School of Business
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A CASE STUDY ON FISCAL SUSTAINABILITY:

The Treasury-Petrobras Transaction (Oil Rights Selling and Capital Augmentation)

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Summary

It is excellent
To have a giant's strength, but it is tyrannous
To use it like a giant.
— William Shakespeare
Lines for Isabelle in
Measure For Measure (1604), Act 2, Scene 2.

Section 1: INTRODUCTION

Brazil has experienced deep changes in its public finances, result of innumerous reforms undertaken in the last 30 years. Today's Brazilian fiscal position is much stronger than before, and one can consider that it has achieved the level of having in place mechanisms to pursue fiscal objectives, such as long-run sustainability.

That the advances represent a fantastic accomplishment is beyond dispute, however the subject of public finance management (PFM) is seen as one in need of permanent improvement, and surveillance. It is clear that the existence of such practical mechanisms do not prevent authorities from not following them, for they have the sufficient power to bypass any eventual constrain imposed by the system.

This paper is dedicated to a discussion on one recent outcome within the Brazilian PFM, case in which the author understand that public authorities could have taken different course of action. It refers to a transaction involving the Secretary of National Treasury (STN, in Portuguese acronym) and *Petróleo Brasileiro S.A.* (Petrobras), a state-owned enterprise (SOE), in which the latter bought rights to explore petroleum and associates, and the former subscribed stocks from the latter, transactions occurred in 2010.

However, before dealing directly with the subject of the paper, the author believes it is important to highlight some of the most fundamental developments undertaken in PFM, so as to contextualize the framework in which the discussion will be held, and give readers the true nature of the problems Brazil coped with in the past.

1.1 Historical Perspective

The next lines are dedicated to a small description of the latest developments in

Brazilian PFM, beginning in the late 1980’s, during President Sarney Administration.

During that period there was a deep reform in the financial system in order to better define the competencies of the Brazilian Central Bank (BCB), Bank of Brazil (BB), a joint capital bank, and the Secretary of the National Treasury. The BCB held many functions strange to a monetary authority as well as many functions typical of a monetary authority were held by BB.

Since 1965 up to 1986, the Bank of Brazil functioned as the financial agent of the Central Bank, through the “movement account”. In passing the years this account was gradually used to provide the federal government resources, even without previous funding. It financed the fiscal deficit, and was seen as one of the main sources of the inflationary process.

The extinguishing of the movement account, in 1986, along with the extinguishing of the monetary budget is a hallmark in the Brazilian public finance management. Moreover, the function of receiving the compulsory and voluntary deposits from commercial banks was transferred from the BB to the Central Bank.

The year of 1987 marks the inauguration of the Integrated System of Federal Government Financial Administration (SIAFI, in Portuguese acronym), which is an information technology system, used as the primary tool in federal government budget and financial management. It has a wide scope of use, related to the financial execution of budget, both from the revenue as well as the expenditure perspectives; to the accounting system, for it does it automatically; to contract register, and other functions.

The 1990-decade is marked also by profound reforms in the Brazilian public finances. The inflationary process was finally tamed with the implementation of the Real Plan, named after the currency adopted in Brazil, in 1993: ‘real’. Also, during this period, several measures were put in place in order to control the finance, in accordance with the ideas that came out of the Washington Consensus, of reducing government’s size and influence over the economy.

Along with the selling of public companies, government started to implement a new view into public administration that related with the managerial approach to public services, and also that of regulating the economy. The concession law (Law 8.987/95) was approved, and the monopoly attributed to Petrobras was broken (Law 9.478/97), allowing foreign companies to drill oil in Brazilian soil.

The idea was government not to produce directly the goods, but rather regulate their production. In order to accomplish this new task, there were created regulatory agencies in several sectors, such as transportation (one for each modal), oil and combustible alcohol, electric energy, telecommunication, water etc.

From a federative perspective, federal government pushed the sub-national States into reforms, so they too became fiscal balanced. Among the measures adopted it is worth noting the refinancing of their debts (Law 8.727/93 and 9.496/97). The States agreed to adopt a plan of fiscal adjustment, which included some of the conceptions already adopted by the federal government, such as selling public companies and banks, controlling expenditure with civil servant’s salaries, among others.

The adjusts were not restricted to the public sector, as in 1995 the private banking system almost collapsed, which made public authorities to intervene within the *Program of Stimulus towards the Restructuring and Strengthening the Financial National System* (PROER, in Portuguese acronym), supported by the dispositions of Provisional Measure 1.179/95 (MP 1.179/95). The crisis also reached the federal public banks, such as the aforementioned BB and the *Caixa Economica Federal* (CEF), which also needed to receive financial support.

The social security was object of at least three reforms, which tried to give the system more funding and an actuarial perspective. The two firsts occurred with the promulgation of Constitutional Amendments (EC 20/98 and EC 41/2003), and the third, which instituted the complementary social security for the civil servants, came with Law 12.618/2012. This law imposes a ceiling for retirement wage payments, for future public servants, in order to balance the civil servants’ social security fund.

In 2000, it was approved the Fiscal Responsibility Law (Complementary Law 101/2000, also known as LRF). As it is well stated in literature, it was necessary first to put order in finances before approving the restrictions that came along with it. The LRF established several strict rules regarding public expenditure, expansion of debt, and expenses with civil servant. It prohibited any credit operation among entities belonging to different levels of the federation, that is, the national level entity cannot lend money to the sub-national level, and vice-versa. In practice, that means that it is illegal to the National Treasury to refinance the State debt in the terms of the previous cited laws.

After the adoption of the Real Plan, the Brazilian economic policy can be divided in two periods: one from 1993 until 1999, and the other from 1999 up today. During the first period, the fiscal policy encompassed efforts to reform the patrimonial side of the public sector, nevertheless due to the financial instability of the country, the fiscal deficit was not controlled, and it even increased in the period.

The monetary policy was subordinated to the cambial anchor, losing its autonomy. The maintenance of a rigid cambial policy required a monetary contraction should occur any shock in the supply side diminishing the amount of dollars flowing to the country. In the 1990's, there were at least three occurrences of that kind: the Mexican, the Asian and the Russian crisis. By 1998 the seeds for change were already in place.

After 1999, supported by an agreement signed with the International Monetary Fund (IMF), the economic policy was replaced. For the fiscal policy, it was agreed that a budget surplus would be pursued, so as to stabilize the ratio debt to GDP. The regime of fixe exchange ratio was replaced for the free-floating one. And finally, at the monetary policy was adopted the inflation target.

In 2003 the Brazilian Labor Party (PT) arrived in power, and although that political party has historically been against the adoption of such economic policies, these three concepts still dominate the present Brazilian economic policy: budget surplus, free-floating exchange rate, and inflation target.

The years between 2003-2012 do not experience many fiscal reforms, but rather are devoted to improving Brazilian general economic consolidation and the solution of long dated problems. The attention of the Federal Administration was shifted towards social issues, and many programs were implemented so as to foster social development, and reduce inequalities, such as the *Bolsa Familia* (Family Aid Program, in free translation), an assistance program for poorer families.

At the same time, the government directed efforts to augment public investments, and in 2007 it launched the Accelerated Growth Program (PAC, in Portuguese acronym). Among its several objectives, the PAC intended to provide public managers with the necessary financial means to promote multi-year investments, with the certitude that cash flow would not be a hindrance. Also, there were put in place situation rooms in order to solve problems related to investments.

In terms of solvency, if the ratio debt-GDP heavily increased in the previous decade, after 2004 it has stabilized and eventually decreased, due to continuous fiscal surpluses and also economic growth. Another fragility addressed during the period was that of the international reserves. Gradually, Brazil started to improve its position, having reached the amount of U$373 billion, by the end of 2012. Its size has worked as a cushion, and has helped the country in preventing any speculative attack against its currency, for example.

As more data from the current policy will be presented later on the paper, this section closes with some negative outcomes that resulted of the various reforms. They represent a general trend for the period since 1994: a) rise in the ratio central government's primary expenditure to GDP, and b) rise in tax burden. Further in the paper there will be given some hints on how these aspects can affect a prompt response to crisis.

1.2 Objective of the Paper

After this brief introduction, it is possible to comeback to discuss the objectives of the paper. The main purpose here is an attempt to assess how Brazilian Federal Government authorities are managing the public finance instruments towards fiscal sustainability, and fiscal responsibility.

It is important to initiate, however, telling what the paper does not aim at. In this sense, it is not the intention to undertake any kind of fiscal projection about the future nor to arrive in a general conclusion about Brazilian long-run fiscal sustainability. The scope here is much restricted.

The intended goal is, therefore, to produce an investigation of past fact, in order to understand whether in that specific case public authorities could have taken different course of action, which would result in a safer way towards fiscal responsibility, and fiscal sustainability.

In order to achieve it, the paper aims at shedding light on a transaction involving the National Treasury and Petrobras, which resulted in a major fiscal surplus in the year of 2010. It will be discussed how government proceeded so as to achieve this result, and the reasons why it did or did not contribute to fiscal responsibility. Parallel to this main objective, it will be presented throughout the paper broad information on the Brazilian actual fiscal position as well as on the oil sector analyzed.

The case refers to the transaction, in which STN sold Petrobras the rights to drill a huge amount of oil (5 billion barrels of oil (BOE)), without applying the ordinary procurement law. It was a direct selling, which did not allow other interested parties to dispute for the oil basins. The contract that settled the transaction established a mean price for the BOE at U$8.51, leading to the final financial amount in U$42.5 billion (forty two point five billion dollars, or R$74.8 billion, considering the exchange rate of the time), which Petrobras would have to pay the Treasury.

The transaction was conclude in September 2010, and in June of that same year Petrobras' equity and total assets were R$97.5 billion and R$308.7 billion, respectively, showing the virtually impossibility to Petrobras fulfill its obligation if nothing else were done. The solution proposed was augmenting its social capital in such a way that the governmental part in it would match exactly what Petrobras had to pay for the oil. This proposition would allow Petrobras to buy the oil rights, without burdening its budget, for all the necessary means would came from the capitalization.

Despite being relevant, the main object of analysis is not the selling, nor the augmentation of Petrobras' capital parts, but a R$31.8 billion fiscal surplus generated out of it, because third public entities (notably the Brazilian public development bank, *Banco*

Nacional de Desenvolvimento Economico e Social, BNDES) participated in the capital augmentation deal, causing an imbalance to a rather balanced transaction.

In 2010, the total fiscal surplus produced by the central government was of R$78.1 billion, showing the relevance the transaction had to its final amount (about 39%). So, in scrutinizing the transaction, it is the intention to question government's decision of introducing third parties in order to generate the fiscal surplus, instead of taking a more prudent decision of not producing it, and searching the surplus elsewhere or even diminishing its amount for that year.

Throughout the discussion here undertaken it will be considered that it was a deliberate choice to produce the fiscal surplus, meaning that authorities had full control over the outcome produced from the transaction, i.e., public officials debated over the outcome fiscal surplus, were aware of it, and decided to go for it. It is not necessary to assume, nevertheless, that the only reason to put BNDES into the deal was to produce the surplus, and that there were not other important reasons to justify it.

The assumption that it is being made does not require to be that strong, but only recognize that the fiscal surplus was not a surprise, that no one had not think about it before. On the contrary, the assumption being made, due to the amounts involved in the transaction, is that the outcome needed to be clear and that ultimately it was considered by the time the choices were made.

It is therefore the intention of this paper discuss whether the solution proposed by the authorities contributed to the Brazilian long-term fiscal sustainability. Although it will not be made any kind of assessment towards credibility, it is undeniable that the spirit of this paper is related to it. The main assumption that motivated its writing was that it did exist a safer solution to the problem, which did not affect Brazilian actual fiscal position, and at the same time better expressed the nature of the transaction. Much is being said today that government is adopting what has been called as a "creative accounting", meaning that non-orthodoxy solutions are being applied.

It is doubtful that the points here discussed could lead to the conclusion that public authorities are not having a responsible attitude towards fiscal sustainability. It is acknowledged that governments are very large and complex institutions, and for reaching such a conclusion would require a much wider research, which is not the intention. The sole purpose here being that of assessing public authorities' choices in one specific case, and highlighting aspects in the PFM that could have had a different outcome.

1.3 Description of the transaction in the oil business

The transaction involving Petrobras and the National Treasury is made of two distinct parts: a) a buying-selling part and b) an augmentation in the capital of Petrobras part.

The buying and selling part

According to the Brazilian Constitution, the natural resources at the underground soil belong to the Federative Republic Brazil (FRB), here also referred to as the Federal Union (art. 176). The Constitution allows the Federal Union to explore it directly or through companies in the market (art. 177, paragraph first).

Based on these assumptions, the Law n. 12.276/2010 authorized the Union, through its Secretary of National Treasury (STN), selling to the State-Owned Enterprise *Petróleo Brasileiro S.A.* (Petrobras) the rights to explore up to 5 billion barrels of petroleum, natural gas and other fluid hydrocarbons (BOE), from the pre-salt oil basin (art. 1st). This was a direct selling without using the procurement law normally applicable to concessions similar to that, where other competitors would participate in the process.

After an evaluation process, the average cost of the barrel was fixed at the price of U$8.51 (eight dollars and fifty one cents per BOE), which leads to the total amount of U$42.5 billion (forty two point five billion dollars) to the entire transaction. At the time the real-dollar exchange rate was R$1.76 per dollar, which led to the approximate amount of R$74.8 billion (seventy four point eight billion reais), which Petrobras would have to pay the Treasury for the rights of explore.

The payment occurred in September 2010, and National Treasury accounted it for current revenue R$74.8 billion (seventy four point eight billion reais). Part of the payment (R$67.7 billion) was made in bonds and the remaining R$6.9 billion in cash, as shown at the table below.

Table 1. Means of Payment used by Petrobras in Buying the Oil Rights

(R$ bn)

Means of Payment	Amount
Treasury Bonds	67.7
Cash	6.9
Total	**74.8**

Source: Secretary of National Treasury (STN)

The augmentation of Petrobras' Capital

The cited Law 12.276/2010 authorized the Union to subscribe Petrobras stocks up the amount of the transaction referred to in previous part (art. 9). As a means of protection to the minorities, the process preserved them the rights to subscribe also stocks from Petrobras, as to maintain their relative share of the company.

It is important to notice that the Law authorized the Treasury to buy the remaining stocks should the minorities did not subscribe all their were entitled to, and also authorized an additional set of new stocks, in such a way that the final capital augmentation reached the amount of value R$120.2 (a hundred and twenty point two billion reais), made of three parts: a) the governmental, b) the minorities and c) additional stocks:

Table 2. Entitlement for Participate in Petrobras' Augmentation of Capital

R$ bn

Entities	Amount (R$ bn)
Government	74.8
Minorities	40.2
Supplementary Stocks	5.2
Total	**120.2**

Source: Petrobras

The rules applied to the deal authorized the central government to use its controlled entities in the transaction. In doing so, at the end four public entities participated in the stock subscription: STN, the Brazilian Development Bank (*Banco*

Nacional de Desenvolvimento Econômico e Social – BNDES), the BNDES financial subsidiary (BNDES-PAR), and the Sovereign Fund (FSB, in Portuguese acronym). Combined, they bought stocks which valued R$80.0 billion, the summation of the original R$74.8 government was entitled for and all the R$5.2 billion in stocks allocated in the supplementary lot, as government was the only interested in the latter.

The Presidential Decree of September 10, 2010, which authorized Petrobras to augment its social capital (art. 1st), authorized also the National Treasury to issue bonds in order to buy Petrobras stocks. According to the official register, the Treasury issued two lots of bonds, being the first lot of circa 9.8 million National Treasury Bonds (*Letras Financeiras do Tesouro* - LFT) valuing around R$43.0 billion (forty three billion reais). A second lot was issued and lent to BNDES, valuing R$24.7 billion (twenty four point seven billion reais). Both the STN and BNDES used the bonds to pay for their share in subscribing Petrobras' stocks.

Table 3 below shows the means of payment used by public entities in buying Petrobras' stocks. The amount received in Treasury bonds sums up R$67.7 billion, which is the exactly amount Petrobras paid in bonds for the buying purposes, as depicted in table 1. This means that all the new bonds issued by the Treasury was paid back, in a circular operation, and could be cancelled at the end of the entire transaction.

Table 3. Means of Payment used by Government in Buying Petrobras' Stocks

R$ bn

Means of Payment	Amount
National Treasury Bonds (LFT)	43.0
Bonds lent to BNDES (LTF)	24.7
Other Means of Payment	12.3
Total	**80.0**

Source: STN

The capitalization process was a complex one, full of details, regulated by the **Definitive Prospect of the Initial Public Offering of Ordinary and Preferential Stock Emitted by Petrobras**, in free translation from *Prospecto Definitivo da Oferta Pública de Distribuição Primária de Ações Ordinárias e Ações Preferenciais de Emissão da*

Petrobras, document to which the reader is directed should it need more information.

There were offered 2,369 and 1,901 millions of ordinary and preferential Stock, respectively, at a unitary value of R$29.65 and R$26.30, which sums up to R$120.2 billion for the capitalization. Tables 4 and 5 below show the share in Petrobras' capital of each major player before and after the capitalization, and table 6 shows the quantity of stocks bought by each player and the amount paid for them.

Table 4. Petrobras Stock Share Before Capitalization

Million of Stocks

Shareholders	Ordinary Stocks	% in Total	Preferential Stocks	% in Total
Union (Treasury)	2,819	55.56%	-	0.00%
BNDESPAR	98	1.94%	574	15.51%
BNDES	-	0.00%	-	0.00%
Sovereign Fund	-	0.00%	-	0.00%
Others	2,156	42.50%	3,127	84.49%
TOTAL	**5,073**	**100.00%**	**3,701**	**100.00%**

Source: Petrobras

Table 5. Petrobras Stock Share After Capitalization

Million of Stocks

Shareholders	Ordinary Stocks	Share in Total (%)	Preferential Stocks	Share in Total (%)
Union (Treasury)	3,991	53.63%	66	1.18%
BNDES-PAR	173	2.33%	1,341	23.94%
BNDES	225	3.02%	-	0.00%
Sovereign Fund	344	4.62%	162	2.88%
Others	2,709	36.40%	4,033	71.99%
TOTAL	**7,442**	**100.00%**	**5,602**	**100.00%**

Source: Petrobras

Table 6. Amount of Petrobras Stock Purchased and Value

Million of Stocks and R$ million

Shareholders	Ordinary Stocks		Preferential Stocks		Total Amount Paid
	Quantity of Stock	Amount Paid	Quantity of Stock	Amount Paid	
Union (Treasury)	1,173	34,769	66	1,736	**36,506**
BNDES-PAR	75	2,222	767	20,180	**22,402**
BNDES	225	6,667	-	-	**6,667**
Sovereign Fund	344	10,201	162	4,250	**14,451**
Others	553	16,384	906	23,837	**40,221**
TOTAL	**2,369**	**70,243**	**1,901**	**50,003**	**120,247**

Source: Petrobras

Treasury Bonds emission in favor of BNDES

The National Treasury emitted bonds to allow BNDES to subscribe Petrobras stocks, within the context of Petrobras social capital augmentation.

The Provisory Measure (Medida Provisoria – MP) n. 505, from September 24, 2010, later converted in Law nº 12.397/2011, authorized the emission of up to R$30 billion (thirty billion reais) of Treasury bonds in favor of BNDES so as to allow the Developing Bank to subscribe Petrobras stocks.

In September 2010, Treasure emitted bonds valuing R$24.7 billion (twenty four point seven billion reais) and lent to BNDES that used them to subscribe Petrobras' stocks. From table 6 above, one can infer that BNDES and BNDES-PAR bought together stocks corresponding to R$29.1 billions[1].

As it is a lending, the Bank will have to pay back the corresponding amount, and according to the law, it will have to pay interest rates, which were defined to be the Long-Term Interest Rate (TJLP). The TJLP is the interest rate applied by BNDES in its borrowings.

Summarizing the transaction it could be described as having the following stages:

[1] We do not have the full information on how BNDES paid for this difference of R$4.4 billion, if it were in cash or in Treasury bonds, especially because in January 2011 (4 months after the transaction) Treasury emitted R$5.2 billion in bonds in favor of the BNDES, which the press noticed as if it were to pay the Petrobras capitalization.

a) Treasury Emission of Bonds, divided in two lots: one for itself, the other to BNDES;
b) Treasury and BNDES buying Petrobras' stocks with the bonds;
c) Other parties buying Petrobras' stocks;
d) Petrobras buying the oil rights from Treasury (paying with bonds and cash);
e) Treasury cancels all the bonds emitted in letter a.

Section 2: CONCEPTS AND REVIEW

2.1 Financial Reporting and Financial Statements

In the calculation of the fiscal surplus many financial statements are considered, which have been produced in different reports. So, in order to conduct a discussion on aspects related to the quality of the fiscal surplus calculated, it is necessary to highlight general characteristics of reporting and financial statements.

According to the Conceptual Framework for Financing Report issued by the International Accounting Standards Board (IASB) the "*objective of general purpose of financial reporting is to provide financial information about the reporting entity that is useful*" to users of the report. The users are generally but not only capital providers (equity investors, lenders and other creditors).

In the analyzed transaction besides the capital providers, one can identify other users such as the Brazilian Government itself, and the Brazilian society as a whole, as a means of guaranteeing that the entities under scrutiny abided by law requirements, and also by more broad requirements such as the fiscal sustainability.

Literature accords that for financial information be useful it must posses some qualitative attributes, classified as fundamental or enhancing qualities. The two fundamental qualities are relevance and faithful representation, and the enhancing qualities comprise comparability, verifiability, timeliness and understandability.

For the purposes of this study, the focus will lay on the faithful representation quality, discussion what a financial statement should aim at to be considered as so. A faithful representation is "attained when the depiction of an economic phenomenon is complete, neutral, and free from material error" (IASB, 2008).

The most relevant aspect to this analysis is that of neutrality meaning "the absence of bias intended to attain a predetermined result or to induce a particular behavior. Neutral information is free from bias so that it faithfully represents the economic phenomena that it purports to represent" (IASB, 2008). It is clear, therefore, that the depiction of an economic phenomenon cannot be such as to mislead the users by trying to influence their decision making process or judgments in order to achieve an outcome.

This paper is not intended to audit the relevant financial statements used to calculate the fiscal surplus, nor to give an opinion on whether the underlying transactions fulfill with these characteristics. The point to be discussed is in a broad view, if the summation of the transactions is faithful, and above all neutral.

2.2 Fiscal Sustainability Review

This section is dedicated to a discussion on the concept of fiscal sustainability, and the importance to countries of having a fiscal sustainable budget.

According to Wikipedia “fiscal sustainability, or public finance sustainability, is the ability of a government to sustain its current spending, tax and other policies in the long run without threatening government solvency or defaulting on some of its liabilities or promised expenditures”.

Another approach to sustainability problem would be associated to the debt problem, i.e., whether the country will service its debt “without an unrealistically large future correction in the balance of income and expenditure” (IMF, 2002).

Dealing with the subject, Burnside (2003) states basically the same concept to fiscal sustainability, which would be related to a government’s ability to a) “service its debt obligations without explicitly defaulting on them” or, what would lead to same meaning, b) “indefinitely maintain the same set of policies while remaining solvent”. Reversely, any “particular combination of fiscal and/or monetary policies would, if indefinitely maintained, lead to insolvency, these policies would be referred to as unsustainable” (Burnside, 2003).

Taking into consideration only the debt itself, without any concerns of other expenditures, the analysis would need to consider mainly the net debt and the annual surpluses/deficits produced during the various fiscal years. The temporal budget constrain is such that obliges the discounted present value of all future surpluses to equal the actual net debt, so that in the future the debt will be completely paid. This condition means that a country is solvent if it is able to produce in the future the necessary fiscal surpluses to bring the net value of the debt to zero.

To achieve a sustainable path, however, it is acknowledged, that it is not necessary to have such strong an assumption of reducing public debt to zero. All that is required is conducing the net debt to a level where fiscal surpluses can be generated so as to meet its (the debt) services. This can mean a reduction in its ratio to GDP, or even it is possible to allow the net ratio debt/GDP to grow, depending on the conditions each country face at the moment of the analysis. In fact, that is what most countries do, consider sustainable its current course if it is able to satisfy the service of the debt.

The more recent developments on the sustainability analysis, however, have shifted governments' attention towards a broader concern related to economic growth and to intergenerational aspects, being the public debt and deficits only part of the analysis (Schick, 2009). Their interest lay especially in assessing whether the fiscal position will retard economic growth, or will demand new rises in taxes or even if it will imply transference of significant costs to future generations.

This new approach, according to Schick, gave rise to new ways of regarding sustainability, and therefore when assessing fiscal sustainability, the analysis should encompass four dimensions: solvency, growth, stability and fairness, with the following objectives:

Table 7. Dimensions of Sustainability

Dimensions of the Sustainability Analysis	
Solvency	The ability of government to pay its financial obligations
Growth	The adoption of a fiscal policy that sustains economic growth
Stability	The capacity of governments to meet future obligations with existing tax burden
Fairness	The capacity of governments to pay current obligations without shifting the cost to future generation

Source: Schick, 2009

Within this framework, the ability to service the debt is only a small part of the whole analysis, being necessary to scrutinize other fundamental aspects of the long-run sustainability. The complexities of such a study is beyond the scope of the paper, but some ideas brought by this new approach is worth noting.

When it comes to economic growth, the latest developments in PFM have acknowledged that fiscal imbalances can pose a threat in future growth rates, and consequently the capacity of governments in meeting their future obligations. Therefore, the fiscal sustainability requirements are that “governments should manage the finances prudently so as to assure future growth”, by running balanced budgets.

This approach implies looking at the budget not as a short-term tool, for cyclical adjustments, but rather a mechanism of pursuing long-term objectives, such as continuous economic growth. Budget is to be seen “as a strategic plan of future government financial capacity”, in such a way to “contributing to a stable environment that promotes economic growth”, and also to stabilize government size (Schick, 2009).

The stability will not be acquired, however, if in the future governments have to increase the tax burden. Similarly as to the case of economic growth, governments should adopt prudent fiscal policies that do not add pressure for future tax increases, assuming that in most countries tax burden is still high.

The problem is that, in developing countries like Brazil, the demand for more public services or the improvement of its quality is increasing, adding pressure for new expenditures. It is not an easy equation to balance, on the one side, requirements for prudent fiscal policy, and on the other demand for better public services.

This characteristic of developing countries makes the job of public authorities even harder, because many a time they are tempted to increase social expenditures, in the name of the people and with all the goodwill, but as a consequence compromise the fiscal position, and ultimately even the social gains promoted by the policies.

As it will be seen further in the paper, the Brazilian tax burden has already reached a level where there is not much room left for new increases, limiting not only any fiscal response to crisis, but also the augmentation of new policies.

The issues related to the intergeneration approach are generally associated to the fairness of tax burden and expenditure across generation. It would not be fair “to provide benefits to one age cohort that will have to be paid by taxes levied on younger cohorts” (Schick, 2009).

The difficulties involved in such an analysis is clear from its very conceptualization, for it requires assessment of tax payers and beneficiaries across generations, knowing the great difficult of doing so to the actual generation: if the current distribution of payers-beneficiaries is a fair one.

Despite the intrinsic difficulties, the object of analysis lies on a transaction over a non-renewable natural resource, oil. In this case the solution seems clearer demanding an approach that enables the present generation to produce savings to the next one, so as to allow them to share the benefits of that natural resource.

Aligned with the idea, the Law 12.351/2010 created the Social Fund with this precise objective of constituting a long-term public saving with revenues from the oil sector[2]. Even if the fund did not exist at the date of the oil transaction (the bill was signed three months later, in December 2010), the authorities could have complied with its principle. At least, the financial resources could not have ben used to funding current expenditures, as was the case.

2.3 The Fiscal Responsibility within Brazilian Legal Dispositions

There are two main statutory laws that regulate fiscal responsibility and fiscal sustainability within the Brazilian legal framework, besides the budget law itself: a) the Fiscal Responsibility Law (Complementary Law n. 101/2000) and b) the pre-budgetary law (LDO, the Portuguese acronym) approved every year. Here, the references will be made to the 2010 pre-budgetary law (LDO/2010: Law 12.017/2009), i.e., the dispositions that regulated the elaboration of 2010 federal budget.

The Fiscal Responsibility Law (LRF, in Portuguese acronym), that most important law on public finance, imposes public authorities to have a responsible fiscal management, in the sense that their actions need to be transparent and coordinated so as to prevent risks and correct deviations that can affect the public accounts equilibrium (art. 1st, paragraph 1st). These are to be reached by the identification of major risks that can affect the public finance results, and by the establishment and pursuing of fiscal goals

[2] This Social Fund intends to provide financial resources to programs and projects that aims at reducing poverty and foster social development in education, culture, sports, public health, science and technology, environment, and reducing effects from climate changes (art. 47), and its funding are resources stemmed from transactions on the oil business, among others (art. 49).

related to revenues and expenditures, tax expenditure, increasing in personnel and social security expenditures, debt volume, credit operation, and other indicators.

The ceilings and conditions, when applicable, are defined by the LRF itself, such as the ceilings of personnel expenditure and debt volume, or the conditions applied to credit operations. Whenever the indicator is of a more dynamic type the definition is left to be made by the pre-budgetary law. This is the case for the fiscal deficit/surplus goal defined for every fiscal year.

The LRF, nevertheless, created some mechanisms public authorities have to put into practice should reality does not correspond to planning. In its bimensal publications, if actual revenue collecting is below to what has been projected for the period, and if this shortage can affect the fiscal result established for that year, the National Treasury has the obligation to suspend the expending authorizations, in the necessary amount so as to guarantee that the goals will be achieved.

This condition can be relaxed through out the year, if revenues go back to its projected path. Moreover, there are some expenditure that do not abide to this rule: a) the mandatory obligations, b) the service of the debt and c) those considered relevant by the pre-budget law (LDO). Recently, including the 2010 fiscal year, LDO has elected the Accelerated Growth Program (PAC, in Portuguese acronym) as to be considered relevant, and therefore outside the limitation of expenditure, should it exist.

As said before, the amount of the fiscal surplus is ultimately defined by the LDO, which for 2010 it was established as 2.15% of the GDP (art. 2^{nd}). This amount represented only a primary fiscal surplus, but not a surplus considering the interest expenditure associated to the debt service. This means that total debt would grow, but the ratio debt to GDP would remain under control.

The proposed surplus is not an absolute amount according to the LDO, for it could be reduced by up to the expenditure from the Accelerated Growth Program (PAC), and also by the excess of fiscal surplus from previous year. These rule eases the fiscal effort, because, in practice, the target for the fiscal surplus is the 2.15% of GDP minus the amount allocated to and effectively expended with the PAC.

In reality, the fiscal surplus is only reduced should it be necessary, i.e., whenever for any reason the revenue collected during the fiscal year is insufficient to meet the full fiscal surplus. In 2010 this measure was not adopted, and the full amount of surplus was produced, as discussed further in the paper.

In order to avoid surprises, the LRF predicts that every two months government has to publish its accounts, and every four it has to go before the Congressional Budget Commission to present the fiscal condition, and discuss whether the goals are going to be achieved or not, and what measures are being taken to prevent any deviation in the path.

In terms of planning, the legal dispositions in place approach the framework of the medium term fiscal one, in which government has to present not only the projection for the fiscal year the budget refers to, but also projections for the following two budgets and also the execution of the previous one. Therefore, the information comprises four years: the real execution of previous year, and projections for current year and two following years.

With these rules in place, it became easier to society accompany the fiscal outcomes produced every year, and more difficult to government to lose track of its accounts.

Section 3: CONTEXT

3.1 Brazilian Fiscal Position

This section is dedicated at giving a snapshot on the actual position of Brazilian public finances. Data will not be discussed in depth, rather the intention is to present a series of information in order to give a sense of the latest development, and moreover an idea of what kind of responses can Brazil use in case of a severe fiscal crisis should strike. First, Brazil will be compared to selected countries, and later the numbers will refer only to its reality.

Tables 8 and 9 present data on gross debt and the overall budget balance, for the period 2008-2011, and the projections for 2012 and 2013. They were extracted from IMF's Fiscal Monitor document of October 2012, explaining why the 2012 data are only projections.

Looking at the evolution of the gross debt ratio to GDP during the period depicted in table 8 shows that Brazil has managed to keep its trajectory under control. It grew 3.4 percentage points (p.p.) in 2009 in relation to 2008, stabilized at the level of 65% of GDP, and started to decline, with a closing projection for 2012 of 64.1%. For 2013 the projections are even more favorable putting the debt around 61.2% of GDP.

Table 8. Ratio: Gross Debt to GDP (%)

Selected Country					Projection	
	2008	2009	2010	2011	2012	2013
Developing Countries						
Brazil	**63.5**	**66.9**	**65.2**	**64.9**	**64.1**	**61.2**
China	17.0	17.7	33.5	25.8	22.2	19.6
India	74.1	74.2	68.0	67.0	67.6	66.7
Russian Federation	7.9	11.3	11.8	12.0	11.0	9.9
Developed Countries						
United States	76.1	89.7	98.6	102.9	107.2	111.7
France	68.2	79.2	82.3	86.0	90.0	92.1
Germany	66.9	74.7	82.4	80.6	83.0	81.5
Greece	112.6	129.0	144.5	165.4	170.7	181.8
Ireland	44.5	64.9	92.2	106.5	117.7	119.3
Italy	105.7	116.0	118.6	120.1	126.3	127.8
Portugal	71.6	83.1	93.3	107.8	119.1	123.7
Spain	40.2	53.9	61.3	69.1	90.7	96.9
Japan	191.8	210.2	215.3	229.6	236.6	245.0
United Kingdom	52.2	68.0	75.0	81.8	88.7	93.3
Canada	71.3	83.3	85.1	85.4	87.5	87.8

Source: IMF

Although Brazilian debt has not increase in the period, comparatively to other emerging markets, its debt ratio is only better than that of India. Its debt is much bigger than that of China, Russia, Mexico, and South Africa, during the entire five-year period under analysis.

When the comparison is made with developed countries, the Brazilian position is rather better. Its indebtedness is lower than all the showed countries in 2011, and the projected values for 2012. If it is considered the starting point in 2008, the Brazilian level of indebtedness is much closer than several other countries, which have their level at around 60-70%, such as the debts from the US, France, Germany, Portugal, and Canada, but bigger than that of Spain, Ireland, and United Kingdom.

This comparison seems interesting because these countries have strongly suffered from the international economic crisis when compared to what Brazil has suffered. Therefore, this rather high debt ratio to GDP can be seen as a limitation to a strong fiscal response, should Brazil needs one. Since 2008, Brazilian authorities have defended the use of a counter-cyclical fiscal mechanism to minimize the impacts of the international economic crisis.

One of this mechanisms used is the injection of money at BNDES via lending Treasury bonds, so the bank can lend to the production sector. It has been largely utilized, and by the end 2012, the Treasury had R$371 billion (circa U$185 billion, at present exchange rate of R$2 per 1 U$) in assets against the BNDES[3, 4]. This lending is similar to that used in the transaction here analyzed.

Turning the attention to the overall balance, data show that if Brazilian deficit has increased since 2008 (1.3%), reaching a peak in 2009 (3.0%), afterwards it started to decline smoothly in the following years, to 2.7% and 2.6%, and 2012 the deficit projected will be 2.1%, and 2013 it will be of 1.6% of GDP.

Most of the countries represented at table 9 have had a greater deficit in the

3 This strategy generates an implicit subsidy supported by the National Treasury, due the interest rates paid by the bonds are greater than that the BNDES pays the Treasury back.

4 Some Brazilian economists have criticized this strategy. For instance, former Finance Minister Mailson da Nobrega says it is the return of the movement account (*conta movimento*), where public officials can expend money without the necessary legislative approval (Nobrega, 2012).

period, especially those from the developed markets, which have been suffered from what has been called the dual crisis. In many of them the deficits have reached 10% of GDP, or are rapidly approaching this figure.

Among the developing countries, India is the one that have the most fragile situation, as it is running a deficit for all the period depicted around 9%, while China and Russia have a more confortable position, running overall small deficit (1%) and a surplus (0.2%), respectively.

Table 9. Overall Balance as % of GDP

Selected Country					Projection	
	2008	2009	2010	2011	2012	2013
Developing Countries						
Brazil	**-1.3**	**-3.0**	**-2.7**	**-2.6**	**-2.1**	**-1.6**
China	-0.7	-3.1	-1.5	-1.2	-1.3	-1.0
India	-8.7	-10.0	-9.4	-9.0	-9.5	-9.1
Russian Federation	4.9	-6.3	-3.5	1.6	0.5	0.2
Developed Countries						
United States	-6.7	-13.3	-11.2	-10.1	-8.7	-7.3
France	-3.3	-7.6	-7.1	-5.2	-4.7	-3.5
Germany	-0.1	-3.2	-4.1	-0.8	-0.4	-0.4
Greece	-9.9	-15.6	-10.5	-9.1	-7.5	-4.7
Ireland	-7.3	-13.9	-30.9	-12.8	-8.3	-7.5
Italy	-2.7	-5.4	-4.5	-3.8	-2.7	-1.8
Portugal	-3.7	-10.2	-9.8	-4.2	-5.0	-4.5
Spain	-4.2	-11.2	-9.4	-8.9	-7.0	-5.7
Japan	-4.1	-10.4	-9.4	-9.8	-10.0	-9.1
United Kingdom	-5.1	-10.4	-9.9	-8.5	-8.2	-7.3
Canada	-0.4	-4.9	-5.6	-4.4	-3.8	-3.0

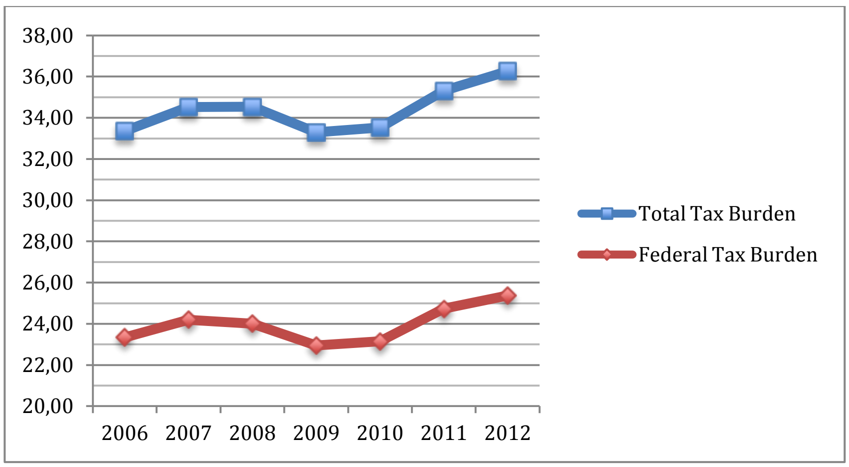
Source: IMF

The data presented in sequence are related only to Brazil. To begin with, there is the Brazilian total tax burden (including all levels of government), and the Federal total tax burden, both as a percentage of GDP.

The chart 1 below shows that during the period depicted there was an overall growth of the tax burden of almost 3 p.p., considering the total amount, and a growth of 2 p.p. for the federal tax burden. The growth was not constant during the entire period, for during the crisis the tax burden as percentage of GDP experienced a decrease. The decrease was only felt in total during the year of 2009, and the federal percentage had a slight decrease in 2008 when compared to 2007, and a bigger decrease in 2009. But, after this incident, it resumed its ascendant path.

Once more the fiscal space public officials have is very restricted, for one cannot conceive a substantial growth at this rates so as to meet demands for a stronger fiscal stimulus. Nevertheless, tighten that it is, it can still continue to grow. One does not see any signal among authorities of a plan to cut taxes down, and diminish the burden on society, as a means to foster economic growth. The tributary reform proposed during Lula Administration seems likely not to be approved.

Chart 1. Brazilian Tax Burden

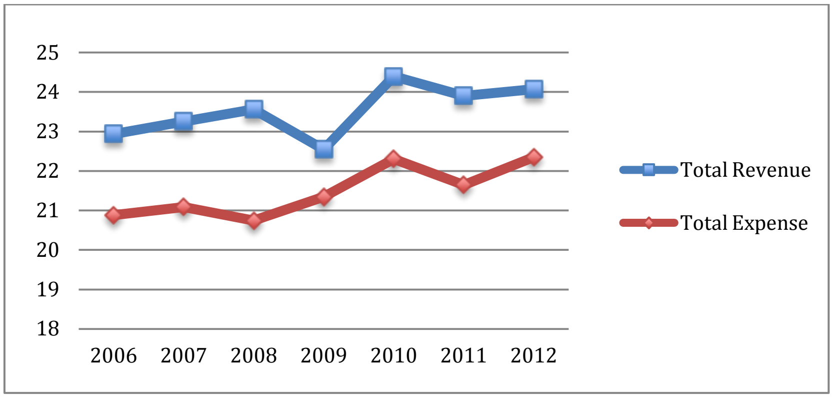


Source: Brazilian Central Bank (BCB); and Brazilian Institute for Tax Planning[5]

The attention now is turned to federal total primary revenue and expenditure (chart 2), and primary fiscal surplus (chart 3), during the period 2006-2012. Considering first the revenues one can see that the 2008 crisis affected its ascendant trajectory, causing a drop in 2009 of 1 p.p., reaching the value of 22.5% of GDP in that year of 2009. The recovery in 2010 was very strong, with a grow of almost 2 p.p. The year of 2011 experienced again a drop in the percentage, but it was kept above the 2008 level, reaching 23.9% of GDP. Although 2012 was marked by the concession of multiples new sectorial tax expenditures, the total revenues surpassed that of 2011, reaching the values of 24.1% of GDP.

[5] All data comes from Brazilian Central Bank, except those from 2012, which was extracted from the Brazilian Institute for Tax Planning, what can explain the acute growth in 2012 when compared to 2011.

Chart 2. Federal Primary Revenue and Expenditure



Source: BCB

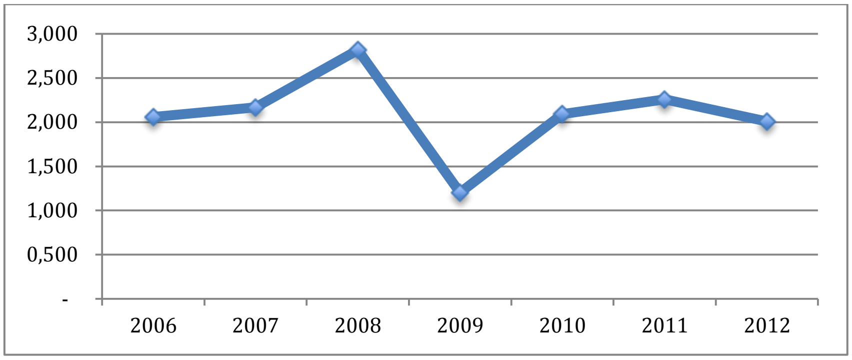
The behavior of federal primary expenses was a little different than that of the revenues, for it had a drop in its percentage value already in 2008. Not considering other factors that might have affect its outcome, this behavior result of public officials choices are rather prudent, as in 2008 it was not clear how the economic crisis would affect the Brazilian economy.

The following two years (2009 and 2010) are characterized by a fiscal stimulus represented by a growth in expenses as percentage of GDP. This countercyclical behavior showed to have been relevant to Brazil facing the crisis. Finally, in 2011 the expenses decreased a little, only to resume the ascendant level in 2012, having reached 22.3% of GDP.

The primary fiscal is the combination of these two behaviors of revenue and expenditure. Brazil has had a surplus during all the period depicted in chart 3. Its amount grew continually until 2008 when it reached its peak of 2.8% of GDP. The following year was the worst result of the series, when the surplus was only of 1.2%, for the reasons already discussed, i.e., negative shock on revenues and a fiscal response on the expenditure side.

In 2010 the primary surplus grew having reached the value of 2.1%, an amount similar to that achieved in 2007, but a way less than that of 2008. Also, this 2010 surplus refers to the period, in which this study is being conducted, and at least one third of it is being questioned. The result in 2011 was slightly better (2.26%), but it was not sustained in 2012, when the surplus dropped again to 2% of GDP.

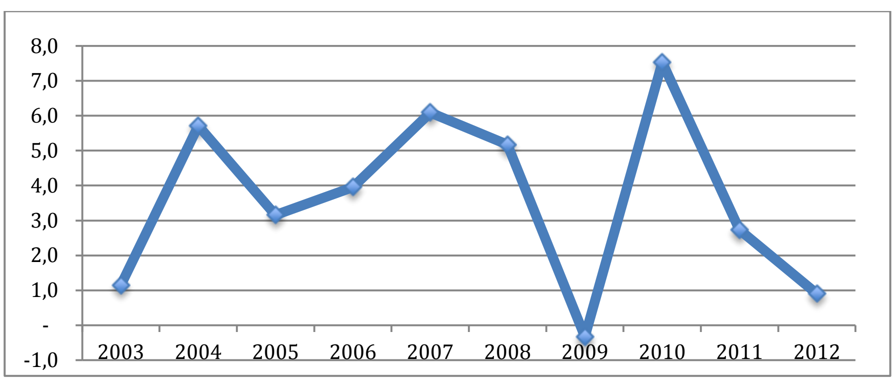
Chart 3. Brazilian Federal Primary Fiscal Surplus (% of GDP)



Source: BCB

Chart 4 is dedicated to the GDP growth rates, for a wider period, from 2003-2012. Focusing the attention to the period beginning with the crisis, Brazilian economy was heat, growing at a rate of 6% in 2007, and 5.1% in 2008. In 2009 the game changed and its growth was negative (-0.3%). The following year (2010) the recovery was strong, when the economy grew by 7.5%, but it was not sustainable, for in 2011 it was 2.7%, and in 2012 only 0.9%.

Chart 4. Brazilian Real GDP Growth (%)



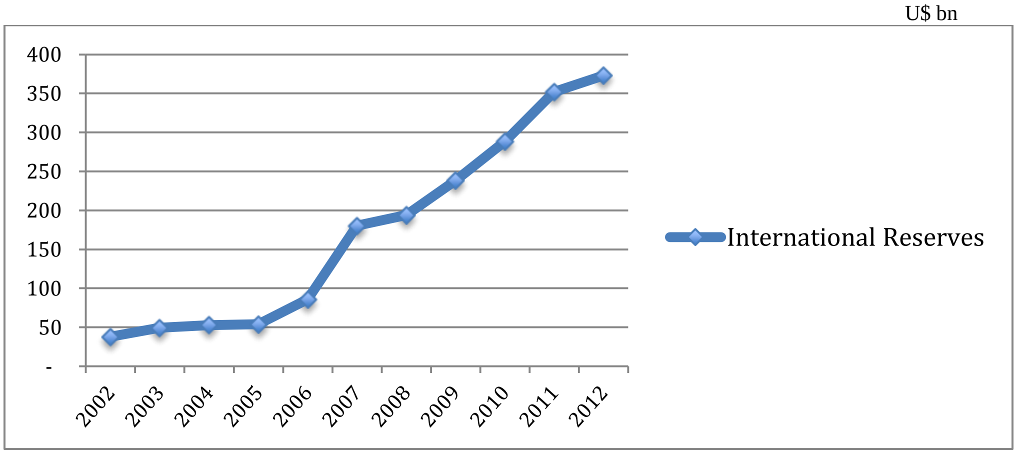
Source: IBGE

That the actual crisis is being considered the most severe after that of 1929 is well acknowledge, nevertheless the economic growth pattern shows that Brazil has room to improve when it comes the use of fiscal tools, for it is clear from the values that Brazil did not reach yet stability in growth in the way prescribed by the fiscal sustainability theory. The rates are uneven, very high one period, low the following. These high fluctuations are not good for the purposes of planning, and achieving stable results.

Finally chart 5 presents the amount of the Brazilian international reserves at the end of each period in US billion dollars. Brazil managed to build a cushion throughout the years, in such a way that today it is creditor internationally. This position, for sure, helped the country to face the 2008 economic crisis, for the reserves played a important role against any attempt investors to bet against its currency.

Chart 5. International Financial Reserves at the End of each Period

U$ bn



Source: BCB

3.2 Petrobras and the Context within the Oil Sector

Along with this transaction here analyzed, the oil business in Brazil experienced two other major changes in its rules, composing the scenario in which the transaction took place. One is related to a new procurement law, where the bidding process was altered, and the other refers to the distribution of royalties among sub-national governments due to the oil exploitation.

The Petrobras-Treasury transaction represents itself an enormous movement in the sector, for al least two reasons: first it did not follow the procurement process that prevailed at the time, but rather the exploration rights were assigned to Petrobras by law, without any competition (art. 1st of Law 12.276/2010); second, the amount involved is huge in international basis, let alone to the Brazilian market. Along with them, the transaction also introduced requirements to national content regarding the exploitation of the respective oil involved in this transaction, which is not quite a novelty.

Each of these subjects are enough complex to demand a paper of its own. The idea here is only to provide some insights about them. Regarding the first feature, the controversy spins around the concept of different treatment conceded to Petrobras in detriment of other oil companies, which would infringe the law. Because Petrobras received the exploration rights without having to compete for them would have given it an unfair advantage compared to its competitors.

A second aspect related to not using the procurement process refers to the amount the Treasury could have obtained should the transaction were open to other competitors. It is hard to image, though not impossible, a bidding higher than U$42.5 billion, due to its immense proportion. The funding for any company would be a problem, which was solved by the described augmentation of Petrobras' capital.

Comparing the amount of revenue due from this transaction to the amount collected in ordinary oil concessions, the former represents a much greater quantity, for in ten rounds, during the last 14 years, the amount paid as signature bonus reached – only – U$2.6 billion (ANP, 2012).

The second aspect of the transaction that calls the attention is the amount of oil involved: 5 billion BOE. As one can see from the table below, considering only Brazil, the transaction involved 33% of its proven reserves, and in terms of world it would represent alone the 26th largest national proven reserve:

Table 10. Proven Oil Reserves (Billions of BOE)

	Country	Proven Reserves
1	Venezuela	296.5
2	Saudi Arabia	265.4
3	Canada	175.2
4	Iran	151.2
5	Iraq	143.1
6	Kuwait	101.5
7	United Arab Emirates	97.8
8	Russia	88.2
9	Libya	47.1
10	Nigeria	37.2
11	United States	30.9
12	Kazakhstan	30.0
13	Qatar	24.7
14	Brazil	15.1
15	China	14.7
16	Angola	13.5
17	Algeria	12.2
18	Mexico	11.4
19	Azerbaijan	7.0
20	Norway	6.9
21	Sudan	6.7
22	Ecuador	6.2
23	Malaysia	5.9
24	India	5.7
25	Oman	5.5
26	Vietnam	4.4

Source: ANP Statistical Annals

The last feature, which is not really a novelty, for it has been used before, is related to the obligation that Petrobras observes minimum requirement for local content. It was defined as 37% minimum during the exploration phase, and a variable percentage to the development phase, according to the year it begins: 55% if it begins until 2016; 58% if it begins between 2017 and 2019; and a 65% of local content if the development phase begins after 2019.

These three characteristics have imposed a new scenario to the oil sector in Brazil, however the recent changes are not restricted to them. The procurement system was replaced, for the pre-salt oil basin, and other areas considered strategic. The new dispositions, introduced by law 12.351/2010, are based on the concept of production share, in which the winner company is that offers the highest share in production. In this model, the price the company pays is not upfront, but it keeps paying, in oil production, along with the drilling.

The law not only changed the bidding system, but it assigned Petrobras a greater role in the entire process. It was given Petrobras the right to be the operational company in all blocks conceded under the production share regime, even if it did not win the bidding contest (art. 4th). The winner company is obliged to admit Petrobras and the new SOE oil company (*Empresa Brasileira de Administração de Petróleo e Gás Natural S.A. - Pré-Sal Petróleo S.A. (PPSA)*, alas Brazilian Oil and Natural Gas Administration Company – Pre-Salt Petroleum S.A.) as partners in the Specific Purpose Company (SPC) (art. 20).

Finally, the third major event in the oil business was the establishment of a new distribution rule of royalties due, among national and sub-national governments. This is more of a federative discussion that leads to a different allocation of the financial resources from the oil production.

Stock Price

After all these changes, it is interesting to check what happened to Petrobras evaluation by the market, through the price of its stocks. For the transaction the ordinary and preferential stocks were evaluated at R$29.65 and R$26.30, respectively, for the stocks at the Brazilian Stock Exchange Market (BOVESPA); and U$34.49 and U$30.59 for the equivalents ADR at the New York Stock Exchange (NYSE).

Their values for March 13, 2013, are R$16.90 and R$18.73, representing losses of 43% and 30%, respectively. As one might expect the causes to the drop are not easy to be figured out, and this is not the adequate space to discuss them also.

Nevertheless, at the time the transaction was conclude some investment banks reduced their appraisal regarding Petrobras` stocks. These banks saw the price charged by government to be over evaluated by at least one third, the fair value raging between $5-6 per BOE (Fishman, 2010).

According to news published at Bloomberg website, at least Barclays, Credit

Suisse and Itau Unibanco changed their ratings. For instance, Barclays moved the company`s stock from “equalweight” to “overweight”. While the Credit Suisse shifted it from “outperform” to “neutral”.

The perception of Moody’s, however, was slightly different, for in their analysis the capital augmentation would enable Petrobras “fund its capital spending, reduce the debt, and shore up its liquidity”, and therefore “the stock offering and the transfer of oil rights will be positive for the state-run oil company's credit quality”.

It is worth comparing, however, the behavior of the stock value of other oil companies to try to see their trend. Below there are depicted graphs representing the stock market value at NYSE, for Petrobras, British Petroleum (BP), Exxon Mobil, and Royal Dutch Shell (RDS), from April 2010 until March 2013 (a three years span).

Comparing these major oil companies, the value of their stock values have a complete different trend altogether. Petrobras’ performance was by far the worst, for its stock value has fallen in every year of the analyzed period, and accumulates a total loss of 61%. BP also has experienced a drop in the value of its stocks in the period of almost 30%, however it faced a huge accident in Gulf of Mexico in April 2010, which might explain some of the loss. In that year alone the losses were of 22%. Nevertheless, in 2012, it managed to shift the trend and has already a positive gain in its stock value.

RDS’ stocks also have a different path, for they soar in 2010 and 2011, but faced losses in 2012, and face it in 2013 too. Its overall performance, however, is 12.8% positive. Finally, there is the Exxon Mobil, which has the best performance of the four, having positive gains in all these years, and accumulates gains of 33%.

Graph 1. Petrobras' Stock Value at NYSE

Source: CNN Money

Graph 2. British Petroleum's Stock Value at NYSE

Source: CNN Money

Graph 3. Royal Dutch Shell's Stock Value at NYSE

Source: CNN Money

Graph 4. Exxon Mobil's Stock Value at NYSE

Source: CNN Money

Section 4: ANALYSIS

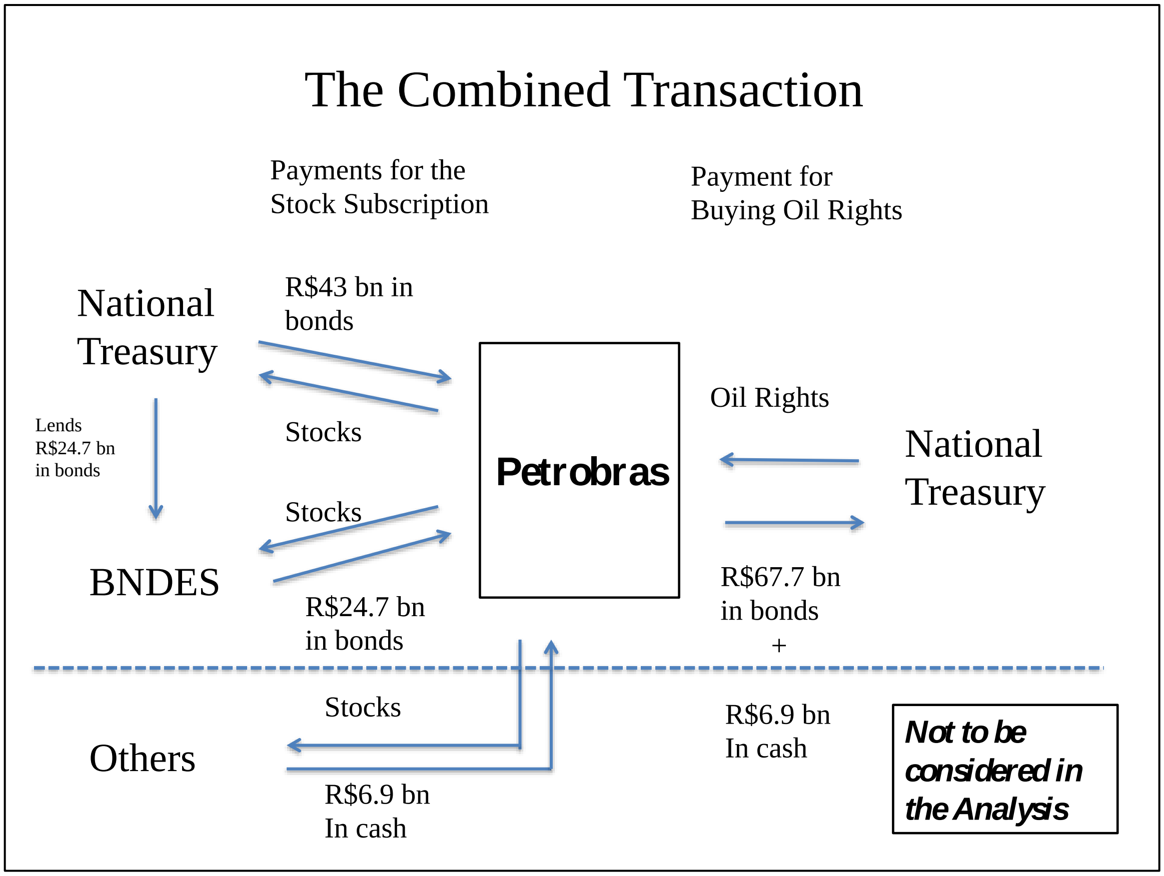
4.1 The Transaction

The figure below depicts the entire transaction. On the left part, there are the entities that participated in buying Petrobras' stocks. The Treasury and BNDES paid for them in bonds, and all other participants paid in cash. On the right side, it is depicted Petrobras payments for buying the oil rights from the Treasury, in which part was made in bonds and part in cash.

In order to simplify the analysis, the attention of the paper will be directed only to the amount paid by with government bonds, as if only two public entities participated in Petrobras' stocks subscription: the National Treasury and Development Bank (BNDES). The reason it has been chosen this path is that the other part is not relevant to the point here discussed, and its inclusion would only render the explanation more complicated, and it would not contribute to what it is intended to be shown.

Therefore for the sake of simplification, it will only be analyzed in this section the parts that involved bonds, and it will be excluded the parts where cash were used.

Figure 1. The National Treasury – Petrobras Combined Transaction



Both STN and BNDES used bonds to pay for their share of stocks, R$43.0 billion and R$24.7 billion, respectively, summing up R$67.7 billion. This same amount was the value of oil purchased by Petrobras (just remember it has been neglected R$6.9 billion in the deal). The bonds BNDES paid its parts was lent it by STN.

The National Treasury is present in both sides of the transaction. It receives the full amount from Petrobras (right side), but does not buy all the stocks (left side), for BNDES bought part of them, meaning that it received more than it paid. It is this imbalance in Treasury's revenue and expenditure that generated the final fiscal surplus.

The consequences of BNDES participating in the transaction, and its paying for it with bonds which it received from STN, is the main objective of the paper. The next paragraphs are dedicated to better understanding what were the outcomes derived from this participation, and what would have happened if BNDES did not participate in the transaction.

Treasury Point of View

From the National Treasure point of view, what actually happened was a selling to Petrobras of the rights to explore oil from the pre-salt basin at total amount of R$67.7 billion, representing current revenue, and an expenditure of R$43.0 billion due to the capitalization of Petrobras. These two combined generated a fiscal surplus of R$24.7 billion (or U$14 billion, at the exchange rate of the moment of the transaction).

It is interesting to notice that if government had not participated in Petrobras` capital augmentation, the full amount received by the selling of oil rights would be accounted for as a fiscal surplus. However, as it was necessary to augment its capital, and every stock bought by the central government diminished the fiscal surplus, because it was accounted for as expenditure. Therefore, imagining the possibility of government selling the stocks in the future, it would generate a surplus when it happens. Looking from this perspective, one can perceive some aspects related to fiscal surpluses being produced in different periods resulting from the same transaction, arising questions on intergenerational equilibrium.

However, the main path here pursued is related to the fact that indeed the capital augmentation was a condition to the existence of the transaction and, therefore, its corresponding expense a true expense to be accounted for in the date of the transaction.

In this case, if National Treasure were the only entity to subscribe Petrobras' stocks there would be no fiscal surplus as a result of the transaction. The surplus appeared only and because there were other parties involved. This triangulation allowed the Treasury to diminish its expenditures, because part of it was paid by the development bank, while keeping the revenues unchanged.

To make the point clear, let be compared the two possible scenarios: with and without the participation of BNDES, being highlighted the different outcomes that would be produced from each scenario, in terms of fiscal surplus and changes in patrimony.

1st Scenario: only the Treasury participated at the transaction

In this situation, as early pointed out, there would have been no fiscal surplus (the revenue due to the oil selling would match the expenditure due to the capitalization). Treasury patrimonial position (P) would have grown by the value of the oil rights sold (O), which is the sole transaction that alters the patrimony. Following it, Treasury would purchase Petrobras' stocks (S) by the same amount, so P = O = S. In this situation, there would have no net fiscal surplus (FS), FS = 0.

2nd Scenario: both the Treasury and BNDES participated at the transaction

When BNDES takes part of the deal, it is necessary to look at the Treasury and BNDES situations separately, as well as the consolidation of both of them. For the Treasury, the amount received for the oil (O') is equal as in previous solution (O), and this is the only transaction capable of changing the patrimonial position (P'). So, P' = O' = O = P.

Treasury would have bought less stocks (S'), paying therefore less for them. The rest would have been bought by BNDES (s), but the total amount of stocks are still the same: S = S' + s. Moreover, as revenues would exceed expenditures, there would be a fiscal surplus equivalent to the difference: FS = O' – S'. The fiscal surplus would be equal also in value to the amount of stocks bought by BNDES: FS = S – S'.

Actually the Treasury revenues were made of bonds it received from Petrobras. Notice, however, that STN received back the bonds it used to pay and also the bonds paid by BNDES. Hence, in receiving STN could cancel them, diminishing in its debt, while holding a right against the BNDES. It is this amount that counts for the fiscal surplus.

Although cash is not being considered in the transaction, when the fiscal surplus is calculated the result can be expressed in cash means, as it has been used.

From a patrimonial point of view, the Treasury's final situation would not differ from that described at the previous scenario, for its patrimonial gain would be similar, but made of two parts: money (M) surplus and stocks (S'). The amount of cash equals the difference between the stocks S' from this solution minus the value of the stocks from the previous one, so that M = S – S'. The patrimonial gain (P') from this situation would be:

P’ = M + S’ = (S – S’) + S’ = S.

The total patrimonial gain would be the same, but there would have a difference in relation to the nature of the assets, for in this case it would be split into cash and stocks, but the combined value would be exactly the same.

Lending bonds to BNDES does not change the patrimonial position of the Treasury, for it represents only an exchange of assets. The net federal debt is not increased too due to the fact that, on the one hand, if the stock of bond has increased, augmenting Treasury’s liabilities, on the other hand, Treasury has a claim against BNDES, augmenting its assets at the same amount. The net impact due to this transaction is a zero increase of the net debt, and that of patrimony (increase in the assets equal the increase in the liabilities).

From the BNDES perspective, there are two transactions as well, one with Treasury and the other with Petrobras. Neither of them affects the patrimonial position of BNDES. The former for the same reasons it did not affect the Treasury’s: BNDES received bonds, augmenting its assets, but now it has a liability towards Treasury, at the same amount, leading to a zero net increase of patrimony.

Buying Petrobras stocks does not change BNDES patrimonial position either, for it represents solely an exchange of assets: bonds for stocks. As a result, BNDES does not experience any patrimonial change due to its participation in the transaction. However, the composition of the assets and liabilities has changed, for on the asset side it has Petrobras stocks, and at the liability one it has a debt towards the Treasury.

As BNDES has no change in its patrimony, the consolidated patrimonial outcome will be that of STN (P’), which is equivalent to that of the first solution (P), P’ = P. The consolidation also leads to government holding the entire share of Petrobras stocks, and having a fiscal surplus (FS), equal to the amount paid by the bank, being the difference in the amount of stocks bought by STN in the first and second solutions, FS = S – S’.

Figuring out the Transaction

The solution is really ingenious! But, what happened then?

It is not difficult to show that the very same outcome would have been achieved if, after applying hypothesis one, the Treasury sold Petrobras stocks to BNDES. Similarly to the actual transaction, Treasury would lend BNDES the funding for paying for the stocks.

So, in this hypothesis, Treasury receives all the money for selling the exploration rights (O), and would pay alone for Petrobras' stocks (S), so that O = S, leading to a patrimonial increase (P) of the selling, P = O = S.

The second part would be made of selling stocks to BNDES. As the bank would not have the money to pay for it, the Treasury would lend it bonds. Neither these transactions change the patrimonial position of BNDES nor that of the Treasury, for they represent only exchange of assets, as it has already been discussed.

Within this third scenario, BNDES would receive the bonds, and then buy the same amount in Petrobras' stocks, but now from the Treasury. The latter would receive back the bonds lent and would cancel them, but would give BNDES the sold stocks, reducing its amount. But because the bonds were cancelled, there would appear a fiscal surplus. Therefore, the results of this hypothesis are absolutely the same as those of the real transaction, discussed as second solution above.

This proposition can be describe synthetically:

a) Treasury Emission of Bonds;
b) Treasury buying Petrobras' stocks with the bonds;
c) Petrobras buying the oil rights from Treasury with the bonds;
d) Treasury Lending part of the bonds to BNDES;
e) BNDES buying Petrobras' stocks from Treasury with bonds;
f) Treasury cancels all the bonds emitted in letter a.

One can still ask whether this was a good transaction and has its economics and/or juridical arguments. In doing so, one could cite the fundamentals that were used to sustain the adoption of Law 12.380/2011, the legal basis that allowed the central government to contract with its entities the exchange of different assets, among them the selling of stocks of SOE.

Other potential argument in favor of the transaction could be that it, while generating a fiscal surplus, did not reduce governmental assets, did not increase its debt, did not diminished its participation in Petrobras' capital etc. As said before, it was really an ingenious transaction that brought only economic profits.

However, there is one aspect that has not been enough debated, and it is related to the fact that BNDES will have to pay interest for having borrowed from the National Treasury. It is quite a leverage to hold debt to invest in the stock market. Apart from strategic reasons, which will not be discussed, one can calculate the amount of interest that will be paid for it.

In doing so, some parameters will need to be assumed, for the author did not have full access to the contract. It will be assumed that the interest rate (TJLP) will be that which prevailed at the time of the transaction, 5.5% a year; and that the payments will follow the Price Table, for 20 years loan. With these presumed conditions, after 20 years the amount of interest paid for the R$24.7 billion loan would be of R$16.6 billion.

The main purpose with the calculation is to show that there are other economic results from the transaction that were not been considered, and change its outcome. With this new scenario, BNDES would have an expense for participating in the deal, represented by the amount of interest paid for the loan. This is definitely a burden on its side, and will reduce its profits, for example.

However, from the Treasury point of view, the amount will enter as revenue, interest received. Once more, from its perspective the transaction has only benefits. Section 4.3 will discuss a further step in trying to figure out the transaction.

4.2 The Budget Execution in 2010

Examining the documents of following-up the 2010 budget execution, it is clear the budgetary officials were not considering the revenue and expenditure from the Petrobras-STN transaction in their projections. The first mention to it occurs after the conclusion of the transaction in September, having being captured by the official document only in the 5th bimensal report, of October, dedicated to assess revenues and expenditures, elaborated by STN itself, and the Budget Federal Secretariat (SOF, in the Portuguese acronym).

These bimensal reports are elaborated in order to assess, among other elements, the behavior of revenues and expenditures and evaluate whether the fiscal goals are going to be achieved by the end of the year.

The Brazilian budgetary praxis is that at the beginning of each fiscal year the amount public entities are authorized to spend is less than that authorized by the budget Law. During this bimensal analysis, the budgetary authorities adjust their projections and expand the spending authorizations. By the time of the 4th report in August 2010, the shortage, meaning what authorities have blocked, reached the amount of R$25.0 billion.

In the 5th report the amount of the transaction (R$74.8 billion) appeared as revenue. As it was said, it was not previously being considered in the calculation, which caused an increase in the revenue projection for the rest of the year of R$61.8 billion, after some R$13.0 billion in revenue frustration was also accounted for. For the same reason, the incurred expense of R$43.0 billion was accounted for as increase in expenditures. The combination of the two unexpected revenue and expenditure, lead the SOF/STN officials augmenting the spending authorization in R$18.6 billion.

Although it would be interesting to investigate the reasons why this revenue was not estimated in the official documents, such a pursue will not be made. It suffice describe the practical consequences of it. First, it is important to notice that up to September all fiscal surplus projections were made without taking that value into account, and up to that moment there was no signal that the central government would not fulfill the proposed fiscal surplus.

This assumption could lead to the conclusion that the surplus generated by the oil transaction needed not be considered in order to achieve the fiscal surplus. However, one might remember that during that year some R$25 billion in authorized expenditures were blocked by budgetary officials, and the fact that at that point the revenue projection experienced an increase of R$18.6 billion, would allow government to start to execute the programs that had their funding blocked throughout the year. This argument is very sound and should be analyzed, and better scrutinized.

Part of it is true, many expenses were held just in need of an authorization. Therefore, the augmentation of the total expending authorization had a positive effect. However, considering the great amount involved (R$18.6 billion), it is not reasonable to imagine that its major part could have been executed in that year of 2010, for it lasted only three months to the end of the fiscal year[6]. Unfortunately, it was not possible to proceed such a survey, and check the final outcome of every program that received the expenditure authorization.

The Brazilian law allows to carryover to the following budget authorizations that are not executed entirely during a fiscal year. In fact, this is very much used in today's reality, as the amount of carryovers (or *restos a pagar*, in Portuguese) has increased tremendously in amount in the last years.

So, the assumption is that the programs supported by the increase in the expenditure authorization are important, and the sooner one execute them the better, hence justifying the use of BNDES in the oil transaction so as to generate the necessary surplus to allow the mentioned increase. That is a reasonable argumentation either, posing the problem of the importance of the programs.

Considering though that those programs were very important and the time was ripe for them to be executed, the question is if it were possible to find other means to finance them without being necessary to produce the fiscal surplus at the oil transaction. One possible solution would require government to recur to the exceptions in the calculation of the fiscal surplus, in terms that the expenses from the PAC could have subtracted from that of the established fiscal surplus so as to meet law's obligation.

The amount executed at the PAC in 2010 was R$22.1 billion, more than the necessary to allow government official to increase their expenditure authorizations, and hence provide the indispensable funds to those programs that had been previously chosen not to receive funds, due to revenues imbalances during the year.

[6] In Brazil the fiscal year is from January to December.

If this solution had been adopted, in terms of budget execution nothing would be different from the real solution adopted. An extra spending authorization would be granted, expanding it in the very same amount. The differences would be in terms of the calculated fiscal surplus, and the triangulation in the oil transaction. The fiscal surplus in this hypothetical case would be less, but meeting the law's requirement, because it would have been diminished in accordance to the Law, but on the other side, there would be no need to BNDES participate in Petrobras augmenting capital, in the way it participated.

It has been pointed out, so far, two possible solutions, both of them involve political decisions. The first, R$18.6 billion worthy programs would not have received funding at that time, at least. Though difficult it is to calculate the benefits, which would not have been produced, the savings are very easy to calculate. Within the second solution, where the programs receive the funds, the benefits would have been produced, but what were the costs associated? Here, the intention is only to compare the costs among the different solutions, and the comparison is between the real solution is this hypothetical one. In both cases the money was spent. So, the political cost would have been only associated to divulge a smaller fiscal surplus.

Rephrasing the comparison between the real solution and the second one here proposed, for the sake of clarity, the real one produced a fiscal surplus because the development bank participated in the transaction, and as a result in October of that year, due to an increase in revenue projections, budgetary authorities augmented the spending authorizations in R$18.6 billion. And, by the end of the year the calculated fiscal surplus met law's requirement of 2.15% of GDP in full, that is, without any reduction.

In the second solution here proposed, there would have no surplus from the oil transaction, and the augmentation in the spending authorizations would come from deducing the fiscal surplus by the necessary amount so as to allow the same programs valuing R$18.6 billion receiving the funding. The difference would be that the calculated surplus at the end of the year would now be less than 2.15% of GDP, but would, nevertheless, meet law's requirement.

There is also the possibility of reducing the annual fiscal surplus by changing the law, which would lead to the same outcomes as the last solution discussed.

Is this a small political cost? The answer is far from being easy, and it is not the intention to discuss the political costs, but only to try to have a better understanding the choices public authorities had at the moment. In the future historian will look back and ask what was the fiscal surplus for the year of 2010.

4.3 Fiscal Surplus

Throughout the paper some possible solutions were raised and discussed. Now, the attention will be focused only on two of them: a) the real one, with the participation of the development bank, and b) a hypothetical transaction without its participation. The former scheme produced a fiscal surplus and the latter would not have done so.

The question that is put forth is whether there are fundamental differences among them so as that one could assert that the Brazilian fiscal position is better in one case or the other. In other words, is it possible to identify which solution puts Brazil in a better fiscal position, or both solutions are equal?

Comparing the outcomes from both possibilities, one would conclude that the real transaction put Brazil in a better position, because in both cases the patrimonial gain would be equal, the final net debt equal, the total Petrobras' stocks hold by government equal, but in the real transaction the fiscal surplus was greater than that would be produced in the other solution.

So, if all comparable features are the same, but in one of them, the solution that has the better outcome in that one feature is the best. And this is the case for the real transaction. Therefore, from the perspective of the outcomes the real arrangement adopted for the transaction presented a better fiscal outcome, and Brazil was put in a better fiscal position.

That the real transaction produced a better fiscal outcome can be asserted because the total fiscal surplus was greater than it would have been at the other hypothesis, allowing the budgetary ceiling to be increased, without causing any indicator to be worse off. It is the classical example of Pareto's optimal.

However, would the answer lead to the same result, if one analyze the problem from the perspective of the essence of the transaction? The question would not be directed for the outcomes produced, but to the meaning of each part of the transaction, in what the two proposed possibilities differ among each other essentially. In a direct way, the question would be: how the Brazilian fiscal position would differ in essence if BNDES participates in the deal or not? Or, how can the BNDES participation improve Brazil's fiscal position?

At first, it is noticeable that there is nothing perceivable that can made the country better off just because the bank took part in the deal. Any wealth whatsoever was created in its participating, so as to justify the improvement in the fiscal position. In essence nothing was changed.

Of course, that when the bank took part in the transaction Treasury spent less in buying the stocks, which originated the surplus. Nevertheless, this same amount saved by the Treasury was spent by the bank, which is owned by the central government, which should lead to a zero net increase in welfare. The tricky part that sometimes eludes the attention comes from the bonds that Treasury lent the bank, as it will be discussed below.

This conclusion becomes even clearer if one assumes as true the comparison made before in the paper that the real deal, in the way it was performed, is equivalent to the National Treasury selling BNDES part of the stocks, while lending it the necessary means to pay for the purchase. As it is easier to visualize this structure, the following discussions will consider it as what has really happened.

The consequences have already been discussed, and that would mean that the patrimonial gain would be equivalent to the amount of oil rights sold, but split in two different kinds of assets: stocks and a financial asset, which will ultimately be expressed in money terms. The amount of money represents the fiscal surplus of the transaction, and will further serve as base for augmenting the expending authorization or the expending ceiling, on the budgetary cycle.

However, it is necessary to take a further step in analyzing the transaction, because the loan is not the end of the history, it will have to be paid back. And this action by BNDES will cause new outcomes to the transaction. Putting aside the interests, and focusing only on the principal, it is interesting to take a closer look to its impacts.

According to the Law 12.397/2011, BNDES can make this repayment with assets, or with cash. If then, for instance, BNDES uses Petrobras' stocks to do so, the initial situation would be restored, as Treasury would hold the entire amount of stocks back, and the mutual obligation BNDES-STN would be extinguished. The consequence from such a hypothesis would be a deficit in STN's accounts, for it is exactly the reverse transaction here under analysis. So, if when the STN sold the stocks to BNDES it generated a fiscal surplus, when BNDES pays STN with stocks it might generate a fiscal deficit.

Actually, in order to that conclusion hold true it is not necessary to be the very same stocks, it needs to be any kind of asset different from financial ones. If BNDES uses the Law prerogative, and pays back with assets, the Treasury would experience at that moment a deficit due to the finalization, so to speak, of this transaction. A surplus today would be followed by a deficit in the future, solution in which the intergenerational requirement of sustainability would not be met.

If the payment is made in cash, it would confirm the nature of the original transaction as an ordinary selling, and the surplus would have come from it, selling stocks to fund budgetary programs. Here, two problems can be devised: first, concerns whether it is a good policy selling assets to fund current expenses; and second, if there would not be in place a locational and intergenerational problem, related to the production of the surplus, for in order to STN be able to enjoy a fiscal surplus in 2010, it will have to be compensated by a real effort in BNDES to produce that surplus, in future years[7].

The way things are looking it seems that either possibility there would have a need to be produced in the future the necessary means to fund the transaction that was elusive funded with bonds. In one case, the Treasury would have to run a deficit, and in the other, BNDES would have to run a surplus to then really pay for the stocks.

In the first solution there is not a real creation of welfare, but a mere temporal

[7] There are in reality three ways to pay for it: use actual assets as means of payment; use already existing financial resources; or gain (trough operations) new financial resources. Either way the solution does not change from what has been presented.

substitution of surplus/deficit. In the second solution, there would have a real creation of welfare that would be derived from BNDES efforts to pay for the stocks, but the transaction occurred in 2010 would be more like advancements made in favor of STN.

Coming back to the question of either solution leads to a better fiscal position, following two different paths the conclusions were contradictory; for in one argumentation the result was that the real transaction was superior in terms of its final fiscal position, and the other argumentation led to the conclusion that both solutions were similar in terms of its final fiscal position.

Which of these two solutions must prevail? Or can one assume them both equally correct and choose the outcome that best suits the decision maker? Or, on the contrary, this is a case where the faithfulness of the statements is in place, and one must decide on behalf of the solution that preserves the essence of the economic phenomenon?

It is never too much remind that the calculated fiscal surplus is important not only to user of the financial reporting, such as the capital providers, but it is used also to check compliance with the pre-budgetary law, which established a target for the year, and it serves during the decision making process, involving the establishment of expenditure ceilings, indebtedness level, for instance, among others.

Therefore, it looks like, in accordance with the principles attached to fiscal sustainability, that a more prudent outcome should always prevail when compared to a more bold solution, because this bolder outcome can give the false impression of a good fiscal position, al least a position better than in reality the country has, which may compromise its fiscal position in the future.

Taking decisions for a country is not an easy task, and facing difficult decisions are even harder, but good government means being able to cope with problems without deviating from the main causes, rather addressing them.

Section 5: CONCLUSION

The main objective of the paper was an attempt to scrutinize the STN-Petrobras oil for stocks transaction and assess whether there were in place other options that public authorities could have trailed in order to achieve the legal fiscal surplus established for 2010, and, execute the same level of budgetary programs.

The main aspects which could be concluded are related to intergenerational imbalances. Initially, it has to be acknowledged that the National Treasury in selling part of its rights to explore oil accounted for huge revenue. However, as a means to make possible the entire transaction, it was necessary to augment Petrobras' social capital, which accounted for an expense supported by the government.

It is interesting to notice that if government had not participated in Petrobras` capital augmentation, the full amount received by the selling of oil rights would be accounted for entirely as a fiscal surplus. Therefore, buying Petrobras` stocks reduced the fiscal surplus that could be generated in the year of the transaction. If, in future years, government decides to sell some of the stocks, this selling would account for a surplus, making possible to distribute the fiscal surplus that would have been generated in the year of the transaction along several years.

However, as it was necessary to augment Petrobras` capital so as to make possible the entire transaction, one can regard the corresponding expenditure as belonging to the year of the transaction, and the intergenerational problems associated to it would be of a different nature.

Below it is stated what could be verified and conclude throughout the paper:

Regarding fiscal subjects, the following aspects were verified during the analysis:

a) The fiscal surplus derived from the transaction only occurred because other public entities different from the National Treasury participated in buying Petrobras stocks;
b) Neither the revenue nor the expenditure incurred in the transaction were incorporated in the official budgetary estimations, until they really occurred in September 2010, only three months before the fiscal year were to finish;
c) The very same budgetary execution could have been achieved even

without the fiscal surplus stemmed from the STN-Petrobras transaction, if only the amount executed in the Accelerated Growth Program (PAC) were subtracted from the required legal fiscal surplus goal;

d) The same result could have been achieve should government had proposed a reduction in the fiscal surplus goal for the year.

Regarding the oil sector, it could be verified the following:

a) The amount of oil involved (BOE) represented one third of all the Brazilian proven reserves at the time;

b) Petrobras ordinary and preferential stock prices fell by 43% and 30%, respectively, since the conclusion of the transaction;

Based on these assumptions, the following conclusions were achieved:

a) The participation of the Brazilian Development Bank (BNDES) in the transaction, in the way it was designed, could not make the Brazilian Central Government fiscal position better off when compared to the same transaction without its participation;

b) The fiscal surplus produced at that time will have to be counterbalanced by a deficit in the future or it will only be confirmed as a surplus when BNDES produces it in the future in order to pay for the loan, imposing, either way, an intergenerational problem;

c) BNDES will have to pay interest for the loan received as a means for buying Petrobras` stocks, burdening its budget;

d) It would have been safer if public authorities did not use that surplus to meet its legal obligation, nor authorize new expenditures, doing so by different means.

Bibliography

Associacao dos Procuradores do Banco Central. (n.d.). Retrieved February 10, 2013, from http://www.apbc.org.br/historicoate64-90.php

Auerbach, A. (2011, November). Long-term Fiscal Sustainability in Major Economies. *Bank for International Settlement*.

Bloomberg. (n.d.). Retrieved April 13, 2013, from http://www.bloomberg.com/news/2010-10-13/petrobras-cut-to-neutral-from-outperform-by-credit-suisse.html

Brazilian Central Bank . (n.d.). *Central Bank Portal.* Retrieved March 2013, from Inflation Report: http://www.bcb.gov.br/htms/relinf/port/2012/12/ri201212inp.pdf

Brazilian Central Bank. (n.d.). *Temporal Series*. Retrieved March 2013, from http://www4.bcb.gov.br/pec/series/port/aviso.asp

Brazilian National Agency of Petroleum, N. G. (n.d.). Retrieved March 10, 2013, from Statistical Annals: http://www.anp.gov.br/?pg=56346

Brazilian Secretary of the National Treasury. (n.d.). *Temporal Series*. Retrieved March 2013, from http://www3.tesouro.fazenda.gov.br/series_temporais/principal.aspx?subtema=6#ancora_consulta

Burnside, C. (2003, July). Theoretical Prerequisites for Fiscal Sustainability Analysis.

Burnside, C. (2005). Fiscal Sustainability in Theory and Practice: A Handbook. Washington.

CNN. (n.d.). *CNN Money*. Retrieved March 10, 2013, from http://money.cnn.com/

Costa, M. d., & Juan-Ramon, H. (2005). Evaluacion de la situacion financiera del sector publico. *IMF*.

Fishman, A. (2010). Petroleum in Brazil: Petrobras, Petro-Sal, Legislative Changes & the Role of Foreign Investment. *http://www.gwu.edu/~clai/working_papers/Fishman_Andrew_12-10.pdf*. Washington, DC, USA.

Giambiagi, F. (2004). A Política Fiscal do Governo Lula Em Perspectiva Histórica: Qual e o Limite para o Aumento do Gasto Público? *Planejamento e políticas públicas*(27).

International Accounting Standards Board. (2008). An improved Conceptual Framework for Financial Reporting.

International Monetary Fund. (2002). Assessing Sustainability. Washinghton, DC.

International Monetary Fund. (2003). Sustainability Assessments—Review of Application and Methodological Refinements. Washington, DC.

International Monetary Fund. (2012). *Fiscal Monitor*. Retrieved March 2013, from http://www.imf.org/external/pubs/ft/fm/2012/02/app/FiscalMonitoring.html

Nóbrega, M. d. (2012, October 31). De volta às trevas orçamentárias (Back to the Doomsday in Budgeting). *Revista VEJA*, 24.

OECD. (2010). Restoring Fiscal Sustainability: Lessons from the Public Sector.

Oliveira , G., & Turolla, F. (2003). Política econômica do segundo governo FHC: mudança em condições adversas. *Tempo Social – USP*. (http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0103-20702003000200008, Trans.) Sao Paulo.

Oliveira, J. C., & Fontenele e Silva, P. (2000). Reformas das instituiçõesfiscais: Reflexões sobre o caso do Brasil. *Seria Politic Fiscal 110*. (http://www.scribd.com/doc/22931817/Reforma-Fiscal-Brasil-CEPAL, Ed.) Santiago, Chile.

Petróleo Brasileiro S.A. - Petrobras. (2010). *Petrobras Oficial Web Site*. Retrieved February 10, 2013, from Investors' Relation: http://www.investidorpetrobras.com.br/pt/comunicados-e-fatos-relevantes/aumento-do-capital-social-e-avaliacao-das-lfts.htm

Petróleo Brasileiro S.A. - Petrobras e Controladas . (2011). Demonstrações Contábeis Consolidadas em 30 de junho de 2011 e 2010 .

Petróleo Brasileiro S.A. - Petrobras. (n.d.). Prospecto Definitivo da Oferta Pública de Distribuição Primária de Ações Ordinárias e Ações Preferenciais de Emissão da Petrobras.

Schick, A. (2009). Evolutions in Budgetary Practice.

Sousa, F. J. (2011). A Cessão Onerosa de Áreas do Pré-Sal e a Capitalização da Petrobrás. *Brazilian Senate Legislative Consulting*. Brasilia, Brazil.

Sovereign Fund. (2010). *Sovereign Fund*. Retrieved February 10, 2013, from Sovereign Fund Report: http://www3.tesouro.gov.br/fundo_soberano/download/RelatorioGestao_2010.pdf