

Part III

Chapter 7

Treasury Direct: Internet public securities retail sales program

by André Proite¹

1 Introduction

The discussion of government financing through public security retail markets begins with a brief look at its history. For example, records from 17th century France show that the country adopted the practice to finance the Thirty-Year War. Similarly, in the next century, the UK applied market instruments that have survived until now²; and in Sweden, the State issued special public bonds to build war ships. Reasons vary, but the public security retail market has been critical for centuries.

This chapter will describe the National Treasury program known as *Treasury Direct*, which sells domestic Federal debt bonds directly to individuals in Brazil over the Internet.

1.1 Why develop such a program?

For their part, most retail investors view government securities as the only source whose loans are risk free, an important fact if the public is considered the primary source of savings. And, there is little doubt about families' need to save: Most require savings to deal with temporary shocks to their income flows since a surprisingly large share do not have enough resources to cover expenses even for a few months³. While these investors can be numerous and diversified, they are still a relatively untapped source.

For governments, this market is crucial since retail investors, as well as the institutional (wholesale) market, help finance their budget deficits. Also, domestic savings help sustain economic growth. Thus, regardless of their relevance in proportional terms - which can be small - developing this market segment should rank high on economic policy makers' agendas⁴. The reasons are varied. A basic issue is the importance of savings. Even when the macroeconomic debate on the domestic savings rate is put aside, there is little doubt about families' needs to save. This fact cannot be minimized: Most need savings to deal with temporary shocks to their income flows since a surprisingly large share do not have enough resources to cover expenses even for a few months⁵.

¹ The author thanks the Investor Relations team (as of July 2008) for its valuable comments, particularly Fabio Guelfi, Fabricio Moreira, Flávia Fernandes, Juliana Coelho, Leonardo Tavares and Helena Menezes, besides all those involved in bond pricing, registrations and payments. Important information was provided by those involved in bond custody at BM&FBovespa, especially Gustavo Laurino, Valmir Soler, Valéria Lorenzo and Alexandre Gushi.

² World Bank, 2006.

³ Tufano, Schneider, 2005.

⁴ McConnachie, 1997.

⁵ Tufano, Schneider, 2005.

First, this market can correct possible imbalances created by the concentration of wholesale investors, which are very important in narrow markets where authorities agree that, lacking some degree of competition, yields could be forced against them.⁶ The literature⁷ shows that costs can be reduced through different means, but that some - i.e. a vibrant retail market - are more efficient in the long run.

Second, financing public deficit through individual investors may positively affect monetary policy by reducing the base of deposits in commercial banks⁸ since this course expands the supply of assets available to investors⁹. Third, governments in developing countries can benefit by establishing financial markets other than repo and money markets (the primary ones). Fourth, governments usually see savings as a practice that promotes national wealth.

In recent years, technology has reduced costs and increased access to an array of financial services¹⁰. In this regard, the Treasury Direct (TD) program was conceived by the National Treasury in 2001 to democratize access to public securities, disseminate information about the public debt, stimulate medium- and long-term savings, and increase the base of public security holders. In November 2001, a Technical Cooperation Agreement was signed between the National Treasury (STN) and the Brazilian Settlement and Custody Company (CBLC) to offer Federal securities to the public over the Internet. One month later,¹¹ the Treasury regulated this practice and in January 2002, the government started selling public securities on the Treasury website (www.tesourodireto.gov.br).

This chapter is divided into five sections. Besides the Introduction, Section 2 presents the program's objectives, Section 3 describes its *modus operandi*, Section 4 discusses the results, Section 5 reviews international experiences and Section 6 offers some conclusions.

2 Treasury Direct objectives

The new program was based on the need to offer retail investors an alternative to the investment fund industry, which, until then, was basically the only distribution channel of public securities and charged rather high fees to small-sized investors. It was thought that by increasing competition in the distribution of public bonds, the program would motivate institutions to reduce their profit margins for products with little value added - such as DI (Interbank Deposit rate) funds. Further, the public debt investor base would be expanded in a way that the National Treasury - as the entity issuing public securities - could reap the benefits of diversification. Finally, the program could promote transparency and disseminate the principles of Brazil's public debt management.

2.1 Increasing the investor base

A large, more heterogeneous investor base gives the government added flexibility to manage its public debt, as this helps lengthen it at a lower cost: It reduces the degree to which demand is concentrated because retail investors have different preferences for duration and instruments. This fact explains the importance

⁶ In Sweden, the Parliament issued a guideline that the National Debt Office would to be financed by retail investors, but only where this could reduce the State's interest rate.

⁷ Wheeler, Jensen 2000.

⁸ In Bulgaria, authorities offer this reason as a justification for developing this market.

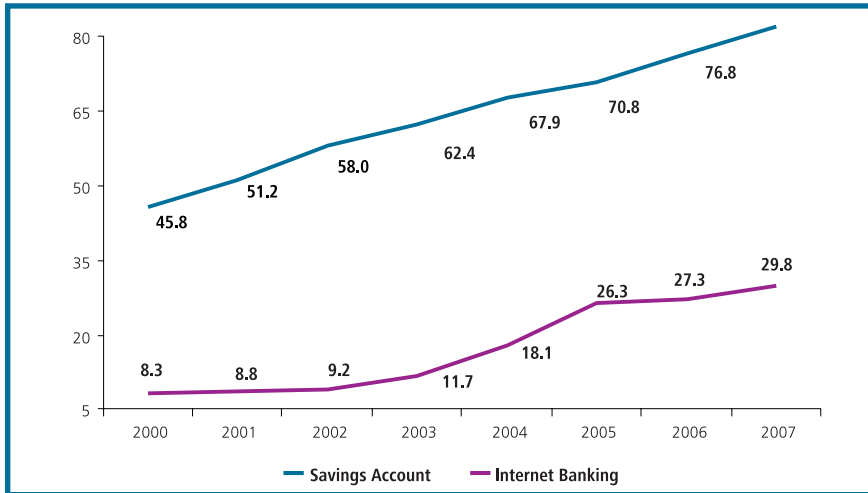
⁹ McConnachie, 1997.

¹⁰ Glaessner, Kantur, 2004.

¹¹ On December 12, 2001, the National Treasury issued Administrative Ruling STN No. 554.

of policies such as the Treasury Direct program. Also, while the share of securities sold to these investors is small - it accounted for just 0.11% of the DFPD (Domestic Federal Public Debt) in December 2007 - the practice is still in its early stage and has huge potential: Indeed, the indicators for 2007 show there are about 30 million Internet banking users, nearly four times the eight million in 2001. The number of those with savings accounts also rose substantially during that time (see Graph 1).

Graph 1. Population using Internet banking and holding savings accounts (millions)

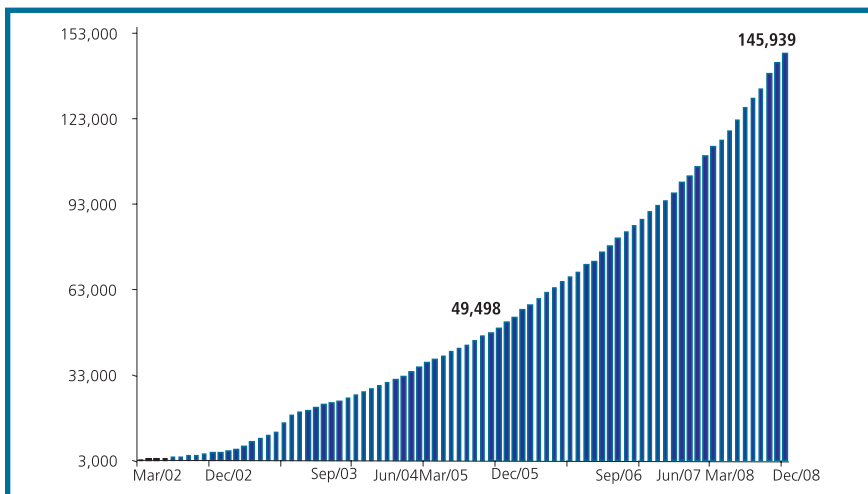


Source: Febraban, Abecip and BB

The use of instruments that expand and diversify the investor base is an international trend (see Part III, Chapter 5), and the direct sale of public securities to individuals is an important model.

Graph 2 shows the rise in the number of people registered with the TD program. Although it already increased four times in just three years, it can still be substantially enlarged (see Section 4: Treasury Direct Results)

Graph 2. Number of investors registered in the TD program



Source: National Treasury

2.2 Incentives to develop medium and long-term savings

Another important TD aim is to promote medium and long-term savings. Currently, the investment fund structure does not fully contribute to this objective, since it does not offer the incentive of higher yields associated with decreasing costs for medium and long-term investments; however, it is crucial for the government to develop domestic savings to sustain economic growth.

Conversely, by offering weekly liquidity,¹² the TD structure encourages medium and long-term savings. This occurs through the tax scheme applied to financial investments (the same as any fixed income investment), as described in the next section.

Further, the Treasury only offers securities with maturities of over six months and longer (up to 40 years, as a benchmark), which not only lengthen the public debt maturity profile, but also build long-term savings' practices. As investors lengthen the horizon of their investments, seeking higher yields through the TD, it can be assumed that investment funds will have a larger volume of long-term securities in their portfolios, thus reducing public debt refinancing risks. This should occur because investors usually see debts with longer maturities as less susceptible to default, which accounts for the lower risk premium, or spread, required by investors to purchase them and, ultimately, the lower cost of public debt in the long run.

2.3 Disseminating the public debt concept

Since the TD program began, the National Treasury has provided the public with information about the types of securities it offers. Pricing guides, amortization schedules, reference indexes, profitability, tax structure and all sort of information on public securities are provided within the program. It also explains the concept of public debt, pointing out that a significant share of small investors' savings is channeled into public securities through either the TD or investment funds and also that these securities - which are not concentrated in banks - are spread into many financial products. Further, it stresses that the government does not intend to declare a moratorium on its debt (as some have urged);¹³ thus, small and medium savers would not lose their savings. Further, the information refutes the notion that default on the public debt - as some have encouraged - would benefit the country. Armed with this information, the public is less likely to back such an action.

This discussion is consistent with the orthodox fiscal policies Brazil has adopted since the early 2000s and the inflation control since 1995. There is no significant debate on drastic changes of those policies and public debt management is a meaningful part of it. The manner in which the public securities market functions and debt is managed can, against a backdrop of interest rate shocks, trigger mechanisms that will destabilize the economy.

Despite the difficulty in measuring the exact contribution of the TD program to improve the domestic debt profile, data already exist on (a) small investor participation, (b) their geographic distribution and (c) their preference for longer-term/lower-indexed investments when compared to other types of investors. Their individual decisions under market conditions can be well observed and point up the program's democratic aspects.

¹² Some funds discourage early redemption by their participants.

¹³ Breach of contract is a practice that is harshly criticized in Brazil. As seen in the latest elections, fiscal irresponsibility and breach of contract were dropped from the debates, reflecting the strong public repudiation of such postures.

3 Treasury Direct (TD) operations

Before the TD program was introduced, domestic debt securities were sold only in public offers through auctions and direct issuances to meet specific needs provided for by law. The TD program, however, does not participate in auctions.

Also, before securities were traded on the web, buyers of public securities in the primary market were restricted to banks, brokerage firms, distributors and other financial institutions registered with the Special System for Settlement and Custody (Selic), and had to purchase at least R\$50,000 (roughly US\$30,000). Now, however, TD bonds can be sold to all Brazilian residents who have an Individual Taxpayer's Registry (CPF) checking account in a bank or brokerage firm, and are registered with any of the financial institutions that operate in the program.

These institutions, called depository agents, are accredited with the Stock Exchange - the BM&FBovespa¹⁴ - and are responsible for updating the registry, collecting taxes and transferring funds to/from investors with respect to their purchases, paying interest, or redeeming the securities' principal. Depository agents include stock brokers, commercial and investment banks, and asset distributors, which are all listed, along with their volume of operations and fees charged, on the website. Their role is to facilitate investors' buying and selling; they do this by contacting the investors directly, since the National Treasury does not communicate with individuals.

After they register with depository agents, the latter send them a temporary password (via email) from BM&FBovespa that allows them to access the restricted website to buy or sell securities or make inquiries. After this, they can also update their personal registration forms with information relevant to the program.¹⁵

3.1 Purchase and sale of securities

Investors can buy and sell securities in three ways. First, they can access the restricted TD website. Second, if they do not have Internet access or want to buy their securities from brokers, they can use a depository agent. Third, they can conduct trades on the latter's website (home brokers), if it is integrated with that of the TD.

Purchases can be made weekdays from 9 a.m. to 5 a.m. the next morning; after this time, the system is closed for four hours until 9 a.m. for maintenance and updates. On weekends and holidays, the site is open 24 hours a day. To protect retail investors, the Treasury can temporarily suspend sales during periods of extreme market volatility.

After securities are purchased, investors have two choices: They may hold them to maturity or sell them back to the National Treasury. Repurchase transactions can be done from Wednesday at 9 a.m. to Thursday at 5 a.m. except on Copom¹⁶ meeting days, when Wednesday sales are interrupted at 5 p.m. and

¹⁴ This is the company that resulted from the merger of the São Paulo Stock Exchange (Bovespa) and the Brazilian Mercantile and Futures Exchange. Together, the two are among the five largest stock exchanges in the world.

¹⁵ In November 2009, 10 depository agents delivered a new tool to their clients, integrating the TD to their home brokers (internet based trading platforms). Thus, investors can buy and sell public securities within the TD through the same screen on which they access the equity market. This was due to a joint effort by BM&FBovespa and the National Treasury to boost the Program and cover more than 80% of sales.

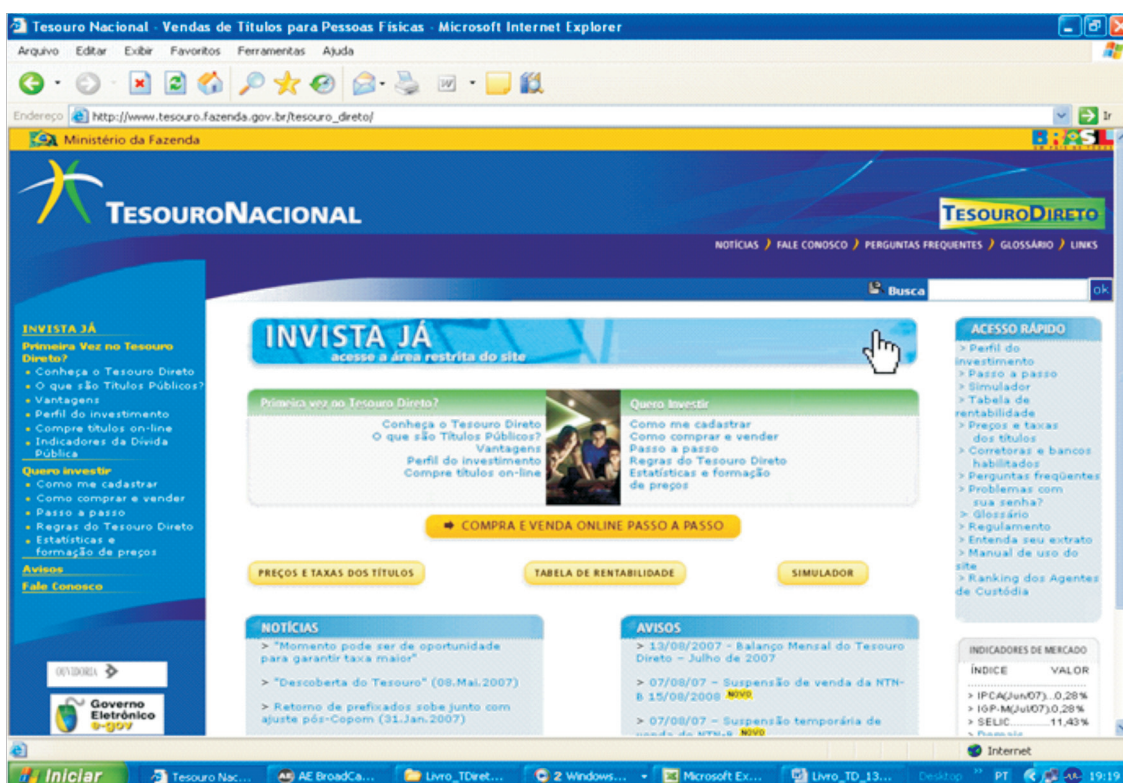
¹⁶ Monetary Policy Committee.

resumed at 9 a.m. the next day. Thus, even long-term securities have weekly liquidity. It should be noted that when investors sell their securities before maturity, they get the day's market rate, which can be higher or lower than the purchase rate. Still, repurchase represents an important added flexibility.

Investors need to pay at least 20% of a bond's cost and the total must be a minimum of R\$100 (around US\$60): Amounts are generally R\$160 to R\$400, depending on the bonds; all purchases must be in multiples of 20% of a bond. In December 2008, investors' purchases were limited to R\$400,000 a month, except for months in which the bonds mature, when the limit is R\$ 400,000 plus the redemption and interest amounts.

The ceiling for purchases was established to curb arbitrage between the National Treasury and the secondary market. Without a limit, investors could take advantage of possible differences¹⁷ between the National Treasury prices and those they could get by selling securities in the secondary market.

Figure 1. The TD website – fast and easy access



3.2 Availability and pricing of securities

The Treasury's aim is to offer securities similar to those in traditional weekly auctions. In December 2008, these were divided into those with fixed (LTN and NTN-F), inflation-linked (NTN-B and NTN-B Principal) and floating rates (LFT),¹⁸ with different maturity dates.

¹⁷ These discrepancies can reflect different points in time, since TD prices are updated based on the secondary market only three times a day, while the market varies every minute.

¹⁸ For details, see Part III, Chapter 2, on Instruments and Pricing.

All buy and sell operations are carried out at market prices that the Treasury's trading desk routinely monitors. Prices are updated about three times a day, but the Treasury can temporarily suspend sales at any time depending on market conditions, so as to protect retail investors from sudden price fluctuations.

There is a slight spread between the purchase and sale price of securities traded through the TD; this is due to the market practice of having different buy and sell prices to avoid intra-day transactions and to promote the holding of assets for longer periods.

3.3 Fees and taxes on operations

Fees on TD operations differ. At the end of 2008, the CBLC charged a 0.4% fee on the security purchase value for custodial services and providing information on investors' balances and transactions.¹⁹ When the company was incorporated into the BM&FBOVESPA, the fees changed: The trading fee in the first year is now 0.10% of the purchase amount, with a custodial fee of 0.3% (of the purchase amount) a year, collected on a semi-annual basis. Thus, the total cost in the first year is the same as before, but in the following years it is reduced, and is charged at different periods.

Depository agents charge brokerage fees, custodial account maintenance fees and other service fees, agreed upon between investors and financial institutions. In general, agents' fees are 0.4% to 4% a year on the securities' value. Institutions that do not charge such fees eliminate them so as to attract clients to their other services, where profits are higher and more than compensate for expenses associated with TD operations.

As a result, total fees are 0.30% to 4.40% a year on the value of investments and length of maturity, and are the same for all investors, regardless of the amount invested. This practice is not common in the market, which tends to discriminate against retail investors, charging wholesale investors less. Thus, an important feature of the TD is providing all investors with equal access to reduced fees and similar yields; this benefits both small and medium investors, who generally do not find market options regarding fixed-income investment funds at such reduced fees.

Taxes charged at the TD are the same as those of other fixed-income investments and are collected by depository agents. Income tax (IR) is charged retroactively on the nominal yield of securities and the Financial Operations Tax (IOF) is levied on investments maturing in less than 30 days. The main difference in relation to investment funds is that the IR on public securities is charged only when interest is paid or the securities are redeemed. Investment funds, however, are subject to semi-annual IR payments, which reduce long-term yields as compared to the direct purchase of public securities.

In general, investors do not have a clear idea about the effects of administrative fees on yields. However, these can be compared by checking securities purchased through an investment fund with those through the TD. For example, an investment through the TD with a nominal yield of 12% a year, for a one-year period and a 3.5% inflation rate for that year, will benefit from higher deductions. The Income Tax (IR) on the investment is 20% (for 180-360 days).

¹⁹ After the first year, the 0.4% annual fee is charged proportionally to the period the investor keeps the securities with the CBLC; fees are calculated on the investor's current stock in the day (*pro rata* day) and are charged at the time interest is paid, on redemption or repurchase dates by the National Treasury.

Further, the TD charges an administrative fee of 0.9% a year (CBLC and depository agent's fee) while different investment funds might charge 2%, 3% and 4% yearly fees. At this point, differences appear when the income tax is charged after the administration fee. With the TD, the IR deduction is 2.38%, while with the three funds it is 2%, 1.8% and 1.61%, respectively (it varies inversely to the fee charged). With inflation equally discounted in each investment, the net yield in the TD program is 5.81%, but just 4.3%, 3.57% and 2.83%, respectively (see Table 1), with securities bought through the investment fund.

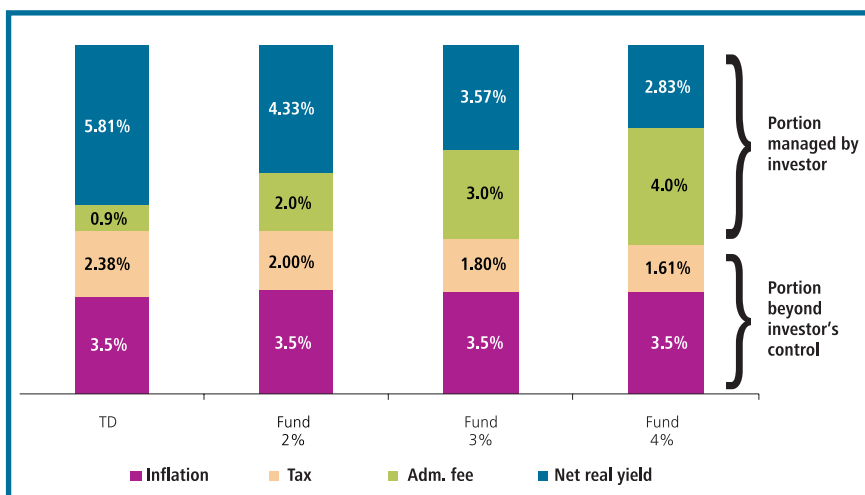
Table 1. Comparison between the Treasury Direct and investment funds
simulation: nominal yield 12% yr., IT 20% /yr, and CPI 3.5%

Administration Fee	Treasury Direct	Investment funds		
	0.9%	2.0%	3.0%	4.0%
Gross nominal yield	12.0%	12.0%	12.0%	12.0%
Administration fee	0.9%	2.0%	3.0%	4.0%
Tax discount	2.38%	2.0%	1.8%	1.61%
Yield <i>net nominal</i> of taxes and fees	9.51%	7.99%	7.20%	6.43%
Inflation realized (CPA)	3.5%	3.5%	3.5%	3.5%
Yield <i>net real</i> of taxes and fees	5.81%	4.33%	3.57%	2.83%
Treasury Direct yield above all others		34.08%	62.59%	105.57%

Note: TD fee (0.9%) includes CBLC (0.9%) and average custodian broker fee (0.5%)

Prepared by the National Treasury

Graph 3. Treasury Direct vs. investment funds



Source: National Treasury

Once inflation and taxes are discounted, what is left of the yield is divided between the investor and the administrator. In the TD, the average administrative fee accounts for 9% of the total, while investment funds charge 4% a year plus administrative costs that represent 34%.

The tax scheme that applies to investment funds and the TD differs in an important respect: In the first, taxes on yields are charged semi-annually - the so-called "quota eater" scheme which adjusts the income

tax bracket to the investment period. In the TD scheme, taxes are charged only when the security falls due or is sold; therefore, bond holders have higher interest yields and relatively higher profits.

The TD and BM&FBovespa websites also feature a simulator²⁰ that allows investors to see gross and net yields, which include the yearly costs; this ensures that information is clear and timely.

3.4 The dissemination program

Since the program began in 2001, the Treasury has supported investors by following up on sales, holding free lectures and participating in special events. Each day, the TD team answers investors' inquiries, submitted electronically²¹ - about 200 messages a week - regarding the bonds offered and their pricing schemes; BM&FBovespa (the stock exchange) also provides a similar service to depository agents and the general public.

The Treasury's lectures to universities, private and public companies, brokerage firms and congresses, *inter alia*, provide a forum for answering questions and increase public confidence in the products, which helps promote these types of investments.

During the year, the TD participates in financial events for retail investors,²² where Treasury and stock exchange employees give lectures and answer questions; the events are mainly in the state capitals stretching from the south to the northeast. These activities are extremely useful in a country of Brazil's size and where small investors' behavior varies from one region to another.

Since 2009, the TD has assumed a larger role in dissemination and financial education programs promoted by BM&FBovespa, which aim to reach retail investors, opinion makers and financial institutions. Results have been positive for the stock market and home brokers' market, which posted high growth rates from 2002-2008.

Interestingly, the TD program benefits most from unsolicited news articles by columnists and discussions on news shows. This could be a response to the quality of the TD, when compared to other programs (see Section 4: TD Results).

3.5 The next steps

In early 2009, a study reviewed the TD in terms of scope, segmentation, resources involved, bottlenecks, its efforts compared to international experiences, and proposals for decision-makers to adjust various aspects to enlarge the program and promote a more robust framework in terms of infrastructure and personnel. Armed with this information, administrators can offer a product that is easily understood.

One issue the study uncovered was that the program was not as widespread as anticipated. To correct this, it was suggested that sales could occur at lottery ticket shops and the Post (Postal Bank). In Brazil, lotteries are a state monopoly linked to the large Federal Savings Bank (CEF) and the ticket shops are regularly used by the low-income population because they extend banking services at low costs.

Similarly, because the Postal Bank provides services to almost all 5,561 Brazilian municipalities, public securities could therefore be a savings alternative to the lowest income levels. However, such an extension would be difficult to establish and changes are not expected in the near future.

²⁰ See http://www.tesouro.fazenda.gov.br/tesouro_direto/.

²¹ See http://www.tesouro.fazenda.gov.br/tesouro_direto/faleconosco.asp.

²² See <http://www.expomoney.com.br/> e <http://www.traderbrasil.com/expo/index.php>.

4 Treasury Direct results

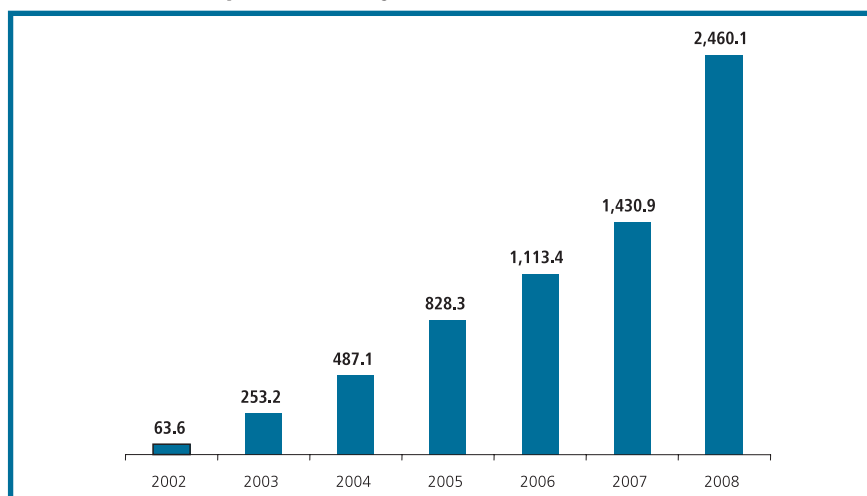
Some of the programs' outcomes with respect to outstanding securities, their average maturity, sales and investor profiles will be reviewed in this section.

4.1 Outstanding securities

TD outstanding securities in December 2008 were R\$2.4 billion, a 72% increase over the previous year, although still just 0.17% of the Domestic Federal Public Debt (DFPD). This growth was due to the way the TD developed, as well as the greater volatility of the market in Brazil and worldwide, which led many to move their investments to public securities, which were considered safe in times of crisis.

In December 2008, the TD had about 146,000 registered investors, of which 43.6% are relatively small, with holdings of up to R\$10,000 - a figure that illustrates the wide range of retail investors. Larger investors also participate, which reflects the TD quality and lower costs, since these groups are generally better informed of the opportunities offered by other financial products.

Graph 4. Treasury Direct stock – R\$ million



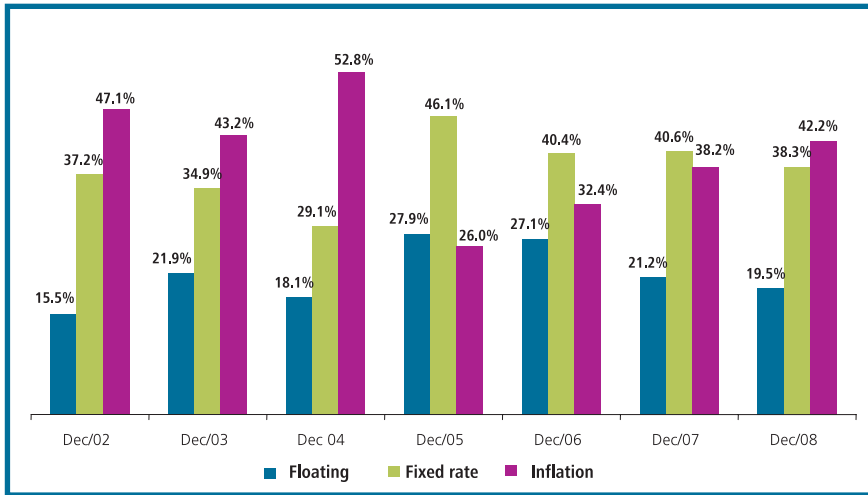
Source: National Treasury

Graphs 4 and 5 show that the distribution of outstanding TD securities differs from that of the DFPD (Domestic Federal Public Debt). In the TD, securities with higher volumes, which account for 42% of the overall amount, are inflation-linked (24.6% in NTN-Bs, 13.3% in NTN-Bs Principal and 4.3% in NTN-Cs). The share of fixed-rate securities is 38.3%, with a large number of LTNs, which account for 24.8% of the total and exceed R\$610 million. At the same time, the share of floating rate securities declined: In December 2005, they accounted for 28% and by December 2008, were just 19.5%.

In general, the profile of TD outstanding securities, which is concentrated in fixed-rate and inflation-linked instruments, somewhat anticipated the changes in the DFPD profile: In 2004, these two categories accounted for 83% of outstanding securities while for the DFPD they represented only 35%. This is the first evidence that individual investor preferences do not closely follow those of wholesale investors, many of which

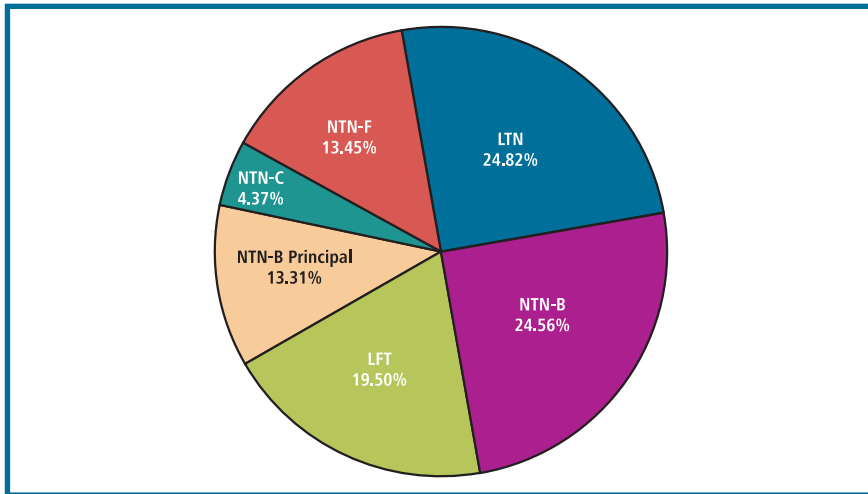
offer these same securities to the public indirectly, via investment funds. The composition of fixed-income funds from the largest Brazilian banks shows that LFTs account for the largest share of assets.²³ In other words, there is a mismatch between the portfolio allocation between individuals and fixed income funds.

Graph 5. Historical series of outstanding securities



Source: National Treasury

Graph 6. Share and type of securities in the outstanding debt – December 2008



Source: National Treasury

4.2 Sale profiles

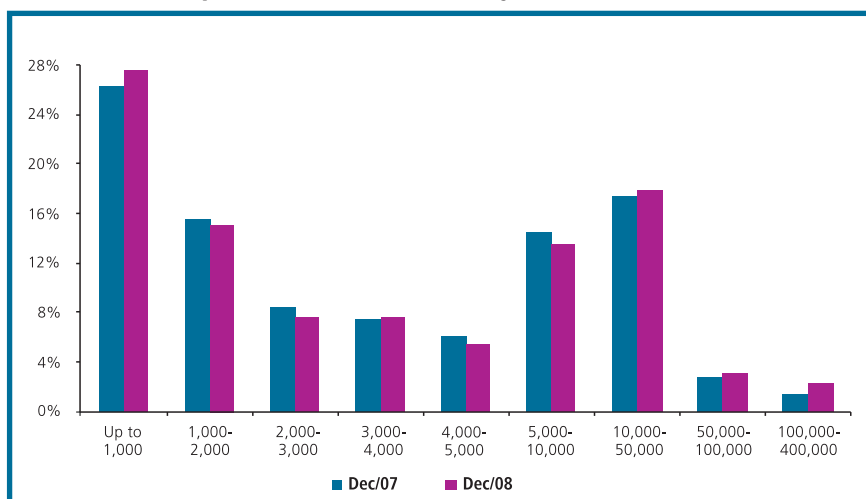
The TD's attractiveness to retail investors is also illustrated by the high volume of investments of up to R\$5,000, which accounted for 63.2% of the total in 2008. Moreover, as shown in Graph 6, about 62% of the investments were below R\$1,000, a distribution that has been relatively stable over time.

²³ See Chapter 5, Part 3.

In 2008, the total value of public securities sold was R\$1,558.32 million, which was a 102.1% increase over the previous year, the largest since 2003: Demand was high for fixed-rate securities (LTNs and NTN-Fs), whose share reached 45.9%, followed by Consumer Price Index (IPCA) indexed securities (NTN-Bs and NTN-B principals), which accounted for 37.7%. The best selling securities during the year were LTNs, which represented 30.3%. This trend has continued since the program began and is obviously reflected in the stock: IPCA-indexed securities (NTN-Bs and NTN-B principals) ranked second among best-selling securities in recent months, above LFTs.

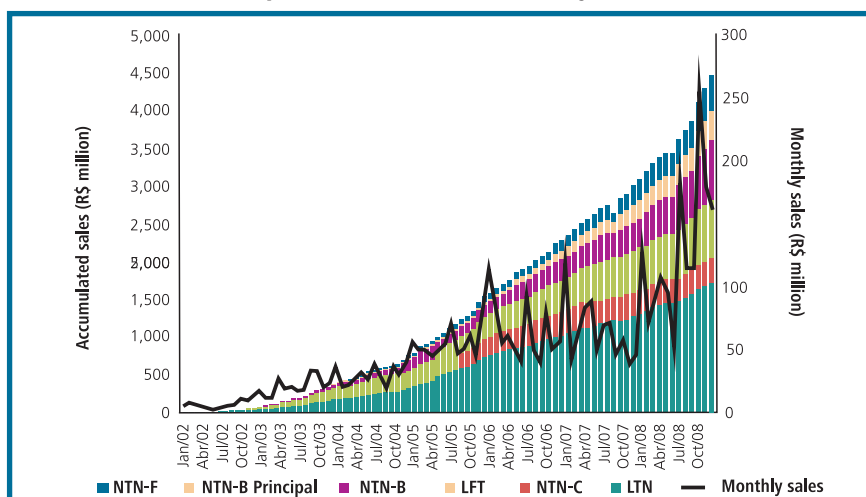
In part, this is because they are easily understood and meet investors' goals to develop long-term savings, which protect against inflation. In an economic scenario where interest rates are expected to drop in the medium term,²⁴ investors can expect excellent yields with the longer-term instruments currently offered by the National Treasury. Graph 7 shows sales over time.

Graph 7. Number of sales by investment level



Source: National Treasury

Graph 8. Evolution of monthly sales



Source: National Treasury

²⁴ See market expectations *Focus – Central Bank*.

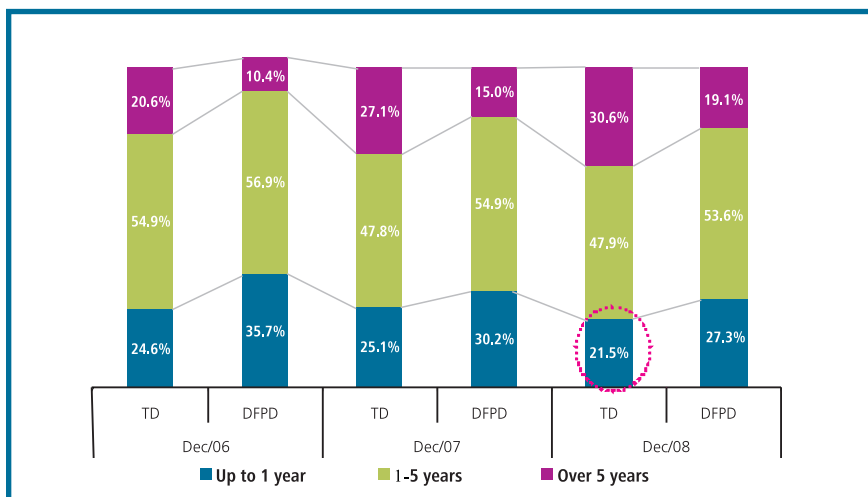
4.3 Maturities

Graph 8 compares the maturities of outstanding TD and DFPD securities. As can be seen, bonds matured over a wide range of dates: The percentage of TD securities falling due in 12 months - mainly in December 2006 - was very low when compared to the outstanding DFPD, but the share of those with maturities under five years was twice as high within the TD for 2006 and 2007, and considerably higher for 2008. When the profiles of the two stocks are compared, retail investors prompted changes within the FPD.

It should be noted that the decrease in the percentage falling due in a year occurred before and was steeper in the TD than in the overall domestic debt;²⁵ thus, by December 2006, just over a third of the DFPD matured every 12 months, while the percentage was close to a fourth with the TD. Similarly, the over-five-year share rose in the two groups but was higher and increased earlier in the TD outstanding securities: Here, the change was even more pronounced because non-resident investors were exempted from withholding taxes since February 2006, which contributed to improving the DFPD profile.

This is the second piece of evidence that individual and wholesale investors' preferences differ. As for maturities, small investors prefer longer terms because transaction costs affect them more heavily than they impact banks and institutional investors; thus, the first group would not benefit fully from market fluctuations while the latter would gain from the operational economies of scale, thereby mitigating the costs. Retail savers also seek longer terms because their alternatives (with regard to this type of savings) are limited to only a few products, which have less attractive yields.

Graph 9. Outstanding securities by maturity



Source: National Treasury

4.4 Investors' profiles

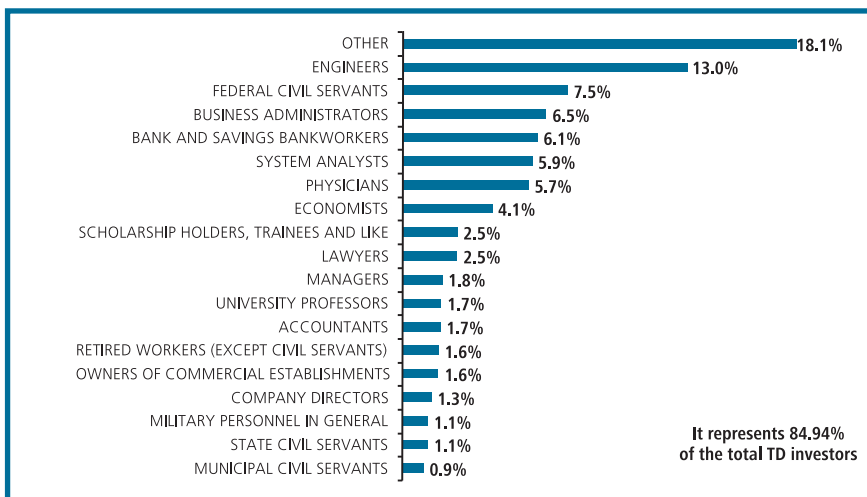
Small and medium investors, who are interested in investments that require relatively low amounts of cash, are increasingly important in terms of their participation in the TD program. Thus, it is necessary to

²⁵ Although the TD is computed in the DFPD, its outstanding securities and profile are insignificant when compared to the DFPD total.

understand their characteristics - e.g. occupation, sex, age, geographic location and frequency at which they participate in the system - so the program can be tailored to their needs when appropriate.

In late 2008, registered TD investors represented 101 professions of which only 14 had a participation level above 1.5%. Engineers were the most numerous, accounting for 13%, followed by Federal civil servants (7.5%), business administrators (6.5%) and bank employees (6.1%). This last number was surprising, as it was thought the share of bank employees would have been higher, given their easy access to financial services.

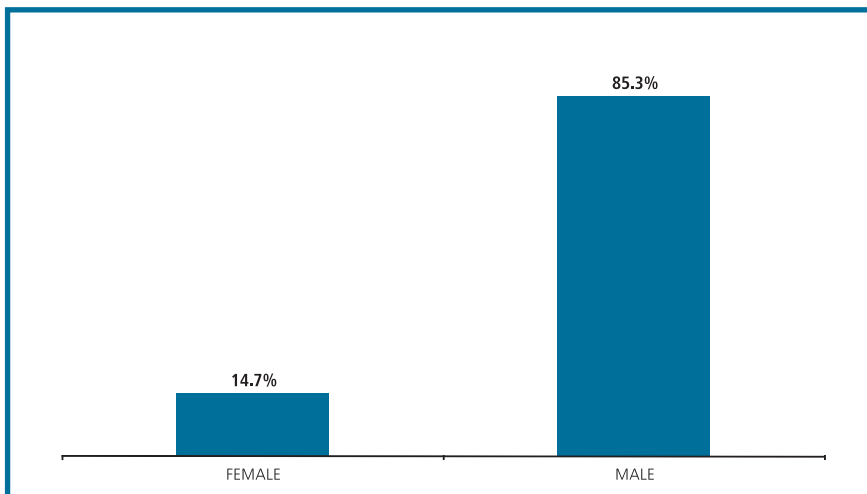
Graph 10. Investors by profession



Source: BM&FBovespa
Prepared by: National Treasury

However, in 2007, Federal civil servants were the most numerous, accounting for 62.5% of the total. This fact is linked to this group’s relatively high savings, when compared to other occupations. Economists were the second most active group, which could reflect their greater familiarity with the performance indicators for public securities.

Graph 11. Purchase distribution by gender and age – December 2008

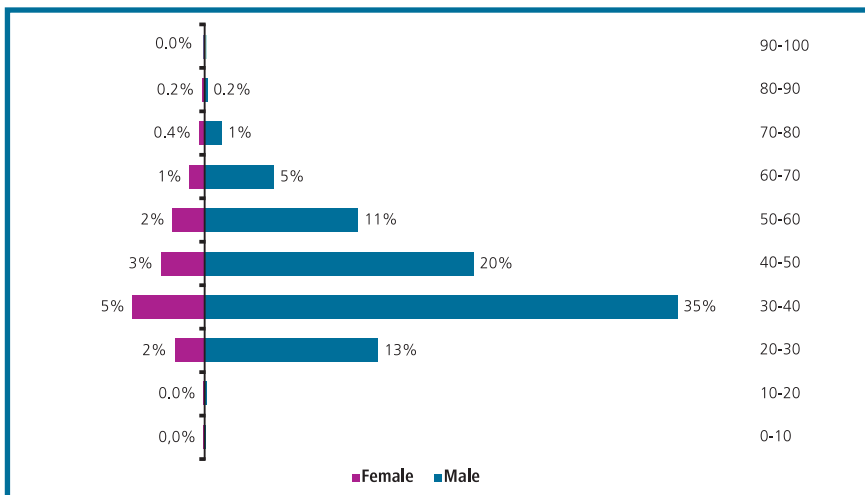


Source: BM&FBovespa
Prepared by: the National Treasury

Of those who invested at least once, 38.7% also purchased securities over the past 12 months. Men account for most of those registered with the TD program (see Graph 10) and 81.4% of those who actually bought securities. However, historical information since 2004 showed that women have been more active participants since 2004: 54.2% made at least one purchase during that time, while the figure for men was 45.8%. These figures indicate women’s higher aversion to risk, since public securities are among the safest financial assets. Thus, it is possible that men, more than women, are distributing their funds into fixed and variable income investments, as well.²⁶

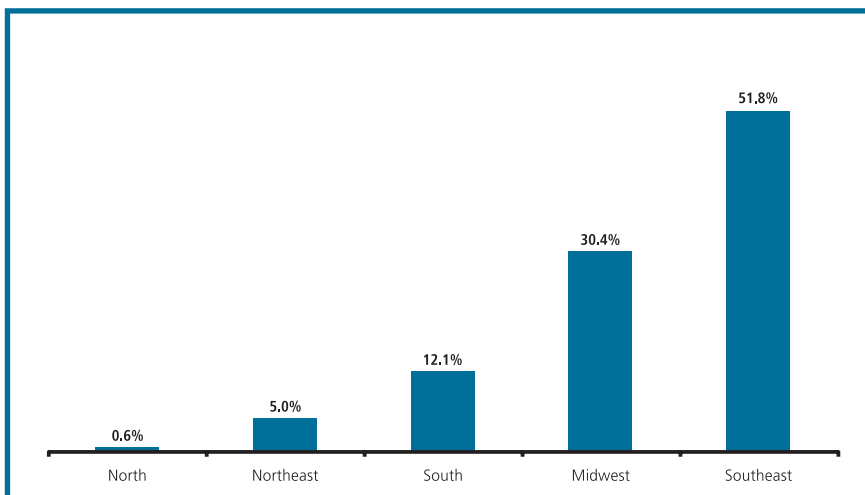
Distribution by age group is basically similar to Brazil’s demographics: Groups between 20 and 50 years of age (at 10-year intervals) represent about 15, 40 and 23%, respectively, of total participants, which is consistent with the life-cycle theory in terms of savings and productivity. Women are more numerous in the 30- to 40-year old age group.

Graph 12. Participation of registered investors by age



Source: BM&FBovespa
Prepared by the National Treasury

Graph 13. Geographic distribution of purchases



Source: BM&FBovespa
Prepared by the National Treasury

With respect to geographic locale, the data confirm the concentration of investors in Brazil's southeast (where 53% of wholesale buyers are located), while the north and northeast account for just 5.7% and the central-west region for 12%. Important growth can be seen in the south, which is the country's second richest region: For this reason, since 2006, there have been more events and training in the capitals of the three southern states. This situation is positively correlated to income concentration in those regions, along with levels of schooling and access to information. Thus, government efforts to promote the program in regions where TD participation is lower, are justified.

5 International experience

Public securities are sold directly to individual investors in many countries, especially developed economies. As noted in Section 1, the countries are motivated by different factors, but all aim to offer investors low-cost alternatives and thus diversify the base (see Table 2 for a comparison of objectives).²⁷

In general, these instruments can be divided into negotiable - similar to those purchased by large investors - and non-negotiable. Of the latter, the most important are savings and lottery bonds.

Most countries offer both negotiable and differentiated products (see Table 3) due to the positive correlation between the level of financial education and the demand for negotiable instruments - since this type of security generally requires a greater understanding of their characteristics and pricing. Even where readily available, information is generally sought by investors who value the capital market. Differentiated products represent a smaller share relative to those interested in the general program. For this group, non-negotiable and easily understood products are usually more attractive.²⁸

Table 2. Objectives of retail programs, for selected countries

Country	Objectives of retail program
Belgium	Diversify the instruments offered to retail investors Promote their participation in the market
Brazil	Democratize the offer of public securities Increase financial knowledge among local population Stimulate long-term savings Diversify the investor base Introduce competition among financial intermediaries in the retail market
Canada	Low cost financing that is stable for the government
India	Promote long-term and diversified instruments for retail investors Ensure low cost and long-term financing to the government Provide an investment mechanism for the elderly and pensionists

²⁶ In May 2007 women represented some 22% of equity investors according to Bovespa (www.bovespa.com.br).

²⁷ For detail, see World Bank (2006) "*Retail government debt programmes: practices and challenges*".

²⁸ This explanation is consistent with that of Tufano & Schneider (2005), who suggest the revitalization of US savings bonds as an important marketable product.

Country	Objectives of retail program
Ireland	Offer investors a savings alternative
Italy	Allow retail investors to choose an alternative investment
Japan	Reduce government total financing costs Diversify the investor base Promote their participation in the market
Pakistan	Ensure the government an additional financing source Encourage people to save Diversify the investor base Diversify savings instruments accessible to retail Develop a secondary market for market securities
Philippines	Diversify the investor base Reduce the concentration of public debt holders Enhance competition among dealers in primary auctions
South Africa	Diversify the investor base and financing source Diversify instruments offered to retail investors Promote long-term savings
Sweden	Borrow at the lowest cost possible, with regard for risks Offer investors a diversified and low cost alternative Enhance financial market competition
UK	Minimize financing costs in the long run, with regard for risks Diversify instruments offered to investors Provide a totally safe investment alternative Provide the government with another financing alternative
US	Borrow at the lowest cost possible, with regard for constraints

Source: World Bank

As mentioned in Section 3, Brazil is interested in expanding distribution channels and reviews various countries' experiences with respect to selling public securities to a broader public. Sweden, for example, actively promotes its program and, according to the Swedish National Debt Office, retail investors hold 5.5% of the central government debt, with lottery bonds as the main financial instrument.

Table 3. Public financial instruments available to retail investors

Country	Negotiable	Non-negotiable	
	Standard bond	Savings bond	Lottery bonds
Belgium		√	
Brazil	√		

Country	Negotiable	Non-negotiable	
	Standard bond	Savings bond	Lottery bonds
Bulgaria		✓	
Canada		✓	
China		✓	
Germany	✓	✓	
India	✓	✓	
Indonesia		✓	
Ireland	✓	✓	✓
Italy	✓	✓	
Japan		✓	
Pakistan		✓	✓
Philippines	✓	✓	
South Africa	✓	✓	
Sweden	✓	✓	✓
UK	✓	✓	✓
USA	✓	✓	

Source: World Bank

The country comparisons (see Table 4) illustrate a range with regard to type of investor access, securities' characteristics, and liquidity. The six countries, which are geographically diverse, have programs that are well established or being developed.²⁹ Most ensure investors some liquidity to redeem their funds before maturity. In Sweden, for example, investors can sell their assets via the local stock market at current prices.

Table 4. Comparisons in selected countries

Country	Internet access	Type of instrument			Liquidity
		Floating rate	Fixed rate	Inflation-linked	
Brazil	✓	✓	✓	✓	✓
Italy	no	✓	✓	✓	no
Philippines	✓	no	✓	no	✓
Spain	✓	no	✓	no	✓
Sweden	✓	✓	✓	✓	✓
USA	✓	✓	✓	✓	✓

Source: Governments' websites and other publications.

²⁹ It is important to note that the specific choice of these particular countries reflects only the greater availability of and easiness to get information on the programs, whether by the internet or (direct personal) contact.

The examples present an array of security maturities, from six months to 30 years. This allows investors to customize their portfolios by blending different maturities and types of instruments. All require a minimum investment: In Brazil, it is about \$50, possibly the lowest among the sample.

Some countries interrupted their retail programs in the 1990s (for example, Denmark and Australia) due to macroeconomic adjustments and lower borrowing requirements, as well as issues related to market operations such as cost-benefit ratios. However, other factors should also be considered, such as objectives and risks, the design of the offers to retail investors, and preconditions that are legally viable and reliable.³⁰

6 Conclusion

The economic literature indicates that a diversified investor base is needed to reduce the cost of sovereign debt and, most important, make it less susceptible to financial shocks.³¹ An analysis of the data shows that the TD has gradually met its objective to attract retail investors - despite limited media coverage.

Evidence also suggests that expanding the TD program will eventually attract more small and medium investors and provide them with important savings, as their yields will increase. Already, due to increased competition in the banking sector, loan spreads were lowered. Given this reality, the financial sector has been concerned that the TD's growth will create significant competition. However, this fear is overblown, since even an enlarged program will still only attract a small share of total investment.

Nevertheless, an expanded TD program could promote competition among financial institutions as they will need to offer interesting, alternative fixed-income investments to benefit investors. In the same manner, individuals will gain from a more efficient financial sector and a more diversified supply of assets, whose operations form the base of economic growth and reduce the tax burden, because the resources obtained through the sale of public securities are used to finance public investments in infrastructure and other essential areas.

Compared to most of the countries analyzed, Brazil relies on a high level of automation and decentralization with respect to investors' participation. Thus, the TD program's overhead is quite low: It uses web-based systems and gains economies of scale through the expertise of BM&FBovespa, the National Treasury's partner in consolidating custody-related actions, and daily interactions with brokerage firms and banks, which serve as depository agents.

Finally, it should be noted that in many developed countries, including the US, mechanisms like the TD comfortably co-exist with the financial sector: In these countries, most investment funds carry not only floating rate public securities, but offer equity funds and other portfolios with higher value-added to investors. With the structural downward trend in nominal interest rates in Brazil, it is expected that most fund managers will benefit from lower administrative costs and could switch their portfolios to more diversified structures. Thus, the TD could be a popular, effective channel to distribute public securities to retail investors.

³⁰ See Thedéen (2004) , (Glaessner, Kantnur, 2004)

³¹ (Wheeler, Jansen, 2000)

Bibliography

BASTOS, Leonardo Faccini Tavares. (2005). Available at: http://www.stn.fazenda.gov.br/Premio_TN/XPremio/divida/3afdpXPTN/3premio_afdp.pdf.

Public Finances: IX National Treasury Award. Brasília: Esaf, 2005. 76 p. Third place winner monograph. Theme: Fiscal Adjustment and Public Debt.

DIPARTIMENTO DEL TESORO DE ITALIA – DEBITO PUBBLICO. Available at: <http://www.dt.tesoro.it/Aree-Docum/Debito-Pub/index.htm>.

GLAESSNER, T.G.; KANTUR, Z. *Two case studies on electronic distribution of government securities: The US Treasury Direct System and The Philippine Expanded Small Investors Program*. World Bank Policy Research Working Paper 3372, August. 2004.

HAYES, Roger G. The path to bond market efficiency: how increased retail distribution can lower borrowing costs. *Government Finance Review*, 2003. Available at: <http://www.allbusiness.com/business-finance/equity-funding-stock/580635-1.html>.

MCCONNACHIE, R. *The retail market for government debt*. Centre for Central Banking Studies/Bank of England, 1997.

NATIONAL TREASURY SECRETARIAT; Brazilian Settlement and Custody Company (CBLC). *Treasury Direct Regulation*. Available at: www.tesourodireto.gov.br.

RIKSGÄLTEN – SWEDISH NATIONAL DEBT OFFICE. Available at: https://www.riksdagen.se/default_EN.aspx?id=1559.

TESORO PÚBLICO DE ESPAÑA. Available at:

THEDÉEN, E. *Retail borrowing: an important part of the national debt*. Swedish National Debt Office, June, 2004.

TREASURY DIRECT® – USA. Available at: <http://www.savingsbonds.gov/>.

TUFANO, P.; SCHNEIDER, D. *Reinventing Savings Bonds*. Harvard Business School, 2005.

WHEELER, G.; JENSEN, O. Governance issues in managing the government's debt. *World Bank Handbook on Public Debt Management*. World Bank, 2000.

WORLD BANK. *Retail government debt programmes: practices and challenges*. Bozena Krupa, Eriko Togo and Antonio Velandia (Treasury). World Bank, 2006.