# FEDERAL GOVERNMENT BONDS

## Methodology for Calculating Federal Government Bonds Offered in Primary Auctions

The aim of this guide is to facilitate investor's understanding on some peculiarities concerning Brazilian domestic government bonds. We show below how interest and principal of federal government bond offered in primary auctions are calculated. Throughout the text there are tables with the main bond characteristics as well as the rules for rounding and truncation, in order to allow the accurate calculation of price, yield and quotation. In addition, for each bond we shall give a hypothetical example showing all the steps and details which must be followed.

Table 1 below shows the general characteristics of federal government bonds offered in the primary auctions.

**TABLE 1**
**General Characteristics of Federal Government Bonds**

| Securities | Description | Indices | Coupon | Maximum Term | Type of Interest | Face Value on Maturity |
|---|---|---|---|---|---|---|
| **LTN** (National Treasury Bills) | Short-term, zero-coupon fixed rate bills | - | Zero coupon | About 24 months | Fixed | R$ 1,000 |
| **NTN-F** (National Treasury Notes – Series F) | Long-term fixed rate coupon bonds | - | 10% p.a. paid semi-annually | About 10 years | | |
| **NTN-B** (National Treasury Notes – Series B) | Inflation-linked coupon bonds | IPCA Price Index Source: IBGE (www.ibge.gov.br) | 6% p.a. paid semi-annually | About 40 years | Inflation linked | - |
| **NTN-C** (National Treasury Notes - Series C) | Inflation-linked coupon bonds | IGP-M Price Index Source: FGV (www.fgv.br) | 6 or 12% p.a. paid semi-annually | About 25 years | | - |
| **LFT** (Financial Treasury Bills) | Floating rate bills | Selic Interest Rate Source: Central Bank (www.bcb.gov.br) | Zero coupon | About. 5 years | Floating | - |

Source: National Treasury.
Note: Type of securities => book entry, nominative and negotiable.

Besides the general characteristics of the securities, it is important to mention the formulae used in the calculation of price, yield and quotations. Since some of the securities in question pay semi-annual interest over the life of the bond and others do not, some particularities in pricing should be noted. Also, it is important to mention that in the case of floating rate securities, the quotation must be calculated before calculating the bond price itself.

Table 2 below shows the main formulae for calculating the security's quotation and price.

**TABLE 2**
**Formulae Used for Calculating Federal Government Bonds Prices and Quotations**

| Securities | Price | Up to Date Nominal Value(UNV)) | Quotation/Present Value |
|---|---|---|---|
| **LTN** (National Treasury Bills) | $\frac{1{,}000.00}{(1+ytm)^{\frac{bd}{252}}}$ | - | - |
| **NTN-F** (National Treasury Notes - Series F) | $\left[\frac{1000\cdot\left(1.10^{0.5}-1\right)}{(1+ytm)^{bd\,1/252}}\right]+\left[\frac{1000\cdot\left(1.10^{0.5}-1\right)}{(1+ytm)^{bd\,2/252}}\right]+\ldots+\left[\frac{1000\cdot\left(1.10^{0.5}-1\right)}{(1+ytm)^{bd\,n/252}}\right]+\left[\frac{1000}{(1+ytm)^{bd\,n/252}}\right]$ | - | |
| **NTN-B** (National Treasury Notes - Series B) | Quotation/100 * UNV<br>Quotation = Present Value of the discounted cash flow | Accumulated Index of the IPCA from the reference date of the security (07/15/00) to settlement date | $\left[\frac{100\cdot\left(1.06^{0.5}-1\right)}{(1+ytm)^{bd\,1/252}}\right]+\left[\frac{100\cdot\left(1.06^{0.5}-1\right)}{(1+ytm)^{bd\,2/252}}\right]+\ldots+\left[\frac{100\cdot\left(1.06^{0.5}-1\right)}{(1+ytm)^{bd\,n/252}}\right]+\left[\frac{100}{(1+ytm)^{bd\,n/252}}\right]$ |
| **NTN-C** (National Treasury Notes - Series C) | Quotation/100 * UNV<br>Quotation = Present Value of the discounted cash flow | Accumulated Index of the IGP-M from the reference date of the security (07/01/00) to settlement date | |
| LFT (Financial Treasury Bills) | Quotation/100 * UNV<br>Quotation = Present Value of the discounted principal | Accumulated Index of the SELIC rate from the reference date of the security (07/01/00) to settlement date | $\frac{100}{(1+ytm)^{\frac{bd}{252}}}$ |

Source: National Treasury.
The term *ytm* corresponds to the yield to maturity under the BD/252 % p.a. convention,
Note: In the case of a NTN-C with maturity on January 1st, 2031, the terms $(1.06)^{0.5}$ must be substituted by $(1.12)^{0.5}$.

Investors must follow some rules on truncation and rounding which will be fundamental for avoiding small price differences and allow the accurate calculation of price, yield and quotation. For illustration purposes, a hypothetical example for each security will be given highlighting all details and the attention needed to apply the appropriate pricing methodology.

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**National Treasury Bills - LTN**

- *Price Calculation*

$$\text{Price} = \frac{1{,}000}{\underbrace{\left(1+\underbrace{\text{ytm}}_{\text{T}-4}\right)^{\underbrace{\left(\frac{\text{bd}}{252}\right)}_{\text{T}-14}}}_{\text{T}-6}}$$

where:

ytm = yield to maturity (BD/252 % p.a. convention => truncate to the 4th decimal place);
bd = number of business days between settlement date (inclusive) and maturity date (exclusive).

*Example:*

Maturity Date: 07/01/2010

Purchase Date: 05/20/2008

Settlement Date: 05/21/2008

Yield to Maturity: 14.3600% p.a.

Business Days between 05/21/2008 and 07/01/2010: 532

$$\text{Price} = \frac{1{,}000}{\left(1+\underbrace{14.3600\%}_{T-4}\right)^{\underbrace{\left(\frac{532}{252}\right)}_{T-14}}} = \underbrace{753.315323}_{\textit{truncate to the 6th decimal place}}$$

- *Yield to Maturity Calculation*

Conversely, the yield can be obtained on the basis of the price:

$$Yield = \left[\frac{1{,}000}{753.315323}\right]^{\frac{252}{532}} - 1 = \underbrace{14.3600}_{T-4}\%\ p.a.$$

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**Financial Treasury Bills – LFT**

- *Quotation Calculation*

$$Quotation = \frac{100}{\left(1 + \underbrace{discount\ rate}_{T-4}\right)^{\underbrace{\left(\frac{bd}{252}\right)}_{T-14}}} \ ;\ \textit{truncate to the 4th decimal place}$$

where:

discount rate: BD/252 % p.a. convention => truncate to the 4th decimal place;
bd = number of business days between settlement date (inclusive) and maturity date (exclusive).

- *Price Calculation*

$$\text{Price} = \underbrace{Quotation\ (\%)}_{T-4} * \overbrace{UNV}^{T-6} \ ;\ \textit{truncate to the 6th decimal place}$$

where:

UNV = up to date nominal value up to settlement date. The UNV is published daily in Central Bank's website (http://www.bcb.gov.br).

*Example:*

Maturity Date: 03/07/2014

Purchase Date: 05/20/2008

Settlement Date: 05/21/2008

Nominal Value on reference date (07/01/2000): R$ 1,000

Discount Rate: -0.0200% (BD/252 % p.a. convention => truncate to 4th decimal place)

Number of business days between 05/21/2008 and 03/07/2014: 1459

$$Quotation\ (\%) = \frac{100}{\left(1+\underbrace{\left(-0.0200\%\right)}_{T-4}\right)^{\left(\frac{1459}{252}\right)}} = \underbrace{100.1158\ \%}_{T-4}$$

UNV on 05/21/2008 = R$ 1,000 x Accumulated Selic Index between 07/01/2000 and 05/21/2008

$$= R\$1{,}000 * \underbrace{(3.4512018246800000)}_{R-16} = R\$\ \underbrace{3{,}451.201824}_{T-6}$$

$$= R\$\ \underbrace{3{,}451.201824}_{\text{T-6}}$$

$$\text{Price} = R\$\overbrace{\underbrace{3{,}451.201824}_{\text{T-6}}}^{\text{UNV on 05/21/2008}} \text{ x } \overbrace{\underbrace{(100.1158\%)}_{\text{T-4}}}^{\text{Quotation}} = R\$\ \underbrace{3{,}455.198315}_{\text{T-6}}$$

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**National Treasury Notes – NTN-B**

- *Quotation Calculation*

$$\text{Quotation}(\%) = \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bd1}{252}\right)}_{T-14}}}\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bd2}{252}\right)}_{T-14}}}\right]}_{R-10} + \ldots + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}\right)}^{R-6}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bdn}{252}\right)}_{T-14}}}\right]}_{R-10}$$

Note: the numerator of each term should be **rounded** to six decimal places and the final result for each term, to ten decimal places.

where:

ytm = yield to maturity (BD/252 % p.a. convention => truncate to the 4th decimal place);
bd = number of business days between settlement date (inclusive) and maturity date (exclusive).

- *Price Calculation*

$$\text{Price} = \underbrace{Quotation\ (\%)}_{T-4} * \overbrace{projected\ UNV}^{T-6}; \textit{ truncate to the 6th decimal place}$$

where:

Projected UNV = up to date nominal value (inflation index – accumulated IPCA from the reference date of 07/15/00 to the settlement date) projected to the settlement date.

*Example:*

Maturity Date: 08/15/2010

Purchase Date: 05/20/2008

Settlement Date: 05/21/2008

Reference date value (07/15/2000): R$ 1,000.00

Yield to Maturity: 8.2900% (BD/252 % p.a. convention => truncate to the 4th decimal place);

Projection for IPCA April/2008: 0.46%

UNV on 05/15/2008 = R$ 1,000 x index of accumulated IPCA between 07/15/2000 and 15th day of the current month

$$= R\$\,1{,}000 * \underbrace{(1.72692645947653)}_{R-16}$$

$$= \underbrace{\text{R\$}1{,}726.926459}_{T-6}$$

UNV on 05/21/2008 = UNV on 05/15/2008 x $(1 + \text{IPCA}_{\text{projection}})^{pr1}$

where:

$$pr1 = \frac{number\ of\ \ consecutive\ \ days\ (settlement\ date,\ 15th\ day\ of\ previous\ month)}{number\ of\ consecutive\ days\ (15th\ day\ of\ the\ current\ month,\ 15th\ day\ of\ the\ following\ month)}$$

$$pr1 = \frac{(05/21/2008 - 05/15/2008)}{(06/15/2008 - 05/15/2008)} = \frac{6}{31}$$

$$(\text{UNV on } 05/21/2008 = \text{R\$}\underbrace{1{,}726.926459}_{T-6} * \left(1 + \underbrace{0.46\%}_{R-2}\right)^{\underbrace{\left(\frac{6}{31}\right)}_{T-14}} = \text{R\$}\underbrace{1{,}728.461136}_{T-6}$$

| Pay Date | Cash Flow | Present Value | Business Days |
|---|---|---|---|
| | R-6 | R-10 | |
| 08/15/2008 | 2.956301 | 2.8998535976 | 61 |
| 02/15/2009 | 2.956301 | 2.7840057610 | 190 |
| 08/15/2009 | 2.956301 | 2.6770128972 | 314 |
| 02/15/2010 | 2.956301 | 2.5733184988 | 439 |
| 08/15/2010 | 102.956301 | 86.1471473965 | 564 |
| | Quotation %(T-4) => | 97.0813 | |

$$\text{Quotation}(\%) = \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\underbrace{\left(\frac{61}{252}\right)}_{T-14}}\Big/\left(1+\underbrace{8.2900\%}_{T-4}\right)\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\underbrace{\left(\frac{190}{252}\right)}_{T-14}}\Big/\left(1+\underbrace{8.2900\%}_{T-4}\right)\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\underbrace{\left(\frac{314}{252}\right)}_{T-14}}\Big/\left(1+\underbrace{8.2900\%}_{T-4}\right)\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\underbrace{\left(\frac{439}{252}\right)}_{T-14}}\Big/\left(1+\underbrace{8.2900\%}_{T-4}\right)\right]}_{R-10} + \ldots$$

$$+ \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}\right)}^{R-6}}{\underbrace{\left(\frac{564}{252}\right)}_{T-14}}\Big/\left(1+\underbrace{8.2900\%}_{T-4}\right)\right]}_{R-10} = \underbrace{97.0813}_{T-4}$$

Note: the numerator of each term should be **rounded** to six decimal places and the final result for each term, to ten decimal places.

$$\text{Price} = R\$\,\underbrace{1{,}728.461136}_{T\text{-}6} * \overbrace{97.0813\%}^{T-4} = R\$\,\underbrace{1{,}678.012540}_{T-6}$$

- Coupon Payment Calculation

$$Interest\ coupon = UNV * interest\ rate\ factor$$

where:

interest rate factor: semi-annual effective coupon rate

Example:

Maturity Date: 05/15/2045

Coupon Payment Date: 05/15/2008

Nominal value on reference date (07/15/2000): R$ 1,000

Up to Date Nominal Value on 05/15/2008: R$ 1,726.926439

$$\text{Interest} = \text{R\$}\overbrace{1{,}726.926459}^{T-6} * \underbrace{0.02956301}_{\left(1.06^{0.5}-1\right)=>\textit{round to the 8th decimal place}} = \text{R\$}\overbrace{51.053144}^{T-6}$$

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**National Treasury Notes – NTN-C**

- *Quotation Calculation*[1]

$$\text{Quotation}(\%) = \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bd1}{252}\right)}_{T-14}}}\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bd2}{252}\right)}_{T-14}}}\right]}_{R-10} + \ldots + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}\right)}^{R-6}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bdn}{252}\right)}_{T-14}}}\right]}_{R-10}$$

Note: the numerator of each term should be **rounded** to six decimal places and the final result for each term, to ten decimal places.

[1] In the case of the NTN-C maturing 01/01/2031, the terms $(1.06)^{0.5}$ should be replaced by $(1.12)^{0.5}$.

where:

ytm = yield to maturity (BD/252 % p.a. convention => truncate to the 4th decimal place);
bd = number of business days between settlement date (inclusive) and maturity date (exclusive).

- *Price Calculation*

$$Price = \underbrace{Quotation\ (\%)}_{T-4} * \overbrace{projected\ UNV}^{T\text{-}6}\ ;\ truncate\ to\ the\ 6th\ decimal\ place$$

where:

Projected UNV = up to date nominal value (index of the accumulated IGP-M from the reference date of 07/01/00 to the settlement date) estimated to settlement date.

*Example:*

Maturity Date: 03/01/2011

Purchase Date: 05/20/2008

Settlement Date: 05/21/2008

Nominal value on the reference date (07/01/2000): R$ 1,000

Yield to Maturity: 6.9000% (BD/252 % p.a. convention => truncate to the 4th decimal place);

Projection of IGP-M May 2008: 1.75 %

UNV on 05/21/2008 = R$ 1.000 x index of the accumulated IGP-M since the reference date (07/01/2000) up to the 1st day of the current month

$$= R\$\,1{,}000 * \underbrace{(2.10280551851751)}_{T-16}$$

$$= \text{R\$}\,\underbrace{2{,}102.805518}_{T-6}$$

UNV on 05/21/2008 = UNV on 05/01/2008 x $(1 + \text{IGP-M}_{\text{projection}})^{pr1}$

where:

$$pr1 = \frac{number\ of\ consecutive\ days\ (1st\ \ day\ of\ current\ month, settlement\ date)}{number\ of\ consecutive\ days\ (1st\ \ day\ of\ the\ current\ month, 1st\ \ day\ of\ the\ following\ month)}$$

$$pr1 = \frac{(05/21/2008 - 05/01/2008)}{(06/01/2008 - 05/01/2008)} = \frac{20}{31}$$

$$\text{UNV on } 05/21/2008 = \underbrace{R\$\ 2{,}102.805518}_{T-6} * \left(1 + \underbrace{1.75\,\%}_{R-2}\right)^{\overbrace{\left(\frac{20}{31}\right)}^{T-14}} = \underbrace{R\$\ 2{,}126.473734}_{T-6}$$

| Pay Date | Cash Flow | Present Value | Business Days |
|---|---|---|---|
| | R-6 | R-10 | |
| 01/09/2008 | 2.956301 | 2.9004761983 | 72 |
| 03/01/2009 | 2.956301 | 2.8053073742 | 198 |
| 09/01/2009 | 2.956301 | 2.7125428649 | 325 |
| 03/01/2010 | 2.956301 | 2.6263204830 | 447 |
| 09/01/2010 | 2.956301 | 2.5381301937 | 576 |
| 03/01/2011 | 102.956301 | 85.5153966416 | 701 |
| | Quotation %(T-4) => | 99.0981 | |

$$\text{Quotation}(\%) = \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{6.9000\%}_{T-4}\right)^{\underbrace{\left(\frac{72}{252}\right)}_{T-14}}}\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{6.9000\%}_{T-4}\right)^{\underbrace{\left(\frac{198}{252}\right)}_{T-14}}}\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{6.9000\%}_{T-4}\right)^{\underbrace{\left(\frac{325}{252}\right)}_{T-14}}}\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{6.9000\%}_{T-4}\right)^{\underbrace{\left(\frac{447}{252}\right)}_{T-14}}}\right]}_{R-10} + \ldots$$

$$+ \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}-1\right)}^{R-6}}{\left(1+\underbrace{6.9000\%}_{T-4}\right)^{\underbrace{\left(\frac{576}{252}\right)}_{T-14}}}\right]}_{R-10} + \underbrace{\left[\frac{\overbrace{100*\left(1.06^{0.5}\right)}^{R-6}}{\left(1+\underbrace{6.9000\%}_{T-4}\right)^{\underbrace{\left(\frac{701}{252}\right)}_{T-14}}}\right]}_{R-10} = \underbrace{99.0981}_{T-4}$$

Note: the numerator of each term should be **rounded** to six decimal places and the final result for each term, to ten decimal places.

$$\text{Price} = \text{R\$}\ \underbrace{2{,}126.473734}_{T-6} * \underbrace{99.0981\%}_{T-4} = \text{R\$}\underbrace{2{,}107.295067}_{T-6}$$

- Coupon Payment Calculation

$$\textit{Coupon payment} = \textit{UNV} * \textit{interest rate factor}$$

where:

interest rate factor: semiannual effective coupon rate

*Example:*

Maturity Date: 04/01/2021

Coupon Payment Date: 05/01/2008

Nominal Value on reference date (07/01/2000): R$ 1,000

Up to Date Nominal Value on 04/01/2008: R$ 2,088.388799

$$\text{Interest} = \text{R\$}\ \overbrace{2.088{,}388799}^{T-6} * \underbrace{0.02956301}_{\left(1.06^{0.5}-1\right)=>\textit{round to the 8th decimal place}} = \text{R\$}\ \overbrace{61.739058}^{T-6}$$

Note: In the case of a NTN-C 01/01/2031, the terms $(1.06)^{0.5}$ should be replaced by $(1.12)^{0.5}$. In the above example, the coupon would be worth R$ 121.754152 .

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**National Treasury Notes – NTN-F**

- *Price Calculation*

$$\text{Price} = \underbrace{\left[\frac{\overbrace{1000\times\left(1.1^{0.5}-1\right)}^{R-5}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bd1}{252}\right)}_{T-14}}}\right]}_{R-9} + \underbrace{\left[\frac{\overbrace{1000\times\left(1.1^{0.5}-1\right)}^{R-5}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bd2}{252}\right)}_{T-14}}}\right]}_{R-9} + \ldots + \underbrace{\left[\frac{\overbrace{1000\times\left(1.1^{0.5}\right)}^{R-5}}{\left(1+\underbrace{ytm}_{T-4}\right)^{\underbrace{\left(\frac{bdn}{252}\right)}_{T-14}}}\right]}_{R-9}$$

Note the numerator of each term should be **rounded** to five decimal places.

*Example:*

Maturity Date: 01/01/2014

Purchase Date: 05/20/2008
Settlement Date: 05/21/2008

Yield to maturity: 13.6600% (BD/252 % p.a. convention => truncate to the 4th decimal place);

| Pay Date | Cash Flow | Present Value | Business Days |
|---|---|---|---|
| | R-6 | R-9 | |
| 07/01/2008 | 48.80885 | 48.119371611 | 28 |
| 01/01/2009 | 48.80885 | 45.020757190 | 159 |
| 07/01/2009 | 48.80885 | 42.314735474 | 281 |
| 01/01/2010 | 48.80885 | 39.650299657 | 409 |
| 07/01/2010 | 48.80885 | 37.248144536 | 532 |
| 01/01/2011 | 48.80885 | 34.902737214 | 660 |
| 07/01/2011 | 48.80885 | 32.771550709 | 784 |
| 01/01/2012 | 48.80885 | 30.723628208 | 911 |
| 07/01/2012 | 48.80885 | 28.832967367 | 1036 |
| 01/01/2013 | 48.80885 | 27.044908383 | 1162 |
| 07/01/2013 | 48.80885 | 25.406432363 | 1285 |
| 01/01/2014 | 1048.80885 | 511.040083815 | 1415 |
| | Unit Price (T-6) => | 903.075616 | |

$$Price = \text{R\$}\ 903.075616$$

- *Coupon Calculation*

$$\text{Interest} = \text{R\$}\ 1{,}000 * \underbrace{\left(1.10^{0.5} - 1\right)}_{R-8} = \text{R\$}\ \underbrace{48.808850}_{T-6}$$

Finally, Table 3 below summarizes the conventions of truncation and rounding which are needed to ensure the precise calculation of price, yield and quotation.

**TABLE 3**
**Conventions for the Accurate Calculation of Price, Quotation and Rate of Federal Government Bonds**

| | | | Base-100 | | | Base-1000 |
|---|---|---|---|---|---|---|
| **Criteria** | **Variable** | **LTN** | **LFT** | **NTN-B** | **NTN-C** | **NTN-F** |
| R | Interest payment (semester) | - | - | 6 | 6 | 5 |
| R | Inflation forecast | - | - | 2 | 2 | - |
| R | Acummulated Selic rate | - | 16 | - | 10 | - |
| R | Flow of discounted payments | - | - | 10 | 14 | 9 |
| T | Accrual fraction | - | - | 14 | 14 | - |
| T | Acummulated price index | - | - | 16 | 16 | - |
| T | YTM (% p.a.) | 4 | 4 | 4 | 4 | 4 |
| T | UNV | - | 6 | 6 | 6 | - |
| T | Price | 6 | 6 | 6 | 6 | 6 |
| T | Day exponential (bd/252) | 14 | 14 | 14 | 14 | 14 |
| T | Quotation (%) | - | 4 | 4 | 4 | - |
| T | Financial value | 2 | 2 | 2 | 2 | 2 |

Key: R - round; T - truncate
Source: National Treasury