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Confronting Fiscal Imbalances Via Intertemporal Economics, Politics and Justice: The Case of Colombia¹

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Abstract

Fiscal adjustment packages have traditionally been designed to tackle excessive public spending. The suggested strategy usually entails pursuing objectives in terms of reducing current levels of deficit and explicit debt, and is thus a flow approach to government financing. However, when a long term perspective is incorporated into fiscal policy decisions the result is the pursuit of a dynamic equilibrium, one related to public sector net worth as opposed to explicit debt and deficit targets. Additionally, the feasibility of the entire fiscal strategy depends on the disposition of congress and high court to approve a particular set of reforms. These bodies take different legitimate criteria into account when evaluating reforms, such as political desirability and constitutional coherence. The hypothesis is that the feasibility of a particular fiscal package depends not only on a sound intertemporal (stock) economic approach, but also on the incorporation of a new approach into the political and judicial decision making process. This approach requires that an explicit intertemporal view be taken of politics and of the concept and enforcement of social justice. An open dialogue between the executive, legislative and judicial arms of government is necessary if an intertemporal approach is to be implemented. This intra-governmental intertemporal consistency will reinforce the dynamic approach which needs to be taken within each arm of government. This is a precondition to consistency of their respective objectives in time. Recent developments in Brazil and Colombia illustrate the importance of such dialogue.

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I. Motivation

Fiscal adjustment packages are traditionally designed to tackle excessive public expenditure; the reduction of current deficit and explicit debt levels is achieved by using a flow approach to government financing. When a long term perspective is incorporated into fiscal policy decisions the result is the pursuit of a dynamic equilibrium, related to public sector net worth as opposed to explicit debt and deficit targets. The latter approach has fiscal adjustment implications that differ from the former, even in the definition of fiscal imbalance.

A completely new set of problems emerges when implicit liabilities such as sub-national government financing, financial sector bail-outs, public sector guarantees, or other country specific liabilities, such as the imputable cost of a peace process are included in fiscal strategy. The feasibility of the entire fiscal strategy depends on congressional and high court approval of reforms which, in turn, depends on the political desirability and constitutional coherence of said reforms. Additionally, objectives specific to each public body are pursued, thus the public sector budget and fiscal adjustment programme are directly affected by the specific needs of different areas of government. This paper discusses the current Colombian fiscal adjustment model, and how economic, political and judicial considerations affect public policymaking.

The hypothesis is that the feasibility of a particular fiscal package depends not only on a sound intertemporal (stock) economic approach, but also on the incorporation of a new approach to political and judicial decision making. This new approach requires that politics, and the concept and enforcement of social justice, have an explicit intertemporal dimension. A static view of politics and social justice may result in the unsustainability of a fiscal program, and aggravate the fiscal imbalances which it is designed to eliminate.

If an intertemporal cross-government approach is to be implemented, open dialogue is necessary between the executive, legislative and judicial arms of government, in order that consistency of their respective objectives be achieved in time. Recent developments in Brazil and Colombia illustrate the importance of such dialogue.

The growing consensus towards taking a stock approach to public financing is discussed in the following section. Section III deals with the flow and stock perspective relative to Colombian public finances and briefly discusses current fiscal adjustments. The final section explores both the political and judicial considerations which affect fiscal strategy, and the risk of adopting a static approach to public policymaking. Finally the need for an explicit intertemporal approach to decision making, in all arms of public power, is justified as a necessary condition for the achievement of fiscal and economic stability.

II. Fiscal Policy

Pursuing fiscal stability via deficit reduction may be conceptually inconsistent as a deficit is, in itself, an arbitrary accounting construction which is subject to changes in accounting practices; it therefore depends on the categorisation of receipts and payments. Thus data manipulation is made possible, allowing misleading balances to be created which invalidate current fiscal objectives. Kotlikoff (1993) points out that “from a neo-classical perspective the deficit is an arbitrary construct with no necessary relationship to the fundamental stance of fiscal policy”. The real effects of fiscal policy are independent from the size of the public surplus or deficit, and depend only on the extent to which they alter economic incentives through the redistribution of income and expenditure.

Fiscal adjustment in the form of flow correction, related to the reduction of public deficit or debt, may not represent an effective solution. It may also be misleading to use conventional accounting to calculate the extent and impact of an adjustment package in which explicit government liability (debt) variations are considered, whilst variations in government assets, or implicit liabilities, are ignored.

Anticipated government responsibilities, which are not specified as legal obligations, can be direct (predictable and therefore expected), or contingent (triggered by a discrete event and, therefore, uncertain). A government commitment to accept obligations which depend on future events amounts to a hidden subsidy. This could cause immediate distortions in the markets and,

therefore, result in an unexpected major drain on government resources in the future. The relevance of implicit liabilities is related to expectations of government intervention, which can be interpreted as being a moral hazard, the scope of which depends on the magnitude of government led minimisation of market failures.

Bearing this in mind, a more appropriate deficit calculation would reflect variations in the Net Present Value (NPV) of public sector assets, minus all liabilities. This would emphasise changes to government net worth, and constitutes a *stock* perspective of fiscal imbalances which allows for an intertemporally optimal fiscal policy path where objectives are considered in terms of government net worth.

The development of fiscal policy along these lines requires the explicit incorporation of an intertemporal framework that reduces fiscal adjustment to the fall in the government discount rate. This is, in turn, linked to generational accounting, a system of long term fiscal analysis and planning aimed at the sustainability of fiscal policy and the measurement of current and future fiscal burdens.

Such intertemporal analysis of fiscal policy is conducted using the Fiscal Balance Rule (FBR) to measure the impact of current policies on the tax burden of future generations, relative to that of current generations. Thus, the intergenerational balance refers to future generations not having to suffer a higher tax burden compared with that of current generations.

The FBR implies that government should extract enough from each successive generation so that if it were in a steady state - where government net worth and consumption grow at the same rate - it would remain there, with no need to impose a larger or smaller tax burden on subsequent generations. It is evident, therefore, that the FBR is based on the efficient extraction of resources from, and allocation to, different generations, consistent with an optimal path of government expenditure. An element of long term analysis is incorporated into the FBR, in which government financing is guaranteed by a dynamically consistent scheme that, additionally, seeks to provide equal funding for different generations (Kotlikoff 1993, Auerbach, Kotlikoff and Leibfritz, 1999).

Fiscal policy complies with governmental intertemporal budget constraints, which are, in turn, dependent on the individual's lifetime net payment. This concept is related to positive and negative flows between government and individuals in terms of taxes, loans and transfers. Thus, generational accounting is based on the government intertemporal constraint, which determines the sustainability of the policy. This constraint requires that the future net tax payments of current and future generations be sufficient, at today's values, to cover the present value of future government consumption, and government initial net indebtedness. Thus, the zero-sum nature of intergenerational fiscal policy is revealed.

The achievement of fiscal adjustments via discount rate reduction – which equals an increase in the current young generation's lifetime net payment – constitutes a real adjustment with the respective implications for saving, investment and capital accumulation. Such a policy, which can be interpreted as an intergenerational transfer, can work with a balanced budget, a deficit or a surplus.

However, when adjustments are limited to flow variables, targets such as deficit reduction can be achieved via the manipulation of accounting categories, a reduction in asset accumulation or an increase in hidden liabilities. These adjustment packages were criticised by Easterly (1998), who defined them as mere illusion. The use of fiscal deception can reduce a cash deficit, but it is only a transient reduction and is not a permanent shock that shifts government intertemporal net worth. Thus, a deficit target is achieved through policies that turn out to be short-sighted; they do not consider the intertemporal dimension.

Such is the example of a reduction in public investment, which might be dynamically inefficient as it deprives the economy of future revenue, which could have more than compensated for the expenditure. A further example is the reduction of operational and maintenance spending, resulting in a reduction of current asset values and requiring future spending on the restoration of assets. This offsets the current value of the reduction in expenditure, thus making it dynamically inefficient.

Another way to meet current deficit targets consists of protecting current public consumption, by shifting expenditure and revenue across time. This is strictly a flow manipulation and does not have any structural impact on government net worth over time.

Thus, a government can shift taxes over time or delay financial crises in the banking sector by altering flow temporality, but is obliged to face the consequences of dynamically inconsistent decisions later. The result is persistent and aggravated structural fiscal imbalances, resulting from the dynamic nature of fiscal policy.

The reduction of current deficits through time reallocation of revenue and expenditure flows may overlook or elevate fiscal risks. Apparently sound fiscal packages may favour budget programs that do not immediately require cash and which, therefore, temporarily hide the underlying fiscal cost. The dynamic nature of fiscal policy calls for an ex ante analysis of risks and future implications associated with contingent forms of government support, in order to guarantee the dynamic efficiency and consistency of fiscal policy.

Implicit contingent liabilities carry great risks and are relative to the strength of the macroeconomic framework, the vulnerability of the financial sector, the efficacy of regulatory systems and the availability of information, which is in turn related to transaction costs. The presence of contingent liabilities requires that the cost of uncertainty be incorporated into the decision making process.

Prudent fiscal policies need to be developed within a long-term framework, and policymakers need to be explicitly aware of the long-term consequences of their decisions. This requires a recognition of the fact that short-term flow stability does not necessarily mean fiscal stability. The elaboration of prudent fiscal policies entails, therefore, the construction of dynamically efficient strategies. This, in turn, requires the development of a single portfolio containing a stock of (complete and accurate) contingent liabilities, public sector debt and other public liabilities, and which permits the evolution of a correlation sensitive to both macroeconomic and policy scenarios and overall risk exposure through time. All of which results in the determination of optimal risk exposure according to the state's ability to manage risk and absorb contingent losses.

These strategies depend on the existence of an appropriate institutional framework in which the behaviour of political arms such as parliamentary and judicial boards, or the Supreme and Constitutional Courts, is crucial. The importance of policy consistency in the different areas of government, in order to achieve fiscal balance targets through the conciliation of their respective objectives, is illustrated by situations such as the one currently facing Brazil.

In the pursuit of fiscal adjustment, the Brazilian Congress recently approved two reforms aimed at achieving a primary fiscal surplus equivalent to 3.25% of GDP. This was necessary to comply with the austerity program negotiated with the International Monetary Fund as the condition for a US\$41.5 billion loan. The reforms consisted of an increase in pension contributions paid by high-earners in the public sector and a deduction of contributions from those who had already retired. The reforms were also in line with the Government's efforts to achieve equality among the public and private sector pension schemes (The Economist, Oct. 9/1999).

However, the Brazilian Supreme Court recently judged such reforms to be unconstitutional, a judgement which will result in a US\$1.2 billion dollar shortfall in next year's public accounts. This means further budget cuts and has created additional uncertainty over exchange and interest rates; there is also uncertainty regarding political support for the reforms, ultimately resulting in a lack of credibility for future reforms. Doubt has been cast on the ability of the Government to comply with the required fiscal austerity program, thus hindering a speedy economic recovery from a deep recession.

In sum a trade-off exists between long-term fiscal stability and budget deficit and debt target levels, and between the quality of fiscal adjustments and the speed of deficit reduction. This may lead to fiscal opportunism and, in turn, a bias towards excessive accumulation of contingent financial risks and unsustainable and dynamically inconsistent policies. Additionally, the extent and effectiveness of fiscal reforms employed in the pursuit of fiscal adjustments requires guarantees from both the judicial and political systems. Such guarantees require the incorporation of an intertemporal framework into the policies, which includes the dynamic implications that decisions have on the long-term confrontation of fiscal imbalances.

III. The Flow and Stock Perspective to Colombian Public Finance

III. A. The Flow Perspective

Applied Colombian fiscal accounting practice has traditionally based the sustainability concept on deficit dynamics; an unsustainable situation has been explained in terms of growing and persistent deficits. The result has been a fiscal policy analysis based on the achievement of short-term goals, such as current period deficit reductions, as opposed to a long-term dynamic perspective. Given the conceptual and practical deficiencies which arise when using government deficit as a measure of fiscal balance, the policies aimed at reducing the short-term deficit have not resulted in equilibrium. On the contrary, short-sighted fiscal policy decisions have resulted in larger future fiscal burdens.

Traditionally, fiscal flow unsustainability refers to the explosive tendency of explicit public debt, when considered as a proportion of GDP. Public debt increases each year on a scale equal to the primary fiscal deficit, in addition to nominal interest payments, excluding the portion financed through seigniorage. When expressed as a proportion of GDP, debt declines in accordance with inflation and economic growth.

$$\Delta \left\{ \frac{\text{debt}}{\text{GDP}} \right\} = \frac{\text{primary deficit}}{\text{GDP}} - \frac{\text{seigniorage}}{\text{GDP}} + (\text{real interest rate} - \text{GDP growth rate}) \frac{\text{debt}}{\text{GDP}} \quad (1)$$

Thus, if the primary deficit exceeds seigniorage income, and the real interest rate exceeds the GDP growth rate, the debt/GDP ratio will grow without limit.

In Colombia, the average real interest rate of domestic and foreign public sector debt over the past two decades has been approximately 8%, while the average GDP growth rate has been

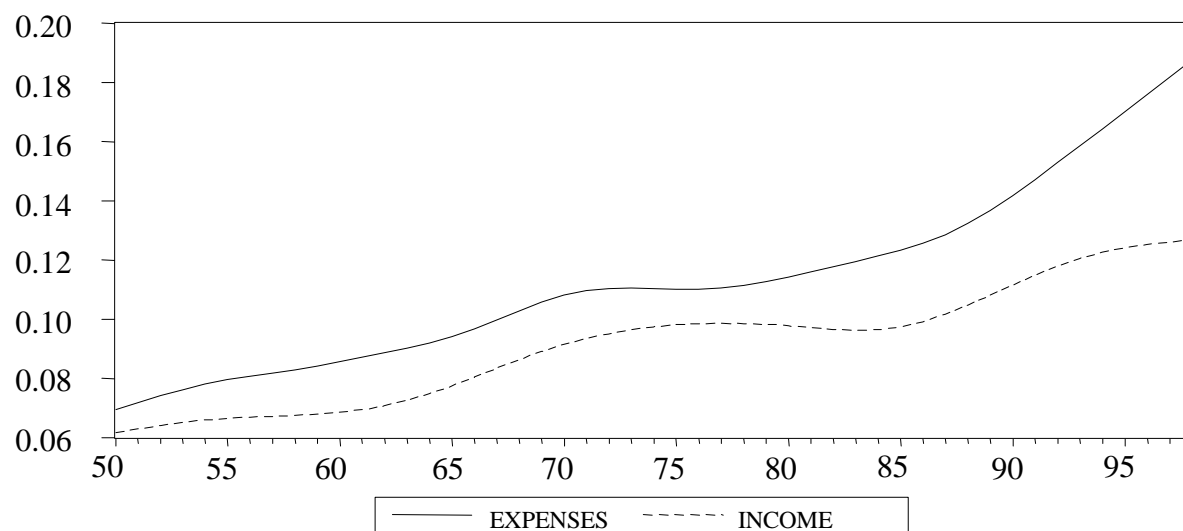
3.7%. Such a scenario is clearly unsustainable when combined with increasing primary deficits as a proportion of GDP. According to Trujillo (1999) the sustainable level of debt for Colombia, under reasonable assumptions of economic growth and money creation, is 29% of GDP, a level three points below the current figure and seven points below the level projected for 2002.

One approximation to the analysis of fiscal imbalances in Colombia is centred upon measures of deficit and debt, which are in turn based on the long-term performance of income and expenditure flows. Stylised facts reveal an increasing gap between annual Government tax income and expense flows between 1980 and 1998 (Graph 1). The unsustainability of this relationship implies that future expenditure, excluding contingent liabilities, cannot be sustained within the actual government income flow framework.

An analysis of fiscal instability, limited to a study of flows, underestimates the real dimensions of the fiscal problem and hampers the design of a sound fiscal policy. This implies that the forecasted deficit reduction, as a percentage of GDP, does not necessarily result in the achievement of an intertemporally sustainable fiscal scenario.

Therefore the importance of pursuing a stock based analysis of fiscal policy in Colombia is stressed. This line of investigation includes various factors which have an impact on the long-term sustainability of fiscal policy (and which are often overlooked by the simple flow approach). The dynamics of a stock based analysis require the incorporation of contingencies into the Government balance sheet, thus redefining the perception of fiscal imbalance via the consideration of major risks to fiscal stability. Furthermore, this type of analysis shows the underlying long-term unsustainability of current balanced budgets, which have resulted from the mislabelling of accounts and underestimations. A stock based analysis also reveals the importance of intertemporal equilibrium between public sector power arms in the design of public policy, which has an impact on the dynamic structure of a long-term fiscal program.

Graph 1
Tax Income and Total Expenditure, Central Government, 1950 – 1998 (%GDP)



Source: Fainboim and Rodriguez (1999).

III.B. The Stock Approach

According to Easterly (1998), an analysis of fiscal sustainability requires a study of intertemporal government net worth, rather than of current deficit levels. With this in mind, the Colombian National Planning Department amplified the official Government balance sheet produced by the National Accounts Office (1997). Implicit and contingent assets and liabilities were included, as well as a re-estimation of explicit liabilities and assets, in order to present a more accurate picture of the fiscal imbalance (Echeverry et al., 1999). This balance sheet amplification shows the relevant contingent liabilities in the elaboration of fiscal policy by displaying the long term consequences, and thus dynamic structure, of the policy.

The following contingent liabilities were included:

Explicit liabilities: i. Public body debt guarantees (public enterprises and regional and municipal government); ii. Infrastructure guarantees (linked to traffic volume, income, debt service, excess costs and delays).

Implicit liabilities: i. Bailing-out of financial institutions and financial sector deposits; ii. Bailing-out of regional bodies; iii. Natural disasters (earthquakes and floods); iv. Contingencies resulting from legal actions against the Nation; v. Constitutional obligations with no contractual basis; vi. Anticipated cost of peace negotiations.

The asset recalculation included: i. Gas, oil and coal reserves; ii. The electromagnetic spectrum.

The official balance sheet, as a percentage of GDP is presented in Table 1. The balance sheet including the recalculation of existing assets and liabilities, in addition to the inclusion of contingent liabilities appears in Tables 2².

² For a detailed analysis of the estimation of contingent liabilities, and the asset and liability recalculation, see Echeverry et al. (1999).

PUBLIC SECTOR BALANCE 1997

(as % of 1997 GDP)

	TOTAL
Total Assets	140.5%
Current Assets	29.5%
Fixed Assets	110.9%
Natural Resources	16.5%
Total Liabilities	78.2%
Current Liabilities	26.1%
Not Current Liabilities	51.8%
Of Minority Interest	0.3%
Public Patrimony	62.3%
Total Liabilities + Patrimony	140.5%

Source: Contaduría General de la Nación.

A grave underestimation of the value of pension liabilities, due to miscalculations, was the most important variation of the amplified balance sheet, when compared with the official results. This is a direct implicit liability which constitutes the most poignant fiscal sustainability problem, due to both its size and its long-term implications. Unfunded pensions constitute a hidden cost of approximately 159 % of GDP. Social Security beneficiaries (48.5%) and teachers (30.1%) make up the greater part of this liability.

In terms of infrastructure, contingent liabilities generally consist of guarantees associated with private sector concessions; the origin of which is in the transformation of the role of the State from a direct service provider to a guarantor of minimum sales to private sector service providers. The first generation of contracts included such clauses, whereas recent contracts specify a flexible duration. Private investors obtain a good level of return on their investment, and no public sector guarantee is required³. However, the previous contracts generated uncertainty over whether or not public financing would be required in the future, as a response to the private sector guarantees.

Contingent liabilities in road construction consist mainly of traffic volume guarantees and, to a lesser extent, of excess construction cost guarantees. The former are invoked if anticipated income falls below an agreed minimal level, related to predicted traffic volume. However, if income rises above an allowed maximum it becomes a contingent asset and the excess is returned to the State. The calculated net present value (NPV) of this contingent liability until 2009, to be incorporated in the Government balance sheet, is 0.1% of 1997 GDP.

The construction contract for the second runway at El Dorado International Airport (Bogota), in addition to the requirement to maintain both runways, includes traffic volume guarantees that are in effect minimum income guarantees; the liquidity for such guarantees has been ensured by the formation of a Government fund. Other characteristics of the contract include Government

³ Previous contracts involved fixed terms within which a level of profitability was guaranteed by the government.

Flexible contract length allows for low profitability to be compensated for through time.

compensation for tariff modifications. The NPV of this contingency for the duration of the project (20 years) is estimated to be 0.7% of 1997 GDP.

Contracts for energy provision have been granted under onerous conditions; the Government has had to assume the difference between the actual market value and the price agreed with investors. The NPV of this contingency, until 2009, is 0.5% of 1997 GDP.

Contingent liabilities in the telecommunications sector are related to minimum income guarantees, associated to the number of conversation minutes, contained in joint venture four year contracts. The net present value of calculated contingent liabilities in this sector, until 2002, is 0.23% of GDP.

Other contingent liabilities may emerge from the construction of the Bogota Metro. In this case the contingency is related to the probability of liabilities being larger than predicted, and is partly a consequence of regulatory ambiguities. The Metro Law states that National Government may guarantee up to 70% of the debt associated with this project. Thus, if excess costs imputable to the public sector are generated, the National Government is obliged to respond for 70% of them. These contingencies are particularly important given the risks associated with delays, cost of public services (such as piping), and currency risks related to external financing.

As well as contingent liabilities that are related to infrastructure contracts, the Colombian case is particularly interesting as the Government has to consider the cost of the peace negotiations. The approach chosen was to consider the guerrilla as a business, and to calculate the sum needed to “purchase” this business. Hence a calculation of the profitability of guerrilla violence was needed. This was achieved by calculating average expected income and expenditure per guerrilla member; total values were calculated from a figure of 20,000 guerrilla members ⁴.

⁴ Average expected income per guerrilla was calculated by considering it as a random variable related to: i. the probability of death of a guerrilla based on the fact that 400 out of 20000 guerrilla members die each year; ii. the value of the income variable associated to previously calculated levels of guerrilla income from 1991 to 1994 and their dependence on economic activity. Such data exhibits a high level guerrilla income of approximately \$680

Colombian guerrilla groups present an expected profit of US\$430 million per year; the cost of achieving peace is considered to be the amount of investment necessary to eliminate a business with such high levels of profitability. Assuming the guerrilla to be risk averse, and taking into account a dollar interest rate of 6% a year, an investment of approximately 7 billion dollars is required. However, efficiency gains from army restructuring, and the acquisition of superior military hardware, should reduce this cost. Not making this investment would be short-sighted, given that the contingent liabilities of a prolonged armed conflict would be much greater. Therefore the net present value of peace over the next five years is estimated to be 4.1% of 1997 GDP.

Additionally, a dynamic fiscal balance is affected by implicit liabilities, resulting from external factors such as natural disasters. Colombia's topography means that it is particularly vulnerable to such liabilities, the most common being earthquakes and floods, which have a four and two year cycle respectively. Government obligations after such incidents require the provision of resources for the reconstruction and rehabilitation of affected areas, as well as for future damage prevention. An estimate of the most recent earthquake (Jan. 1999) indicates that the net current value of earthquake contingency is equal to 1.1% of 1997 GDP, and 0.044% of 1997 GDP for flood contingencies.

million a year, while low level income fluctuates around \$370 million. The principle sources of this income are: drug trafficking (41%), robbery and extortion (28%) and kidnapping (19%). Considering that Colombia has been affected by two year recessions over a six year economic cycle, a probability of 2/3 was assigned to high productivity periods. Expected guerrilla income in US dollars = $[Y](\text{Probability of Death}) + [(HY)(P_{HY}) + (LY)(1 - P_{HY})](\text{Probability of Survival}) = 576 \text{ million}$. Y = Income; HY = High Income Level; LY = Low Income Level; P_{HY} = Probability of high productivity based upon length of Colombian economic cycles (2/3). Average income per guerrilla member = US\$28,800. Estimated Guerrilla Costs (million US\$): Yearly Endowment = 6; Salary Costs = 72; Other Costs = 72; total costs = 150.

Another important contingent liability is the bailing -out of financial institutions. The analysis of this contingency is based on the current financial crisis and the implications that it has had for the Government. Poor performance in the financial sector has resulted in Government liquidation of insolvent institutions, and the re-capitalisation of those which have presented net worth deterioration. Re-capitalisation requires substantial resources and, therefore, additional tax income. The liquidation of financial organisations creates depositor liabilities for the government; these are implicit liabilities that are covered in order to prevent a general crisis of trust in the financial system. The contingent liabilities of the re-capitalisation process result in a difference between the resources provided by the state and those which cannot be recovered from selling financial institutions in the future. The current financial recession presents contingency liabilities of between 1.24% and 1.68% of 1997 GDP.

Additional implicit contingent liabilities are derived from public sector debt guarantees, which constitute the hidden subsidies previously mentioned. These avoid the tainting of Central Government debt, but generate moral hazards such as the incentive to incur unsupportable levels of debt, as there is the guarantee of Central Government assistance if the debt becomes unserviceable. These liabilities are subject to sub-national Government borrowing regulations, however current regulations, based on the 1991 Constitution and laws issued until 1997, are insufficient, allowing rapid growth of regional debt. Since 1997, borrowing has been limited to the payment capacity of the regional entity concerned, and thus associated to the generation of operational savings. However, the bail out cost of current regional debt is calculated to be 0.48% of 1997 GDP.

Another source of contingent liabilities are judicial rulings against the State, which have been increasing over the past decade; from 0.02% of GDP in 1990 to 0.3% in 1998. Since 1995 the majority of these rulings have been related to the infrastructure sector⁵, although recently demands resulting from insufficient provision of social services (health and housing) have increased dramatically.

⁵ Table 3 is a summary of estimated contingency liabilities.

Table 3

Principal Public Sector Contingent Liabilities

(Billions of 1997 pesos)

CONTINGENCIES	1997	as % of GDP
I. Natural Disasters	1,360	1.1%
1. Earthquakes	1,343	1.1%
2. Floods	18	0.01%
II. Financial Entities' Bail Out	2,700	2.2%
III. Pension Liabilities	193,727	159.2%
IV. Infrastructure	7,283	6.0%
1. Roads	122	0.1%
2. Airports	863	0.7%
3. Energy	617	0.5%
4. Telecommunication	281	0.2%
5. Massive Transportation	5,400	4.4%
V. Foreign Debt	860	0.7%
VI Sentences	204	0.2%
VII Territorial Debt	591	0.5%
VIII Peace	5,000	4.1%
Total	211,725	174%

When analysing Colombian Government net worth, proper calculation of public sector assets (Table 4), such as oil reserves, is important. Verified oil reserves that belong to the State can be considered as income for the government. Considering that they represent a volume three times greater than current reserves, and taking into account the terms of reference of the association contract with the State oil company, ECOPETROL, these reserves have a current value of 14.8% of 1997 GDP. Equally, coal reserves generate a net present income equal to 12.2% of 1997 GDP, and gas reserves 9.2%. The electromagnetic spectrum is also considered as a source of income, although dependent on licensing; under the current legal framework this resource will provide profits over the next 10 years, with a net present value equal to 18.6% of GDP.

This revaluation of assets amounts to 162.3% of GDP, in contrast to the 140.4% reflected in the official balance. Government liabilities rise from 78.2% of GDP to 251.7%, after the recalculation of pension and contingent liabilities. This translates as a deterioration of government net worth from 62.3%, to -89.6% of GDP (Table 2). Therefore such net worth should equal the present of value of the future flow of fiscal surpluses in order that the transversality condition be fulfilled.

The amplification of the Government balance sheet shows a level of current assets which is sufficient to cover short-run obligations. Thus, the public sector does not have a medium term liquidity problem, but one of long-term solvency. The implications of this analysis illustrate how misleading the simple flow approach can be in terms of fiscal sustainability. When considering the analysis in the long-term the insolvency factors are evident, stressed by the high value of pension liabilities. The result of these findings is that, in order to achieve a dynamic fiscal balance, the country needs to pursue a greater level of natural resource exploitation, accompanied by both higher economic growth rates and a simultaneous decrease in contingent and certain liabilities, including pension liabilities. Of paramount importance are Sub-national Government finance reforms, and the resolving of the financial sector situation. The results emphasise the importance of using an intertemporal analysis of fiscal policy to achieve a sustainable path of government financing.

Table 4

Positive Public Sector Contingencies

(Billions of 1997 pesos)

CONTINGENCIES	1997	as % of GDP
I OIL RESERVES	18,103	14.9%
II GAS RESERVES	11,146	9.2%
III COAL RESERVES	14,785	12.2%
IV ELECTROMAGNETIC SPECTRUM	22,657	18.6%
TOTAL	66,691	54.8%

III.C. Analysis of Colombian Fiscal Reforms

This section presents an analysis of the fiscal adjustment packages implemented by Colombian authorities over the last year. The Colombian macroeconomy was considered stable by Latinamerican standards, until the beginning of the nineties. This stability was mainly due to the maintainance of a prudent fiscal stance. Recent in stability can be attributed to the decentralization of a number of public sector contracts, among which agreements with labour unions have played a prominent role. Descentralisation has led to the disregard of a unified budget constraint for such contracts. The main problems faced by authorities are the size of the necessary adjustment and institutional constraints and, therefore, the allocation of savings should be made within a three dimensional space of economic sectors, geographical regions and time.

The following reforms reflect the main efforts made in the reallocation of savings, along the path described, aimed at confronting the flow and stock fiscal imbalances.

- 1. Tributary Reforms:** These reforms consist of various policies related to tax collection, which have both regional and national implications. The Value Added Tax (VAT) reform implies an expansion of the tax base, with a simultaneous rate reduction from 16% to 15%, starting November 1999.
- 2. Liberalisation of Fuel Prices:** The elimination of fuel price controls has created additional income flows for both Central and Regional Government.
- 3. Modification of the Association Contract for Oil Exploration:** A decrease in the State-take through a reduction in State participation from 50% to 30%, after the commercial viability of the well has been established. This competitiveness gain is designed to result in greater levels of foreign investment, and thus in additional income for both Central and Regional Government; a substantial impact on public sector net worth is expected.
- 4. Sub-National Government Income and Expenditure Reform:** The main measures are centred on a reduction in expenditure. In addition to a reduction of regional pressures on

Central Government, via further decentralisation, policies are directed to more efficient expenditure; the rationalisation of payroll and acquisition plans and funding of regional and teacher pension funds. Reductions in Central Government expenditure refer, essentially, to public investment, with an emphasis on shifting infrastructure investment to the private sector through a concession system.

- 5. Regional Transfers from Central Government Reform:** Currently National Government transfers to the regions constitute the budget item with the greatest relative importance, being equivalent to 39% of total national expenditure. Additionally, they have recorded a high growth rate, passing from 2.8% of GDP in 1990 to 5.3% in 1999.

The proposed reform will reduce the pressure that these transfers place on Central Government by almost freezing them in real terms, once they reach their maximum value as a percentage of national current income. The regional implication of this policy, in terms of decentralised government, is a reallocation of flows favouring Central Government financing. However, to promote fiscal sustainability in Sub-National Government, specific regional finance reforms have also been presented to Congress.

- 6. Creation of the Regional Pension Fund:** Regional pension liabilities have reached a level equivalent to 39% of GDP, a threat to long-term fiscal stability; the lack of Regional Government savings has resulted in serious payment delays. The objective of the policy is, therefore, to direct resources towards the creation of the reserves needed to cover pension liabilities for a maximum of 30 years. The necessary resources will be obtained from the joint participation of Regional and Central Government. Regional funding is derived from an increasing share of transfers to municipalities.
- 7. Gambling:** The Colombian Constitution provides for a state gambling monopoly; exploitation of the resource is regulated by one specific administration. Income derived from gambling is destined for the health sector which is in an extremely critical situation, adding importance to an evaluation of the administration of the gambling monopoly.

8. Rationalisation of the Social Security System: One of the most important factors in the current worsening of the fiscal situation is transfers to the social security fund. These represent 30.4% of transfers at Central Government level, of which 17% is related to severance payments. Not only do these transfers represent a major burden for Central Government, but the design of the social security system implies rapid growth of these liabilities. Under the current system, severance payments suffer geometric growth, which resulted in the doubling of this liability between 1996 and 1999. This geometric growth is the result of the drawing of severance payments discounted by the nominal value at the moment in which the contribution took place, as opposed to the moment of the last contribution. If this remains uncorrected the government will not have sufficient resources to guarantee this liability.

With a view to achieving long term fiscal balance, from a stock perspective, the elimination of the retroactivity of severance payments is proposed. Additionally, the social security reform contemplates the inclusion of teacher's contributions, until now exempted, and a two year extension of both the contribution period and the age of eligibility for receiving pension, for all workers. These policies should offset what is both a regional and national contingency.

A careful evaluation of whether this fiscal package is sufficient to tackle stock -level fiscal imbalances is beyond the scope of this paper. The purpose is to illustrate how the main problems that were identified in the stock analysis are emphasised in the reforms mentioned; pension reform being the most urgent.

In the event that these reforms are insufficient to achieve fiscal balance, the result would be a cascade of defaults on public contracts, starting with those of groups with the lowest bargaining power, for instance pension and wage recipients in remote areas, as has recently been the case⁶.

⁶ Presently some of the Sub-National Government debt is being defaulted on. Such debt is held by domestic commercial banks, which have bargaining power and are therefore putting pressure on the National Government to implement new mechanisms to solve the problem. This situation reveals how this cascade of defaults is arriving to a stage where the financial system's stability is threatened, and therefore has consequences at a macroeconomic level.

The ineffectiveness of the adjustment could imply further defaults, where the last contracts to be affected would, most likely, be those with international commercial banks and multinational institutions. This could be the reason that Colombian bond spreads do not reflect the current stock problem.

Once the fiscal package has been designed, the Government has to confront two independent bodies when seeking approval of the reforms: Parliament and the Constitutional Court, both of which can either hinder or promote Government efforts to impose long-term fiscal adjustments. Therefore, intertemporal budgeting and financing are a necessary, but not sufficient, condition for long-term sustainability. The commitment of these two arms of public power to harmonise their policies with fiscal adjustment strategies, by assimilating the intertemporal consequences of their decisions together with the dynamic structure of budget constraint, has become as crucial as the executive strategy itself.

IV. Intertemporal Economics, Politics and Justice

Economic planning has traditionally been the responsibility of the executive branch of public power, and is related to the annual public sector budget. The 1991 Colombian Constitution specifies that each successive new Government must produce a National Development Plan consisting of: i. An analysis of the main problems affecting the country (i.e. the state of the nation at the start of the new Government's term of office). ii. The priorities of the new Government, regarding the distribution of the investment budget (which specifies spending targets for the four-year mandate).

The importance of intertemporal equilibrium in government is evident, especially when considering the extent to which decisions of one public body directly affect the dynamic structure of public policy decisions taken by a different body. The need for dynamic institutional co-operation in Colombia is manifest when the existing relationship between Parliamentary and Constitutional Court policy decisions and Government intertemporal fiscal adjustment objectives is analysed.

What has become evident over recent years, is that sound economic planning is a necessary, but not sufficient, condition for the effective planning of public sector expenditure. Indeed , other branches of public power have proved as effective as the executive in effecting obligations, namely Parliament and the Judiciary.

It is crucial to extend an intertemporal approach to public policy decision making to the other branches of public power, for at least two reasons. Firstly, in order to give a true meaning to economic planning, and secondly to give effective economic content and feasibility to laws passed by Parliament, and judicial rulings.

Regarding Parliament, some laws passed have increased state obligations, and serious consideration is also being given to the remainder of the fiscal reforms. However, the negotiation process necessary to smooth the passage of Government initiatives through Congress requires that agreements be made with Congressmen regarding investment in their constituencies ⁷.

In terms of the Judiciary, the 1991 Constitution created a Constitutional Court to rule on the constitutional status of Government initiatives, and a procedure was implemented to allow individuals to demand the fulfilment of their “fundamental rights” (known as a *tutela*). Various examples can be cited which illustrate the manner in which Constitutional Court rulings have imposed obligations on the State without contemplating intertemporal budget constraints. This is the result of the judicial purity of these decisions, which lack consideration of resource generation and expenditure requirements.

Constitutional Court judgements T-296/98 and T-153/98 illustrate the problems of purely judicial decision making (Sotelo, 1999). Following the status change of some civil offences to

⁷ Prior to the 1991 Constitution, an endowment from the National Annual Budget was given to Congressmen, to be used for projects beneficial to their constituencies. This was deemed a source of corruption and was abolished. Congress subsequently began pressing for allocations from the national annual budget as a whole, in order to obtain the necessary resources to effect their own initiatives. Thus, ironically, the abolition of the Parliamentary Endowment was self-defeating.

criminal offences punishable by incarceration, the prison population increased. The Constitutional Court subsequently found in favour of a prisoner who had asserted that overpopulation in Colombian prisons creates living conditions that violate not only prisoners' dignity, but also their basic human right to life, personal integrity and health. The court found that Colombian jails were overcrowded and characterised by violence, corruption, serious public service deficiencies and a lack of rehabilitation facilities. The State, therefore, was not complying with the Constitutional obligation to provide prisoners with a reasonable quality of life.

The Court ruled that prisoners' rights are guaranteed by the Constitution and have "an absolute value, not susceptible of being limited under any circumstance" (Ruling T -296/98), and that the necessary resources for the transformation of prisons be set aside. In doing this the Court arbitrarily decided that this expenditure is more important than social expenditure, and therefore has to be made at expense of investment in other areas.

The Court ordered the Government to formulate within three months a plan for the construction and refurbishment of penal institutions; stating, furthermore, that all work must have been completed within four years. This call for public infrastructure improvements makes the judge a policymaker (expenditure executor), and is outside his mandate; the judge has assumed a role constitutionally assigned to other public bodies. Overcrowding is still at critical levels, and an across the board reduction in sentences is currently being contemplated by Congress in an effort to find a solution to the problem.

The difficulties arising from these rulings are not limited to the additional fiscal burden, but also include the temporal conditions of the resolutions, which represent an obstacle to the pursuit of an optimal intertemporal fiscal program that will ultimately lead to dynamic fiscal sustainability.

Additionally, decisions of the judiciary affect the fiscal adjustment process directly, as the fiscal package is subject to a determination of its Constitutional status. Given that the fiscal package is yet to be approved by the Constitutional Court, fiscal adjustment in Colombia faces a risk similar

to the one faced by Brazil. In order to increase the saleability of fiscal reforms, marketing devices have to be employed; this paper is intended to be one of such devices.

Thus, when considering the relationship between the Constitutional Court and Government financing, it can be seen that some Court decisions ultimately become contingent liabilities on the Government balance sheet. Judgements may, therefore, constitute a major risk to fiscal stability and the intertemporal sustainability of fiscal policies. The direct impact of Constitutional Court rulings on Government net worth illustrates the importance of intertemporal and interdepartmental consistency in public policy elaboration.

However, the autonomous nature of these three areas of government makes it difficult to establish a dialogue which will result in more comprehensive levels of planning for the provision of both new public services, and the maintenance of those already provided by the state. It is therefore evident that sound planning requires a comprehensive strategy, the precondition of which is a reasonable level of communication and co-operation between government power arms, without reducing their autonomy. Intra-government consistency needs to be guaranteed for the fiscal strategy to be successful.

The rulings of Parliament and the Constitutional Court should, at the very least, be incentive compatible. They should be dedicated to reducing problems and promoting solutions; the implications of the ruling should not be more damaging than those of the problem to be resolved. In summary, Parliament and the Constitutional Court should explicitly assume an intertemporal stance when making decisions, and consider the effects of their rulings on society as a whole. It should be recognised that a better provision of public services depends strongly on the evolution of the economy, and not exclusively on the issuing of laws and rulings that cannot have real economic content when they disregard the state of the economy, and the intertemporal budget constraint of the Government.

Governability and sound planning depend on Parliament and the Constitutional Court adopting an intertemporal approach to decision making. A static approach can only lead to a more erratic public expenditure path, one full of huge contingencies and an instability of norms. The effect of

the existing decision making structure can be devastating for a country, as is clearly illustrated by the recent experiences of Colombia and Brazil.

The experience of Peru is illustrative of the risk of a narrow interpretation of the independence of different government bodies and the nature of their rulings. Fujimori deemed necessary the suspension of both Parliament and the Supreme Court, a decision that initially received both national and international criticism. The policy was, however, praised later as having been the only way to bring order to Peru's erratic institutional and economic decision making process. Commenting on this episode of Peru's history Barro (1997) concluded that Fujimori did the right thing, as an excess of democracy can be damaging for democracy.

The economic lessons learned over the last twenty years, which have resulted from the exploration of an intertemporal approach, must now be learned by the political and judicial systems. Countries, and in particular poor countries, cannot afford to be short-sighted when considering their economies and the role of incentives, the burden of contingent liabilities and the damage resulting from policy decisions that do not promote long-term wealth creation.

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