Public Securities and Public Debt Management

with information up to October 2016

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BANCO CENTRAL DO BRASIL

Frequently Asked Questions Series

"Frequently Asked Questions" Series

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Public Securities and Public Debt Management[1]

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The Banco Central do Brasil (BCB) is producing this series as part of its ongoing efforts to enhance the transparency of the Brazilian economic policy and the effectiveness in communicating its actions.

[1] Gerin thanks the Open Market Operations Department of the Central Bank of Brazil for its collaboration, which was fundamental for the publishing of this material.

Summary

Public Securities and Public Debt Management

1. What government institution is responsible for managing the federal debt in Brazil?

The National Treasury Secretariat (STN), as part of the Ministry of Finance structure, is responsible for managing the Brazilian federal public debt, both domestic and external.

The Central Bank of Brazil (BCB), as the manager of the Selic (Special System of Settlement and Custody), carries out auctions held by the STN to sell or buy domestic federal public debt securities (DPMFi), under custody in Selic, besides other issuer events, as the procedures related to issuances, redemptions, and interest rate payments regarding these securities.

2. What is the relationship between the federal public debt management and the fiscal policy?

The STN manages issuances and redemptions of public securities to comply with the fiscal policy, according to its strategy of debt management, with the aim of minimizing costs, managing risks and efforts with the aim of contributing for the development of the Brazilian market of public securities. The Annual Financing Plan (PAF), which has been published by STN since 2001, releases the goals, requisites and priorities regarding the federal public debt management. The PAF-2016, for example, establishes as objective for the federal public debt management: ***"to provide federal government financing needs efficiently, at the lowest long-term financing cost, observing prudent risk levels. Additionally, it seeks to contribute for the Brazilian market of public securities to work properly"***.

3. What are federal public debt securities and what is the aim to issue public debt securities?

Federal public debt securities are fixed income financial instruments (pre- or post-fixed) issued by the federal government to get funding from the society, aiming primarily at financing its expenses. They may be issued to finance the budget deficit, including the refinance of public debt and to make operations with specific aims, as defined by law.

4. What is the relationship between the federal public debt management and monetary policy?

The STN is responsible for managing the federal public debt, whilst the BCB is responsible for the conduction of monetary policy. The STN manages the issue and redemption of federal public securities aiming at providing the federal government financing needs; the BCB, on its turn, buys and sells federal public debt securities, in order to manage the supply of money or the interest rate. These operations carried out by the BCB are called open market operations and are held in the secondary market, and financial institutions are the counterpart.

5. Which are the federal government's main domestic securities? Where are they registered?

Table 1 presents the federal public securities offered to the public in 2016, as well as their most important characteristics. It is important to highlight the National Treasury Bills (LTN) and National Treasury Notes – Series F (NTN-F), prefixed rate securities; Financial Treasury Notes (LFT), with rates pegged to the Selic rate; and National Treasury Notes – Series B (NTN-B), indexed to the IPCA. Almost all federal public securities are under custody at the Selic, managed by BCB. The remaining securities are registered at Cetip (*Cetip S.A. – Mercados Organizados*).

Table 1 - Characteristics of Federal Public Securities Offered in 2016

Objective	Security	Interest Coupon	Benchmark	Maturity
Letra do Tesouro Nacional (LTN)	Fixed rate	There isn't (the interests correspond to the difference between the nominal value and the issuance value)	Short and Medium Run 6, 12, 24 and 48 months (*tranches*)	Oct/2016 and Apr/2017; Apr/2017 and Oct/2017; Apr/2018 and Oct/2018; Jan/2020 and Jul/2020
Nota do Tesouro Nacional (NTN-F)	Fixed rate	10% p. y., paid every semester	Long Term 6 and 10 years (2 *tranches*)	Jan/2023; Jan/2027
Letra Financeira do Tesouro (LFT)	Selic interest rate	There isn't (the interests are paid in the maturity according to the change of the security)	6 years (1 *tranche*)	Mar/2022; Sep/2022
Nota do Tesouro Nacional (NTN-B)	IPCA	6% p.y., paid every semester	Group I - Short and Medium Run 5 and 10 years (2 *tranches*) Group II - Long Term 20 and 40 years (2 *tranches*)	May/2021; Aug/2026 (Group I) May/2035; May/2055 (Group II)

Source: STN

6. How does the National Treasury issue securities?

The STN issues public securities through: direct issuances for specific aims defined by law (non-competitive placement); public offers (auctions) with the direct participation of financial institutions (competitive placement); and sales to individuals (*Tesouro Direto*).

7. What are direct issuances?

Direct issuances are held by the STN directly to the beneficiary, with no public offer (auction). These issuances are related to attend specific aims defined by law, such as: securitizing federal debt (Union's debt or other entities' debt that was or may be assumed by the Union); increasing capital of public entities; guaranteeing loans; land reform; rural credit; holding structured financial operations, among others.

8. What are public offers? How is the announcement of these offers made?

Securities public offers are auctions held by the STN to sell or buy securities, aiming at managing domestic securitized public debt. These auctions, in which financial institutions directly participate, are announced through a STN communiqué, and held through a BCB electronic system (Public Offer System - Ofpub). The BCB also holds its Open Market Operations (OMOs) through auctions, via electronic systems: Ofpub, when auctions are open to any financial institution participating at the Selic; and Offer to Dealers (Ofdealers), when these auctions are held exclusively with financial institutions accredited to deal with the BCB's OMOs Department - Demab (dealers). The auctions restricted to dealers are announced by an electronic message sent directly from the BCB's OMOs desk to the dealers. At the BCB auctions opened to any financial institution, the event is announced through a formal communiqué released by the BCB.

Official communiqués from the STN make public the conditions of each auction: characteristics of the securities; offered volume; dates of issuance and financial settlement; date and time limit to presenting proposals; criterion for selecting proposals; electronic system to be used, etc. The released documents may be consulted at the STN webpage or directly at the links http://www.tesouro.gov.br/web/stn/resultados-dos-leiloes and http://sisweb.tesouro.gov.br/apex/f?p=2501:2:11950991667767:::2::. (both in Portuguese).

9. What are the characteristics and periodicity of National Treasury's public offers?

The STN releases an annual calendar with dates on which auctions will be held and securities that will be offered, with their respective maturities, such as the official schedule for 2016 (in Portuguese).

The different formats of public securities auctions adopted by STN (Table 2) have specific aims:

- Traditional Auctions: aiming at refinancing the federal public securities debt through issuing public securities with prefixed interest and pegged to the Selic rate and to the IPCA;
- Change Auctions: consisting mainly in the change of shorter-term securities for longer-term securities, aiming at elongating or improving the debt profile; and
- Anticipated Redemption Auctions: seeking to provide liquidity to the security owner.

Table 2 – Main Types of National Treasury Auctions

	Auction Type		
Security	Traditional	Change	Anticipated Redemption
LTN	Weekly	-	-
NTN-F	Bimonthly	Yearly	Quarterly
LFT	Bimonthly	-	-
NTN-B	Bimonthly	Monthly	Quarterly

Source: STN

Change auctions generally aim at spreading maturities and/or increasing tenures, as determined by the PAF, in Portuguese.

10. Which players can participate on the National Treasury's public offers?

Directly: banks; savings banks; brokers; securities distributors and other institutions authorized to operate through the BCB. In general, every financial institution regularly registered at Selic can participate directly in the Treasury public offers, presenting proposals. Other companies and individuals can participate through these institutions.

11. How are the winner proposals defined in the public offers of debt securities?

Proposals for the auctions shall inform amount and price for purchase (or sale) of the securities. After the end of the auction, the STN analyses the proposals, establishing parameters for the definition of the amounts and the rates to be accepted. For the definition of the auction result, the STN considers, mainly, the security price in the secondary market, the yield curve based on the interest rate future contracts negotiated at BM&FBovespa (denominated *DI futuro*) and the auction consensus, obtained from the financial institutions trading desks when the auction is close to end.

The following criteria are used in the securities purchase/sale public offers:

- multiple prices (or discretionary prices) – all proposals with price equal to or higher (lower) than the minimum (maximum) price threshold are accepted in the sale (purchase) offer, denominated cut-off price; *i.e.*, the securities are sold (purchased) at the correspondent constant price of the winning proposals;
- unique price (or uniform price) - all proposals with price equal to or higher (lower) than the minimum (maximum) price accepted at the public offer are accepted (cut-off price); this price will be applied to all winning proposals; *i.e.*, the securities are sold (purchased) at the cut-off price for all winning proposals.

Currently, LTN, NTN-F and LFT auctions follow multiple prices. NTN-B auctions follow unique price criterion.

12. What is the second round of the auction?

The second round of the auction is a special operation carried out by the STN with institutions (dealers) accredited to operate with the STN General Coordination of Public Debt Operations (Codip), as ruled by the joint Decision n. 74 of February 4th 2015. This operation consists in selling public securities at a non-competitive price, as established in the competitive public offer announcement. These special operations, whose conditions are defined in the public offer announcement, only occur if at least 50% of securities offered in the competitive auction are sold. They are held right after the end of the competitive auction and its volume corresponds to a share of the total quantity sold in the mentioned auction. Each dealer institution has a limit to buy at the second round auction, based on its monthly performance, and has a specific timeframe to manifest its willingness to participate.

13. How do the direct sales to individuals occur (*Tesouro Direto*) and how have the outstanding and the number of investors registered for these sales evolved?

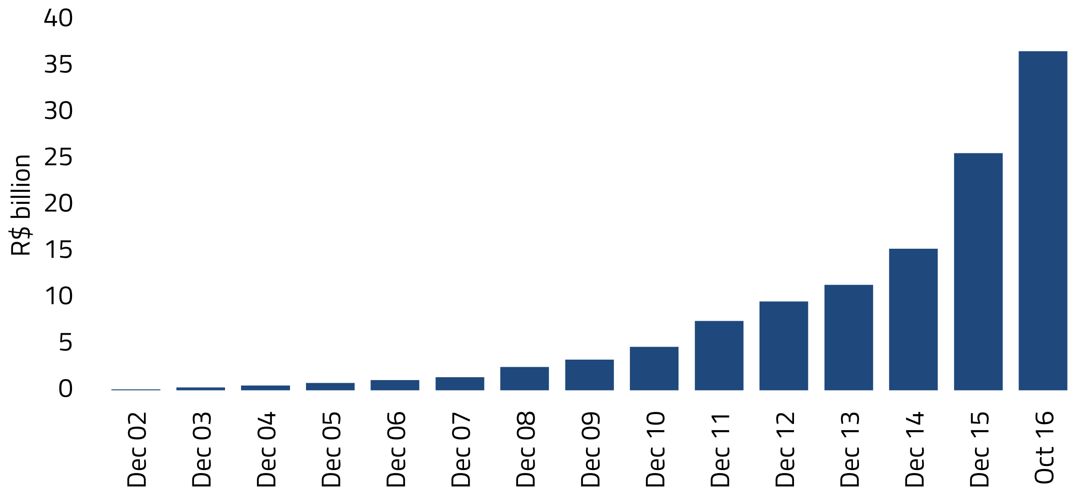
Since 2002, the STN has been selling public securities directly through the internet, aiming at facilitating the individual's access to these securities. In March 2015, the STN named *Tesouro Direto* securities as to explicit their yield characteristics. Thus, the following securities may be purchased:

- Pegged to the IPCA: Tesouro IPCA (NTN-B Princ) and Tesouro IPCA+ with biannual coupons (NTN-B);
- Prefixed rate: Prefixed Tesouro (LTN) and Prefixed Tesouro with biannual coupons (NTN-F); and
- Pegged to the Selic rate: Tesouro Selic (LFT).

Volumes may be invested from R$30 to R$1,000,000 per investor, monthly. In order to stimulate participation of the public, the STN daily repurchases securities negotiated through *Tesouro Direto* (available in Portuguese).

According to statistics, in Portuguese, in the last twelve months through October 2016, sales amounted R$18.1 billion, the best result since the program began (2002). The outstanding reached R$38.1 billion in October 2016, 42.56% higher than in December 2015.

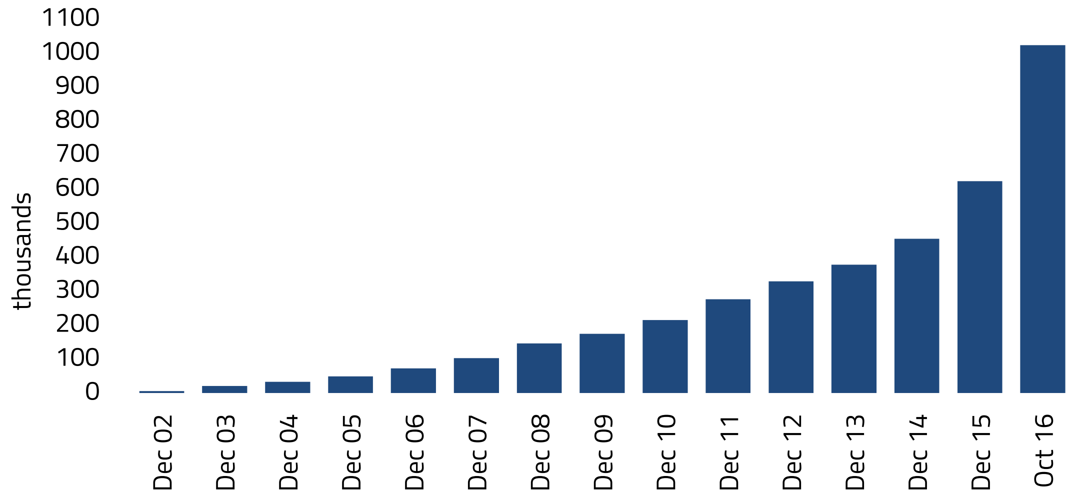
Chart 1 - Evolution of *Tesouro Direto* Outstanding



Source: STN

In the year through October 2016, 400,075 new investors were registered, totaling an outstanding of 1,024,433 investors, 64% higher than in 2015.

Chart 2 – Number of Investors Registered at *Tesouro Direto*



Source: STN

14. What is the consensus rate?

The consensus rate tells what market estimates for the price of the auctioned security or currency. It is obtained through surveying dealer institutions some minutes prior to the end of each auction, serving as a reference for determining its result.

15. How can I consult the auction's results?

The BCB and the STN auctions results are released in Portuguese. The STN also releases its auctions results at Auctions' Historic, in Portuguese.

16. What are par value and price at the curve?

Par value is the nominal value of the security on the issuance date, or base date, updated by its respective index, when it is the case. This value does not incorporate interest rate coupons. For LTN and NTN-F, prefixed securities, par value is always equal to face value (R$1,000.00).

Price at the curve is the security price updated by its original yield, defined at the issuance. According to the characteristics of the security, this price incorporates the index change, interest rate coupons and premium or discount factors. For calculating the price at the curve for LTN and NTN-F, for example, it is necessary to build the yield curve for each security, based on the placement rate in the auctions.

17. How can I know the prices for federal public securities?

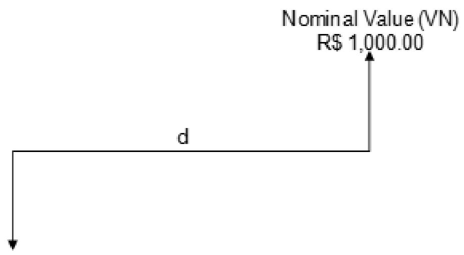
Prices for public securities traded in the secondary market are freely negotiated between seller and buyer. As references for securities market prices, one may consult several information sources, such as: statistics held by Anbima with the main participants, in Portuguese; statistics on federal securities traded in the secondary market released at BCB website, which include real time information; and results of STN securities public offers, also in Portuguese.

18. What are the main characteristics and how are the PU and the price of the main securities calculated?

National Treasury Bill (LTN)

LTN is a prefixed security whose payment is calculated based on the discount over the nominal value (R$1,000.00) obtained in the sale of the security by STN – through public offer or direct issuance, or through the acquisition in the secondary market. From the yield rate desired at the security purchase, the PU is calculated discounting its nominal value by that rate according to the security tenure.

Figure 1 – LTN – Cash Flow



$$PU = \frac{VN}{(1+i)^{d/252}}$$

where:

PU: Unitary Price (R$; rounded to the 6th decimal place);

d: tenure (number of working days between the reference date, inclusive, and the date of maturity, exclusive);

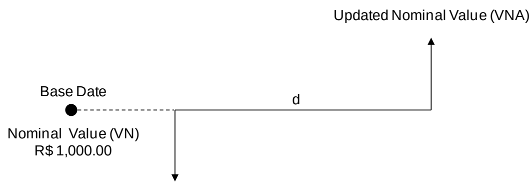
VN: Nominal Value (R$1,000.00);

i: interest rate per year (rounded to the 4th decimal place).

Financial Treasury Bills (LFT)

LFTs provide post-fixed yield, pegged to the Selic rate change, added by premium or discount, if it is the case. Its nominal value (VNA) is updated by the Selic rate accumulated since the base date. The base date is established by STN, as mentioned in the announcement of the security sale, and it is usually prior to the security issuing date. Its current base date is 7/1/2000. On the base date, the security nominal value is R$1,000.00. In LFT auctions, proposals are made as a quotation over VNA, with four decimal places. When LFT is sold with discount, i.e., at less than 100% of VNA, this represents an effective yield higher than the accumulated change of Selic rate up to the maturity; on the contrary, when there is a premium at the sale, i.e., a quotation higher than 100% of the VNA, this represents an effective yield lower than the accumulated change of Selic rate up to the maturity. Finally, if the security is sold at 100% of VNA, then its effective yield will be exactly the accumulated change of Selic rate.

Figure 2 – LFT – Cash Flow



$$PU = \frac{\text{Quotation}}{100} \times VNA$$

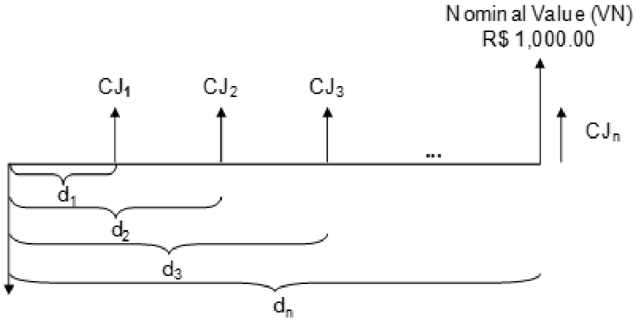
$$\text{Quotation} = \frac{100}{(1+i)^{\frac{d}{252}}}$$

where:
PU: Unitary Price (R$; rounded to the 6th decimal place);
Quotation: (%; rounded to the 4th decimal place);
d: tenure (number of working days between the reference date, inclusive, and the date of maturity, exclusive);
VN: Nominal Value (R$1,000.00);
VNA: Updated Nominal Value (rounded to the 6th decimal place);
i: interest rate per year (rounded to the 4th decimal place)

National Treasury Notes - Series F (NTN-F)

NTN-F is a prefixed security whose payment is calculated based on the discount over the nominal value (R$1,000.00) obtained in the sale of the security by the National Treasury Secretariat (STN) – through public offer or direct issuance, or through the acquisition in the secondary market. From the yield rate desired at the security purchase, the PU is calculated discounting its nominal value by that rate, according to the security tenure. These securities pay biannual interest rate coupons. The interest rate coupon is calculated multiplying the coupon rate by the VN. In the securities redemption, in addition to the payment of the VN, the last coupon is added. For each issuance, interest rate coupons are defined by the STN.

Figure 3 – NTN-F – Cash Flow



$$PU = \frac{CJ_1}{(1+i)^{d_1/252}} + \frac{CJ_2}{(1+i)^{d_2/252}} + \frac{CJ_3}{(1+i)^{d_3/252}} + \cdots + \frac{(CJ_n + VN)}{(1+i)^{d_n/252}}$$

$$CJ_i = VN \cdot [(1 + coupon)^{0,5} - 1]; i = 1, \dots, n$$

where:

PU: Unitary Price (R$; rounded to the 6th decimal place). Discounted cash flows are rounded to the 9th decimal place;

di: tenure (number of working days between the reference date, inclusive, and the date of maturity, exclusive) of the i-th interest rate coupon, i=1, ..., n;

VN: Nominal Value;

i: interest rate per year (rounded to the 4th decimal place);

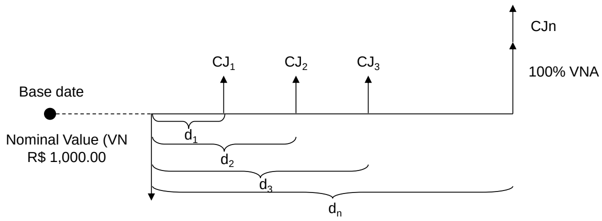
CJi: i-th interest rate coupon, i=1, ..., n. (rounded to the 5th decimal place);

Coupon: interest rate coupon defined by the STN at the issuance.

National Treasury Notes - Series C (NTN-C) and Series B (NTN-B)

NTN-B and NTN-C are post-fixed securities whose yields are linked to the variation of the IPCA and IGP-M, respectively. These securities pay biannual coupon interest rates. As with LFT, they have a base date established by the STN, and the nominal value on the base date is R$1,000.00 for each security. Likewise, the VNA is the nominal value on the base date (R$1,000.00) updated by the change of the IPCA for the NTN-B, or IGP-M, for the NTN-C, accumulated since the base date. The interest rate coupon is calculated multiplying the coupon rate by the VNA at the date of the respective coupon payment. In the securities' redemption, besides the VNA, the last coupon is added. For each issuance, interest rate coupons are defined by the STN. NTN-B and and NTN-C are negotiated through quotation, i.e., a share of the VNA.

Figure 4 – NTN-B and NTN-C – Cash Flow



$$Quotation = \frac{CJ_1}{(1+i)^{d_1/252}} + \frac{CJ_2}{(1+i)^{d_2/252}} + \frac{CJ_3}{(1+i)^{d_3/252}} + \cdots + \frac{(CJ_n + 100)}{(1+i)^{d_n/252}}$$

$$CJ_i = 100 \cdot [(1 + coupon)^{0.5} - 1]; i = 1, \ldots, n$$

$$PU = \frac{Quotation}{100} \cdot VNA$$

where:

PU: Unitary Price (R$; rounded to the 6th decimal place);

Quotation: (%; rounded to the 4th decimal place). Discounted cash flows are rounded to the 10th decimal place;

d_i: tenure (number of working days between the reference date, inclusive, and the date of maturity, exclusive) of the i-th interest rate coupon, i=1, ...,n;

VN: Nominal Value;

VNA: Updated Nominal Value (rounded to the 6th decimal place);

i: interest rate per year (rounded to the 4th decimal place);

CJ_i: i-th interest rate coupon, i=1, ..., n. (rounded to the 6th decimal place);

Coupon: interest rate coupon defined by STN at the issuance.

NTNs of series B and C can be issued at par price, with premium or discount, over the VN.

It bears highlighting that NTNs-C have not been issued since December 2006.

19. How are premiums/discounts of LFTs traded in the auctions calculated ? What do they mean?

The premium/discount of LFT may be defined as the factor applied over these securities as a proportion of their nominal value. When a security is traded with a discount, it means that the buyer will have an yield higher than the Selic rate change, since its purchase up to its maturity.

20. What is the maturity schedule for the public debt?

The volume and the maturity schedule for the debt registered at Selic may be daily accessed at the BCB webpage at the internet, in Portuguese.

21. What is the volume traded in the secondary market?

The traded volume of each security in the secondary market may be weekly viewed at the "*Resenha Semanal do Departamento de Operações do Mercado Aberto*" (in Portuguese) or monthly at the Open Market Press Release.

22. What is a debt securitization?

Securitization is the operation through which several financial and non-financial assets are gathered – called base assets – as the basis over which negotiable financial securities are issued. Securitization of receivables in general is an operation in which the issuer of the security ensures to the buyer the right to the credit or receivable free from the issuer risk. Therefore, these credit rights or receivables are removed from the issuer balance sheet, releasing capital for new loans, in the case of banks, or resources for other objectives, in the case of companies. In the particular case of debt securitization, it may be understood as a process of debt renegotiation, in many cases due and not paid, having as underlying mechanism the contractual renewal or renegotiation of clauses of the original contracts. Debt securitization has been widely used by the STN when refinancing indirect or direct debts of the Union, stemming from warranties given to bodies and/or entities controlled by the Union. Due to the high diversity of creditors, clauses, rates and characteristics of these original liabilities, the STN chose to standardize them in homogeneous credit instruments, in a securitization process. This process brings advantages not only for the Union, which may adequate its liabilities to its payment capacity, but also for creditors, whose advantage consists in more liquidity of their credit in the secondary market.

23. What are the so-called "privatization currencies"?

"Privatization currencies" are certain Brazilian debt securities which may be used as payment for acquiring public companies in the privatization processes. However, in each privatization process, the National Council of Privatization is responsible for defining the maximum share of each security in the payment, and the remaining share must be settled in cash. Besides the securitized securities, other assets are considered privatization currencies, which can also be used as payment in the privatization processes: Siderbrás Debentures backed by the National Treasury, Development National Fund Obligations (OFND), Rural Debt Securities (TDA), and Treasury Financial Certificates.

24. What are unmarketable securities and what is their objective?

Unmarketable securities are those which may not be traded in secondary market operations. This characteristic is intrinsic to the security. Currently, the main unmarketable security of the National Treasury is the NTN-P, indexed by TR + 6% p.y., whose objective is the swap for resources received in cash or the change for securities and credits received under the National Program of Privatization (PND).

25. Where may I get further information and updated data about public securities and public debt management?

Information about domestic securitized public debt and open market operations may be obtained in the "Open Market Press Release", monthly published by the BCB. This report presents relevant information and facts related to the public debt and open market operations evolution, including the database. Another source is the "Relatório da Dívida Pública Federal" (in Portuguese), where the STN releases consolidated data on external and domestic securitized debt.

Additionally, the BCB webpage has the following Technical Note and Working Paper about securitized debt management and open market operations.

Technical Note 12 - ***Mercado de Títulos Públicos e Operações de Mercado Aberto no Brasil – Aspectos Históricos e Operacionais*** (in Portuguese)

Carlos Hamilton Vasconcelos Araújo (January/2002)

Working Paper 37 - Monetary Operations in Brazil: Remarks on the Inflation Targeting Regime, Public Debt Management and Open Market Operations

Luiz Fernando Figueiredo, Pedro Fachada and Sérgio Goldenstein (March/2002)