

Green Bonds



FUNDAÇÃO GETULIO VARGAS CENTER FOR SUSTAINABILITY
STUDIES (GVces / FGV-EAESP)

FEBRABAN

Brazilian Federation of Banks

Green Bonds

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EXECUTIVE SUMMARY

This study aims to contribute to the discussion about the opportunities and the limits to the development of a Green Bonds market in Brazil, in line with international experience.

The research consisted of a bibliographical review, interviews with international participants in the Green Bonds market and with organizations in Brazil involved in capital markets, feedback sessions with members of the FEBRABAN Working Group and the opinions of the GVCes team.

The first part of the report describes the features of Green Bonds prevailing on the international market; the second discusses the features of the Brazilian corporate bond market and the challenges to developing in Brazil a market for green bonds along the lines of international experience. The third part presents the conclusions and suggestions for developing this market in Brazil.

The international experience: Green Bonds (GBs)

- Between 2010 and 2014, US\$ 57.9 billion in GB were issued on the international market, which indicates the development and consolidation of an innovative market whose aim is to finance projects that adopt socioenvironmental criteria, thereby contributing to sustainable development.
- The GB market is attracting a new group of investors interested in acquiring bonds that comprise part of their green investment initiatives.
- Potential issuers of GB, those who detect opportunities for projects with socioenvironmental criteria in their business, are encouraged to issue this type of bond in order to bolster their reputation. Reputation involves image and reliability/credibility. This differential, in turn, can become an important competitive advantage for the organization. Moreover, GBs open the doors to a wider range of investors committed to responsible investment.
- The process for issuing GB differs from that of traditional bonds solely because of the need to hire a second opinion agent, who must attest that the prospective project fulfills the socioenvironmental criteria required for classification of the GB.
- The international GB market has grown and is now economically viable without the use of fiscal incentive mechanisms. Those countries where GBs prosper have similar characteristics, such as low interest rates, less macroeconomic uncertainty and lower market risk, with government securities that deliver lower levels of returns. Against this background, corporate bonds offer investors attractive returns and a favorable environment for raising long-term funds for investment projects with a socioenvironmental bias. Furthermore, greater awareness about socioenvironmental issues attracts the attention of major asset managers in search of returns, reputation, and shared benefits.
- Key aspects here are the legal certainty of markets that issue international GBs, the reputation and risk rating of the issuers, and the track record of funding using other instruments.
- The international GB markets do not require distinctive and specific legislation. As a result, they are founded on market principles in which the supply and demand for bonds are sustained by incentives perceived both from the point of view of the issuer and the investor. This situation is governed by a win-win logic which, above all else, provides society with socioenvironmental benefits.

Why is the GB market facing development hurdles in Brazil?

There are still some substantial structural challenges when compared with the international capital markets, not to mention the momentary challenges facing the country and which affect this class of investment.

1. Government bonds enjoy a different level of competitiveness over corporate bonds.
2. The low secondary market liquidity in Brazil hampers the development of the corporate bond market.
3. Highly concentrated investor market, with low participation by private individuals and foreigners.

1. The process for placing GBs on the market is extensive and comes with an additional cost (second opinion)
2. Lack of incentive for underwriters to structure a GB, in detriment of a traditional debenture.
3. Investors perceive a higher risk associated with GBs is the case of project financing for new technologies.

Why should Brazil make a big effort to develop a domestic GB market?

Although the Brazilian economy is currently experiencing a macroeconomic adjustment process – witness the economic slowdown, high inflation rates and rising basic interest rates – the government is looking for innovative ways to facilitate investment in the infrastructure Brazil needs. Add to this context the appearance of new business opportunities and investment projects which, naturally, will require private sector funding. The private sector needs to find new means of funding and, given international experience, GBs represent a way of diversifying investments which providing society with shared socioenvironmental benefits that are important for the transition to a sustainable economy.

PROPOSALS TO FACILITATE THE DEVELOPMENT OF A GB MARKET IN BRAZIL

The recommendations have been classified into i) structural proposals; and ii) specific GB proposals. It should be pointed out that all proposals are based on several assumptions described below. The assumptions adopted when preparing the proposals were:

- Structural agenda: Based on Brazil's current and historical economic scenario and the challenges underlined in this study, all proposals presented are channeled towards building a constructive agenda. This agenda is structured around the medium and long term and its aims are the development and competitiveness of a future GB market in Brazil. Thus, the proposals take into account, in the future, the convergence of aspects involving the economic scenario, such as the creation of savings and an increase in market liquidity, together with greater concerns about sustainability on the part of society and the institutions.
- GBs are products derived from the traditional fixed income market: GBs are traditional bonds with socioenvironmental criteria. As a result, it is assumed that the set of specific proposals for developing a GB market in Brazil lies within a much wider context, the bond market.
- The proposals for facilitating the GB market were analyzed so as not to aggravate the distortions and asymmetries that exist in the fixed income market: In the light of the foregoing, the proposals presented must not contribute to distortions that impact prices, transparency and access to the fixed income market.
- All assets of the fixed income market can, in theory, be green. It is generally accepted that any asset traded on capital markets can be configured as a green asset to the extent that it contributes to financing a sustainable economy and is backed up by a second opinion agent. However, in order to enjoy this classification, the socioenvironmental criteria must be measurable and assured, guaranteeing transparency in the use of the proceeds raised, which in turn must be in line with the principles of sustainable development.
- All assets must offer a competitive risk-return ratio in relation to traditional bonds. To engage with the mainstream market, and if a green bonds market is to effectively prosper in Brazil, the risk-return ratio must be compatible and competitive in relation to traditional assets.
- Definition of a standard for the concept of socioenvironmental criteria and KPIs. A certain subjectivity still prevails when classifying projects that meet the criteria for socioenvironmental criteria. There is a need to define a protocol of eligibility criteria that engage with the financial and manufacturing sectors if a bond is to be considered "green". Moreover, it is crucial for such criteria to abide by the international parameters already widely used.

To kick-start the process for issuing GB in Brazil, it is suggested engaging with businesses that already have sustainability practices, good credit ratings and which need to raise funding. Besides financing specific projects with socioenvironmental criteria, GBs can also be used to finance a company's cross-the-board sustainability strategy.

STRUCTURAL PROPOSALS

Bearing in mind the work being undertaken by the Anbima, together with the Brazilian Securities Commission (CVM) for structural improvements to the Brazilian capital markets in general, GBs would benefit from:

1. Reduced asymmetry in tax incentives for different classes of investment.
2. Fewer hurdles to the placement of bonds in the market.
3. Better liquidity on the secondary market.

However, one must draw attention to several specific proposals for developing the GB market in Brazil, bearing in mind the challenges in terms of scenario and structure that the Brazilian fixed income market needs to overcome.

SPECIFIC PROPOSALS FOR GB

1. **Creation of uniform guidelines for classifying GBs.** In the case of a project classified under these criteria, the company could embark on a fast track and, as a reward, issue bonds much more quickly. Uniform guidelines would also have a positive impact on the work of the underwriter, who would have a much clearer idea of how to structure these products. Therefore, it is recommended developing a sub-chapter, within the rules and guidelines governing standardized debentures, that clearly sets out the criteria and indicators of projects with socioenvironmental criteria. Such uniform guidelines can take their inspiration from international experience, adapting this to the Brazilian context.
2. **Development of local Second Opinion agents:** it is important to encourage the creation of domestic second opinion agents that can work together with their international peers, thereby creating a locally competitive network.
3. **Improvement in the risk perceived by investors with regard to socioenvironmental projects, by means of guarantees provided by multilateral institutions:** Multilateral agencies, several domestic sector-specific funds that already exist, as well as the BNDES (Brazil's economic and social development bank) could become guarantors of some GB transactions for the purpose of disseminating green bonds on the domestic market.
4. **Encourage anchor investors for GB issues:** Engage with investor signatories of the UNPRI (Principles for Responsible Investment), in order for them to assist in boosting their demand. Multilateral institutions could also contribute to structuring the process of engaging with anchor investors.
5. **Move ahead in disseminating information to agents involved in the GB market:** Raise awareness and disseminate information about GBs to issuers, underwriters, and investors.

The set of assumptions and proposals presented above aims to develop a GB market using solutions created by the agents themselves involved in this and without fiscal incentives provided by the government. This is about building a structured, long-term agenda that should enable a market to develop with few or no distortions.

International experience within the context of GBs inspires the development of a market without recourse to fiscal incentives. Internationally, the market is advancing based on the cost-benefit status whereby investors are attracted by competitive rates to traditional bonds and place great store by the responsible allocation of the proceeds. Brazil, notwithstanding its peculiarities, must move forward towards establishing the GB market in Brazil, inspired in this international reality.

Above all, it is crucial for the GB market in Brazil to grow in a credible manner, ensuring that the proceeds are invested in projects that go hand-in-hand with the principles of sustainability. If this is to come to pass, the second opinion agent will a key role as the market faces the challenge of coming up with solutions to ensure that the job gets done.

PRESENTATION

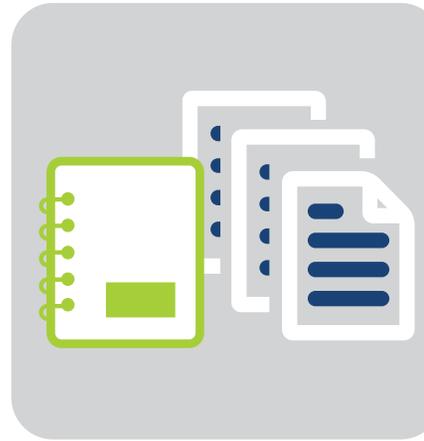
In 2014, FEBRABAN and GVces agreed to a partnership to analyze possible ways forward for leveraging the transition to a Green Economy in Brazil, through the Brazilian Banking Sector.

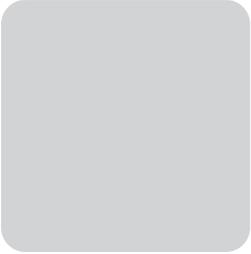
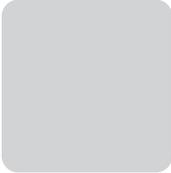
The outcome of this partnership was the publication, in April 2015, of a book that presented the results of three supplementary studies on the issue: the volume of funds allocated by the financial industry to the Green Economy as of 12/31/2013, the institutional and regulatory framework for the Brazilian Banking Sector regarding this issue, and the relationship between finance and sustainability in two sectors and on two economic issues: agribusiness, renewable energy, biodiversity and cities. Taking the FEBRABAN-GVces partnership to the next stage, this study seeks to contribute to the discussion surrounding the opportunities and limits to developing a market for Green Bonds in Brazil, in line with international experience.

The study involved: i) a bibliographic review, especially reports on international issuances of Green Bonds and the outlook; ii) interviews with international participants in the Green Bonds market and capital markets organizations in Brazil, including private sector companies, sectorial organizations, banks, investors and government; iii) discussions with the members of FEBRABAN comprising the Working Group organized for this project; and iv) internal discussions among the GVces team.

This report is divided as follows: the first part deals with the features of Green Bonds, based on evidence in the international market. The second part discusses the Brazilian corporate debt market and the challenges to developing in Brazil a market for green bonds in line with the international experience. In part three, the report concludes with proposals for developing this market in Brazil.







I. GREEN BONDS: THE INTERNATIONAL EXPERIENCE

Developed on the international market, GBs represent a new way of diversifying investments.

Sustainability is an issue of increasing interest in corporate decisions, and requires funds in order to finance projects with socioenvironmental criteria. It promotes access to several funding sources, including debt instruments, a method of financing among the most economical ways of accessing external financing, and for that reason frequently used in the corporate market¹.

A traditional debt instrument is a fixed income security in which the bond issuer raises a fixed amount of funds from investors over a previously agreed time frame, remunerating them with interest payments (coupons) during the period. However, there is a rapidly growing global “green” securities market whose potential is estimated at 100 trillion dollars². The main difference between traditional and “green” securities, known as Green Bonds (GB) is the use of the proceeds.

When issuing GBs, the issuer raises funds exclusively to finance sustainable projects, such as renewable energy, energy efficiency, sustainable waste management, low carbon transportation, forestry projects, etc. The bonds can also be used to finance social benefit projects, such as improved healthcare and social services. For more information about the use of proceeds, see the Exhibits.

There are two sources of specifications that assist in qualifying projects eligible for GBs: the Green Bond Principles and the Climate Bond Standards. The Green Bond Principles represent a voluntary initiative that sets out guidelines clarifying the approach to issuing a GB. It recommends transparency and disclosure, in addition to fostering integrity in the market. Its executive committee consists of representatives of issuers, investors and intermediaries in the GB market, and is supported by the International Capital Markets Association (ICMA). The signatories to this initiative amount to over one hundred institutions, among them Blackrock Inc., KfW, the European Investment Bank, the World Bank, Bank of America-Merrill Lynch and JP Morgan Chase & Co.. The full list of the signatories to the Green Bond Principles can be found in the Exhibits. The Climate Bonds Standard is a tool for assessing the environmental integrity of bonds whose purpose is to mitigate and adapt to climate change. It consists of eligibility criteria for investments in solar and wind energy, transportation and green buildings. There are 34 partners in this initiative, such as Rabobank, Credit Suisse, Bloomberg and Allianz, among others. See the list of the Climate Bonds Standard partners in the Exhibits.

When the bonds issued seek to specifically mitigate the impacts of climate change, they are frequently referred to on the global market as Climate Bonds. In this scenario, their purpose is to mitigate greenhouse gas (GHG) emissions in new projects, or adapt existing projects so as to reduce GHG emissions and allow gains in operational efficiency with low environmental impact³. Thus GBs present a new way of diversifying investments. The bonds can be issued by governments, banks, supranational institutions, public sector and private sector corporations, while the remunerations conditions and characteristics are decided during the issuing process.

¹ (Petrasek, 2010)

² (Climate Bonds Initiative, Accessed in 2015b)

³ (Mathews & Kidney, 2010)

The bonds can be structured in four different ways: Green Use of Proceeds Bonds, Green Use of Proceeds Revenue Bonds, Green Project Bonds or Green Securitized Bonds. Their respective features are shown in detail in **Table 1**.

TABLE 1. CLASSIFICATIONS OF GREEN BONDS

TYPE	USE OF THE PROCEEDS	BOND COLLATERAL
Green Use of Proceeds Bonds	Intended for sustainable projects	Guaranteed by the issuer, and an assessment and credit risk score by independent agencies
Green Use of Proceeds Revenue Bonds	Intended for sustainable projects	Cash flow from the project as collateral for the transaction
Green Project Bonds	Specific sustainable project	Project assets and financial information
Green Securitized Bonds	Intended for sustainable projects or some specific sustainable project	Group of assets and cash flows

▲ SOURCE: CLIMATE BONDS INITIATIVE

It is worth pointing out that, in the case of Green Corporate Bonds, more than specific projects their aim is to finance the entire sustainability strategy of a company. These bonds are classified as Green Use of Proceeds Bonds.

The differential of GBs is not to raise cheaper funding, but to be a benchmark for investing resources in projects that are economically viable and responsible from the socioenvironmental point of view.

To attract the interest of investors, companies interested in issuing GBs approach the method of funding in a similar manner to a traditional debt instrument. Although the funds raised are intended for projects with socioenvironmental criteria, the returns offered to investors are compatible with those of traditional securities available in the market.

Therefore, the primary motive for issuing a GB involves aspects of reputation, since it does not involve an issuance at lower rates. By issuing green bonds, companies demonstrate their commitment to socioenvironmental aspects while building a good corporate image. In addition, they are able to access a wider range of investors: those engaged in socioenvironmental issues.

On the investor side, the incentive for acquiring a GB is linked to the possibility of diversifying their investment portfolio, accessing profitable projects with socioenvironmental criteria and greater transparency in investing their financial resources. Moreover, the incentive is also associated with the fulfilment of specific mandates from investors involving the concept of Socially Responsible Investment (SRI). Many investors adhere to specific guidelines limiting the composition of their portfolio to investments that take into account the socioenvironmental consequences. This concept creates value for the investor and the company.

Moreover, by investing in GBs, investors are aligned to the Principles for Responsible Investment (PRI). The PRI aims to assist in integrating environmental, social and governance (ESG) issues into investment decision-making and ownership practices, thereby enhancing long-term returns to the beneficiaries.

GB programs have peculiarities in relation to traditional ones; therefore they require the participation of an additional agent in the process, which affects the costs of issuing the bond.

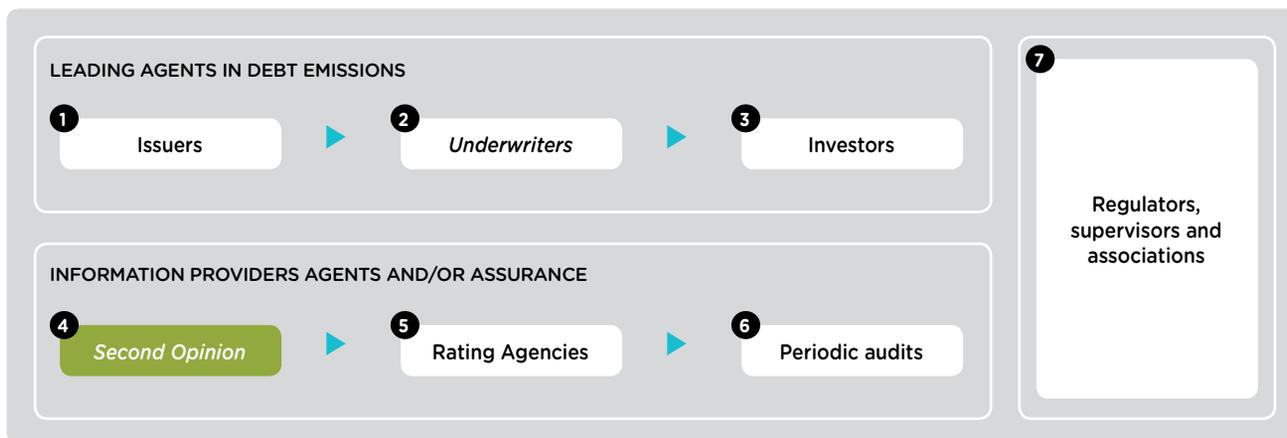
Issuing a GB arises from the need for financial resources by a potential issuer, who identifies and defines a project with socioenvironmental criteria. In traditional bond programs, the players involved in the process include issuers, underwriters, investors, rating agencies, periodic audits and, lastly, regulatory agents. However, issuing a GB requires the involvement of a specific agent not found when issuing traditional securities: the agent providing the so-called second opinion.

Figure 1 shows the typical participants in the process of issuing GBs, while the characteristics and role of each one are detailed below.

GREEN BONDS (GB)

FIGURE 1. TYPICAL PARTICIPANTS IN GREEN BOND PROGRAMS.

CAPITAL MARKETS



▲ SOURCE: GVCES

1 Issuers: Institutions with a potential project with socioenvironmental criteria and which opt to issue GBs to raise funds, bearing the additional costs of this type of issuance. The principal issuers of GBs are privately held corporations, supranational institutions and multilateral development banks. Besides these participants, countries, states, and municipalities raise funds by issuing GBs through their institutions.

2 Underwriters: Institutions that play a leading role in issuing GBs. They are chosen by the issuer for the role of lead manager of the transaction, with responsibility for developing the structure, the price and bringing the bond to market. Structuring the transaction involves defining the characteristics of the bonds, such as maturity date and coupon payments. The bond price is estimated after assessing the interest of investors in the bonds and adjusting the return so as to make it attractive both for the issuer and the investor. The process includes the transaction road show for potential investors, which in the light of the interest clears the way for developing the process for registering the intentions of investors to purchase⁴.

3 Investors: The characteristics of GBs are catching the attention of different investors. They include institutional investment funds, specialist ESG investors, corporations, governments, and retail investors⁵. The principal investors in GBs on the international market include BlackRock, Pax World Management, 3M Company (corporate), Pfizer (corporate), California State Treasurer's Office, Standish Mellon Asset Management, CalSTRS State Street Global Advisors, Calvert Investments, Microsoft (corporate) and Zurich Insurance Group, among others⁶.

4 Second Opinion Agents: Institutions that assess and validate the sustainability features of the projects for which the proceeds of the funding are intended⁷. They provide the investors with details of the features of the investment, indicating the reasons why the project qualifies for issuing GBs. The institution analyzes the issuer's corporate social performance, discusses the principal points raised about the project and analyzes the issuer's ability to mitigate the potential risks of the project. The services of a Second Opinion institution are not mandatory in a GB program, but they add credibility to the process. The work performed by these institutions can be extended to include monitoring and auditing of the project. On the international market, 63% of the total transactions closed involved the services of a Second Opinion Agent⁸.

4 (DTCC, 2004)

5 (Climate Bonds Initiative, Accessed in 2015a.)

6 (Goldman Sachs, 2014)

7 (Climate Bonds Initiative, Accessed in 2015)

8 (Climate Bonds Initiative, Accessed in 2015)

5 Rating agencies: Institutions that provide credit assessments, studies, tools and analyses that contribute to the transparency and integration of the financial markets, for which reason they are important in capital markets. GB programs are subject to credit risk. The risk involves the possibility that the investor will incur financial losses in the event the issuer cannot meet the obligations assumed when the bond matures.

Risk rating agencies, although not yet incorporating socioenvironmental issues in their analyses, operate with a set of parameters and procedures that form the grounds for assessing the risk level of a borrower. This activity consists of a risk measurement, known as risk classification or rating, which represents a degree of expectation regarding the risk of the borrower defaulting. Risk classification is therefore a consideration regarding the overall quality of an issuer, based on material risk factors⁹. For the issuer of a GB it is important to obtain a credit risk rating from a globally recognized rating agency, so as to generate liquidity for their bonds. Since green bonds are long-term financing instruments, reputation risk for the issuers extends for the entire life of the bonds; thus, the effect of the issuer's risk rating will be reflected in the volume offered, the maturity date and the remuneration of the bonds.

6 Periodic audits: Specialist audits that analyze operational and financial information in accordance with international auditing standards, such as the International Standard on Assurance Engagements 3000 (ISAE 3000)¹⁰. The role of these agents is recognized by the Green Bond Principles as a much stricter means of evaluating projects¹¹. The diligent work of the oversight agent guarantees quality and independence, ensuring that the agents are genuinely independent from the bond issuer. Moreover, this work enables investors to trust that the monitoring processes and the management of the proceeds are sound¹².

To initiate a transaction, an issuing prospectus is prepared. It contains information about the issuer, a brief section about the underwriting and structure of the offering. Once approved, the issuing prospectus can be sent to investment banks and presented to the capital markets. In the next phase, the transaction is officially registered. The issuer sends a declaration of registration to the financial market regulator, with a forecast of the size of the offering. From then on the issuer can sell the bonds on the first day of the offering to the market, or over a predetermined period, usually two years. This process is accompanied by annual and quarterly reports of the sales performance of the bonds¹³.

The underwriter is entitled to distribute the securities to a range of investors in the market. He defines an indicative price range and invites investors to submit their purchase orders, where each purchase order shows the number of securities wanted for each price range. At the end of the process, the underwriter sets a single issuance price and distributes the securities in a discretionary manner¹⁴.

During the structuring process carried out by the underwriter, the issuer of the bonds must clearly define the use of proceeds in a project with socioenvironmental criteria. The definition of the use of proceeds is accompanied by a project evaluation process that aims to certify the socioenvironmental features of the project.

The purpose of the funding must fulfill the eligibility criteria and be in accordance with environmental, social and governance (ESG) issues. In addition, Key Performance Indicators - KPIs must be defined.

⁹ (S&P, 2015)

¹⁰ <https://www.ifac.org/publications-resources/international-standard-assurance-engagements-isa-3000-revised-assurance-enga>

¹¹ (Green Bonds Principles, 2014)

¹² (KPMG, 2015)

¹³ (DTCC, 2004)

¹⁴ (Benveniste & Spindt, 1989)

The differentiated features of the projects and the role of the second opinion agent in the issuance process mean that the issuance costs associated with GBs tend to be higher than the issuance costs of a plain vanilla debt instrument. The additional costs are justified by the process for identifying the need for the proceeds, the evaluation and selection of the socioenvironmental features of the projects, oversight, monitoring, managing the proceeds and the disclosure of information to the investors.

The remuneration offered by GBs, as well as their maturity periods, reflects traditional fixed income bonds.

The issuer's risk rating and the maturity date of the bonds are the most influential aspects in the final remuneration paid to the bond investors. GBs remunerate the principal amount via interest payments defined during the issuance process, and remuneration can be via a lump sum on the maturity date of the bond, or at defined intervals over the maturity period.

Remuneration in the form of interest can be prefixed (Fixed Rate Bonds) or post-fixed (Floating Rate Bonds)¹⁵. Fixed rate bonds are those whose total remuneration in the form of interest is defined and disclosed when the bonds are issued, and applies to the entire maturity period of the bonds. Fixed rate bonds ensure greater predictability regarding the interest receivable; however, they are subject to interest rate and inflationary shocks. Floating rate bonds, in turn, aim to smooth out the effects of the variations in interest rate and inflation, associating part of the bond's remuneration with an index reflecting the variance in those factors. In this case it is impossible to determine the total remuneration at the time of issuance, only when the bonds mature.

Interest rate indices traditionally match the interest rates practiced between financial institutions in the market of issuance, which are usually pegged to the other interest rates prevailing in the economy. Benchmark indices pegged to interest rates aim to adjust the remuneration on the bonds, given the variance in the interest rate in the economy local. Inflation indices, however, strive to accompany the variance in inflation of a given economy by correcting the amount of each coupon payment on the maturity date.

The average maturity period of GBs is 7 years¹⁶, in line with traditional bonds.

GBs can present additional risks to traditional corporate bonds, depending on the nature of the projects with socioenvironmental criteria.

As with traditional bonds, GBs are exposed to risks encompassing structuring, credit and market liquidity. The bonds peg the amount of principal and interest to currency rates and commodity prices, domestic and external interest rates, credit events and the behavior of indices, among other events, that may lead the issuer to redeem the bonds in advance.

Credit risk can arise when the issuer is facing a default event that affects their credit capacity, thus imposing losses on the bondholders. Default risk is considered a risk of the bond issuer, as it is associated with the intrinsic characteristics of the borrower of the funds.

Bonds can also face market liquidity risk. The prices of the bonds on the secondary market are affected by a variety of factors, including expectations involving interest rates and future macroeconomic scenarios. Long-dated bonds are most affected and may be traded at lower prices than the issuance price, imposing losses on bondholders looking to redeem the bonds for cash prior to the maturity date. Moreover, bondholders may find it difficult to sell the bonds before the maturity date, at prices that reflect the bondholder's opinion as to the fair value of the bonds.

Thus, a project with socioenvironmental criteria, the target of a GB, may create a heightened perception of risk. This is due to the fact that GBs finance, for example, new technologies about which the performance of a potential project is an unknown quantity. When projects contain a high perception of risk, additional collateral is required. Furthermore, in the case also of smaller projects,

¹⁵ (WorldBank, 2013)

¹⁶ (Climate Bonds Initiative, Accessed in 2015b)

such as those involving energy efficiency, the risk-return ratio is quite often adversely affected. Traditional credit rating agencies could assist in understanding these risks by incorporating socioenvironmental criteria in their analyses. Moreover, grouping projects together according to the nature (for example energy efficiency) affords the transactions scale and uniformity of risk.

1. CHARACTERISTICS OF THE INTERNATIONAL GB MARKET

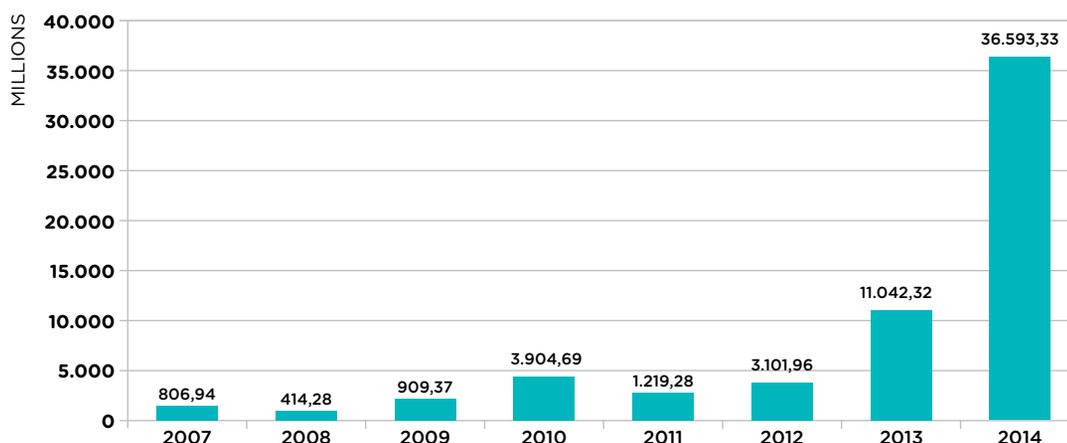
The global GB market has been growing apace, especially after 2013, and points to an opportunity for public sector and private sector corporations to raise financial resources to finance projects with socioenvironmental criteria in which the earnings generated are shared with society as a whole.

From 2007 to 2014, international GB issuances totaled 57.9 billion dollars. The peak was reached in 2014, when 36.5 billion dollars were issued.¹⁷

The first structured GBs were issued in 2007, on the initiative of the European Investment Bank (EIB) and the World Bank. Some €600 million of GBs were issued in response to the demand from pension funds for projects with socioenvironmental criteria. Since the first issuance, known as Climate Awareness Bonds (CAB), the EIB has raised over €3.4 billion for investments in projects with a socioenvironmental bias¹⁸.

In the period between 2007 and 2012 the global GB market grew discretely, effectively taking off as from 2013 onwards. The decisive factor for propelling the global GB market was the bond issues by private sector companies. With more sustainable investment projects, privately owned corporations tapped the market for the first time, tripling the GB market in 2013. From 2007 to 2014, some 57.9 billion dollars in GB s were issued through 332 transactions. **Figure 2** shows the evolution of the GB market in this period.

FIGURE 2. WORLD GROWTH OF GB ISSUANCES (MILLIONS OF US\$)



SOURCE: CLIMATE BONDS INITIATIVE

¹⁷ (Climate Bonds Initiative, Accessed in 2015a.)

¹⁸ (EIB, 2014)

GREEN BONDS (GB)

With the GB market now more mature, the year 2014 enabled the placement of high-income (junk) bonds, that is, bonds with higher exposure to default risk, issued by a company without an investment grade rating issued by a rating agency. Abengoa Greenfield, a Spanish renewable energy services company, successfully issued the first junk bonds, enabling it to raise €500 million to finance its projects. Junk bonds are exposed to higher risk, but they also offer higher returns, an attribute that has caught the attention of a large number of investors.

The record of 36.5 billion dollars in GBs issued in 2014 funded corporations and made possible countless projects with socioenvironmental criteria. Some 143 transactions were closed that year, involving several issuers in different sectors and currencies, (US and Australian dollars and Swedish and Norwegian krona, among others). In 2015, the GB market has continued highly active, exceeding 10 transactions in January and February.

See a sample of GB emissions and their details in **Table 2** and **Table 3** below:

TABLE 2. SAMPLE AND DETAILS OF GB TRANSACTIONS

TRADE DATE	ISSUER	S&P/ MOODY'S RATING	SECTOR	CURRENCY	AMOUNT (MILLIONS)	COUPON (%)	MATURITY DATE	OVERSUBSCRIPTION	NEW ISSUES PREMIUM	LAUNCH SPREAD VS. MS (BPS)
24/Sept/14	Abengoa (GB)	B/B2	Engineering and Construction	EUR	265	5,500	1/out/19	-	-	472
26/Jun/14	Hera Spa (Green)	BBB/Baa1	Utility	EUR	500	2,375	4/jul/24	3,4x	20	100
12/May/14	GDF Suez (GB)	A/A1	Utility	EUR	1200	1,375	19/mai/20	3,1x	5	42
12/May/14	GDF Suez (GB)	A/A1	Utility	EUR	1300	2,375	19/mai/26	2,9x	0	60
8/Apr/14	Iberdrola (Green)	BBB/Baa1	Utility	EUR	750	2,500	24/out/22	4,0x	2	97
19/Mar/14	Unilever (GB)	A+/A1	Consumer goods	GBP	250	2,000	19/dez/18	3,5x	-1	67 (vs. Gilts)
19/Feb/14	Unibail Rodamco (GB)	A/NR	RBT	EUR	750	2,500	26/feb/24	3,6x	6	78
20/Nov/13	EDF (GB)	A+/Aa3	Utility	EUR	1400	2,250	27/abr/21	1,6x	15	75

▲ FONTE: SANTANDER

TABLE 3. INFORMATION ABOUT THE UNILEVER GB PROGRAM

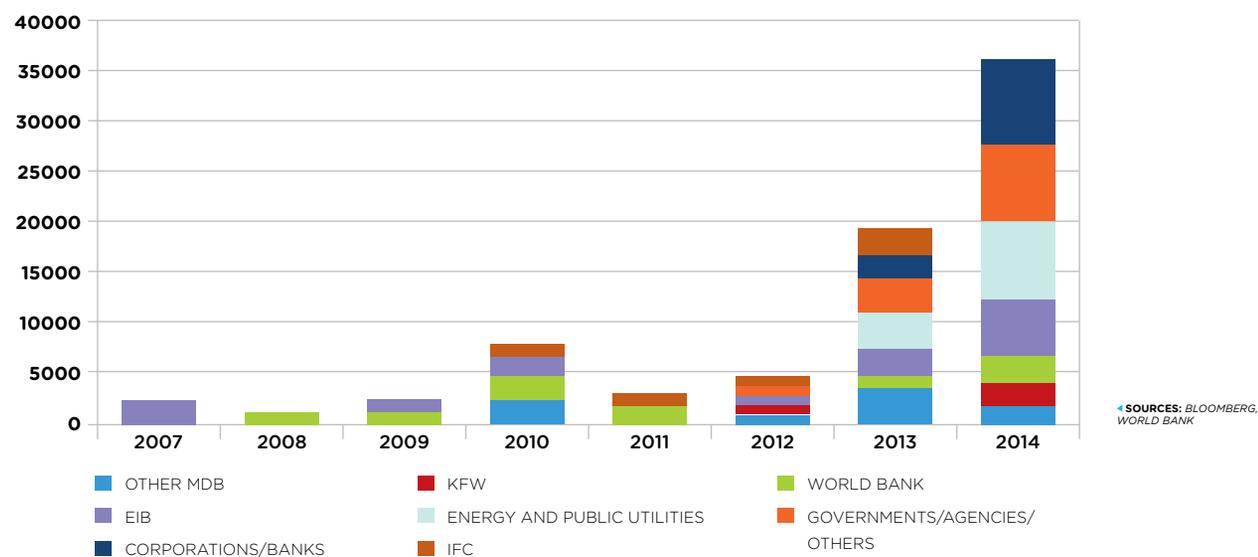
Issuer:	Unilever PLC
Guarantor:	Unilever NV and Unilever United States, Inc.
Amount :	GBP 250 million
(S&P/ Moody´s) Rating:	A1 / A+ all stable
Pricing date:	19/Mar/2014
Maturity date:	19/Dec/2018
Format:	Fixed rate
Reoffer Spread:	Gilts +67 bps
Benchmark:	UKT 5.000% Mar 2018
Reoffer Yield:	2.063% semiannual / 2.074% annual
Coupon:	2.000% annual
Reoffer price:	99,675%
Denoms / Listing:	100k + 1k / London and Amsterdam
Use of Proceeds:	Environmentally sustainable projects - GL obtained a Second Opinion

▲ SOURCE: SANTANDER

The principal issuers of GBs on the world market are the European Investment Bank (EIB) and the International Bank for Reconstruction and Development (IBRD).

The principal issuers of GBs on the international market are privately held corporations, supranational institutions and multilateral development banks (MDBs). Besides those participants, countries, states and municipalities can also raise funds by issuing GBs through their institutions.

FIGURE 3. ANNUAL ISSUANCE OF GBS PER TYPE OF ISSUER (MILLIONS OF US\$)



The EIB leads the market in funding via GB for financing projects with a low climatic impact. The funds raised by the bank are concentrated in renewable energy and energy efficiency projects. In February 2015, the institution raised GBP 500 million in floating rate bonds, at 0.07% per annum plus the remuneration corresponding to the Sterling LIBOR (London Interbank Offered Rate).

The IBRD, an international organization created by the World Bank in 1945, issued in February 2015 €30 million for sustainable economic development and poverty reduction projects around the world. These fixed rate bonds pay 1.03% per annum, with a 30-year maturity period.

Renewable energy and energy efficiency projects lead the investments raised through global GB programs

To illustrate the allocation of proceeds in projects with socioenvironmental criteria, **Figure 4** and **Figure 5** show the use of the proceeds by two major global issuers of GBs, the EIB and the IBRD, respectively.

FIGURE 4. USE OF THE PROCEEDS BY THE EIB VIA GB PROGRAMS.

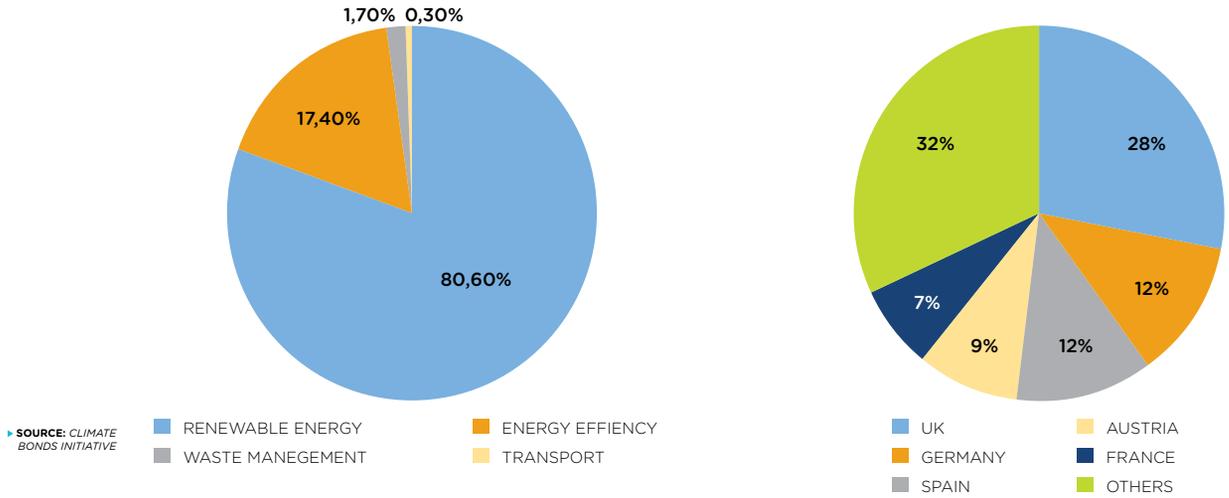
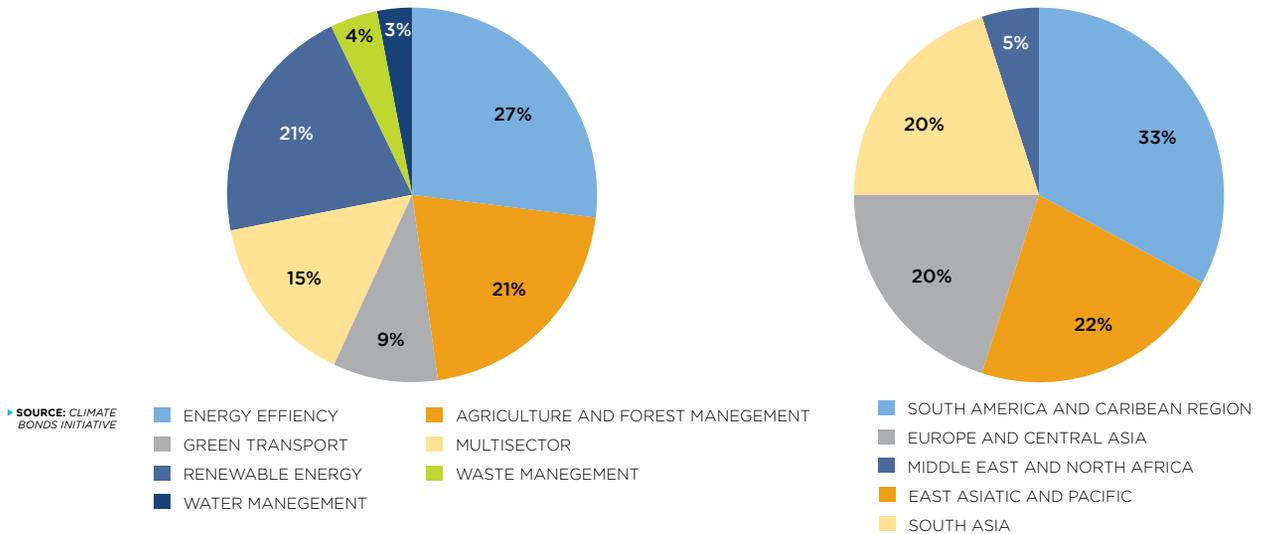


FIGURE 5. USE OF THE PROCEEDS BY THE EIB FROM GB PROGRAMS.



From these examples one can see enormous concentration of investments in projects involving energy efficiency and renewable energy; however, several other investment projects are benefiting from funds raised via GBs. In geographical terms, the use of proceeds is diluted, but Latin America and the Caribbean receive the lion's share of the investments arising from these bonds.

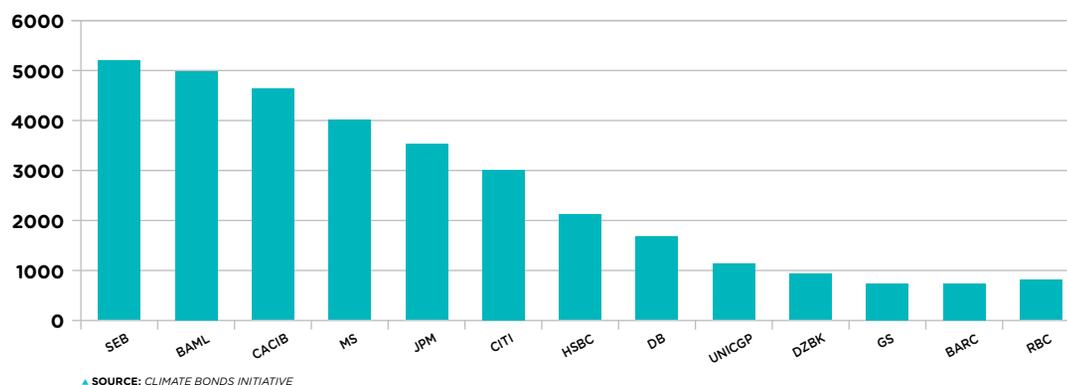
Between 2013 and 2014, the principal underwriters in the GB market were Skandinaviska Enskilda Banken (SEB) and Bank of America Merrill Lynch.

The underwriter plays an extremely important role when a GB is being issued, as they are responsible for structuring the transaction and presenting it to potential investors. Between 2013 and 2014, when the greatest volume was issued, the underwriter with the greatest presence in the world market was SEB, responsible for structuring approximately 4 billion dollars in GB.

SEB, Sweden's leading private bank, has a strong presence in the competitive investment banking market. It offers banking services in Sweden and the Baltic countries, while also serving corporate and institutional clients in the Nordic countries and Germany. The second-largest global

underwriter of GBs was Bank of America Merrill Lynch, one of the largest banks in the United States. The bank provides global financial services to individuals and businesses. **Figure 6** shows the global volume of GBs issued per underwriter in 2014.

FIGURE 6. GB PROGRAMS BETWEEN 2013 AND 2014 PER UNDERWRITER (U\$ MILLIONS).



It is worth highlighting, as the world's third-largest GB structuring agent, Crédit Agricole This organization created its sustainable business unit in 2010 for the purpose of better assisting key clients in transactions with a socioenvironmental nature, and is already a player in the GB market.

MAIN THOUGHTS REGARDING THE INTERNATIONAL EXPERIENCE IN GBS

- From 2010 to 2014, some 57.9 billion dollars in GBs were issued on the international market, which indicates the development and consolidation of an innovative market whose aim is to finance projects that adhere to socioenvironmental criteria, thereby contributing to sustainable development.
- The GB market is attracting a new group of investors interested in acquiring bonds as part of their green investment initiatives.
- Potential issuers of GBs, those that detect opportunities for projects with socioenvironmental criteria in their business, are encouraged to issue this type of bond for reputational reasons. Reputation involves image and trust/credibility. This differential, in turn, could turn out to be an important competitive advantage for the organization. Moreover, GBs afford access to a wider range of investors committed to responsible investments.
- The process for issuing GBs differs from that of traditional bonds, solely because of the need to hire a second opinion agent. They must vouch that the prospective project complies with the socioenvironmental criteria eligible for qualifying the GB.
- The international market for GBs has evolved and is now economically viable, without having recourse to fiscal incentive mechanisms. The countries where GBs have taken hold have similar characteristics, such as low interest rates, lower macroeconomic uncertainty and lower market risk, where government bonds provide low returns. In such a scenario, corporate bonds provide attractive returns for investors, as well as a favorable environment for raising long-term funding for investment projects of a socioenvironmental nature. In addition, greater awareness about socioenvironmental issues attracts the attention of major asset managers in search of profitability, reputation and shared benefits.
- Worthy of note is the legal certainty on the international markets that issue GBs, in addition to the reputation and risk rating of the issuers and the track record of raising funds through other instruments.
- International markets for GBs do not require separate and specific regulations. Thus it is founded on market principles in which the supply and demand for securities are sustained by incentives perceived both from the issuer's point of view and that of the investor. This is a situation governed by win-win logic which, above all else, provides society with socioenvironmental benefits.





II. THE BRAZILIAN DEBT SECURITIES AND GB MARKET

This section will cover the characteristics of the Brazilian debt instruments market, in addition to a current appraisal as to the feasibility of developing a GB market in Brazil along the lines of international experience.

1. THE BRAZILIAN DEBT SECURITIES MARKET

In Brazil, beginning in the 1950s, there was a major change in the profile of industrial production, requiring huge volumes of financial resources to develop corporate projects and to create and expand new markets. During this period, manufacturing development was financed primarily by the National Economic and Social Development Bank (BNDES)¹⁹.

In the 1960s a need arose to expand corporate funding channels, which was to lead to the regulation of the Brazilian capital markets. This is a specific market environment where companies in search of funding for projects, by issuing equity or debt securities, can access funds in an organized and secure manner between the parties²⁰. This led to advent of new market agents that were created to control and regulate how participants operated in this market. To that end, the Brazilian Securities Commission (CVM) was created and that same year, in 1976 Brazilian Company Law was enacted.

These measures increased the number of companies operating on the Brazilian capital markets, while also boosting the issuance of negotiable securities. The number of companies with shares traded on the stock exchange rose over the years, but the market really only took off in the 1990s, when the Brazilian market opened its doors to foreign investors.

At the beginning of the first decade of the century, approximately 490 companies were listed on the São Paulo Stock Exchange São Paulo (BOVESPA), with a trading volume of 260 billion Reais. Investors began demanding greater protection, which came about thanks to differentiated levels of corporate governance. To that end, in 2001, the stock exchange began classifying listed companies by level of corporate governance, with the advent of governance levels 1 and 2, as well as the creation of the Novo Mercado (New Market) segment. The aim of these measures was to highlight those companies with the best relations with investors, especially minority investors.

The new measures, combined with the better domestic and international economic situation spurred on the capital markets beginning in 2003. From 2003 to 2011, there were more than 100 initial public offerings (IPO) of shares on the Brazilian market, while bonds, futures contracts, foreign exchange, funds, index funds, auctions and sovereign and corporate fixed income markets also evolved. Since 2012, the annual financial volume traded on the Bovespa has exceeded 1 trillion Reais. New issues have also grown sharply in recent years, from R\$ 12 billion in 2003, to R\$ 162 billion in 2014²¹.

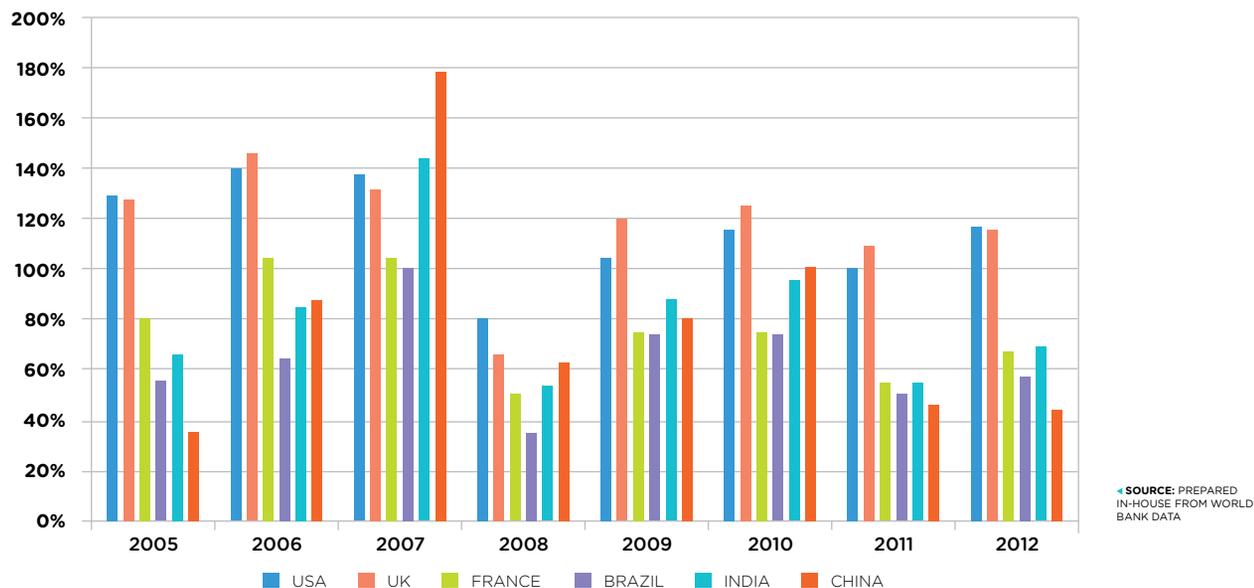
¹⁹ (Freitas, 1999)

²⁰ (Assaf Neto, 2006)

²¹ (ANBIMA, Accessed in 2015)

In spite of the growth of the capital markets in recent years, currently only 358 companies are listed on the BOVESPA, while the companies listed in the USA total 1,867. When comparing the ratio of market capitalization and annual GDP, one can see that the Brazilian equities market has performed moderately against the same ratio in other global economies. **Figure 7** shows the ratio of market capitalization to GDP in different countries.

FIGURE 7. RATIO OF CAPITAL MARKETS CAPITALIZATION TO GDP.



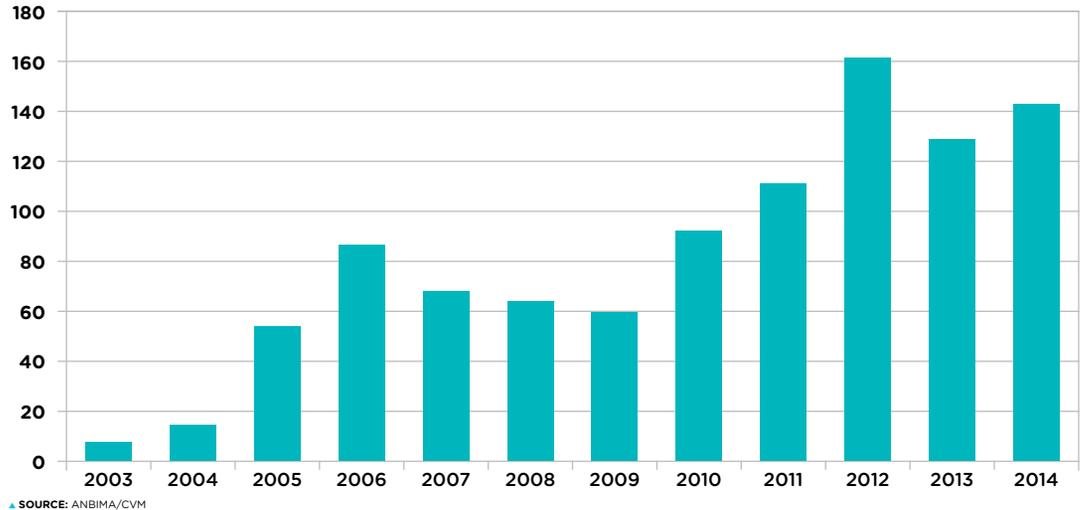
The Brazilian capital markets show greater demand for fixed income assets, which means that this market has performed better when compared to equities. The fixed income market in Brazil consists of government bonds such as LTNs (National Treasury Bills), NTN (National Treasury Notes) and CFTs (Treasury Financial Certificates). There are also corporate bonds issued by financial institutions, such as DIs (Interbank Deposits), CDBs (Bank Certificates of Deposit) and Bills of Exchange. Corporate securities issued by non-financial institutions include debentures, commercial papers and trade bills of exchange. Governments and public institutions can also finance themselves by issuing bonds. However, even the fixed income market is still feeling the effects of the long period of inflation and instability in Brazil, which are somewhat off-putting to the development of activities based on long-term commitments.

Macroeconomic instability weighs on the expectations of market players while favoring a short-term business horizon in which the uncertainty surrounding the business environment means that businesses invest in fewer investment projects and in more liquid assets. So the expectation of market participants induces a lower offer of bonds²². Recurrent fluctuations between periods of economic expansion and recession adversely affect the ability of businesses to plan and operate within a long-term horizon. From the investor standpoint there is greater aversion to risk, which leads to shorter term, more secure investments.

22 (De Paula and Faria Jr., 2012)

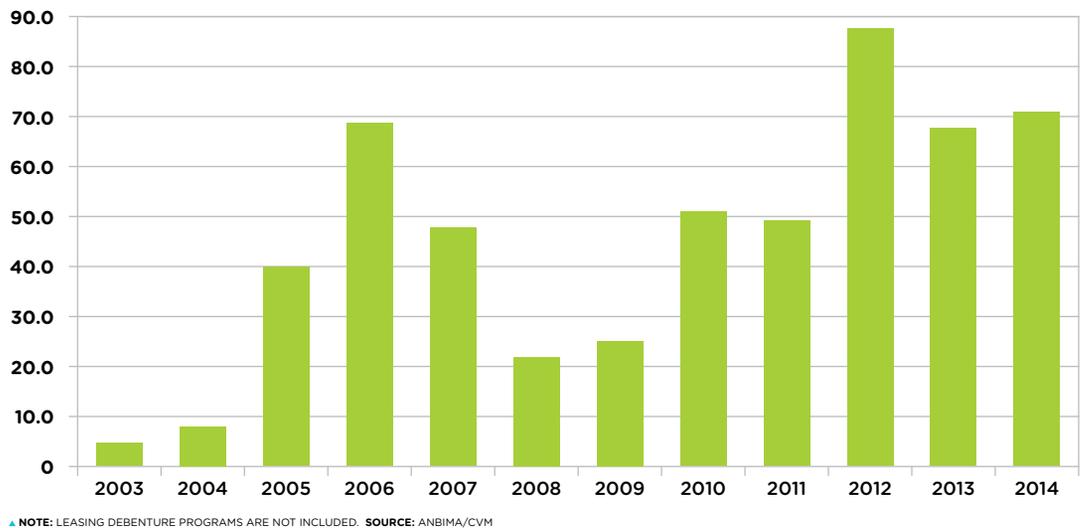
Nevertheless, the Brazilian fixed income market has shown growth over the past 15 years. The stock of private sector offerings in 2003 was R\$ 9 billion, rising to R\$ 146 billion in 2014. This evolution in the offer of fixed income products can be seen in **Figure 8**

FIGURE 8. EVOLUTION OF THE FIXED INCOME MARKET IN BRAZIL FROM 2003 TO 2014 (R\$ BILLIONS).



The total balance of debentures, one of the mechanisms comprising the fixed income market in Brazil, was around R\$ 5 billion in 2003, rising to R\$ 72 billion in 2014, more than ten-fold growth²³. **Figure 9** illustrates the evolution of the debentures market in Brazil.

FIGURE 9. EVOLUTION OF THE DEBENTURES MARKET IN BRAZIL, FROM 2003 TO 2014 (R\$ BILLIONS).



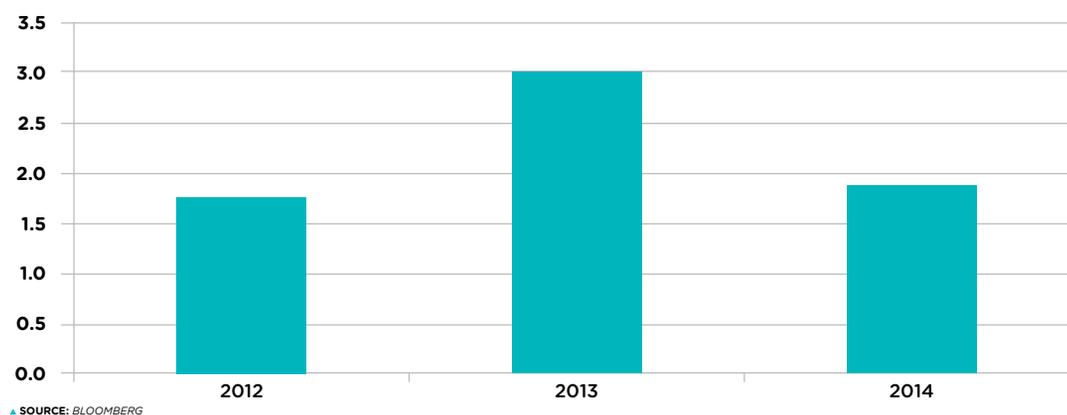
²³ (Anbima, Accessed in 2015)

This market has grown because of the active participation of the investment banks and the higher demand for corporate securities by pension funds and mutual funds. However, note how the total volume of debentures accounts for around 50% of the total fixed income market.

In turn, the growth in market demand for corporate securities favors funding for corporate investment projects at competitive rates. Nowadays, a company with a sound risk rating can access external funding by issuing bonds at rates well below those of the banks.

In 2011, the corporate bond market received an additional incentive. The enactment of Law 12.431 created infrastructure debentures with fiscal incentives for investors, Brazilian and foreigners, willing to invest in infrastructure project bonds here. The law consists of two main articles proposing two different types of programs with fiscal incentives. Programs governed by the first article cover long-term corporate securities, including debentures, offering tax exemption on income to foreign investors only, without necessarily providing funds for infrastructure. But under the second article of Law 12.431, individual investors are entitled to total tax exemption on the earnings obtained from infrastructure debentures, in addition to being exempt from withholding tax on fixed income investments in Brazil. In the case of business investors, withholding tax is now 15% for investment in this type of debenture, reaching 25% in other similar investments. **Figure 10** shows the evolution of infrastructure debenture issues in Brazil.

FIGURE 10. EVOLUTION OF THE INFRASTRUCTURE DEBENTURES MARKET IN BRAZIL, FROM 2012 TO 2014 (R\$ BILLIONS).



However, it should be pointed out that the total volume of infrastructure debentures issued, at around R\$ 2 billion, pales into insignificance against the total volume of traditional debentures of R\$ 70 billion. Moreover, even with the growth in the fixed income market over the last 15 years, and several innovations such as the creation of incentivized debentures, the frequent maturity terms of the programs is concentrated in the 5 to 6 years range, in other words, a short term for what is considered a long-term funding instrument.

There are still some significant structural challenges when compared with the international capital markets, in addition to the situational challenges facing the country and which affect this class of investment. In view of the foregoing context surrounding the development of the capital and bond markets in Brazil, the next section will look at the domestic challenges to be faced in order to structure a GB market in Brazil.

2. THE CHALLENGES FOR THE GB MARKET IN BRAZIL

When exploring the challenges to the development of a GB market in Brazil, one must take into account the economic scenario. The high interest rates prevailing in Brazil, on its own, can lead to unfavorable competition when it comes to issuing corporate bonds. Add to this reality the uncertainty among potential issuers about taking on risk involving variance in indices in local bond programs.

It is not part of the scope of this study to go into detailed discussions about aspects of Brazilian macroeconomics; however, this scenario was considered a backdrop both for identifying the challenges and in putting forward solutions.

The challenges to developing a GB market were classified into: i) structural challenges involving the corporate fixed income securities market; and ii) specific challenges to GBs.

STRUCTURAL CHALLENGES

There are three primary structural challenges involving the corporate fixed income securities market that can hinder the development of a GB market in Brazil.

1. Government bonds are at a different level of competitiveness in relation to corporate bonds

Government bonds in Brazil compete with corporate securities. While the corporate bond market is in need of greater development in Brazil, the market for government bonds is growing apace. The reasons behind this reality are described below:

- Government bonds are more attractive for investors because they are indexed to the rate of inflation, interest rates or carry fixed rates. Thus these bonds provide the market with a product that mirrors investors' futures expectations²⁴.
- The market sees government bonds as being less risky when compared to corporate securities;
- The government bond market enjoys greater liquidity, since offering and trading procedures involve periodic repurchases of bond issues held by investors;
- Corporate bonds in Brazil issued with long maturities should deliver higher returns than government bonds if they are remain competitive and attractive; after all, they entail a higher risk that the issuer will default and are traded on a secondary market with low liquidity. However, government and corporate bonds have similar features in terms of indices, for example, the interbank deposit (DI) interest rates index;
- Corporate issues do not enjoy the additional guarantees that government issues do (such as the guarantees of the Credit Guarantee Fund (FGC), and depend only on risk assessments by rating agencies;
- Corporate securities compete with real estate (LCI) and agricultural receivables (LCA) that enjoy exemption from withholding tax for private individuals resident in Brazil. Tax exemption attracts investors. Moreover, LCIs and LCAs use the DI as an index, competing directly with infrastructure debentures;

2. The low liquidity of the secondary market in Brazil hampers the development of the corporate bonds market.

The low liquidity of the secondary market further complicates market expansion, since investors looking to sell their securities on the market in order to get out of the investment find little demand or, alternatively, substantial discounts to face value. This is the result of the following factors:

- Debentures are rarely standardized, which makes them difficult to price. So these securities tend to be held in portfolio until maturity;
- There are few players in the market. In addition to few companies issuing bonds, banks,

24 (Silva, Garrido and Carvalho, Accessed in 2015)

mutual funds and pension funds have practically cornered all bonds in the market. Funds and banks buy and sell bonds merely to adjust their positions, as unit holders enter or leave;

- Action by speculators is curtailed by the traditional index used in the bonds, the DI (interbank deposit) rate;

3. The investor market is concentrated, with low participation by private and foreign investors.

The majority of corporate securities issues in Brazil is taken up by banks, mutual funds and pension funds. In 2013, banks and mutual funds held around 90% of the total stock of debentures on the market, with the remainder absorbed by closed private pension funds²⁵.

The process of expanding the investor base is affected by CVM Instruction 476/2009. In this case the issuing process involves a roadshow to a group of 50 investors, and of these, around 20 take up the bonds. This instruction enables bonds to be placed in the market more quickly and at a lower cost, when compared to public placements via CVM Instruction 400/2003. Since the implementation of CVM 476 in 2009, more than 80% of the transactions have been closed in this manner, indicating that the incentive to persist with the current scenario of investor concentration remains strong. See more about these Instructions in the Exhibits.

Moreover, since in the financial market demand thoroughly outstrips supply, new issuances are rapidly taken up by current participants, preventing an increase in the number of investors in the market. The corporate bond issuer and investor base in Brazil is local, with only a discreet presence of foreign investors in this market.

Foreign investors enjoy little incentive to invest in corporate bonds on the Brazilian market. This is due to the fact that, in addition to taking local currency risk, they also face a market with low liquidity. Moreover, foreign investors enjoy tax incentives (exemption from withholding tax on interest and capital gains) when investing in Brazilian government bonds, which means they give priority to this type of bond when allocating their resources.

Finally, individual investors take part in the corporate bond market, but essentially via mutual funds. This reality can be attributed in the main to scarce offerings of these products to individual investors.

SPECIFIC CHALLENGES FOR GBS

Bearing in mind the Brazilian structural characteristics discussed above, the GB market in Brazil is still likely to face several operational and specific challenges involving the issuance process and the nature of a GB - if international experience is anything to go by. These are

1. The process for placing GBs on the market is extensive and entails additional costs.

The Brazilian regulatory agency, CVM, requires the issuer to follow a series of procedures for approving offerings of bonds to the market. The public placement of securities on the market, as per CVM Instruction 400, is more bureaucratic and extensive than restricted offerings under CVM Instruction 476.

During the registration process at the CVM, a GB program involves the second opinion agent, resulting in an additional cost for the bond issuer. This additional issuance cost can be anywhere between US\$ 70,000 and US\$ 100,000, while the structuring period extends from 2 weeks to 1 month²⁶. However, the job of the second opinion is to provide details of the use of proceeds in accordance with socioenvironmental criteria in the prospectuses to be analyzed by the CVM. Therefore to avoid delays to the process, this activity should be planned right from the outset.

2. Underwriters lack incentives for structuring GBs, to the detriment of a traditional debenture

Underwriters are responsible for structuring and placing their clients' securities. Their business is affected by the fact that a GB is a new product, which requires understanding eligibility criteria. Furthermore, the placement process may be hampered by the longer tenor and the need to retain additional services, the second opinion. Thus underwriters will only feel encouraged to structure

²⁵ (Anbima, Accessed in 2015)

²⁶ According to the interviews.

a GB program if they identify a specific demand and substantial interest on the part of their client that justifies the additional work.

3. Among investors there is a perception of higher risk associated with a GB in the case of funding for a new technology project

GBs tend to be placed on the market on the same conditions as plain vanilla bonds. GBs finance projects with socioenvironmental criteria, quite often involving new technologies. In such situations, investors perceive higher risks. When projects contain a high perception of risk, higher returns or additional guarantees are required.

.....

Given the challenges discussed above and the international described in the first part of this report, it is clear that the development of a GB market in Brazil faces different challenges from those prevailing internationally. Such challenges involve the economic scenarios, the structure of the market for debt securities or specific challenges involving the process and issuance of GBs. It is therefore understandable that this market has not yet fully developed in Brazil. Nevertheless, it is crucial for the country to come up with solutions for overcoming the challenges and to begin larger scale financing of projects with socioenvironmental criteria, thereby contributing to the transition to a sustainable economy.

In addition, the Brazilian economy is currently experiencing a macroeconomic adjustment process consisting of an economic slowdown, high inflation and rising basic interest rates. The country is dealing with a current account deficit and adjustments to its fiscal policy, with the potential to further aggravate the economic contraction, which results in lower investment capacity and incentives to manufacturing.

Given the government's efforts to rebuild its reserves and generate a primary surplus, an important public channel for corporate finance, the BNDES, now has access to a lower volume of financial resources, reducing its ability to finance new investment projects.

It should be pointed out that, in spite of the economic scenario in Brazil, the government has announced a new phase in the Logistics Investment Program (local acronym, PIL) which will privatize airports, highways, railroads and ports. The program foresees investments of the order of R\$ 198.4 billion, of which 34.8% must be invested between 2015 and 2018. Given the government's diminished investment capacity, a mechanism has been designed to encourage the private sector



to participate in projects by issuing debentures. The larger the program, the greater the access of the concessionaire to BNDES funding at subsidized interest rates²⁷. In other words, the government now requires investors to put up 30% of their own capital into the projects for which they bid. The BNDES, in turn, will lend up to a ceiling of 35% of the value of the highway construction, with interest rates indexed to the Long-Term Interest Rate (TJLP) which is lower than any other rate in the market. This percentage drops to 25% in the case of ports, and to 15% for airports. Hitherto, this percentage was up to 70%, but the entire funds carried subsidized interest rates.

Therefore in this scenario, to obtain a higher percentage of low-interest rate loans, companies are encouraged to issue debentures. In these cases, the participation of the BNDES may rise to 45% in the case of highways, and 35% for airports and ports.

The government's drive to develop infrastructure in Brazil thus throws up new opportunities will arise for business and investment projects that will naturally require financial resources, with special emphasis on the capital markets, creating opportunities for domestic and foreign investors. This context may be propitious for the development of GBs on the Brazilian market, in spite of the challenges.

The fact that the use of proceeds raised through GBs is defined and set out in the issuance prospectus can be considered by investors as a risk mitigation element.

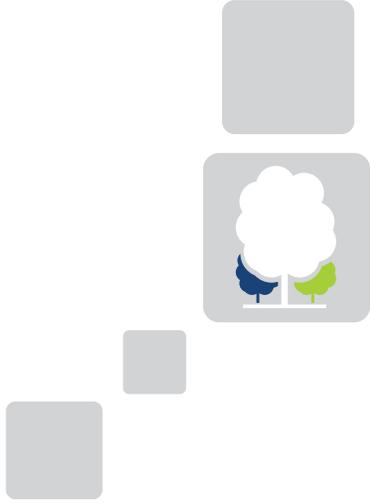
Indications already exist that the Brazilian private sector is now in search of new forms of funding for its projects, in spite of the unfavorable economic scenario. As an example it is worth mentioning the recent issuance by BRF of a €500 million GB on the overseas market. Demand reached €2 billion, with more than 70% placed with European investors. The bond was structured and placed by BNP Paribas, BOFA, Citi, Deutsche Bank, Morgan Stanley and Santander, and the company will use the proceeds to finance renewable energy, energy efficiency and water and waste management projects²⁸. Although it did not take place on the local market, it was the first time a Brazilian company has issued GBs.

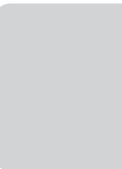
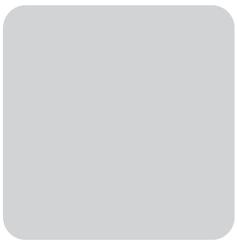
Lastly, looking forward to the development of a GB market in Brazil, the next section will put forward proposals and recommendations so that the country can overcome the obstacles currently hampering the option for GBs by issuers and investors.



²⁷ (Available at <http://www.planejamento.gov.br/assuntos/programa-de-investimento-em-logistica-pil>)

²⁸ (Valor Econômico newspaper, 2015)



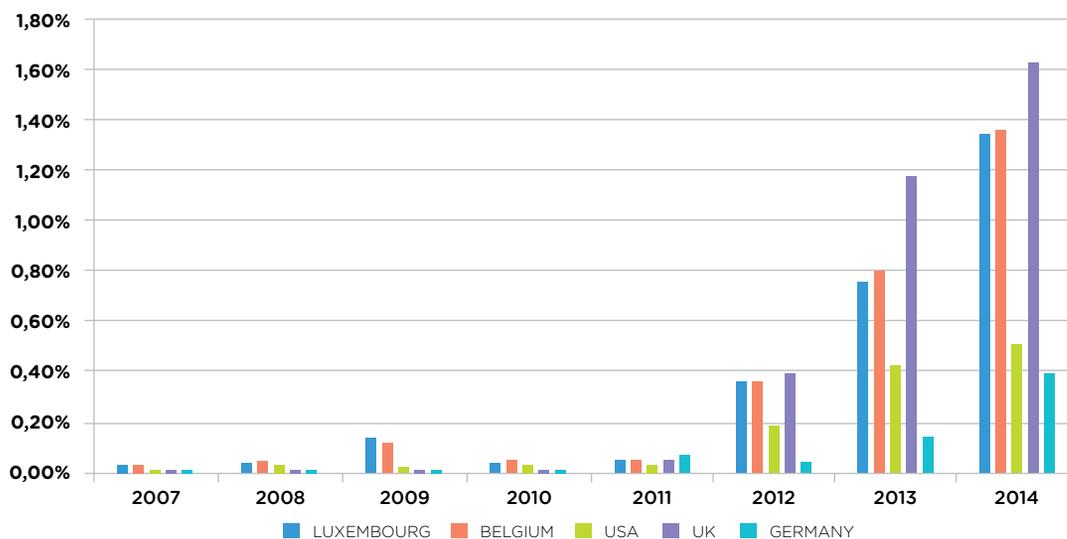


III. PROPOSALS FOR MAKING THE DEVELOPMENT OF A GB MARKET FEASIBLE IN BRAZIL

The private sector needs to find new means of funding, and GBs, given the international experience, represent a new way of diversifying investments and providing society with shared socioenvironmental benefits that are relevant for the transition to a sustainable economy.

To illustrate the growing issuance of GBs in the international markets for corporate bonds, **Figure 11** shows the evolution of the participation of GBs in the total issues of five countries.

FIGURE 11. EVOLUTION OF THE PARTICIPATION OF GBS IN CORPORATE BONDS ISSUES ON THE PRINCIPAL INTERNATIONAL MARKETS



▲ SOURCE: PREPARED IN-HOUSE BASED ON DATA FROM BLOOMBERG - CLEARING HOUSE ISSUANCE

Although the overall ratio of GBs and corporate securities issues is still somewhat reduced, barely exceeding 1.6% in the case of Britain, one can detect that this market is actually growing. This reflects a culture that has been built up internationally based on responsible investments. With this in mind, this section puts forward a set of proposals and recommendations that will assist in unblocking the bottlenecks hampering the issuance of GB programs on the Brazilian market.

The recommendations have been classified into i) structural proposals; and ii) GB-specific proposals. It should be stressed that all proposals are based on several assumptions explained below:

The assumptions adopted in preparing the proposals were:

- 1. Structuring agenda:** Starting from the current and historical economic scenario in Brazil and the challenges highlighted in this study, all proposals put forward are intended for building a structuring agenda. This is a medium and long-term agenda whose aims are the development and competitiveness of a future GB market in Brazil. Thus the proposals take into account the future convergence of economic scenario-related aspects such as the creation of savings and higher market liquidity, along with heightened concern of society and institutions for sustainability.
- 2. GBs are derivatives of the traditional fixed income market:** GBs are traditional bonds with socioenvironmental criteria. Thus, the set of specific proposals for developing the GB market in Brazil can be considered as an integral part of a much wider context, namely the bond market.
- 3. Thought was given to the proposals for rendering a GB market viable in a manner that did not exacerbate the distortions and asymmetries that exist in the fixed income market:** In the light of the foregoing, the proposals put forward should not contribute to distortions on the Brazilian capital markets.
- 4. All assets on the fixed income market can, in theory, be green.** There is an understanding that any fixed income assets traded on the capital markets can be construed as green assets insofar as they contribute to financing a sustainable economy. However, in order to take advantage of this classification, the socioenvironmental criteria must be measurable and verified, so as to ensure transparency in the use of the proceeds, which in turn must reflect the principles of sustainable development.
- 5. All assets must offer a competitive risk/return ratio in relation to traditional securities.** To dialog with the mainstream and effectively develop a green bonds market in Brazil, the risk/return ratio must be comparable and competitive vis-a-vis traditional assets.
- 6. Definition of a standard for the concept of socioenvironmental criteria and KPIs.** There still exists a certain subjectivity in classifying projects that meet the socioenvironmental criteria. One must define a protocol of eligibility criteria that engages with the financial industry and manufacturing, in order for a bond to be considered “green”.

It is suggested that the process of issuing GBs in Brazil could begin by engaging with business that already embrace sustainability practices, enjoy good credit ratings and require funding. Besides financing specific projects with socioenvironmental criteria, GBs can also be used to finance a company’s all-encompassing sustainability strategy.

Bearing in mind the joint work being done by Anbima and the CVM towards structural enhancements in the capital markets as a whole, GBs would benefit from:

- 1. Reducing the asymmetry in tax incentives for different classes of investments.**
- 2. Reduction in barriers to placing bonds on the market.**
- 3. Better liquidity on the secondary market.**

However, one should draw attention to several specific proposals for developing the GB market in Brazil, taking into account how to overcome the situational and structuring challenges that the Brazilian fixed income market requires.

- 1. Creation of uniform guidelines to qualify as GBs:** The development of specific criteria for qualifying projects (eligibility) as GBs would assist in the issuance process. In the case of

projects that meet these criteria, the company could move to a fast track and issue the bonds more quickly as a reward. However, to create such guidelines it is advisable to reach out to players such as FEBRABAN, Anbima and BM&FBovespa. The uniform guidelines would have a positive impact on the work of underwriters, who would have a much clearer means of structuring these products. Therefore, it is recommended developing a sub-chapter in the rules and guidelines governing standardized debentures, explaining the criteria and indicators of projects with socioenvironmental criteria. Such uniform guidelines can take their inspiration from international experience and be adapted to the Brazilian context.

2. Development of local Second Opinion agents: It is important to encourage the creation of domestic certification agents who could work together with their international peers, creating a locally competitive network.

3. Improve the perception of risk by investors regarding socioenvironmental projects, using collateral provided by multilateral institutions: Multilateral agencies, several already existing domestic sector funds and the BNDES could be guarantors of several GB transactions for the purpose of disseminating green bonds on the domestic market.

4. Encouraging anchor investors for GB programs: Since investor demand is a sine qua non for encouraging issuers to opt for GBs, potential engagement with signatory investors to the PRI (Principles for Responsible Investment) could help to increase demand on their part. If signatory investors to the PRI respond positively to this type of asset, it would further encourage issuers to opt for issuing GBs. The multilateral institutions could contribute to structuring the process of reaching out to core investors. Potential investors are signatories to the PRI (Principles for Responsible Investment) and pension funds, such as: Previ, Funcef, Funcesp, Infraprev, Petros, Real Grandeza and Valia, among others. Besides pension funds, mutual funds also have a huge appetite for securities in Brazil, and in this case, corporate securities come in for a lot of attention. Raising the profile of GBs and attracting the managers of these funds will require a disclosure drive providing details of the features of the bonds. It is also suggested reaching out to asset management companies, such as: BBDTVM, Bradesco Asset Management, Caixa Asset Management, Itau Asset Management, HSBC Asset Management, Santander Asset Management, Sul América Asset Management and Votorantim Asset Management

5. Moving forward in disclosing information to the agents involved in the GB market: Work must be done on raising awareness and on disseminating information about GBs to issuers, underwriters and investors. Once these players are familiar with the subject matter, they will find it easier and feel more encouraged to issue this type of bond. There is a need to encourage the dissemination of information about green bonds to all classes of investors in Brazil, relying on an extensive process for disclosing the GB modality to the market.



The aim of the set of assumptions and proposals presented above is to develop a GB market using solutions that the players themselves have created, without the assistance of fiscal incentives provided by the government. This involves putting together a long-term structuring agenda that enables the development of a market with few or no distortions.

However, an issue that has come in for extensive coverage in literature is the government's use of fiscal incentives as instruments for fostering and leveraging certain public policies. It is beyond the objective of this study to discuss the efficacy of applying fiscal incentive mechanisms to the GB market in Brazil, although it acknowledges the important role of the government in promoting economic activities aligned with sustainable development.

As shown in this report, Brazil presents several structural and operational challenges to the development of a GB market. There is a need for greater liquidity, transparency and ease of access by investors to the capital markets, so that GBs can flourish. The feasibility of solutions

that include fiscal and tax incentives to the market can be studied, since it has the potential to encourage the agents in the short term.

The current incentive for the bond market refers to withholding tax on earnings received, in accordance with Law 12.431/11. Incentivized debentures intended for infrastructure investment projects enjoy preferential tax treatment, but they are not a major component of the fixed income market's portfolio in Brazil.

Fiscal and tax incentives can also be present in the real economy as encouragement to the manufacturing sectors on the road to sustainable development. The market, in turn, has the potential for maximizing the efficient allocation of resources, since it channels investments according to cost/benefit logic. Moreover, when a business takes on long-term commitments to third parties and shares its risks with a large number of investors, it is duty bound to provide detailed information about its performance. The investors then monitor the activities of that business, identifying failures and rewarding it when it gets things right.

Above all else, it is crucial for the GB market in Brazil to develop with credibility, ensuring that the proceeds are invested in projects that go hand-in-hand with the principles of sustainability. In this situation, the role of the second opinion agent is key, and the market is facing the challenge of finding solutions that ensure that this work gets done.



VI. CONCLUSIONS

GBs are debt securities with additional socioenvironmental attributes, whereby the funds raised are required to be invested in projects that are environmentally and/or socially responsible.

Internationally, they represent a viable mechanism for diversifying investments at the same time as they provide society with shared socioenvironmental benefits.

The market for these bonds is expanding rapidly, and programs amounts to US\$ 57.9 billion (in the period from 2007 to 2009). Investors attracted by this type of investment are keen on allocating part of their investment portfolios to projects aligned with socioenvironmental issues. Brazil's close relationship with socioenvironmental issues – exemplified by the country's natural features, public policies dedicated to socioenvironmental issues and by the interest of businesses and the financial industry in sustainability – enhances the country's potential for developing a market for green bonds which, through the capital markets, contributes to the transition to a sustainable economy.

Structural challenges - reflecting Brazilian economic history - as well as those involving procedures must be overcome in order to make life easier for issuers, underwriters and investors, encouraging them to back GBs. Brazil's current situation offers an opportunity for the market to develop, given the new context of the diminishing role of the BNDES as a source of long-term financing, together with the need for investment in infrastructure projects so as to resume economic growth. In this way, GBs are mechanisms capable of providing financial returns, together with the allocation of financial resources in a more socially and environmentally efficient manner.



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EXHIBITS

GREEN BONDS PRINCIPLES SIGNATORIES

INVESTORS

ACTIAM NV
 BlackRock, Inc.
 Blue Morpho Investments Zrt.
 Breckinridge Capital Advisors, Inc.
 British Columbia Investment Management Corporation (BCIMC)
 California State Teachers' Retirement System (CalSTRS)
 CM-CIC Asset Management
 Erste Asset Management
 Generation Investment Management LLP
 Humanis Gestion d'Actifs
 ING Groep N.V.
 KfW (Kreditanstalt für Wiederaufbau)
 MainStreet Capital Partners Ltd
 Natixis Asset Management - Mirova
 Neuflyze OBC Investissements
 NN Investment Partners Holdings NV
 OFI ASSET MANAGEMENT
 PGGM Vermogensbeheer B.V. (PGGM Investment Management)
 Standish Mellon Asset Management
 State Street Global Advisors
 TIAA-CREF Asset Management
 TIAN Investment Privatfonds GmbH
 Wasmer, Schroeder & Company, Inc.
 Zurich Insurance Group

ISSUERS

African Development Bank
 Berlin Hyp AG
 BNG Bank
 Commonwealth of Massachusetts
 District of Columbia Water and Sewer Authority ("DC WATER")
 EDF SA
 ENGIE (ex GDF Suez)
 European Bank of Reconstruction and Development (EBRD)
 European Investment Bank (EIB)
 FMO (Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.)
 Hannon Armstrong Sustainable Infrastructure (HASI)
 International Finance Corporation (IFC)
 Kommunalbanken AS (KBN)
 Nordic Investment Bank (NIB)
 NRW.BANK
 NWB Bank (Nederlandse Waterschapsbank N.V.)
 Overseas Private Investment Corporation
 Région Ile-de-France
 Toronto-Dominion Bank
 Unibail-Rodamco
 Unilever
 World Bank

UNDERWRITERS

ABN AMRO Bank N.V.
 Banca IMI SpA

Banco Santander
 Bank of America - Merrill Lynch
 Barclays Plc
 BBVA (Banco Bilbao Vizcaya Argentaria)
 Belfius Bank SA/NV
 Bank of Montreal (BMO) Capital Markets
 BNP Paribas
 Caixa Bank S.A.
 Casgrain & Company Limited
 CastleOak Securities, L.P.
 CIBC World Markets Inc.
 Citi
 CM-CIC securities
 Commerzbank AG
 Crédit Agricole CIB
 Crédit Suisse AG
 Daiwa Capital Markets Europe Ltd
 Danske Bank
 Deutsche Bank AG
 DNB
 DZ Bank AG
 Goldman Sachs International
 Handelsbanken Capital Markets
 HSBC Bank Plc
 Incapital LLC
 ING Bank N.V.
 JCI Capital Ltd
 Jefferies International Ltd
 JP Morgan Chase & Co
 KBC Bank NV
 LBBW (Landesbank Baden-Württemberg)
 Lloyds Bank Plc
 Mitsubishi UFJ Securities International Plc
 Morgan Stanley & Co International Plc
 National Australia Bank Ltd
 National Bank Financial, Inc
 Natixis
 Nomura International Plc
 Nordea Bank Finland Oyj
 Piper Jaffray & Co
 Rabobank (Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.)
 RBC Europe Ltd
 RBI (Raiffeisen Bank International AG)
 Royal Bank of Scotland Plc (RBS)
 Skandinaviska Enskilda Banken AB (SEB)
 SMBC Nikko Capital Markets Ltd
 Société Générale CIB
 Standard Chartered Plc
 Stifel, Nicolaus & Co, Inc
 UBS Ltd
 UniCredit Bank AG
 Wells Fargo Bank, NA
 Westpac Institutional Bank

CLIMATE BONDS STANDARTS PARTNERS

Rabobank
Royal Bank of Canada
HSBC
Nomura
UniCredit Bank
Credit Suisse
Standard Chartered
Barclays
Bloomberg
S&P Dow Jones Indices
Solactive
Claramondial
MSCI
Unep FI Principles for Sustainable Insurance
ICAP
CDP
The Network for Sustainable Financial Markets

Hannon Armstrong
Investor Group on Climate Change
Investor Network on Climate Risk
The Partnership on Sustainable Low Carbon Transport
Shearman & Sterling LLP
Actiam
Martin International
Dividend Solar
Munchener Hypothekenbank
ANZ Bank
Green Building Council Australia
The Swiss Secretariat for Economic Affairs
Clean Energy Finance Corporation
National Australia Bank Group
Allianz Global Investors
ABN AMRO
IISD's International Institute for Sustainable Development

USE OF THE PROCEEDS

PRINCIPAL INVESTMENT INITIATIVES USING GREEN BOND FUNDING.

Energy	Renewable Distribution/Management Energy storage Data Center using renewable energy	Water	Investment in rainwater Investments for dealing with drought Water treatment and recycling Waterway development
Energy Efficiency	Sustainable Buildings Sustainable Residences Efficiency in products and services Industrial Enhancement	Land Use	Sustainable forests and the supply chain Agriculture and and the supply chain
Transport	Public on rails Electric vehicle infrastructure Bike rentals and infrastructure Low-carbon vehicles	Waste Management	Treatment of polluted water Sequester of methane gas Technologies for energy from waste

▲ SOURCE: SANTANDER SUSTAINABLE BOND OVERVIEW

SAMPLE OF GBs ISSUED IN 2014

NAME	ISSUE	CURRENCY	ISSUE DATE
University of Cincinnati	30,415,000	USD	Dec-14
Wind Energy	204,000,000	USD	Dec-14
Massachusetts State College	91,375,000	USD	Dec-14
NAB	300,000,000	AUD	Dec-14
Utah State	21,390,000	USD	Dec-14
Vardar AS	300,000,000	NOK	Dec-14
Connecticut	60,000,000	USD	Dec-14
Rikshem AB	250,000,000	SEK	Dec-14
Rikshem AB	200,000,000	SEK	Dec-14
Spokane	181,225,000	USD	Dec-14
Credit Agricole CIB	32,000,000,000	IDR	Nov-14
East Central Wastewater - Florida	86,590,000	USD	Nov-14
Jefferson County	20,100,000	USD	Nov-14
OPIC	24,400,000	USD	Nov-14

▲ SOURCE: CLIMATE BONDS INITIATIVE

SAMPLE OF GBs ISSUED IN JANUARY AND FEBRUARY, 2015.

NAME	ISSUE	CURRENCY	ISSUE DATE
Credit Agricole	32,000,000,000	IDR	Feb-15
World Bank	436,000,000	INR	Feb-15
Credit Agricole	1,250,000,000	INR	Feb-15
KBN	500,000,000	USD	Feb-15
World Bank	348,500,000	INR	Jan-15
TerraForm Power	800,000,000	USD	Jan-15
Indiana University	58,960,000	USD	Jan-15
World Bank	91,042,000	USD	Jan-15
Massachusetts State Clean Water	228,155,000	USD	Jan-15

▲ SOURCE: CLIMATE BONDS INITIATIVE

GREEN BONDS (GB)

CVM INSTRUCTION 400 OF DECEMBER 29, 2003

Deals with public offerings for distribution of negotiable securities on primary and secondary markets.

Regulates public offering for distribution of negotiable securities on the primary and secondary markets and serves to ensure that the interest of the investing public and the market in general are protected through equitable treatment to takers and the requisites for full, transparent and proper disclosure of information about the offering, the negotiable securities offered, the issuer, the offering party and all persons involved.

Article 2 All public offerings for distribution of negotiable securities on the primary and secondary markets in Brazil intended for individuals, businesses, funds or universality of rights resident, domiciled or organized in Brazil shall be submitted beforehand for registration with the Brazilian Securities Commission - CVM pursuant to this Instruction.

Public distribution of negotiable securities can only take place through the intermediary of the institutions comprising the negotiable securities distribution system

Article 8 The CVM will have 20 (twenty) business days, from the date of filing, to manifest an opinion about the request for registration, accompanied by all supporting documents and information, such registration to be automatically obtained in the absence of an opinion by the CVM within this deadline.

Article 11 Listed companies that have already made public distributions of negotiable securities can submit for filing with the CVM a Program for Distribution of Negotiable Securities ("Distribution Program") for the purpose of making in the future the public offerings for distribution of the negotiable securities mentioned therein.

Article 13 A Multiple banks, commercial banks, investment banks, savings banks and the National Bank for Economic and Social Development - BNDES can submit to the Superintendence of Registration of Negotiable Securities - SRE the registration of Continuous Distribution Programs.

§ 1º Continuous Distribution Programs can consist solely of financial notes, provided these are not related to asset transactions linked to or issued with clauses for converting the financial notes into shares of the issuing institution.

Article 32 A The first registered public offering of shares issued by a company in the pre-operational phase will be distributed exclusively to qualified investors.

Article 43 The offering party and the distribution lead manager institution are permitted to consult potential investors so as to ascertain the viability of or interest in occasional public offerings for distribution, and this consultation must not exceed 50 (fifty) investors and must employ reasonable criteria for controlling confidentiality and secrecy, in the event the intermediary institution has already been retained by the offering party.

§1º Consultations with potential investors cannot be binding on the parties, under penalty of being construed as irregular distribution of negotiable securities, and it is forbidden to make or receive offers, in addition to payment or receipt of any amounts, assets or rights between the parties.

§2º When consulting potential investors, the offering party and the distribution lead manager shall ensure with their interlocutors that the intention to make a public distribution of negotiable securities is kept secret until its normal and widespread disclosure to the market, pursuant to CVM Instruction 358, of January 3, 2002.

§3º The offering party and the distribution lead manager institution shall keep a detailed list with information about all those consulted, the date and time when they were consulted, as well as their response to the consultation.

GATHERING INVESTMENT INTENTIONS

Article 44 It is permitted to gather investment intentions, with or without receiving reservations, as from the disclosure of the Preliminary Prospectus and the filing of the request for registration of the distribution with the CVM.

CVM INSTRUCTION 476 OF DECEMBER 29, 2003

Rules on public offerings of negotiable securities distributed with restricted efforts and the trading of those negotiable securities on regulated markets.

Article 5 A Public offerings distributed with restricted efforts are subject to the rules governing partial distribution in the regulations on public offerings for distribution of negotiable securities on primary or secondary markets.

Article 9 A Public offering for primary distribution of shares, subscription bonuses, debentures convertible to shares re certificates of deposit of those negotiable securities distributed with restricted efforts can take place by excluding preemptive rights or a deadline for exercising pre-emptive rights of less than 5 (five) days, pursuant to article 172, section I, of Law 6.404, of December 15, 1976:

- I** - provided priority is given to the shareholders in subscribing 100% (one hundred per cent) of the negotiable securities; or
- II** - if proceeding with the offering without granting preemptive rights is approved by shareholders representing 100% (one hundred per cent) of the issuer's capital stock.

FEBRABAN
Brazilian Federation of Banks

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