

Lessons from MACs on Public Debt Sustainability and Growth¹

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1. Introduction

This paper focuses on sovereign debt in developing countries with access to the international capital markets.³ Included in this set are middle-income countries, or MICs, as well as low-income countries, or LICs, such as India. We refer to these countries as “market access countries – MACs”, the ranks of which are likely to be swelled in the coming years by LICs which have benefited from debt relief in connection with the World Bank and the International Monetary Fund’s (IMF) Heavily Indebted Poor Countries (HIPC) initiative and the Multilateral Debt Relief Initiative (MDRI).

There is a sharp distinction between developing countries whose governments rely predominantly on market borrowings (i.e. access to the international capital markets) and those which do not. The second group relies mostly on official creditors, multilateral and bilateral, and except for rare exceptions is not subject to sudden stops in capital flows. Net transfers to this group typically remain positive irrespective of the level of indebtedness and especially when they suffer negative external shocks. In addition, the “market vs. official creditors” distinction carries over to fundamental topics such as debt restructuring and the incentives and objectives of both creditors and debtors.

The current landscape facing a number of post completion point HIPCs, many in Africa, is characterized by reduced debt-to-GDP ratios, low per-capita incomes, underdeveloped domestic debt markets, limited access to international capital markets and large dependence on official development assistance (ODA). But in 2006, the OECD’s Development Assistance Committee reported that for the first time, private capital flows into Africa exceeded official aid flows. An analysis in IMF (2008) chapter III suggests that debt relief coupled with the search for yield which characterized western investor behavior until the subprime crisis hit in Fall 2007, was a major factor. Clearly, LIC governments need to borrow domestically and externally in view of

³ Unless explicitly noted otherwise, “debt” refers to public debt, both domestic and external. Public debt and sovereign debt are used inter-changeably.

the huge developmental needs and limited taxation capacity. But the experience of MACs suggests that the journey from LIC to MAC status should be undertaken cautiously and ODA should be effectively utilized in the interim as domestic fiscal and financial institutions are strengthened.

This paper draws on the experience of MACs over the past two decades to gain insights into the links between sovereign debt and development, which could serve as a basis for advising LICs. It is organized as follows: section 2 discusses debt dynamics and the importance of the government's intertemporal budget constraint. Section 3 looks at the crisis of the 1980s and 1990s and the resultant debt overhang. MAC responses over the past decade to unsustainable debt dynamics/levels are discussed in section 4. Section 5 explores the links between public debt and growth and section 6 concludes.

2. Debt Dynamics

The standard flow version of the government's budget constraint in discrete time is shown in Box 1. Changes in the debt-to-GDP ratio are explained by the primary deficit, real interest rate and real growth rate. Certain other factors, like privatization receipts (which form a part of non debt financing sources) could also play a role.

Box 1: Flow version of the government's budget constraint

$$d_t - d_{t-1} = pd_t - ndfs_t + \frac{r_t - g_t}{1 + g_t} d_{t-1}$$

- d	<i>end of period debt/GDP ratio</i>	- r	<i>real interest rate</i>
- pd	<i>primary deficit/GDP</i>	- g	<i>real growth rate</i>
- $ndfs$	<i>non debt financing sources/GDP</i>		

Not usually focused on until the crises of 1997-98 is the effect of the real exchange rate in conjunction with foreign currency-denominated debt. Russia's poor growth and public finance performance over the period 1995-97 which preceded its August 1998 meltdown illustrates the

extent to which an appreciating real exchange rate can mask unsustainable debt dynamics (table 1).

Table 1 - Russia: Public Finances and Economic Growth, 1995-98

<i>Year</i>	<i>Primary deficit (percent of GDP)</i>	<i>Interest Payments</i>		<i>Government debt</i>		<i>Real GDP Growth (percent a year)</i>
		<i>Percent of GDP</i>	<i>Percent of revenues^a</i>	<i>Billions of dollars</i>	<i>Percent of GDP</i>	
1995	2.2	3.6	28	170	50	-4.0
1996	2.5	5.9	47	201	48	-3.4
1997	2.4	4.6	38	218	50	0.9
1998	1.3	4.6	43	242	75	-4.9

a. Cash plus non-cash basis

(Source: Kharas, Pinto and Ulatov 2001)

During 1995-97, the primary deficit was high, real interest rates on ruble treasury bills easily exceeded 25 percent with interest payments rising as a share of both GDP and revenues, and real GDP growth either negative or close to zero. Based on the difference equation in Box 1, we should have expected to see a dramatically growing debt-to-GDP ratio. Yet it barely budged and stayed around 50 percent as Table 1 shows, fueling a sense of complacency. The reason was the sharp real appreciation of the ruble starting in mid 1995 as a result of the disinflation program and a high share of dollar-denominated debt in total government debt. Thus, in 1996 alone, the real appreciation of the ruble acted to lower the debt-to-GDP ratio by 8 percent of GDP. But the real exchange rate was overvalued and on an unsustainable trajectory, as became apparent after the public debt crisis of 1998.⁴ The Russian experience of 1998 underscores the importance of assessing real overvaluation, particularly if a large share of public debt is denominated in foreign currency.

Two other factors also weigh in – private sector balance sheet mismatches and contingent liabilities of the government. The East Asian crisis of 1997-98 showed that currency mismatches on the balance sheets of banks and corporates (borrow short-term in dollars, invest in local

⁴ Kharas, Pinto and Ulatov (2001).

currency assets) could precipitate mass bankruptcy if the exchange rate collapsed and force a fiscally costly bailout. Table 2 shows the gross fiscal bank bailout costs for the first 5 years starting from the crisis year of 1997.

Table 2: Bank Bailout Cost during the East Asian Crisis

Country	Gross Fiscal cost (percent of 1997 GDP)
Indonesia	56.8
Korea	31.2
Malaysia	16.4
Philippines	13.2
Thailand	43.8
Vietnam	10.0

Source: Laeven and Valencia, 2008

Bringing it all together, debt dynamics are influenced by primary deficits, real interest and growth rates, real exchange rates and contingent liabilities (Box 2).

Box 2: Crash Course in Debt Arithmetic

- Change in nominal debt \approx fiscal deficit = primary deficit + interest payments - (seigniorage + privatization proceeds)
- Interest payment = $i \times D$ (i =nominal interest rate, D =nominal debt)
- When you look at debt-to-GDP, you bring in the nominal growth rate, G . The faster the economy grows, the lower is the debt-to-GDP ratio
- If some of the debt is in dollars, a nominal depreciation (appreciation) will raise (lower) debt in domestic currency
- Debt can also go up if the government bails out banks or if guarantees are called (contingent liabilities)

Since debt is postponed taxation, inflation or default, the issue of **debt sustainability and solvency** become critical. A MAC has a debt sustainability problem when its existing mix of fiscal policies needs to be changed in order to avoid an explosion in its debt-to-GDP ratio. The latter could happen if, for example, the government is running a primary deficit (non-interest spending exceeds total revenues) and the real interest rate is greater than the real growth rate. In this case, the debt-to-GDP ratio will grow without bound in the absence of corrective policies until a crisis results (recall Box 1). The crisis could take the shape of a burst in inflation (which

serves as a capital tax on domestic currency debt) or a debt default, the anticipation of which could have knock-effects in terms of an exchange rate collapse, a spike in interest rates, a run on banks (which tend to invest in government securities) and a growth collapse.⁵

If, however, corrective policies are implemented in good time or there is a dramatic increase in the growth rate a crisis would be avoided. In this sense, a debt sustainability problem need not translate into a solvency problem, i.e., a situation in which the debt-to-GDP ratio reaches a level that is no longer serviceable. The latter would happen if the present value of future primary surpluses expressed as a ratio of GDP (at a discount rate equal to the real interest rate minus the growth rate) were less than today's debt-to-GDP ratio.⁶ The policy implication is that a country running primary fiscal deficits today will need to run offsetting surpluses in the future; and that postponing adjustment to a burdensome debt situation will require an even bigger fiscal effort down the road—procrastination is costly.

This brings to the fore the centrality of the government's intertemporal budget constraint, which essentially says that debt dynamics are importantly influenced by the potential for future revenues and growth prospects. These latter factors are crucial as is the market's assessment of solvency. Hence, debt sustainability is a forward looking exercise and the factors affecting it get captured in the government's intertemporal budget constraint. However, the history of macroeconomic management also plays an important role in the market's assessment of debt sustainability, as highlighted in the debt intolerance study of Reinhart, Rogoff and Savastano (RRS 2003).

⁵ The reader will readily recognize the burst of inflation outcome as the famous result of Sargent and Wallace (1981).

⁶ The intuition is that the growth rate of debt is equal to the rate of interest while the growth rate of the debt-to-GDP ratio is the difference between the interest rate and the growth rate. Primary surpluses are available to pay off debt and thereby slow down its rate of growth. For a simple derivation, see Aizenman and Pinto (2005, pp. 555-56).

3. From external debt overhang to public debt sustainability

Until the macroeconomic crises of 1997-98, the focus of the developing country debt literature tended to be on a country's total external debt, public plus private. This was motivated by the external debt crisis of the 1980s and Latin America's 'lost decade', even though much of this debt eventually ended up directly or indirectly on the government's balance sheet as a result of private sector bailouts, debt-for-equity swaps, debt buybacks and the Baker and Brady Plan resolutions of the crisis. The focus on external debt also fit well with the two-gap theory of development, which posited that developing country growth was constrained either by a shortage of national savings or foreign exchange needed for critical imported inputs, for which exports or aid or external borrowing was needed. However, there has been a strong association of external indebtedness with crisis and enhanced macroeconomic vulnerability rather than with rapid growth (World Bank 2005).

One of the most useful policy concepts to emerge from the 1980s debt crisis was that of the 'debt overhang' developed by Krugman (1988) and Sachs (1989).⁷ This had three parts: (i) definition—an overhang exists whenever the market does not expect the debt to be fully repaid, i.e., it expects a partial or total default. Debt then trades at a discount in the market relative to the face value with a higher discount connoting a higher probability of default; (ii) impact—when a country has a debt overhang, it is unlikely to be able to attract new capital inflows even for projects with high economic rates of return (this is the essence of a debt overhang) and would be vulnerable to a sudden stop. Existing creditors would like to exit while potentially new creditors would be deterred by the prospect of an immediate capital loss. Firms would be reluctant to invest even in profitable projects for fear that their returns would be taxed away to service the debt, while politicians would balk at implementing difficult reform as the growth and taxation

⁷ This concept owes its origin to Stewart Myers in the corporate finance literature (Myers 1977). The idea is that if a firm's income is not sufficient for it to service its existing debt, it will find it difficult to attract new financing even for investment projects with a positive net present value. This is because much or possibly all the net present value could be appropriated by the existing debt holders. Thus, the firm will end up foregoing profitable new investment opportunities and growth will suffer.

benefits would be captured by the external creditors (Corden 1989); and (iii) resolution—while a debt write-down would potentially benefit the country and creditors alike, a collective action problem arises. This is because each individual creditor would prefer to ‘free ride’ on debt reduction by the other creditors and gain on her/his entire holding of the country’s debt as the secondary market price would tend to rise after the reduction. This ‘free rider’ problem formed the rationale for the Brady Plan announced in March 1989, whereby the US government threw its weight behind a coordinated debt reduction to break the deadlock on the Latin American debt crisis.

If the Brady Plan gave respite, it did not last long. Another series of crises developed starting in 1997, this time involving public debt either as a fundamental cause (Russia, Argentina, Turkey where unsustainable debt dynamics propelled a crisis) or as an absorber of the costs of the crisis (Korea, Indonesia and other countries where bank bailouts increased public debt). Two large debt defaults occurred, in Russia (1998) and Argentina (2001). While Russia was able to restructure its debt within two years of its 1998 crisis, Argentina has still not reached full agreement with its creditors, either private or official (Paris Club). Box 3 summarizes the factors which played a significant role in the crisis of the 1990s.

Box 3: Key Aspects of the crises of 1997-98 and after

- Public debt was a major factor in the lead up to the crisis in Argentina, Brazil, Russia and Turkey and was crucial ex-post, in East Asia because of the fiscal costs of the bailout of banks and corporates.
- Financial liberalization of early 1990s appears to have enhanced vulnerability instead of growth.
- The combination of fixed exchange rates, unsustainable debt dynamics and open capital accounts proved hazardous to economic health.

Substantial rescue packages orchestrated by the IMF and World Bank played a role, especially in the East Asian countries; but neither the degree of coordinated official intervention nor the scale of debt reduction which marked the 1980s debt crisis was involved. Nevertheless, these debt crises have become a watershed in debates about development policy with attacks

unleashed on capital account convertibility, on the policy recommendations included in the Washington Consensus (Williamson 1990) and on the very utility of external borrowing and access to international capital flows as a way of promoting investment and growth.

After the string of public debt crises which began in 1997 there has been a sea change in the way MAC governments are managing their public finances and macroeconomic policy more generally. One is apt to look at the links between the public finances and growth differently, moving away from short-run concerns about fiscal deficits and inflation to longer-run concerns centered on the *government's intertemporal budget constraint*. It also marked the shift in focus from external to public debt.

In the policy literature, the expression “debt overhang” has given way to “public debt sustainability” and “solvency” concerns. In a situation where a country is experiencing debt sustainability problems that could result in insolvency, investment and growth are likely to suffer because of high real interest rates, macroeconomic uncertainty and uncertainty about future taxation. In this sense, the negative effects are similar to those described above for an external debt overhang (although the incentives for the government may differ to the extent that part of the public debt is held by external creditors).

4. Public Debt Sustainability for MACs: Insights from the last decade

4.1 How can MACs address debt sustainability problems?

What should a government faced with unsustainable debt levels do? The answer would depend upon a country-specific diagnostic, but here are some possibilities based on the MAC experience of the past decade:

4.1.1 Increase primary surpluses—but what about “fiscal space”? Increasing primary surpluses amounts to reducing debt the old-fashioned way, by paying it off. However, countries which increase their primary surpluses often do so by cutting public capital expenditure instead of raising taxes or cutting non-interest current expenditure. Such an approach would be shortsighted

to the extent that long-run growth and taxes and hence the solvency of the government could be adversely affected because of the resulting infrastructure gaps. In this case, interest rates might not come down as the fundamental fiscal problem has not been addressed. However, generating a higher primary surplus by increasing revenue mobilization through improvements in tax policy and administration (which raise compliance for instance) or eliminating inefficient subsidies would help; the question is the scope for such measures as well as the political constraints.

The observation that many MACs, especially in Latin America, were cutting public investments in infrastructure fueled the so-called “fiscal space” controversy, succinctly expressed by Calderon, Easterly and Servén (2004 p. 133): “...fiscal adjustment through public infrastructure compression can be largely self-defeating in the long-run, because of its adverse effect on growth and hence on the debt-servicing capacity of the public sector”. The authors blame the IFIs for focusing on short-run stabilization, fiscal deficits and gross public debt instead of long-run solvency defined by net debt and the government’s intertemporal budget constraint. As an alternative to cutting primary surpluses at the expense of infrastructure, the fiscal space argument would suggest that a better strategy might be to borrow even more and invest in infrastructure. The debt-to-GDP ratio might go up in the short-run, but solvency would actually be strengthened. The key condition is that the marginal financial return to the government, namely, user charges plus the tax collected on the marginal product of the extra spending on infrastructure, exceed the marginal cost of borrowing plus the rate of capital depreciation (see Servén 2007 for a derivation).

Even assuming the Servén marginal condition is met, governments may not be able to borrow the money needed at what might be regarded as reasonable interest rates because of myopic capital markets—infrastructure projects involve long gestation periods; or because of past credibility or default problems which make new creditors reluctant to come in. Besides, high

initial public indebtedness enhances vulnerability to exogenous shocks.⁸ Thus public debt sustainability problems have similar effects as the corporate debt overhang in that even profitable public investment infrastructure projects may have to be foregone until indebtedness is lowered.

4.1.2 Restructure debt. The evidence on countries successfully restructuring debt (defined as changing debt currency composition or terms prior to the scheduled maturity) in an attempt to address debt sustainability concerns is not encouraging. In particular, voluntary, market-based exchanges do not seem to work. The reason is simple: a voluntary, market-based exchange is unlikely to result in a reduction in the present value of debt obligations, as this would run counter to the interests of the creditors, and is therefore incapable of improving debt sustainability. However, an attempt to voluntarily restructure debt may not simply be neutral in the Modigliani-Miller sense; it may backfire and actually hasten a crisis. Russia (1998) and Argentina (2001) are both examples of where attempts to restructure debt in an attempt to stave off a macroeconomic crisis actually precipitated one. In the context of the 1998 Russian crisis, Kharas, Pinto and Ulatov (KPU 2001) argued that not only was the rescue package costly, it actually triggered the crisis.⁹

This is how it happened: suppose a country has a debt sustainability problem and the market is pricing the government's debt at default levels. This means there are basic concerns about the government's ability to service the debt, which can be verified by looking at revenue mobilization and growth (the prospects for both of which were dim at that time in Russia). An IFI rescue package, by bringing in senior debt, then lowers the chances that the bonds held by the private sector will be serviced. In these circumstances and especially if the exchange rate is fixed, a boost to official reserves as a result of an IFI package provides the perfect opportunity for

⁸ As the spreading subprime crisis eloquently attests: one of the reasons MACs have been resilient *so far* is precisely because their governments cleaned up their balance sheets and built up reserves as part of a self-insurance strategy following the last round of crises, a point we return to below.

⁹ Together with dollar Eurobond issues and a debt swap out of ruble treasury bills into long-term dollar bonds, the first tranche of the rescue package raised Russian public debt in dollars by 8 percent of post-crisis GDP in the 10 weeks leading up to the crisis. See KPU (2001).

private sector holders of local currency debt to exit, precipitating a speculative attack and subsequent crisis. In such a case, the IFI rescue package has the twin effects of ‘demoting’ private creditors while also providing the means of escape at the pre-crisis exchange rate. Hence, restructuring debt does not address the core problems underlying unsustainable debt dynamics and is therefore unlikely to work.¹⁰

4.1.3 Default. If voluntary debt restructuring does not help, or even hurts, a second option is a forced, one-sided restructuring resulting in a significant haircut for private creditors, domestic and external. Typically, such restructurings follow a suspension of debt service if not an outright default. After their crises had occurred, both Russia and Argentina were able to lower their debt burden through negotiated deals; but Argentina’s re-negotiation was much more tortuous and is still not fully complete with respect to both private and official creditors. While defaults accompanied by forced restructurings reduce indebtedness, they are costly in terms of disruption and reputation. Not surprisingly, the nature of the outcome and the speed with which it is reached depend upon the relative bargaining power of the government and its creditors.

Russia was able to restructure its debt within two years of its August 1998 meltdown *and* at attractive terms. For example, its agreement with the London Club concluded in August 2000 involved an estimated reduction of 50 percent in present value terms. The inducement was that the securities involved, which were legally the liability of the Soviet-era Vneshekonombank, would be replaced by Russian Federation Eurobonds; while the threat was that Vneshekonombank could be allowed to go bankrupt, creating a legal nightmare for the creditors.¹¹ Of course, it is difficult to know who ultimately lost and gained because the market value of the securities involved rose from a paltry \$1.8 billion in October 1998 to \$14 billion just before the exchange.¹² Besides, Russia was able to obtain the support of the IMF, which made a distinction between Russian- and Soviet-era debt—the debt restructured fell into the latter

¹⁰ For a formal analytical argument, see Aizenman, Kletzer and Pinto (2005).

¹¹ Vneshekonombank was the Soviet-era bank responsible for managing external debt.

¹² For details, see Pinto, Gurvich and Ulatov (2005, pp. 431-2).

category. Thus, the law under which the debt is issued, political support and bargaining power all make a difference and while default is one of the options to reduce indebtedness, it has huge associated costs.¹³

4.1.4 Do nothing and hope that the country grows out of its indebtedness. Sitting back and hoping that a country will grow out of its debt is unlikely to work. Malaysia was able to reduce its debt-to-GDP ratio significantly after it had exceeded 120 percent in the mid-1980s; but this achievement rested on a fundamental redefinition of the role of the state, from being a sponsor of affirmative action based on setting up non-financial public sector enterprises to a more supportive role thereafter with a focus to encourage private sector led growth. Likewise, India after 2003 is a country which seems at last to be growing out of its debt. Much has been achieved by the government—the cumulative impact of gradual reform on taxes, trade and domestic financial liberalization and careful macroeconomic management after 1991 (building up foreign exchange reserves, adopting a flexible exchange rate, shifting towards long-term rupee debt) has been substantial. Initially, these reforms impacted public finances negatively in the form of lower revenues and a consequent worsening in debt dynamics which became evident during the late 1990s. The beneficial impact on growth was seen only after 2003—highlighting the distinct possibility that macroeconomic reforms may bear fruit only after a lag and hence some deterioration in debt dynamics may be unavoidable in the interim (as the fiscal costs are borne upfront).¹⁴

It is very likely that countries transitioning from LIC to MAC status will experience this sort of deterioration in debt dynamics before growth dividends kick in. The process of strengthening fiscal and financial institutions in LICs could require rationalization of tax rates, cut in import tariffs, elimination of financial repression, delicensing, strengthening of supervision and

¹³ Sturzenegger and Zettelmeyer (2006) contains a comprehensive and authoritative account of the sovereign debt defaults of the past decade. One of the authors' findings is that countries rarely engage in "strategic" default; they usually do so only when all other options fail.

¹⁴ See Pang, Pinto and Wes (2007) for an analysis of India's macro-fiscal-growth developments after 1991.

monitoring agencies, design and implementation of reporting systems for debt and capital inflows—to name a few.¹⁵ A number of these reforms could reduce revenues of the government in the short-run though they would go a long way in strengthening the microfoundations of growth and hence long run solvency. However, there could be a lag of several years before growth picks up and managing the interim could be a daunting task. Two factors that have been found to cushion the process are a cautious approach to capital account liberalization and the quality of a country's inflation and credit history.

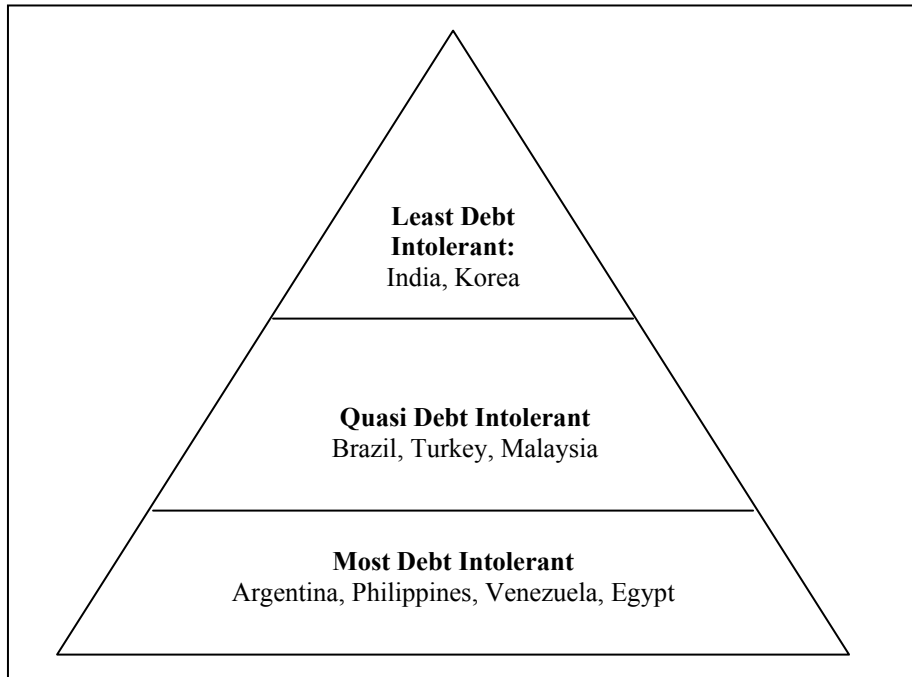
4.2 *Reputation and the Role of the Market*

Markets tend to be more tolerant towards countries which have a history of sound macroeconomic management, as with Malaysia and India – both countries were able to accumulate a significantly higher level of debt (in comparison with levels considered 'safe') without a crisis. Based on institutional investor ratings between 1979 and 2002 and the ratio of external debt (total, public plus private) to GNP between 1970 and 2000, RRS classified emerging and other economies into various levels of debt intolerance based on their incidence of adverse credit events. Figure 1 gives the classification for some of the emerging economies during the specified time period.¹⁶ RRS found that for highly debt intolerant countries, safe external debt thresholds could be as low as 15-20 percent of GNP (NB: RRS focused on a country's total external debt, public plus private, this paper is on total public debt, domestic plus external).

¹⁵ For example, of seven Sub-Saharan African case-study countries examined in IMF (2008, p 59), Zambia is identified as the only one where private capital flow data, including portfolio flows, are compiled by the central bank and stock exchange on a monthly basis. Notwithstanding its impressive fiscal reforms since 2004, Nigeria is described in the report as possessing "only limited capacity to monitor portfolio inflows".

¹⁶ Reinhart, Carmen, Kenneth Rogoff and Miguel Savastano. 2003. "Debt Intolerance." *Brookings Papers on Economic Activity*: 1-74, pp 24-27

Figure 1 – Debt Intolerance classification for some MACs



Source: RRS 2003

A fundamental assumption in the theoretical debt literature is that Ponzi schemes are ruled out, that is, debt cannot grow faster than GDP forever. An example where this condition is in danger of being violated is when the government has a primary deficit, the real interest rate exceeds the growth rate and debt obligations are being rolled over.¹⁷ One can think of several instances in the past decade or so where countries have done this: Russia after mid-1995 and in the lead up to its 1998 meltdown; India briefly during 1997-2002 when its chronic primary deficits began to be accompanied by real interest rates exceeding the growth rate. This does not necessarily mean that the country is insolvent as corrective action can always be taken; however, with the exception of India, all the other countries ended up with disruptive crises. The key point is the market's assessment of whether credible corrective action will be taken on time, which is bound to be influenced by the country's inflation and default history—which is one way of looking at the debt intolerance hypothesis of RRS. Alternatively, the market may be myopic and

¹⁷ This does not mean that the government is insolvent or that debt will grow faster than GDP forever, unless there is simply no hope of future primary surpluses.

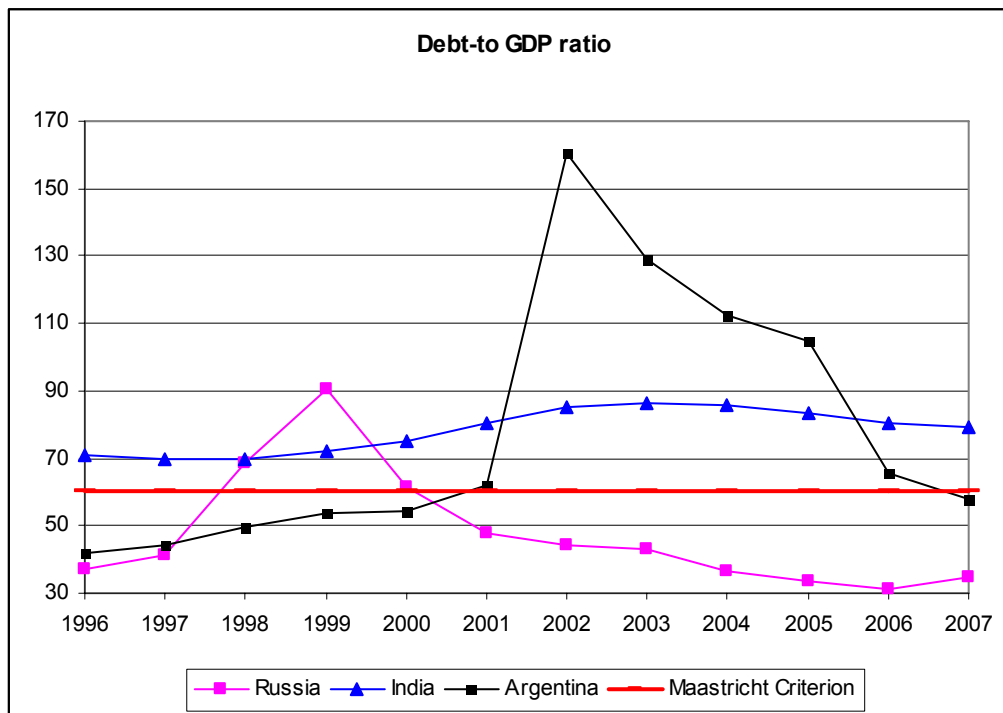
may not give the country a chance. Hence, market perceptions play a key role in deciding safe threshold debt levels for MACs – this however does not imply that the market is always right; it is prone to myopia and herd behavior.

4.3 Debt guidelines and proposed instruments to avoid crisis – how effective?

The focus on crisis avoidance is manifested in attempts to pin down guidelines for what constitutes a sustainable debt level. There have also been attempts to develop and foster debt instruments with equity-type features (such as GDP-indexed bonds). However, empirical evidence suggests that debt guidelines or rules-of-thumb do not work well in practice and there has been limited appetite for new instruments.

4.3.1 Rules-of-thumb for sustainable debt levels. The Maastricht Treaty for participation in the European Monetary Union required a reduction of government debt-to-GDP ratio to at least 60%. Figure 2 shows the debt levels of Russia, India and Argentina with respect to this threshold.

Figure 2: Debt-to-GDP ratio in comparison to the Maastricht Criterion



Source: WEO

Two observations are worth making in this regard: (i) even a level lower than 60 percent of debt-to-GDP could be problematic (Russia in 1998 and Argentina in the lead up to the 2001 crisis had debt levels lower than this threshold) depending upon issues such as debt composition in terms of currency and maturity, whether or not the real exchange rate is overvalued, balance sheet mismatches in banks and corporates, contingent liabilities with fiscal consequences and the like; and (ii) there are large countries like India which escaped a crisis during the turbulence of the late 1990s in spite of government debt levels far in excess of 60 percent of GDP. Taken together, this means that other factors also weigh in. In addition to the real exchange rate, balance sheet mismatches and contingent liabilities, the dynamics of the debt matter. The latter is importantly influenced by future prospects of growth and tax collections. All this eventually gets captured in the government's inter-temporal budget constraint.

4.3.2 Financial engineering. Proponents of the 'original sin' hypothesis (Eichengreen, Hausmann and Panizza 2002) argue that developing country debt crises reflect the failure of the market to develop suitable instruments which would enable MACs to borrow long-term in their own currencies. The 2007 IDB report '*Living With Debt*', reinforces the original sin hypothesis. It reviews and analyzes the evolution of sovereign debt in Latin America and the Caribbean over the past two centuries and identifies debt structure and composition as the critical determinants of vulnerabilities faced by countries. Given this main message, the study advocates the use of instruments like contingent debt contracts with equity type features, inflation indexed debt instruments and shift towards domestic currency denominated debt. As per the report, such a move would ensure a safer and improved debt structure which would limit the risk of sovereign finance and enable the use of sovereign debt as an instrument for growth.

However, contingent debt instruments have not been widely welcomed either by the markets or developing countries. Instruments like the GDP-indexed bonds, for example, where the interest rate would be positively correlated with growth, have not taken off notwithstanding

their theoretical appeal. This could be either because of technical and/or incentive related problems in measuring GDP accurately and punctually or because network externalities are involved, making it costly for a particular country to take the initiative. The idea behind these market innovations and prescriptions was to use financial engineering as a means to reduce vulnerabilities and improve debt sustainability. However, their limited use reinforces the argument that strengthening fiscal fundamentals is far more important and financial engineering cannot replace weak fundamentals. The experience of Brazil further strengthens this argument – while the Brazilian government made a concerted effort to stay away from hard currency debt after 1999, the local currency debt it issued tended to be indexed to short-run interest rates, the exchange rate or the price level. The proportion of nominal (unindexed) bonds fell from 60 percent in 1996 (with credibility following the successful stabilization of 1994 at a high) to less than 3 percent in 2002 as a result of economic and political uncertainty associated with the Presidential elections and its aftermath.¹⁸ This illustrates that debt maturity and currency composition are not one-sided policy choices made by a country but endogenous to more fundamental variables such as credibility, reputation and government solvency as perceived by the market.

4.4 Empirical highlights from the last decade

While all the major MACs sought to lower indebtedness following the crises which began in 1997 (including by default and forced restructuring as in the case of Russia 1998 and Argentina 2001), the degree of success has varied. As a rule, MACs have been successful in running higher primary surpluses, building up foreign exchange reserves, and in shifting towards flexible exchange rates and domestic currency debt. Notwithstanding the similar policy responses, success in reducing indebtedness measured by the public debt-to-GDP ratio and in re-igniting growth has varied considerably. East Asian countries have fared much better and the reasons appear to be two-fold: the governments of the East Asian countries (with the exception of

¹⁸ Gill and Pinto (2005).

the Philippines) have traditionally carried little debt and therefore had greater capacity to absorb the shock associated with the 1997-98 crisis, which came in the shape of a big bailout of the banking system; and these governments also boast a stronger credit history.

The situation has been more challenging in Argentina, Brazil, Russia and Turkey, where unsustainable public debt dynamics were a fundamental cause of the macroeconomic crises they suffered. In these countries, growth was low and interest rates and fiscal deficits high in the lead-up to their crises. Turkey saw more immediate results in terms of reducing indebtedness and restoring long-run growth than Argentina or Brazil. Argentina resumed growing in 2003 and has been growing rapidly since, but concerns remain about debt dynamics and sub-national fiscal policies. Brazil has been growing throughout but at a relatively slow rate, although this is picking up. After its wrenching 1998 crisis, growth resumed rapidly in Russia following a large real depreciation of its currency and the hardening of budgets for the government and firms and banks; but the challenge of diversifying the economy away from oil, gas and minerals remains.

5. Public Debt and Growth

An important and unsurprising finding from the last decade is that a combination of debt intolerance (bad inflation and credit history) and unsustainable debt dynamics is not good for growth. The reasons for this are familiar: (i) real interest rates are likely to be high, “crowding out” private investment; (ii) the government might be forced to cut capital expenditure further hurting growth because of complementary cutbacks in private investment, which might be deterred by infrastructure gaps; and (iii) macroeconomic uncertainty is likely to be high regarding inflation and relative prices as well as future tax rates. This would conspire to weaken the investment climate.

A key new insight is that the ‘unsustainable debt dynamics-debt intolerance’ combination acts in a similar fashion to the external debt overhang. In other words, the government may not be able to borrow and invest even in high rate of return projects (those meeting the marginal

condition derived in Serven 2007) as a shortcut to increasing net worth and restoring creditworthiness without first reducing its indebtedness. This is because, without a restoration of credibility, interest rates could rise in response to the additional borrowing, reflecting the reluctance of creditors to lend new sums of money, eventually violating the Serven marginal condition. Thus, we remain skeptical about the ‘fiscal space’ argument.

Notwithstanding the above finding and the serious MAC debt crises of the past decade, it is hard to imagine LICs financing their development strategies without accumulating public debt—which in the future is going to come increasingly from the domestic and international capital markets rather than official creditors. Such borrowing is essential because LICs have huge infrastructure and social needs alongside limited taxation capacity and low savings rates. Besides, future generations are likely to be richer, justifying borrowing, especially for long-gestation projects. The key is to avoid situations of unsustainable debt in levels or dynamics as well as outcomes that would contribute to debt intolerance, which is easier said than done.

Now suppose a LIC policymaker starting out fresh after HIPC-MDRI would like to use debt in support of growth. What advice could one give? The optimal debt literature (summarized elegantly in Barro 1999) has three main prescriptions: (i) tax rates should be smoothed or kept constant to the extent possible; (ii) optimal fiscal policy could be either pro- or counter-cyclical over the business cycle depending upon the assumptions made about the demand versus the wealth effects of fiscal policy, the nature of the credit constraints faced by individuals, firms and the government; and the interaction between domestic and international credit constraints (Perotti 2007); and (iii) under uncertainty, indexed debt instruments should be issued where available. These prescriptions are meant for rich countries concerned about smoothing fluctuations along the business cycle; but are likely to be of limited value to LICs trying to raise long-run growth

while minimizing crisis-induced volatility.¹⁹ LICs will be going through major transformations in their tax systems and fiscal and financial institutions as they seek to acquire MAC status.

What about the empirical, policy-based literature? In growth empirics, as Easterly (2005) notes, “The list of national economic policies that have received most extensive attention are fiscal policy, inflation, black market premiums on foreign exchange, financial repression vs. financial development, real overvaluation of the exchange rate, and openness to trade.” This focus combined with the observation that Latin America did not do too well on many of these variables, led John Williamson to set down the Washington Consensus in 1990 as the “lowest common denominator of policy advice being addressed by the Washington-based institutions to Latin American countries as of 1989” (Williamson 2000). In addition, Williamson’s list included expenditure, tax reform (to lower marginal tax rates), liberalization of FDI, privatization, deregulation (to abolish entry and exit barriers) and secure property rights. It pointedly excluded capital account liberalization.

In an oblique reference to the Washington Consensus, The Commission on Growth and Development (Growth Commission GC 2008 p 5) notes in its recently released report that “In recent decades governments were advised to ‘stabilize, privatize and liberalize’.” The experience of MACs over the past decade suggests these terms may need to be reinterpreted. For example, stabilization is more than just low inflation, it also means credible fiscal policy and sustainable debt dynamics, which are more complicated to assess and measure. Similarly, Carlos Diaz-Alejandro cautioned in his classic 1985 paper that countries which liberalized their capital accounts in the presence of weak domestic financial systems or trade tax distortions risked inefficient resource allocation and possible financial crash. And “privatize” refers ultimately to a set of incentives to use and allocate resources well—the contrasting experience of the transition countries during the 1990s (Poland, Czech Republic and Russia all had different strategies)

¹⁹ Hnatkovska and Loayza (2005) find that the “crisis” component of volatility—as opposed to normal cyclical fluctuations—does the most damage to long-run growth in developing countries.

showed that privatization had to be accompanied by hard budgets, competition and transparent corporate governance in order to deliver the intended benefits. Which brings us to the report of the GC itself.

The GC analyzed episodes of sustained high growth, that is, an average rate of 7 percent or more per annum for 25 years or longer. The study narrowed down 13 such episodes of high growth and identified five common ingredients in these high growth countries – openness (import knowledge and exploit global demand), macroeconomic stability (modest inflation and sustainable public finances), leadership and governance (credible commitment to inclusive growth and capable administration), market allocation (prices guide resources and resources follow prices) and future orientation (high investment and high saving).²⁰ These ingredients have a direct bearing on public finances: trade openness is likely to involve cutting tariffs, with an adverse impact on revenues; sustainable public finances would call for balance in the government’s intertemporal budget constraint; market allocation might require liberalization of interest rates (reduction in implicit financial repression taxes) and cuts in subsidies; and future orientation would call for lowering macroeconomic uncertainty, without which horizons are likely to be short. Even good leadership and governance would find its most immediate expression in how the public finances are managed, including the transparent selection of public investment projects and tax reform.

If we conflate GC 2008 with the “growth diagnostics” of Hausmann, Rodrik and Velasco (2005), once again, the public finances have a key role to play. It is hard to think of any binding constraint that needs alleviation but does not have implications for the public finances. In short, to quote Vito Tanzi, “It’s mostly fiscal”.

²⁰ Quoted from the content of Figure 2, GC (2008, p. 22).

6. Concluding remarks

The *key empirical insights* that emerge from the MAC public debt crises of the 1990s are summarized below:

- **How stabilization is viewed has changed:** A new mindset has emerged, focusing on the government's intertemporal budget constraint instead of short-run fiscal deficits and inflation. The focus of debt has shifted from external to public debt, although the most recent turmoil highlights the importance of both public (domestic plus external) and external (public plus private) debt. The reason is that the clean-up of the government's balance sheet has in many cases been accompanied by a large increase in private external debt.
- **The market is the ultimate arbiter of what level of debt is sustainable:** Rules-of-thumb on what constitutes a safe debt-to-GDP threshold (such as the Maastricht criteria or even those generated by cross-country regressions) are of limited use and could lead to unjustified complacency.
- **Fiscal fundamentals dominate financial engineering:** 'Debt intolerance' ('it's the country's fault') finds more empirical support than 'original sin' ('it's the market's fault and appropriately engineered instruments will solve the problem').
- **MACs have been self-insuring:** As a rule, MACs have been seeking to lower indebtedness (measured by the debt-to-GDP ratio) in order to spur growth. They have adopted common policies after the crises which began in 1997-98: shift towards domestic debt and flexible exchange rates; run higher primary surpluses; build up reserves; and in many cases, strengthen financial and fiscal systems.
- **A natural hierarchy has developed in terms of the post-crisis response:** to first reduce indebtedness (measured by the debt-to-GDP ratio) and then only think about a better alignment of fiscal policy with growth rather than following the 'fiscal space' prescription of immediately borrowing more for infrastructure in order to raise long-run growth.

- **MACs have been relying on themselves:** What countries themselves have been doing in response to the public debt crises after 1997 is much more significant than what the IFIs have been able to do to help; nor have there been any market innovations in terms of new borrowing instruments. Self-insurance (understood as a comprehensive fiscal and financial package) is the name of the game.

LICs should not expect a smooth ride to MAC status and should make all efforts to avoid crises—prevention is better than cure. This would require extensive groundwork in terms of strengthening fiscal and financial institutions and maximizing the use of available ODA in the transition to predominantly market-based financing.

The experience of MACs with public debt and development emphasizes the good management of public finances and the importance of the government’s intertemporal budget constraint. Ensuring debt sustainability has spinoff benefits in terms of greater market access to less risky debt structures in terms of currency and maturity. It also has important linkages to growth—it provides macroeconomic stability, reduces uncertainty about future inflation and tax rates and creates a facilitating environment for private investment by undertaking complementary public investments. Such synergies fit well with the Washington Consensus, the common ingredients in sustained fast-growth episodes identified by the GC and the “growth diagnostics” framework of HRV.

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