	7	4.85	115.0	IPCA + 4,39%	Water and Sewerage	2.05%	AA- (bra) Fitch
	RSAN44		2/15/2031		10	5.85	335.0	IPCA + 4,83%		1.85%	
Tequimar Vila do Conde Logística Portuária S.A.	TQMR11	3/19/2021	3/15/2028	ICVM 476	7	6.97	360.0	IPCA + 4,04%	Transport		
CIA de Saneamento do Paraná - Sanepar	SAPRA2	3/23/2021	3/15/2029	ICVM 476	8	7.95	208.3	IPCA + 4,25%	Water and Sewerage	0.80%	AA (bra) Fitch
	SAPRA3		3/15/2031		10	9.95	161.7	IPCA + 4,49%		0.90%	
Serra do Mel Holding S.A.	SDMH11	3/24/2021	12/15/2035	ICVM 476	15	7.03	142.0	IPCA + 5,29%	Energy	1.75%	AA(bra) Fitch
Terminal Químico de Aratu S.A. - Tequimar	TEQU12	3/26/2021	3/15/2028	ICVM 476	7	6.95	100.0	IPCA + 4,37%	Transport		

## Continuation – 2021

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 Xingu Transmissões de Energia S.A.	LXIN12	3/31/2021	4/15/2036	ICVM 476	15	7.86	120.0	IPCA + 5,83%	Energy	N/D	brAA+ (S&P)
Unifique Telecomunicações S.A.	UNTE11	3/31/2021	3/15/2028	ICVM 476	7	N/D	100.0	IPCA + 5,34%	Telecoms	N/D	
América NET S.A.	ANET11	4/6/2021	3/15/2029	ICVM 476	8	4.39	250.0	IPCA + 5,60%	Telecoms	2.45%	
Equatorial Transmissão S.A	EQUA11	4/6/2021	3/15/2036	ICVM 476	15	7.73	800.0	IPCA + 4,91%	Energy	0.95%	AA(bra) Fitch
CIA de Água e Esgoto do Ceará - CAGECE	CAEC21	4/7/2021	3/15/2029	ICVM 476	8	6.33	516.0	IPCA + 5,40%	Water and Sewerage	1.42%	AA-(bra) Fitch
Goiás Geradora de Energia Renovável S.A.	GGEN11	4/7/2021	3/15/2041	ICVM 476	20	9.54	65.5	IPCA + 9,04%	Energy	6.40%	
Gameleira Geradora de Energia Renovável S.A.	GMLR11	4/7/2021	3/15/2041	ICVM 476	20	9.54	66.5	IPCA + 9,04%	Energy	6.54%	
Usina Batatais S/A Açúcar e Alcool	UBAT12	4/7/2021	3/15/2028	ICVM 476	7	5.11	150.0	IPCA + 4,89%	Energy		
Brisanet Serviços de Telecomunicações S.A.	BRST11	4/28/2021	3/15/2028	ICVM 476	7	N/D	500.0	IPCA + 5,77%	Telecoms		brA+ (S&P)
Eletropaulo Metropol. Eletr. de S.P. S/A	ELPLA5	4/30/2021	3/15/2031	ICVM 476	10	8.52	720.0	IPCA + 4,26%	Energy		
Rumo Malha Paulista S/A	GASC22	4/30/2021	3/15/2031	ICVM 476	10	8.66	750.0	IPCA + 4,77%	Transport		BB+(bra) Fitch
PCH BV II - Geração de Energia S.A.	PCHV11	4/30/2021	3/15/2040	ICVM 476	19	10.37	70.0	IPCA + 6,73%	Energy	2.70%	
Parintins Amazonas Transmissora Energia S.A.	PTAZ11	4/30/2021	3/15/2046	ICVM 476	25	8.80	220.0	IPCA + 5,69%	Energy	2.30%	AA+(bra) Fitch
Apollo 17 Participações S.A	APOL11	5/3/2021	4/15/2033	ICVM 476	12	7.16	75.0	IPCA + 5,60%	Energy	N/D	AAA(bra) Fitch
Centrais Elétricas Bras. S/A - ELETROBRAS	ELET23	5/10/2021	4/15/2031	ICVM 476	10	9.89	1,500.0	IPCA + 4,91%	Energy	1.80%	AA(bra) Fitch
Companhia Piratininga de Força e Luz	CPFPA2	5/20/2021	5/15/2031	ICVM 476	10	8.87	274.0	IPCA + 4,30%	Energy		AAA(bra) Fitch
RGE Sul Distribuidora de Energia S/A	RIGEA1	5/20/2021	5/15/2031	ICVM 476	10	8.87	680.0	IPCA + 4,30%	Energy		AAA(bra) Fitch
Transmissora Aliança de Energia Elétrica S/A	TAEEA2	5/20/2021	5/15/2036	ICVM 476	15	13.40	100.0	IPCA + 4,76%	Energy	1.70%	AAA(bra) Fitch
Ouro Preto Serviços de San. S/A-SANEOURO	SNRO11	5/31/2021	5/15/2041	ICVM 476	20	8.26	100.0	IPCA + 6,69%	Water and Sewerage	2.50%	

## Continuation – 2021

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)
Matrincha Transmissora Energia TP Norte S/A	TPNO13	6/8/2021	12/15/2038	ICVM 476	18	9.49	135.0	IPCA + 4,93%	Energy	0.85%	AAA(bra) Fitch
AGEO Leste Terminais e Armazéns Gerais S.A.	AGLT11	6/15/2021	7/17/2031	ICVM 476	10	5.86	150.0	IPCA + 4,48%	Transport		brAAA (S&P)
LIGHT Serviços de Eletricidade S/A	LIGHD2	6/15/2021	4/15/2031	ICVM 400	10	8.48	916.4	IPCA + 4,75%	Energy	0.75%	A1 (br) Moody's
TIM S.A.	TIMS12	6/15/2021	6/15/2028	ICVM 476	7	6.17	1,600.0	IPCA + 4,17%	Telecoms		AAA(bra) Fitch
Concessionária da Rodovia MG-050 S.A.	CRMG15	6/18/2021	12/15/2030	ICVM 476	10	5.37	400.0	IPCA + 5,97%	Transport	2.65%	A3 (br) Moody's
Rio Paraná Energia S/A	RIPR22	6/24/2021	6/15/2031	ICVM 476	10	8.63	650.0	IPCA + 4,63%	Energy	1.30%	AAA(bra) Fitch
Ipiranga Agroindustrial S.A.	IPIA12	6/24/2021	7/15/2029	ICVM 476	8	5.63	150.0	IPCA + 4,45%	Energy		
CCR S/A	CCROA5	6/29/2021	11/15/2033	ICVM 476	13	7.15	545.0	IPCA + 4,88%	Transport	0.70%	AA+(bra) Fitch
Tereos Açúcar e Energia Brasil S.A.	TAEB15	6/29/2021	6/15/2027	ICVM 476	6	4.72	480.0	IPCA + 6,07%	Energy	2.20%	A+(bra) Fitch
São Martinho S/A	SMTO13	6/30/2021	6/15/2031	ICVM 476	10	7.38	500.0	IPCA + 4,69%	Energy		AAA(bra) Fitch
Xingu Rio Transmissora de Energia S.A.	XNGU17	7/2/2021	12/15/2034	ICVM 476	14	7.19	1,100.0	IPCA + 4,83%	Energy		AA(bra) Fitch
Rumo S.A	RUMOA6 RUMOB6	7/6/2021	6/15/2031 6/15/2036	ICVM 400	10 15	8.49 13.37	784.6 258.8	IPCA + 4,50% IPCA + 4,54%	Transport	0.45% 0.50%	AAA(bra) Fitch
Eixo SP Concessionária de Rodovias S.A	CONR12	7/13/2021	12/15/2035	ICVM 476	15	8.80	350.0	IPCA + 5,05%	Transport	N/D	AA-(bra) Fitch
Copel Distribuição S.A.	CPLD26	7/15/2021	6/15/2031	ICVM 476	10	4.12	500.0	IPCA + 4,77%	Energy	0.68%	AAA(bra) Fitch
Via Brasil MT 320 Conces. Rodovias S.A.	VIMT13	7/22/2021	12/15/2036	ICVM 476	16	7.27	135.0	IPCA + 6,17%	Transport	1.90%	AA(bra) Fitch
Anemus Wind Holding S.A.	ANEM11	7/27/2021	6/15/2039	ICVM 476	18	7.76	475.0	IPCA + 7,29%	Energy	3.15%	AA(bra) Fitch
CSN Mineração S.A.	CMIN11 CMIN21	8/4/2021	7/15/2031 7/15/2036	ICVM 476	10 15	12.73 12.71	576.5 423.6	IPCA + 4,88% IPCA + 5,02%	Transport	0.70% 0.70%	AAA(bra) Fitch
UTE GNA I Geração Energia S.A.	UNEG11	8/4/2021	7/15/2039	ICVM 476	18	9.10	1,800.0	IPCA + 5,92%	Energy	2.20%	
LC Energia Holding S.A.	LCEN12 LCEN22 LCEN32	8/6/2021	8/15/2043	ICVM 476	22	7.62	50.0 67.0 35.0	IPCA + 8,95%	Energy		



## Continuation – 2021

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)
LIGHT Energia S.A	LGTE17	8/11/2021	7/15/2028	ICVM 476	7	4.96	400.0	IPCA + 4,85%	Energy		A1 (br) Moody's
	LGTE27						100.0				
ALGAR Telecom S.A.	ALGAB1	8/12/2021	7/15/2031	ICVM 476	10	8.41	300.0	IPCA + 4,99%	Telecoms	0.60%	brAAA (S&P)
Colombo Agroindustria S.A.	CLAG13	8/13/2021	7/15/2028	ICVM 476	7	5.53	400.0	IPCA + 5,48%	Energy	1.20%	AA+(bra) Fitch
MRS Logística S.A.	MRSL2A	8/16/2021	8/15/2031	ICVM 476	10	7.53	300.0	IPCA + 4,97%	Transport		
	MRSL3A		8/15/2036		15	12.33	500.0	IPCA + 5,06%			
Aliança Geração de Energia S.A.	ALIG14	8/18/2021	8/15/2035	ICVM 476	14	7.02	220.0	IPCA + 4,80%	Energy	0.40%	AAA(bra) Fitch
Itamaraca Transmissora SPE S.A	IMRC11	8/20/2021	7/15/2041	ICVM 476	20	7.82	32.0	IPCA + 8,00%	Energy		
CIA Estadual Distr Energia Elétrica - CEEED	CEED21	8/25/2021	8/15/2029	ICVM 476	8	7.22	300.0	IPCA + 5,44%	Energy	0.65%	AA+(bra) Fitch
Usina Santo Antonio S.A.	USST11	8/30/2021	8/15/2028	ICVM 476	7	4.94	70.0	IPCA + 5,55%	Energy		BBB-(bra) Fitch
CIA Gás de São Paulo - COMGAS	GASP19 GASP29	9/6/2021	8/15/2031	ICVM 476	10	6.36	500.0	IPCA + 5,12%	Energy	0.55%	AAA(bra) Fitch
			10		10.84	500.0	IPCA + 5,22%	0.60%			
Agro Indústrias Vale São Francisco S.A. - AGROVALE	AGVF12	9/17/2021	8/15/2027	ICVM 476	6	4.65	120.0	IPCA + 6,77%	Energy	3.10%	
CIA Geração Trans Energia - Eletrobras CGT Eletrosul	CTGE13	9/17/2021	9/15/2029	ICVM 476	8	7.96	185.0	IPCA + 5,35%	Energy	0.68%	AA(bra) Fitch
CIA Sanemaento Minas Gerais - COPASA	CSMGA6	9/17/2021	9/15/2031	ICVM 476	10	5.28	243.8	IPCA + 5,23%	Water and Sewerage	0.65%	AAA(bra) Fitch
Tucano Holding III S.A	TNHL11	10/1/2021	9/15/2041	ICVM 476	20	7.70	200.0	IPCA + 6,59%	Energy	1.65%	AA(bra) Fitch
AES Tucano Holding II S.A	TCII11	10/8/2021	9/15/2041	ICVM 476	20	8.20	300.0	IPCA + 6,06%	Energy	1.05%	AA(bra) Fitch
Engie Brasil Energia S.A	EGIEA0	10/18/2021	9/15/2046	ICVM 476	25	8.32	400.0	IPCA + 5,72%	Energy	0.70%	AAA(bra) Fitch
UHE São Simão Energia S.A	UHSM12	10/19/2021	10/15/2036	ICVM 476	15	12.42	1,055.0	IPCA + 5,82%	Energy	0.80%	AAA(bra) Fitch
CIA Auto Raposo Tavares S.A	CART13	10/22/2021	12/15/2035	ICVM 476	14	6.72	1,050.0	IPCA + 6,81%	Transport	1.65%	AA(bra) Fitch
Rumo Malha Paulista S.A	GASC23	10/22/2021	10/15/2033	ICVM 476	12	11.95	500.0	IPCA + 5,73%	Transport	1.30%	BB+(bra) Fitch
Alcoeste Bioenergia Fernandópolis S.A.	ABFR12	10/25/2021	12/15/2027	ICVM 476	6	3.87	50.0	IPCA + 8,19%	Energy	3.00%	
CTEEP - CIA de Trans. Energia Paulista	CTEE1B	10/28/2021	10/15/2031	ICVM 476	10	9.93	668.8	IPCA + 5,77%	Energy	0.35%	AAA(bra) Fitch
	CTEE2B				18	13.21	281.2	IPCA + 5,86%		0.40%	
Holding do Araguaia S.A.	HARG11	10/28/2021	10/15/2036	ICVM 476	15	7.47	1,400.0	IPCA + 6,67%	Transport	1.30%	brAAA (S&P)

## Continuation – 2021

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 Eletric. do Est. Bahia-COELBA	CEEBC3	10/29/2021	10/15/2031	ICVM 476	10	8.40	320.0	IPCA + 5,82%	Energy	1.34%	brAAA (S&P)
CIA Energética Pernambuco-CELPE	CEPEC1	10/29/2021	10/15/2031	ICVM 476	10	8.39	200.0	IPCA + 5,88%	Energy	0.55%	brAAA (S&P)
Elektro Redes S.A.	EKTRC0	10/29/2021	10/15/2031	ICVM 476	10	8.40	260.0	IPCA + 5,77%	Energy	0.45%	brAA (S&P)
Energisa S.A	ENGIA5	10/29/2021	10/15/2031	ICVM 476	10	8.38	330.0	IPCA + 6,09%	Energy	0.65%	AAA(bra) Fitch
Energisa MT - Distr. de Energia S.A.	ENMTA4	10/29/2021	10/15/2031	ICVM 476	10	8.38	350.0	IPCA + 6,09%	Energy	0.65%	AAA(bra) Fitch
Energisa MS - Distr. de Energia S.A.	ESULA6	10/29/2021	10/15/2031	ICVM 476	10	8.38	320.0	IPCA + 6,09%	Energy	0.65%	AAA(bra) Fitch
SMART RJ Conces. Iluminação Pública S.A.	SMRJ12	11/8/2021	9/20/2032	ICVM 476	11	4.84	925.0	Pré 12,25%	Energy		AA+(bra) Fitch
COPEL Geração Transmissão S.A.	CPGT27	11/11/2021	10/15/2031	ICVM 476	10	8.37	366.6	IPCA + 5,71%	Energy	0.48%	AAA(bra) Fitch
Autopista Litoral Sul S/A.	PLSB1A	11/11/2021	10/15/2031	ICVM 476	10	6.67	1,754.0	IPCA + 5,86%	Transport	1.00%	AA-(bra) Fitch
Hidrovias do Brasil S.A.	HBSA11	11/18/2021	10/15/2028	ICVM 476	7	6.89	280.0	IPCA + 6,00%	Transport	0.70%	AA(bra) Fitch
	HBSA21		10/15/2031		10	8.34	100.0	IPCA + 6,04%		0.75%	
Usina Cerradão S.A.	USCR11	11/19/2021	11/15/2027	ICVM 476	6	4.63	120.0	IPCA + 6,32%	Energy		
Borborema Transmissão Energia S.A.	BBRM11	11/22/2021	1/15/2045	ICVM 476	23	9.15	50.0	IPCA + 6,10%	Energy		AA(bra) Fitch
TVV Terminal de Vila Velha S.A.	TVVH11	12/1/2021	11/15/2033	ICVM 476	12	4.46	240.0	IPCA + 6,86%	Transport	1.70%	AA-(bra) Fitch
Sonora Estância S/A	SNRA13	12/3/2021	11/15/2029	ICVM 476	8	7.29	80.0	IPCA + 7,29%	Energy	2.10%	
TESC - Terminal de Santa Catarina S/A	CJEN13	12/6/2021	12/15/2035	ICVM 476	14	6.65	350.0	IPCA + 8,17%	Transport	2.80%	AA(bra) Fitch
Concessionária Rota do Atlântico S.A.	RATL11	12/6/2021	12/15/2036	ICVM 476	15	7.17	160.0	IPCA + 7,17%	Transport	2.00%	AA(bra) Fitch
Confluência Energia S/A	CONF11	12/8/2021	11/15/2041	ICVM 476	20	8.35	215.0	IPCA + 6,60%	Energy	1.40%	AA+(bra) Fitch
Solaris Transmissão de Energia S.A.	SOTE11	12/8/2021	8/15/2045	ICVM 476	24	9.43	150.0	IPCA + 6,40%	Energy		AA(bra) Fitch
Mata de Santa Genebra Transmissão S/A	MSGT23	12/13/2021	11/15/2037	ICVM 476	16	8.48	550.0	IPCA + 6,08%	Energy	0.90%	AA(bra) Fitch
	MSGT33		11/15/2041		20	9.64	550.0	IPCA + 6,23%		1.05%	
Itapoá Terminais Portuários S.A.	ITPO14	12/15/2021	11/15/2036	ICVM 476	15	8.47	750.0	IPCA + 6,29%	Transport	1.15%	brBBB- (S&P)

## Continuation – 2021

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)
Água Vermelha Trans. Energia S.A	AVTE11	12/17/2021	11/15/2035	ICVM 476	14	7.06	23.5	IPCA + 6,62%	Energy	1.50%	AA+(bra) Fitch
Ventos de São Lúcio I Energ. Renov. S.A.	VSLE11	12/17/2021	7/15/2041	ICVM 476	20	6.60	77.5	IPCA + 7,61%	Energy	2.37%	AA(bra) Fitch
Orizon Meio Ambiente S.A.	HZTC14	12/20/2021	11/15/2035	ICVM 476	14	6.68	250.0	IPCA + 6,76%	Water and Sewerage	2.00%	brAA (S&P)
VLI Multimodal S.A.	VLIM13	12/22/2021	12/15/2028	ICVM 476	7	6.96	1,000.0	IPCA + 5,75%	Transport	0.45%	AAA(bra) Fitch
CIA Saneamento Básico Est. SP - SABESP	SBSPE9	12/23/2021	12/15/2031	ICVM 400	10	8.45	600.0	IPCA + 5,31%	Water and Sewerage	0.25%	AAA(bra) Fitch
	SBSPF9		12/15/2036		15	13.26	150.0	IPCA + 5,45%		0.35%	
Conces. de Rodovias Rota Grãos S/A	RGRA11	12/27/2021	12/15/2038	ICVM 476	17	7.49	96.0	IPCA + 8,09%	Transport	2.85%	AA-(bra) Fitch
Ciclus Ambiental do Brasil S.A.	CCLS11	12/28/2021	1/15/2031	ICVM 476	17	9.02	450.0	IPCA + 6,67%	Water and Sewerage	1.50%	
<b>Total.....</b>							<b>47,833.6</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: Infrastructure Investment Projects - 2020

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)
Transmissora Aliança Energia Elétrica S.A	TAE18	1/17/2020	12/15/2044	ICVM 476	25	12.50	300.0	IPCA + 4,77%	Energy	1.28%	Aaa (br) Moody's
Eren Dracena Participações S/A	EREN13 EREN23	2/19/2020	9/15/2037	ICVM 476	18	7.60	215.0 65.0	IPCA + 4,70%	Energy	1.77%	AAA (bra) Fitch
Furnas Centrais Elétricas	FURN21	2/20/2020	11/15/2029	ICVM 476	10	6.86	800.0	IPCA + 4,08%	Energy	1.20%	AA (bra) Fitch
Viarondon Concessionária de Rodovia S.A.	VRDN12	2/27/2020	12/15/2034	ICVM 476	15	8.40	700.0	IPCA + 5,55%	Energy	2.15%	AA (bra) Fitch
SPE Transmissora de Energia Linha Verde II S.A	SPLV11	3/6/2020	12/15/2034	ICVM 476	24	13.24	210.0	IPCA + 5,33%	Energy	1.75%	AA (bra) Fitch
Neoenergia Itaporana Transmissão Energia S.A.	NITA11	3/13/2020	2/15/2045	ICVM 476	25	10.70	300.0	IPCA + 4,50%	Energy		AA (bra) Fitch
CIA Saneamento do Paraná - Sanepar	SAPR10	3/20/2020	3/15/2027	ICVM 476	7	6.03	350.0	IPCA + 4,66%	Water and Sewerage	1.20%	AA (bra) Fitch
Cerradinho Bioenergia S.A	CERR16	3/30/2020	3/15/2027	ICVM 476	7	4.92	200.0	IPCA + 4,15%	Energy	0.77%	AA (bra) Fitch
Concessionária Linhas 5 e 17 do Metrô SP S.A.	LMSP12	4/3/2020	4/1/2030	ICVM 476	10	5.00	700.0	Pré - 9,76%	Transport		
Rumo S.A.	RUMOA4	5/14/2020	4/15/2030	ICVM 476	10	6.83	800.0	IPCA + 6,79%	Transport	2.68%	AAA (bra) Fitch
Manaus Ambiental S.A.	MNAU13	5/29/2020	6/15/2025	ICVM 476	5	4.40	310.0	IPCA + 6,25%	Water and Sewerage	3.88%	
Norte Energia S/A	NTEN11	6/2/2020	5/15/2030	ICVM 476	10	5.80	700.0	IPCA + 7,25%	Energy	3.90%	AA (bra) Fitch
Ecoenergia Participações S/A	ECHP11	6/8/2020	6/15/2030	ICVM 476	10	5.90	180.0	IPCA + 6,90%	Energy	5.00%	A+ (bra) Fitch
Raizen Energia S/A	RESA15	6/15/2020	6/15/2030	ICVM 476	10	7.10	169.5	IPCA + 5,80%	Energy	2.30%	AAA (bra) Fitch
Eneva S.A.	ENEV15	6/29/2020	6/15/2030	ICVM 476	10	7.20	650.0	IPCA + 5,50%	Energy	2.10%	AA+ (bra) Fitch
CIA Saneamento Básico SP- SABESP	SBSPB6 SBSPC6	7/20/2020	7/15/2027 7/15/2030	ICVM 476	7 10	6.11 7.44	600.0 445.0	IPCA + 4,65% IPCA + 4,95%	Water and Sewerage	1.90% 1.90%	AAA (bra) Fitch
LIGHT Serviços de Eletricidade S/A	LIGHA9	7/29/2020	7/15/2025	ICVM 476	5	4.45	500.0	IPCA + 5,80%	Energy	2.10%	AA+ (bra) Fitch
Vila Piauí 1 Empreendimentos Participações S.A.	VP1E11	7/30/2020	6/15/2035	ICVM 476	15	5.43	43.0	IPCA + 5,95%	Energy	3.90%	

## Continuation – 2020

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)
Vila Piauí 2 Empreendimentos Participações S.A.	VP2E11	7/30/2020	6/15/2035	ICVM 476	15	5.45	44.0	IPCA + 5,95%	Energy	3.90%	
Paranagua Saneamento S.A.	PASN12	7/31/2020	7/15/2030	ICVM 476	10	4.55	259.8	IPCA + 6,10%	Water and Sewerage	4.40%	brAA (S&P)
Igua Saneamento S.A.	IGSN15	7/31/2020	7/15/2034	ICVM 476	14	7.22	620.5	IPCA + 6,10%	Water and Sewerage	3.50%	Aa3 (br) Moody's
CESP - Companhia Energética de SP	CESPA2	8/21/2020	8/15/2030	ICVM 476	10	7.50	1,500.0	IPCA + 4,30%	Energy	1.20%	AAA (bra) Fitch
LIGHT Serviços de Eletricidade S.A.	LIGHB0	9/1/2020	8/15/2025	ICVM 476	5	4.50	600.0	IPCA + 5,07%	Energy	3.10%	
CIA de Gás de Minas Gerais - GASMIG	CGMG18	9/9/2020	8/15/2031	ICVM 476	11	6.30	850.0	IPCA + 5,27%	Energy	2.55%	AA (bra) Fitch
Arteon Z Transmissão e Participações S.A.	ARTP12	9/11/2020	2/15/2044	ICVM 476	24	9.00	75.0	IPCA + 5,80%	Energy	2.40%	
Omega Geração S.A.	OMGE12	9/15/2020	9/15/2028	ICVM 476	8	6.80	110.0	IPCA + 4,37%	Energy	1.22%	
	OMGE22		9/15/2028	ICVM 476	8	6.90	50.0	IPCA + 4,37%		1.22%	
Usina Termelétrica Pampa Sul S.A.	UTPS11	9/23/2020	4/15/2028	ICVM 476	8	4.50	102.0	IPCA + 6,25%	Energy	4.00%	brAA (S&P)
	UTPS21		10/15/2036		16	7.50	238.0	IPCA + 7,50%		4.00%	
Eneva S.A.	ENEV16	9/29/2020	9/15/2030	ICVM 400	10	7.50	374.0	IPCA + 4,13%	Energy	0.95%	AAA (bra) Fitch
	ENEV26	9/29/2020	9/15/2035		15	10.50	574.0	IPCA + 4,50%		0.90%	AAA (bra) Fitch
BRK Ambiental Participações S.A.	BRKP28	10/2/2020	9/15/2034	ICVM 476	14	9.10	305.0	IPCA + 5,54%	Water and Sewerage	1.90%	
Energisa Transmissão Energia S.A.	ETEN12	10/26/2020	10/15/2027	ICVM 476	7	6.10	57.4	IPCA + 4,23%	Energy	1.10%	
	ETEN22	10/27/2020	10/15/2030	ICVM 476	10	7.50	82.6	IPCA + 4,47%		1.00%	
Energisa S.A.	ENGIA4	10/27/2020	10/15/2027	ICVM 476	7	6.10	55.0	IPCA + 4,23%	Energy	1.10%	
	ENGIB4	10/27/2020	10/15/2030	ICVM 476	10	7.50	425.0	IPCA + 4,47%		1.00%	
Energia Mato Grosso Distribuidora S.A.	ENMTA3	10/27/2020	10/15/2027	ICVM 476	7	6.10	60.1	IPCA + 4,23%	Energy	1.10%	
	ENMTB3	10/27/2020	10/15/2030	ICVM 476	10	7.50	69.9	IPCA + 4,77%		1.00%	
Ageo Terminais e Armazéns Gerais S.A.	AGNN12	11/6/2020	11/15/2027	ICVM 476	7	4.33	200.0	IPCA + 4,17%	Transport	1.63%	
Arteris S/A	ARTR19	11/13/2020	9/15/2027	ICVM 476	7	5.52	450.0	IPCA + 4,84%	Transport	1.87%	
Usina Termelétrica Pampa Sul S.A.	UTSP12	11/16/2020	4/15/2028	ICVM 400	8	4.60	150.0	IPCA + 4,50%	Energy	1.88%	
	UTSP22		10/15/2036		16	8.90	432.0	IPCA + 5,75%		1.88%	

## Continuation – 2020

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)
Concessionária Águas de Juturnaíba S.A.	CAJS11	11/19/2020	11/15/2040	ICVM 476	20	8.74	117.4	IPCA + 4,77%	Water and Sewerage	1.98%	
Linhas de Taubaté Transmissora de Energia S/A	LTTE15	11/20/2020	10/15/2038	ICVM 476	18	8.60	410.0	IPCA + 5,09%	Energy	1.60%	
Guimarânia I Solar SPE S.A.	GMAI11 GMRN11	11/30/2020	8/15/2033	ICVM 476	13	5.80	21.5	IPCA + 5,57%	Energy	2.50%	
					13	5.74	21.5	IPCA + 5,57%	Energy	2.52%	
Adecoagro Vale do Ivinhema S.A.	ADAG11	12/3/2020	12/15/2026	ICVM 476	6	4.60	400.0	IPCA + 4,24%	Energy	1.89%	
CTEEP-CIA Energia Paulista S/A	CTEE29	12/7/2020	5/15/2044	ICVM 476	24	8.83	800.0	IPCA + 5,30%	Energy	1.90%	
Eletrobras CGT Eletrosul	CTGE11	12/11/2020	11/15/2028	ICVM 476	8	6.06	300.0	IPCA + 3,75%	Energy	1.12%	
Serra de Ibiapaba Transmissora Energia S.A.	IBPB11	12/11/2020	11/15/2040	ICVM 476	20	8.73	116.0	IPCA + 5,90%	Energy	2.67%	
CCR S.A.	CCROB4	12/17/2020	12/15/2028	ICVM 476	8	5.31	480.0	IPCA + 4,25%	Transport	1.77%	
CELESC Geração S.A.	CLGR13	12/18/2020	12/10/2030	ICVM 476	10	5.64	37.0	IPCA + 4,30%	Energy	1.74%	
<b>Total.....</b>							<b>18,625.2</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 Price Index - CPI (IPCA)

## Infrastructure Bonds: 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%	Aaa (br) Moody's
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%	AA+ (bra) Fitch
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%	AA+ (bra) Fitch
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%	AA+ (bra) Fitch
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%	AA+ (bra) Fitch
Petróleo Brasileiro S/A - Petrobras	PETR16	2/12/2019	1/15/2026	ICVM 400	7	6.12	898.4	IPCA + 4,05%	Energy		AA (bra) Fitch
Petróleo Brasileiro S/A - Petrobras	PETR26	2/12/2019	1/15/2029	ICVM 400	10	8.13	1,694.1	IPCA + 4,22%	Energy		AA (bra) Fitch
Rumo Malha Norte S/A.	RUMOB1	2/22/2019	2/15/2026	ICVM 476	7	N/D	500.0	IPCA + 4,68%	Transport		AA+ (bra) Fitch
Porto Primavera Transmissora S.A.	PPTE11	3/1/2019	2/15/2029	ICVM 476	10	6.20	112.3	IPCA + 4,45%	Energy	0.31%	AAA (bra) Fitch
COELCE - Estado do Ceará	COCE27	3/15/2019	2/15/2026	ICVM 476	7	4.57	300.0	IPCA + 4,50%	Energy	0.37%	AAA (bra) Fitch
Rumo Malha Norte S/A.	RUMOA2	3/19/2019	2/15/2029	ICVM 400	10	8.00	641.1	IPCA + 4,50%	Transport	0.23%	AA+ (bra) Fitch
Cia Águas de Itapema	ITPE12	3/22/2019	2/15/2029	ICVM 476	10	4.35	600.0	IPCA + 7,07%	Water and Sewerage	0.30%	Ba3 (br) Moody's
Eólica Bons Ventos da Serra 2 S.A.	GEBV11	3/29/2019	6/30/2033	ICVM 476	14	N/D	100.0	IPCA + 6,50%	Energy		Ba3 (br) Moody's
Eólica Bons Ventos da Serra 2 S.A.	GEBV11	3/29/2019	6/30/2033	ICVM 476	14	6.44	56.5	IPCA + 6,50%	Energy	2.44%	Aa3 (br) Moody's
AES Tietê S/A	TIET39	4/17/2019	3/15/2029	ICVM 476	10	7.51	178.9	IPCA + 4,71%	Energy	0.35%	AA+ (bra) Fitch
Mata de Santa Genebra Transmissão S/A	MSGT12	4/22/2019	11/15/2030	ICVM 476	12	6.10	210.0	IPCA + 4,95%	Energy	0.69%	AA- (bra) Fitch
Cutia Empreendimentos Eólicos S.A	CUTI11	4/29/2019	12/15/2031	ICVM 476	13	6.00	360.0	IPCA + 5,88%	Energy	1.55%	AA- (bra) Fitch
MRS Logística S.A.	MRSL19	4/30/2019	4/15/2024	ICVM 476	5	4.50	367.2	IPCA + 4,10%	Transport	1.06%	AAA (bra) Fitch
Energisa S.A	ENGIA1	5/3/2019	4/15/2026	ICVM 476	7	6.13	500.0	IPCA + 4,62%	Energy	0.35%	AAA (bra) Fitch
CIA. Energética Canoas	KNOA11	5/10/2019	1/15/2031	ICVM 476	12	5.91	21.8	IPCA + 6,96%	Energy	2.50%	AA- (bra) Fitch

## Continuation – 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)
Centrais Elétricas Bras S.A - Eletrobras	ELET42	5/17/2019	5/15/2029	ICVM 476	10	7.50	700.0	IPCA + 5,18%	Energy	1.00%	AAA (bra) Fitch
CIA Energética do RN - Cosern	CSRN19	5/22/2019	4/15/2026	ICVM 476	7	6.12	179.5	IPCA + 4,25%	Energy	0.13%	AAA (bra) Fitch
	CSRN29		4/15/2024		5	7.48	38.5	IPCA + 4,50%		0.22%	
Equatorial Transmissora 5 SPE S.A.	EQTC11	5/23/2019	4/15/2039	ICVM 476	20	11.26	66.0	IPCA + 4,85%	Energy	0.56%	AA+ (bra) Fitch
Equatorial Transmissora 8 SPE S.A.	EQTR11	5/23/2019	4/15/2039	ICVM 476	20	11.26	102.0	IPCA + 4,85%	Energy	0.56%	AA+ (bra) Fitch
	EQTR21				20	11.26	87.0			0.56%	
Equatorial Transmissora 7 SPE S.A.	ETSP12	5/23/2019	4/15/2039	ICVM 476	20	11.26	130.0	IPCA + 4,85%	Energy	0.56%	AA+ (bra) Fitch
Transmissora Aliança S.A.	TAEE26	5/24/2019	5/15/2044	ICVM 476	25	14.00	210.0	IPCA + 5,50%	Energy	0.95%	AAA (bra) Fitch
Omega Geração S.A.	OMGE41	5/24/2019	5/15/2027	ICVM 476	8	6.50	150.0	IPCA + 5,00%	Energy	0.83%	AA (bra) Fitch
Eneva S.A.	BTLM11 BTLM21 BTLM31 BTLM41 BTLM51 BTLM61	5/31/2019	5/15/2029	ICVM 476	10	7.33	500.0	IPCA + 5,05%	Energy	0.96%	AAA (bra) Fitch
			9/15/2031		12	4.04	12.7			2.01%	
			4/15/2031		12	4.81	12.5			2.01%	
			5/15/2031		12	4.98	12.7			2.01%	
			6/16/2031		12	5.04	12.3			2.01%	
			7/15/2031		12	5.11	12.4			2.01%	
			8/15/2031		12	5.20	12.4			2.01%	
ViaPaulista S.A	VPLT12	6/18/2019	6/15/2027	ICVM 476	8	4.90	400.0	IPCA + 3,94%	Transport	0.40%	brAAA (S&P)
Eletropaulo SP S.A.	ELPLB4	6/28/2019	5/15/2026	ICVM 476	7	6.17	800.0	IPCA + 4,01%	Energy	0.02%	AAA (bra) Fitch
Babilônia Holding S.A.	BBLN11	7/2/2019	11/15/2033	ICVM 476	14	8.75	87.0	IPCA + 4,24%	Energy	0.75%	Ba3 (br) Moody's
Hidrelétrica Fockink S.A.	HFCK11	7/5/2019	5/15/2034	ICVM 476	15	7.43	22.0	IPCA + 7,95%	Energy	4.45%	A- (bra) Fitch
Aliança Geração Energia S.A.	ALIG12	7/8/2019	12/15/2029	ICVM 476	11	5.75	77.0	IPCA + 3,65%	Energy	0.43%	AAA (bra) Fitch
Ageo Terminais e Armazéns Gerais S.A.	AGEO24	7/11/2019	7/15/2025	ICVM 476	6	4.60	30.0	IPCA + 3,99%	Transport	0.96%	
Neoenergia S.A.	NEOE16	7/17/2019	6/15/2029	ICVM 400	10	7.68	802.8	IPCA + 4,07%	Energy	0.20%	brAAA (S&P)
	NEOE26		6/15/2033		14	7.40	491.7	IPCA + 4,22%		0.30%	
Cemig Distribuição S.A.	CMGD27	7/19/2019	6/15/2026	ICVM 476	7	5.76	1,500.0	IPCA + 4,10%	Energy	0.25%	brA+ (S&P)
VDB F2 Geração Energia S.A.	VDBF12	7/19/2019	4/15/2033	ICVM 476	14	7.70	106.0	IPCA + 3,87%	Energy	0.65%	AAA (bra) Fitch
CIA Saneamento Básico SP- SABESP	SBSPC4	7/24/2019	7/15/2026	ICVM 400	7	6.37	100.0	IPCA + 3,20%	Water and Sewerage	0.19%	brAAA (S&P)
	SBSPD4		7/15/2029		10	7.89	300.0	IPCA + 3,37%		0.93%	



## Continuation – 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)
Tropicália Transmissora Energia S.A.	TRPI13	7/26/2019	8/15/2043	ICVM 476	24	12.00	407.0	IPCA + 5,09%	Energy	1.45%	Aaa (br) Moody's
EDP-Transmissão SP-MG S.A.	MGSP12	8/6/2019	7/15/2039	ICVM 476	20	10.50	800.0	IPCA + 4,45%	Energy	0.85%	AA (bra) Fitch
Copel Geração e Transmissão S.A.	CPGT26	8/7/2019	7/15/2025	ICVM 476	6	5.50	200.0	IPCA + 3,90%	Energy	0.80%	AA- (bra) Fitch
Engie Brasil Energia S.A.	EGIE19	8/7/2019	7/15/2026	ICVM 400	7	5.86	576.1	IPCA + 3,70%	Energy	0.48%	AAA (bra) Fitch
	EGIE29		7/15/2029		10	7.72	539.7	IPCA + 3,90%		0.58%	
	EGIE39		7/15/2026		7	5.84	378.8	IPCA + 3,60%		0.38%	
	EGIE49		7/15/2029		10	7.72	105.4	IPCA + 3,70%		0.38%	
Tibagi Energia SPE S.A.	TBEG11	8/30/2019	7/15/2035	ICVM 476	16	7.72	210.0	IPCA + 5,32%	Energy	1.85%	AAA (bra) Fitch
VLI Multimodal S/A	VLIM12	9/16/2019	8/15/2025	ICVM 476	6	5.00	120.0	IPCA + 3,31%	Transport	0.18%	AAA (bra) Fitch
LEST - Linhas do Sertão Transmissora S.A.	LELE11	9/23/2019	3/15/2034	ICVM 476	14	7.89	27.0	IPCA + 5,36%	Energy	2.25%	A (bra) Fitch
Arcoverde Transmissão Energia S.A.	ARCV12	9/27/2019	7/15/2042	ICVM 476	23	7.97	52.0	IPCA + 5,02%	Energy	1.60%	AA+ (bra) Fitch
SE Vineyards Transmissão Energia S.A	VNYD12	9/27/2019	7/15/2042	ICVM 476	23	9.27	250.0	IPCA + 5,24%	Energy	1.80%	AAA (bra) Fitch
Transmissora Energia Campinas-Itatiba S.A	TEGT11	10/3/2019	9/18/2039	ICVM 476	20	7.13	70.0	IPCA + 9,00%	Energy	5.66%	AAA (bra) Fitch
	TEGT21		3/18/2040		21	7.13	20.0	IPCA + 9,00%		5.66%	
Petróleo Brasileiro S/A - Petrosbras	PETR17	10/9/2019	6/15/2029	ICVM 400	10	8.47	1,529.3	IPCA + 3,60%	Energy	0.39%	AAA (bra) Fitch
	PETR27		9/15/2034		15	11.50	1,478.7	IPCA + 3,90%		0.46%	
Pirapora II Energias Renováveis S.A	PRPO12	10/18/2019	12/15/2031	ICVM 476	12	7.00	118.0	IPCA + 4,22%	Energy	1.20%	AAA (bra) Fitch
Ipiranga Agroindustrial	IPIA11	10/23/2019	10/15/2026	ICVM 476	7	5.08	200.0	IPCA + 2,61%	Energy	0.44%	AAA (bra) Fitch
Transmissora Aliança Energia Elétrica S.A	TAEE17	10/25/2019	9/15/2044	ICVM 400	25	13.60	508.0	IPCA + 4,50%	Energy	1.01%	AAA (bra) Fitch
Enel Green Power Volta Grande S.A.	EGVG11	11/5/2019	10/15/2029	ICVM 476	10	4.80	519.0	IPCA + 3,70%	Transport	0.83%	AAA (bra) Fitch
	EGVG21				10	4.48	281.0	IPCA + 3,70%		0.83%	
Rumo S.A	RUMOA3	11/6/2019	10/15/2029	ICVM 400	10	7.68	906.9	IPCA + 3,90%	Energy	1.10%	AAA (bra) Fitch
	RUMOB3				10	7.47	222.3	IPCA + 4,00%		1.10%	
UHE São Simão Energia S.A.	UHSM11	11/14/2019	11/15/2029	ICVM 476	10	7.31	775.0	IPCA + 3,54%	Energy	0.76%	brAAA (S&P)

## Continuation – 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)
Cia Melhoramentos Norte Paraná	CMNP13	11/14/2019	11/15/2025	ICVM 476	6	4.69	112.0	IPCA + 3,13%	Transport	0.95%	
	CMNP23				6	4.68	213.0	IPCA + 3,13%		0.95%	
Terminal Químico de Aratu S.A. Tequimar	TEQU11	11/19/2019	11/19/2024	ICVM 476	5	4.30	90.0	IPCA + 6,47%	Transport	0.19%	
Delta Sucrenergia S.A.	SRGI11	11/19/2019	11/15/2025	ICVM 476	6	4.65	250.0	IPCA + 3,17%	Energy	0.88%	
Concessionário Ponte Rio-Niterói S.A - Ecoponte	ECPN11	11/19/2019	10/15/2034	ICVM 476	15	8.94	230.0	IPCA + 4,40%	Transport	1.50%	AA+ (bra) Fitch
Autopista Regis Bittencourt S.A	APRB18	11/19/2019	6/15/2031	ICVM 476	12	8.30	1,000.0	IPCA + 4,50%	Transport	1.55%	brAAA (S&P)
Copel Distribuição S.A.	CPLD15	11/27/2019	11/15/2027	ICVM 476	8	6.19	500.0	IPCA + 4,20%	Energy	1.10%	AA (bra) Fitch
Ourolândia do Norte Transmissora S.A.	OURI11	11/27/2019	11/15/2039	ICVM 476	20	7.10	30.0	IPCA + 6,15%	Energy		
Raizen Energia S/A	RESA14	11/28/2019	11/15/2029	ICVM 476	10	0.00	900.0	IPCA + 3,54%	Energy	0.70%	
Convicon Containeres Vila do Conde S.A.	CVCN11	12/3/2019	1/15/2031	ICVM 476	11	5.27	60.0	IPCA + 4,20%	Transport	0.45%	brAAA (S&P)
Central Fotovoltaica São Pedro II S.A.	FTSP11	12/3/2019	12/15/2034	ICVM 400	15	6.80	113.2	IPCA + 4,40%	Energia	1.00%	AAA (bra) Fitch
					15	9.70	859.5	IPCA + 5,00%		2.02%	
					15	9.65	240.8	IPCA + 5,20%		2.02%	
					15	9.65	199.8	IPCA + 5,20%		2.02%	
					15	9.65	167.5	IPCA + 5,20%		2.02%	
Concessionária Rota das Bandeiras S.A.	CBAN12 CBAN32 CBAN52 CBAN72	12/3/2019	7/15/2034	ICVM 400	15	9.70	859.5	IPCA + 5,00%	Transport	2.02%	AAA (bra) Fitch
					15	9.65	240.8	IPCA + 5,20%		2.02%	
					15	9.65	199.8	IPCA + 5,20%		2.02%	
					15	9.65	167.5	IPCA + 5,20%		2.02%	
Central Fotovoltaica São Pedro IV S.A.	SPIV11	12/11/2019	12/15/2034	ICVM 476	15	6.80	95.5	IPCA + 4,40%	Energy	1.00%	AAA (bra) Fitch
CTEEP-CIA Energia Paulista S/A	CTEE18	12/20/2019	12/15/2029	ICVM 400	10	7.70	409.3	IPCA + 3,50%	Energy	0.67%	AAA (bra) Fitch
Eneva S.A.	ENEV13	12/20/2019	12/15/2027	ICVM 476	8	6.02	650.0	IPCA + 4,23%	Energy	1.20%	brAAA (S&P)
Janauba Transmissora de Energia S.A.	JTEE12	12/20/2019	12/15/2044	ICVM 476	25	12.03	575.0	IPCA + 4,83%	Energy	1.55%	AAA (bra) Fitch
Empresa Sudeste Transmissão de Energia S.A	EPSD11	12/26/2019	12/15/2044	ICVM 476	25	12.97	415.0	IPCA + 4,50%	Energy		
Rincão São Miguel Energética S.A.	RSME11	12/26/2019	6/15/2037	ICVM 476	18	8.80	48.0	IPCA + 5,01%	Energy	1.60%	
Rincão dos Albinos Energética S.A	RALB11	12/26/2019	6/15/2037	ICVM 476	18	8.80	78.0	IPCA + 5,01%	Energy	1.60%	
TSM - Transmissora Serra da Mantiqueira S.A.	TSMM11	12/26/2019	12/15/2044	ICVM 476	25	13.00	530.0	IPCA + 4,50%	Energy		

## Continuation – 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)
Interligação Elétrica Ivai S.A	IVAI11	12/27/2019	12/15/2043	ICVM 476	24	11.22	1,650.0	IPCA + 4,99%	Energy	1.60%	
Quevedos Energética S.A.	QUEV11	12/27/2019	12/15/2037	ICVM 476	18	8.66	90.0	IPCA + 4,53%	Energy	1.16%	
Salto do Guassupi Energética S.A.	GUAP11	12/30/2019	12/15/2037	ICVM 476	18	8.70	50.0	IPCA + 4,53%	Energy	1.20%	
Total.....							33,759.3				

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: 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%	
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%	
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%	
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%	AAA (bra) Fitch
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%	
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%	
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%	
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%	
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%	
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%	
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%	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)
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%	AAA (bra) Fitch
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%	AAA (bra) Fitch
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%	AA- (bra) Fitch
CIA Piratinga de Força e Luz	CPFPA0	9/5/2018	8/15/2025	ICVM 476	7	5.50	197.00	IPCA + 5,80%	Energy	0.20%	AAA (bra) Fitch
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)%	AAA (bra) Fitch
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%	AAA (bra) Fitch
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%	AAA (bra) Fitch
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	7.60	220.00	IPCA + 5,77%	Energy	0.00%	AAA (bra) Fitch
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%	AAA (bra) Fitch
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%	AAA (bra) Fitch
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%	AAA (bra) Fitch
Energisa Tocantins S.A.	CTNS14	10/19/2018	9/15/2025	ICVM 476	7	4.90	240.00	IPCA + 5,09%	Energy	0.20%	AAA (bra) Fitch
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%	AAA (bra) Fitch
Energisa Paraíba S.A.	SAEL15	10/19/2018	9/15/2025	ICVM 476	7	4.90	135.00	IPCA + 5,08%	Energy	0.20%	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)
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%	AA (bra) Fitch
Integração Transmissora Energia S.A.	ITGT11	11/1/2018	10/15/2025	ICVM 476	7	5.21	100.00	IPCA + 5,42%	Energy	0.72%	brAAA (S&P)
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%	AAA (bra) Fitch
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%	
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%	AAA (bra) Fitch
Energisa Transmissão Energia S.A.	ETEN11	12/27/2018	12/15/2025	ICVM 476	7	6.06	75.50	IPCA + 4,92%	Energy	0.30%	AAA (bra) Fitch
Energisa Transmissão Energia S.A.	ETEN21	12/27/2018	12/15/2025	ICVM 476	7	7.38	51.46	IPCA + 5,14%	Energy	0.45%	AAA (bra) Fitch
Energisa Transmissão Energia S.A.	ETEN31	12/27/2018	12/15/2025	ICVM 476	7	6.11	123.04	IPCA + 4,98%	Energy	0.35%	AAA (bra) Fitch
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%	AAA (bra) Fitch
<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 (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: 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%	
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%	
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	5.55	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	7/19/2017	6/15/2024		7	5.86	177.4	IPCA + 5,66%		0.10%	
Concessionária do Sistema Anhanguera-Bandeirantes S/A	ANHB18	7/28/2017	6/15/2024	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	8/25/2017	8/15/2024	ICVM 476	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

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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		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 Eolica	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 Price Index - CPI (IPCA)

## Infrastructure Bonds: 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

## 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)
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
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%	
<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: 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+sfi (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				
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%	Energy	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>5,262.5</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: 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)
Aeropostos Brasil - Viracopos S.A. (Vencimento Antecipado)	VRCP11	2/5/2014	9/15/2025	ICVM 476	12	7.4	75.0	IPCA + 8,79%	Transport	2.27%	AA- (bra) Fitch
	VRCP21						75.0				
	VRCP31						75.0				
	VRCP41						75.0				
Vale S/A	VALE18	2/10/2014	1/15/2021	ICVM 400	7	5.5	600.0	IPCA + 6,46%	Transport	(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	3/21/2014	3/15/2025	ICVM 476	11	6.0	75.0	IPCA + 7,86%	Transport	1.40%	AA (bra) Fitch
	AGRU21						75.0				
	AGRU31						75.0				
	AGRU41						75.0				
Santo Antônio Energia S/A.	STEN13	5/2/2014	4/15/2022	ICVM 400	8	5.8	200.0	IPCA + 7,05%	Energy	0.85%	AA+ (bra) Fitch
	STEN23				10	6.7	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	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-Concessionaria 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 RNEP21	12/29/2014	12/15/2025	ICVM 476	11 11	5.40 5.50	73.0 73.0	IPCA + 7,61% IPCA + 7,87%	Energy	1.40% 1.65%	AA- (bra) Fitch
<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 (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: 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%	
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 - (Vencida)	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 do Sistema Anhanguera - Bandeirantes S/A	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
Termelétrica Pernambuco III S/A-(Vencimento Antecipado)	TEPE11	12/20/2013	11/15/2025	ICVM 400	12	5.0	75.0	IPCA + 9,11%	Energy	2.75%	AA+ (bra) Fitch
	TEPE21						75.0				
	TEPE31						75.0				
	TEPE41						75.0				
Total.....							4,416.8				

## Infrastructure Bonds: 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		A (bra) Fitch
Concessionária Sistema Anhanguera - Bandeirantes S/A - (Vencida)	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>700.0</b>				

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

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(2) Consumer Price Index - CPI (IPCA)

Annex 2

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)	
Proton Energy Participações S.A.	PENP11	4/22/2022	3/15/2030	ICVM 476	8	3.93	50.7	IPCA + 6,23%	Saneamento	AAA (bra) Fitch
						<b>Total.....</b>	<b>50.7</b>			

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

**Note:**

(1) Consumer Price Index - CPI (IPCA)

## Capex Bonds: General Investment Debentures - 2021

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
Eixo SP Conces. de Rodovias S.A.	CONR11	1/15/2021	1/15/2047	ICVM 476	26	145.5	Pré 9,77%	Transport	
<b>Total.....</b>						<b>145.5</b>			

## Capex Bonds: General Investment Debentures - 2020

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
Agasus S.A	AGAU21	1/10/2020	1/10/2026	ICVM 476	6	20.0	Pré - 12,45%	Computing	
Rede D'OR São Luiz S/A	RDORA7	6/20/2019	1/17/2030	ICVM 476	11	3,198.4	Pré 8,75%	Health	
Lojas Americanas S.A.	LAMEA6	10/13/2020	10/15/2030	ICVM 476	10	3,100.0	IPCA + 7,40%	Department store	
B2W - Companhia Digital	BTOW15	11/15/2020	12/15/2030	ICVM 476	10	3,100.0	IPCA + 6,96%	Computing	
<b>Total.....</b>						<b>3,218.4</b>			

## Capex Bonds: General Investment Debentures - 2019

Issuer	Ticker	Distribution Date	Due Date	Offer type	Maturity (years)	Value (R\$ million)	Yield <sup>1</sup>	Sector	Rating (local)
Attend Ambiental S.A	ATAM21	10/1/2019	10/15/2026	ICVM 476	7	20.5	IPCA + 8,11%	Water and Sewerage	
<b>Total.....</b>						<b>20.5</b>			

## Capex Bonds: 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	
<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)

## Capex Bonds: 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)
Total.....						1,000.0			

## Capex Bonds: 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. - (Vencida)	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. - (Vencimento Antecipado)	CTRD11	7/11/2013	3/15/2018	ICVM 476	5	50.0	IPCA + 7,97%	Real Estate Industry	
	CTRD21					50.0			
OAS S.A. - (Em Recuperação Judicial)	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			
LafargeHolcim (BRASIL) 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)
Total.....						2,118.7			

## Capex Bonds: 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. - (Vencimento Antecipado)	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	
OGX Petróleo e Gás S/A. - (Em Recuperação Judicial)	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. - (Vencimento Antecipado)	BRML13	12/17/2012	1/17/2024	ICVM 476	11	364.0	Pré 13,49%	Comercial Centers	AA+ (bra) Fitch
Total.....						2,914.0			

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

## Note:

(1) Consumer Price Index - CPI (IPCA)

## Annex 3



## Green - Infrastructure Debentures



Issuer	Ticker	Distribution Date	Value (R\$ million)	Sector
Delta 2 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
Copacabana Geração de Energia e Participações S.A.	CGEP12	9/13/2018	127.8	Energy
AES Tietê Energia S/A	TIET29	3/17/2019	641.1	Energy
	TIET39	4/17/2019	178.9	Energy
Transmissora Aliança S.A.	TAAE26	5/24/2019	210.0	Energy
Neoenergia S.A.	NEOE16	7/17/2019	802.8	Energy
	NEOE26		491.7	Energy
Transmissora Aliança S.A.	TAAE17	10/25/2019	508.0	Energy
Janauba Transmissora de Energia S.A.	JTEE12	12/20/2019	409.3	Energy
CTEEP-CIA Energia Paulista S/A	CTEE18	12/20/2019	575.0	Energy
TSM - Transmissora Serra da Mantiqueira S.A.	TSMM11	12/26/2019	530.0	Energy
Transmissora Aliança Energia Elétrica S.A	TAAE18	1/17/2020	300.0	Energy
Eren Dracena Participações S/A	EREN13	2/19/2020	215.0	Energy
	EREN23		65.0	Energy
Neoenergia Itaporana Transmissão Energia S.A.	NITA11	3/13/2020	300.0	Energy
Paranagua Saneamento S.A.	PASN12	7/31/2020	259.8	Water and Sewerage
Igua Saneamento S.A.	IGSN15	7/31/2020	620.5	Water and Sewerage
Arteon Z Transmissão e Participações S.A.	ARTP12	9/11/2020	75.0	Energy
Omega Geração S.A.	OMGE12	9/15/2020	110.0	Energy
Eneva S.A.	ENEV26	9/29/2020	574.0	Energy
Eneva S.A.	ENEV16	9/29/2020	374.0	Water and Sewerage
BRK Ambiental Participações S.A.	BRKP28	10/2/2020	305.0	Energy
Linhas de Taubaté Transmissora de Energia S/A	LTTE15	11/20/2020	410.0	Energy



## Continuation - Green - Infrastructure Debentures



Issuer	Ticker	Distribution Date	Value (R\$ million)	Sector
CIA Transmissão Energia Elétrica Paulista	CTEEA0	2/10/2021	672.5	Energy
Concessão Metroviária RJ S.A.	MTRJ19	2/10/2021	1,200.0	Transport
PCH BV II - Geração de Energia S.A.	PCHV11	4/30/2021	70.0	Energy
Apollo 17 Participações S.A.	APOL11	5/3/2021	75.0	Energy
Transmissora Aliança de Energia Elétrica S/A	TAEEA2	5/20/2021	100.0	Energy
Tereos Açúcar e Energia Brasil S.A.	TAEB15	6/29/2021	480.0	Energy
Anemus Wind Holding S.A.	ANEM11	7/27/2021	475.0	Energy
Usina Santo Antonio S.A.	USST11	8/30/2021	70.0	Energy
Agro Indústrias Vale São Francisco S.A. - AGROVALE	AGVF12	9/17/2021	120.0	Energy
CIA Geração Trans Energia - Eletrobras CGT Eletrosul	CTGE13	9/17/2021	185.0	Energy
Tucano Holding III S.A.	TNHL11	10/1/2021	200.0	Energy
AES Tucano Holding II S.A.	TCH11	10/8/2021	300.0	Energy
CTEEP - CIA de Trans. Energia Paulista	CTEE1B	10/28/2021	668.8	Energy
	CTEE2B		281.2	
CIA Energética Pernambuco-CELPE	CEPEC1	10/29/2021	200.0	Energy
Sonora Estância S/A	SNRA13	12/3/2021	80.0	Energy
Jalles Machado S.A.	JALL11	1/5/2022	309.6	Energy
	JALL21		141.4	
CIA de Saneamento do Parana-SANEPAR	SAPRB3	1/19/2022	300.0	Water and Sewerage
GBS Participações S.A.	GBSP11	2/11/2022	600.0	Energy
RDVE Subholding S.A.	RDVE11	4/4/2022	430.0	Energy
Termelétrica Pernambuco III S/A (Vencimento Antecipado)	GTST14	5/4/2022	409.3	Water and Sewerage
	GTST24		190.7	
Transmissora Aliança de Energia Elétrica S/A	TAEEB2	5/9/2022	630.8	Energy
	TAEEC2		300.4	
	TAEEED2		318.8	
AES Cajuína AB1 Holdings S.A.	AEAB11	6/14/2022	950.0	Energy
Jalles Machado S.A.	CMGD28	5/30/2022	500.0	Energy
Conces. Águas de Juturnaiba S/A	CAJS12	9/1/2022	155.1	Water and Sewerage
2W Energia S.A.	WWAV13	9/19/2022	216.0	Energy
BRK Ambiental - Região Metropolitana Maceió S.A.	RMSA12	11/7/2022	1,950.0	Water and Sewerage



## Continuation - Green - Infrastructure Debentures



Issuer	Ticker	Distribution Date	Value (R\$ million)	Sector
CEMIG Geração e Transmissão S/A	CMTR29	11/16/2022	300.0	Energy
Alex Energia Participações S.A.	ALEX11	11/25/2022	450.0	Energy
Conces. Linhas 8 e 9 Sistema Trens Metropolitanos SP S.A.	CLTM13	12/16/2022	2,500.0	Mobilidade Urbana
<b>Total.....</b>			<b>24,977.6</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.



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