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“Original Sin” and Bond Market Development in Sub-Saharan Africa

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The relationship between domestic financial market development and economic growth has been extensively covered in the literature. It is generally agreed that there is a positive relationship between economic growth and financial sector development, although there may not always be agreement on the direction of causation. The more modern functional approaches (see Levine, 1996 and Ul Haque, 2002) emphasise the point that the financial sector performs more functions than simply being a conduit for the mobilisation of saving. These approaches highlight that policies should move beyond simply encouraging the growth of commercial banking. It is also established (see for example Montiel, 2003) that financial markets develop as per capita income increases. As the process of development proceeds, financial markets expand, although the nature of these markets may differ from country to country, depending on the policy, regulatory and legal infrastructure. In general, commercial banks dominate the financial markets in developing countries (Ul Haque, 2002).

The focus of this chapter will be on the role that financial markets and bond markets in particular can play in reducing a country's external vulnerability as well as being an additional source of mobilisation of capital. Financial crises are often caused or exacerbated by weaknesses in a country's financial system. It is argued that central to

¹ South African Reserve Bank. The views expressed here are not necessarily those of the South African Reserve Bank.

this is the question of “original sin”,² that is the inability of developing countries to borrow abroad in domestic currency. This in turn results in excessive foreign borrowing which increases vulnerability in the face of a crisis. Eichengreen, Hausmann and Panizza (2003) question the ability of developing countries to escape from origin sin without an international solution. This gloomy prognosis has been challenged by Goldstein and Turner (2004) who argue that the problem of currency mismatch is likely to become less severe as countries develop. The argument underlines the need to develop domestic financial markets, particularly domestic bond markets. They argue that a range of domestic policies can be implemented to overcome this problem.

It would appear that both arguments have merit and are not mutually exclusive. However, reforms to the international architecture are unlikely for some time. Under such circumstances, countries should take active steps to develop the domestic financial system and the bond markets in particular and provide adequate incentives for foreign participation. However, it is also recognised that these developments also may take time, and that not all developing countries will be able to attract foreign participation into their bond markets. Under such circumstances, there are still advantages to bond market and financial market development, although not necessarily to help solve the problem of currency mismatch.

Although domestic bond markets have developed quickly in recent years in a number of emerging markets, particularly in Asia,³ bond markets remain rudimentary in sub-Saharan Africa (SSA), apart from South Africa, where domestic bond market development has more recently included the significant expansion of the corporate bond market. The lack of a developed bond market not only has implications for the issue of currency mismatch, but also for the efficacy of fiscal policy. It is also argued however that the development of domestic financial markets does not completely insulate countries from foreign exchange crises. Although the problem of currency mismatch is reduced, extensive foreign participation in domestic bond markets can make the currency vulnerable when risk perceptions change.

The chapter is organised as follows: Section 1 briefly discusses the concept of original sin and Section 2 considers the causes of original

² See Eichengreen and Hausmann (1999) and Eichengreen, Hausmann and Panizza (2003).

³ See for example World Bank/IMF (2001) and PECC (2004).

sin and why countries find it difficult to overcome the problem. Section 3 looks at the importance of domestic bond market development and the requirements for this development. Section 4 analyses the development and role of bond markets in sub-Saharan Africa, and Section 5 concludes.

1 Original Sin and Domestic Borrowing

The term “original sin” (in the economics context) was originally used by Eichengreen and Hausmann (1999) and refers to the inability of developing countries to borrow abroad in their own currencies. If a country’s external debt is denominated in foreign currency, resulting in a currency mismatch, then in the event of a currency crisis, a depreciating domestic currency, (and the difficulty of rolling over short-term debt) leads to balance sheet problems which become a key source of financial instability and possibility of default.

Originally, the term was used to include not only the difficulty of borrowing abroad, but also the difficulty faced by countries in borrowing at home at long maturities, sometimes referred to as domestic original sin. This is the notion that was also used in a number of other studies (e.g. Bordo, Meissner and Redish, 2003). Countries suffering from both aspects of original sin would be particularly at risk in coping with adverse shocks. If the currency depreciates in response to the shock, the country will be hurt by the balance-sheet effects of the aggregate currency mismatch. But attempts to support the currency by raising interest rates will harm the financial position of firms as a result of the rise in the short-term interest rate, given the absence of long-term, fixed-rate debt.

In Eichengreen, Hausmann and Panizza (2003), the definition was narrowed to exclude domestic original sin on the grounds that a growing number of countries are showing an ability to borrow long term in domestic currencies. They note that Chile, Hungary, India and Thailand amongst others are now able to borrow on domestic markets at fixed rates without exchange rate indexing of their bonds. However, their ability to borrow abroad remains limited. They point to the fact that local corporate bond issues in emerging markets grew by a factor of ten between 1997-99 and 2000-1 and that local bond markets have been the dominant source of funding for the public sector in emerging markets. Similarly, in Latin America, local bond issues were almost as large as international issues of bonds, equities and syndicated lending in 1997-2001.

Other studies (e.g. World Bank/IMF 2001) also point to the growth of bond markets in Asia, particularly since the Asian crisis. Different reasons are posited for these developments. Some argue that economic growth and the concomitant growth of contractual savings institutions has been instrumental to this growth. Rousseau and Sylla (2001) point to a less benign interpretation, noting the relationship between the development of bond markets and the need to finance large government deficits (particularly relating to funding of war efforts).

However, despite the expansion of domestic bond markets in emerging markets, it is argued that the fact that many bonds placements are linked to the exchange rate, they are indistinguishable from foreign-currency denominated issues from a currency risk point of view, while a large amount are indexed to the short-term interest rate, thereby providing little protection from interest rate increases. So despite the recent rapid development of domestic bond markets, which would have required compliance with a range of prerequisites for the development of domestic bond markets,⁴ Eichengreen *et al.* (2003) argue that they have made little progress in the capacity to borrow abroad in their own currencies, leading them to the conclusion that the problem relates to the structure of foreign demand for claims denominated in the local currency. Although domestic policies and institutions are important for the ability of countries to borrow abroad in their own currencies, so are factors largely beyond the control of the individual country. In other words, in line with Bordo, Meissner and Redish (2003), domestic policies and institutions are a necessary but not a sufficient condition for the elimination of original sin.⁵

It should be noted that original sin and currency mismatch are not the same. Eichengreen, Hausmann and Panizza note that a consequence of original sin is for countries to accumulate international reserves as a way of protecting themselves from potentially destabilising financial consequences. Where reserve accumulation is large, currency mismatch tends to be small, so although aggregate currency mismatch is a possible consequence of original sin, it is not a necessary one. Original sin can

⁴ The issue of the appropriate policies for domestic bond market development is discussed later on.

⁵ They also stress that the development of a domestic bond market should not be seen as a means to avoid foreign financing completely. They argue that this would minimise the benefits of international borrowing and lending for smoothing consumption, diversifying risk and augmenting investment.

therefore result in currency mismatch, large reserve accumulation or both to some extent. Reserve accumulation, however, comes at a cost, particularly when domestic interest rates are significantly higher than foreign interest rates, which raises the cost of sterilisation.

2 The Causes of Original Sin: Why Countries Find It Difficult to Escape

Eichengreen *et al.* (2003) play down the role of factors such as the level of development, macroeconomic credibility and quality of institutions as the sole explanations for original sin, although they concede that these factors may have some limited role. But they argue that even those emerging markets that have improved their policies and institutions have made relatively little inroads into solving the mismatch problem.

According to them, factors beyond control of countries such as network externalities, transactions cost and imperfections in global capital markets account for original sin. The only variable that is both statistically and economically significant as a determinant of original sin is country size and this leads them to formulate an explanation for original sin based on the costs and returns to portfolio diversification at the global level.

The reason that portfolios are concentrated in currencies of large countries relates to the fact that the optimal portfolio will have a finite number of currencies because of transactions costs, and the marginal benefit of each additional currency declines with each additional currency. So most of the benefits of international portfolio diversification are obtained by building portfolios limited to a handful of currencies and only large countries offer significant diversification possibilities, implying that most investors will choose to invest in a few large currencies. Because of the declining marginal benefits of diversification, it does not follow that the characteristics that allowed a few small countries (including South Africa) to issue external debt in their own currencies, should allow us to conclude that acquiring those characteristics would be sufficient to allow others to achieve the same results.

The solution they propose is the creation of an emerging-market currency basket and for the encouragement of the international financial institutions and G-10 governments to issue debt in that composite currency. They propose an emerging market index composed of an inflation-linked basket of the currencies of about 20 of the largest emerging economies, weighted according to GDP.

The gloomy prognosis of this view has been challenged on a number of grounds. It implies that developing countries would find it hard to reduce financial fragility, and efforts to strengthen macroeconomic policies and institutions would either be ineffective or take too long. Burger and Warnock (2004), Goldstein and Turner (2004) and Ul Haque (2002) stress the importance of national macroeconomic policies and institutions. In order to borrow abroad in domestic currency, domestic bond market development is essential. Low inflation is important for building deeper local bond markets. Goldstein and Turner and Bordo, Meissner and Redish (2003) also argue that fiscal policy and debt management policies are important considerations which is in contrast to Eichengreen et al's inability to find evidence that fiscal policy can explain cross-country differences in original sin.

Burger and Warnock (2004) provide an analysis of foreign participation in domestic bond markets globally. Their analysis of 49 bond markets show that creditor-friendly policies (e.g. policies that promote low and stable inflation) and laws are important determinants of the development and size of domestic bond markets.

They point to the possibility that “responsible” policies promote a virtuous cycle in local bond market development. Broader bond market development also tends to encourage the creation of derivatives markets to enable investors to hedge their currency risk, which in turn increases the attractiveness of these markets. Their results show that large countries and those with better inflation performance have larger local-currency bond markets and rely less on foreign currency bonds. Furthermore, countries with strong institutions have broader local-currency bond markets, and those with stronger creditor rights rely less on foreign currency bonds.

Their data also shows that when looking at the bond market as a whole, the share of the bond market denominated in local currency is not much different between emerging markets and advanced economies (although Latin America is a bit of an outlier in this respect). However, the size of the bond market relative to GDP is much smaller in emerging markets.

Of greater relevance to this discussion is the extent and determinants of foreign participation. The data (for 2001) show that US investors “severely underweight foreign bonds overall, and the bonds of some countries more than others” (Burger and Warnock p. 12). US investors held approximately \$150 billion local-currency-denominated foreign bonds issued by developed economies, compared to \$3 billion on

emerging market bonds. Underweighting is significant even with developed country bonds, but more so in emerging markets. South Africa was an exception, with the relative weight being higher than for many developed countries, and the ratio was the same as the developed country average. Their results suggest that US investors avoid markets that exhibit high historical variance or negative skewness. The importance of currency hedges is emphasised by the fact that the variance of local bond returns is dominated by exchange rate volatility.

Bordo, Meissner and Redish (2003) focus on trying to understand how the exceptions to the original sin rule were able to break free.⁶ Their analysis reveals that although sound fiscal institutions, high credibility of the monetary policy regime and good financial development are important factors, they are not sufficient. Conversely, poor performance in these areas is not generally a necessary condition for original sin. They emphasise the role of shocks such as wars, massive economic disruption and the emergence of global markets:

“The differences in evolution between the US and the Dominions we attribute to differences in size, the traits of a key currency, which the US possessed and others did not, and to membership in the British Empire. The important role of major shocks suggest that the establishment of a bond market involved significant start-up costs, while the role of scale suggests that network externalities and liquidity were pivotal in the existence of overseas markets in domestic currency debt” (Bordo *et al.*, p. 5).

The emphasis in their work on path dependence implies that it could be difficult to extrapolate lessons of their experience to other countries.

Burger and Warnock (2002) also argue that there is a strong positive relationship between the level of economic development and depth of financial markets i.e. the size of a country’s local-currency denominated bond market is related to GDP per capita rather than country size.

Whereas Eichengreen *et al.* seem to imply that all emerging markets are in the same boat with respect to original sin, and that the prospects of escaping from this are limited, particularly with respect to domestic solutions, Goldstein and Turner (2004) show that although emerging bond markets are smaller relative to the size of their respective economies, the size, liquidity and ability to hedge risk varies considerably. South Africa features strongly in these comparisons, but is the only

⁶ They accept the original sin definition, which includes the inability to borrow long term domestically.

African country to do so. They also argue that over time, most of the countries should develop to where South Africa is today, implying that there is scope for development. One of the factors stressed, for example, is that although hedging facilities remain limited in some of the smaller emerging markets, this could be due to the fact that experience with exchange rate flexibility is limited. As experience is gained, the development of hedging instruments should be expected to expand.

The currency regime is also a consideration. Eichengreen *et al.* argue that hedging is more difficult and more expensive under flexible exchange rate regimes. Furthermore, they contend that most flexible exchange rate regimes have very high levels of original sin. Goldstein and Turner on the other hand contend that most emerging market currency crises in the past few years have been in countries with fixed or announced targets for exchange rates and that behaviour towards currency risk tends to improve as countries move towards greater flexibility.

Institutional factors may also be central to overcoming original sin and currency mismatch. Goldstein and Turner (2004) note three reasons for stressing institutional factors; they govern the working of microeconomic incentives, strong institutions increase the chances of good macroeconomic and exchange rate policies being adopted, and strong institutions nurture confidence. Often emerging markets lack an adequate market infrastructure, including well-developed and liquid money markets.

There is a general acceptance, that emerging markets are beginning to develop bond markets, and that the development of a domestic bond market is an essential requirement for escaping from original sin, and no emerging market has been able to escape without this. The issue of course remains whether these bond markets are attractive to foreigners.

It should be noted however that foreign access to domestic currency denominated bonds is not unproblematic in the event of a decline of foreign investor confidence or other contagion effects. Having a domestic debt market does not shield the exchange rate or the capital account from sudden capital reversals. Even if a country issues domestic denominated debt, if these are widely held by foreigners they can expose the exchange rate to sudden movements. There is the advantage to government of not incurring foreign exchange losses through the higher domestic cost of servicing foreign-owned debt, and also that non-residents will bear the exchange rate risk. Although there is no exchange rate risk to the government in terms of repayment and servicing, to the extent that domestic firms or banks suffer from currency mismatch, they are exposed to potential instability.

3 Why Develop Bond Markets?

To this point, we have considered the issue of the importance of developing domestic bond markets from the point of view of overcoming or alleviating the problems of original sin. However, there are a number of broader reasons for developing domestic bond markets. Herring and Chatusripitak (2001) and PECC (2004/5) for example, argue that bond markets are central to the development of an efficient economic system, and there would be additional significant benefits if bond markets are developed. They provide greater investment opportunities for both retail investors and financial institutions, and help deepen financial markets. This is particularly the case if foreign investors are attracted.

From a macroeconomic policy perspective, the lack of a bond market places constraints on the financing of fiscal deficits, while bond markets provide useful market signals for macroeconomic policy. Domestic debt is also needed for monetary policy purposes, including for sterilising inflows of foreign exchange.

Bond markets also help to provide interest rates across the maturity spectrum and a more efficient pricing of risk. By providing an alternative source of financing, they reduce concentration of intermediation in banks. Because lending can be hedged in the bond market, banks have the ability to lend longer.

The usefulness of domestic debt markets can also be seen in the context of countries that are dependent on aid flows. International aid is often linked to project financing and can therefore not finance capital projects not supported by the donors. Furthermore, the supply of foreign financing is uncertain, and dependent on the aid agencies' budgets and assessment of economic performance in the recipient country. In many instances, domestic debt has increased because of a need to fill the shortfall caused by the decline in the supply of foreign aid. Rwegasira and Mwega (2003) show that, in general, accumulation of domestic debt has reflected the size of the budget deficit and the extent to which SSA countries have been able to borrow externally.

Even if foreign debt is significantly cheaper than domestic debt, the latter is easier to roll over than foreign debt, and there is no foreign exchange requirement. The greater the degree of foreign indebtedness, the more vulnerable a country is to cessation of loans or foreign exchange crises. As Christensen (2004) points out, many IMF-supported programmes include a cap on non-concessional borrowing, in order to limit external vulnerability.

PECC (2004) sets out a number of general requirements for bond market development.⁷ The factors stressed include the simultaneous development of market width, market depth and market infrastructure. Other factors include effective coordination among government agencies as well as close public-private sector partnership, regulation focusing on maintaining and enhancing transparency and the treatment of taxation. It is also proposed that special support measures be introduced when market depth is lacking.⁸ Finally, from the perspective of attracting non-resident participation, it is argued that “markets will attract investors if there is competition among market participants and if they are open to many players, both domestic and foreign. Such conditions ensure that market prices for risk are properly reflected and provide fair returns” (PECC, 2004 p. 3).

To the extent that the Eichengreen, Hausmann and Panizza argument is correct, that high costs would inhibit the increased participation of non-residents in domestic bond markets, the option of regional bond markets should also be considered. PECC (2004) for example argue that given their small size, most of Asia’s bond markets face serious limits to liquidity, efficiency and growth. Therefore, there would be mutual benefits across the region from increased cross-border issuance and investment and eventually the establishment of a regional bond market that would enable companies and public entities to more directly tap the savings within the region. It would also attract international investors, by providing wider market choice, diversification of risks, and higher returns. Requirements for regional bond markets (in addition to those factors relevant to the development of domestic bond markets) include the eventual opening of capital accounts and more flexible exchange rate arrangements; regional policy coordination and cooperation (including harmonisation of market infrastructure and practices); and credit enhancement facilities at domestic and regional levels that could an important role in financing small and medium enterprises.

⁷ The discussion focuses on regional bond market development, but it is argued that the emergence of a regional bond market needs to start with reforms to develop and strengthen domestic bond markets.

⁸ They quote the example of the use of collateralised bond obligations (CBOs) in Korea, which involved pooling of bonds issued by companies into combined issues at a time when it was difficult for companies to raise funds because of the collapse of the Daewoo Group in 1999 and the problems faced by the Hyundai group in 2000.

4 Fiscal Policy and Domestic Borrowing in Sub-Saharan Africa

There are a number of impediments to long-term bond market development in sub-Saharan Africa. Non-bank financial institutions are generally underdeveloped in sub-Saharan Africa (SSA), except in South Africa. Although the non-bank sector is significant in Kenya, Madagascar, Mauritius and Rwanda, the differences in absolute size between them and South Africa is significant. The lack of institutional investor base reduces the demand for long term paper, and the higher interest rates mean that governments are unwilling to issue long-term bonds. Furthermore, where macroeconomic stability is threatened, long-term debt is unattractive, and there is also the problem of default risk.

As noted above, the efficacy of fiscal policy is reduced because of a lack of domestic bond markets and the lack of depth of the financial sector. This could affect monetary policy as well, through restricting the channels through which monetary policy operates. Despite the general trend towards financial sector liberalisation during the 1980s and 1990s in SSA, financial markets remain relatively small and undeveloped, except in South Africa. The result has been that governments either have to maintain their dependence on foreign capital or aid inflows to finance fiscal deficits, or they have to pay very high interest rates if they finance these deficits locally. This has threatened or has undermined fiscal policy by creating unsustainable fiscal positions as well as vulnerability through currency mismatch.

The generally narrow tax bases and growing demands for infrastructure and social services in SSA countries has resulted in fiscal deficits, which need to be financed either through domestic or foreign borrowing. The lack of depth of the domestic financial systems is therefore a constraining factor, and is to a large extent a result of low savings ratios in SSA. This in turn has resulted in a lack of institutional capacity to mobilise long-term savings.⁹

The low levels of savings can be attributed to low income levels. Sachs *et al.* (2004), for example, quote a survey conducted in Uganda where only 24 percent of rural Ugandan households indicated that they had ever undertaken any saving, and 85 percent of those which do not save gave low income as the reason, although some did mention lack of

⁹ Sachs *et al.* (2004) argue that the savings situation is even worse than it looks because the national income accounts data probably significantly overestimate Africa's true savings rate by counting resource depletion as income.

access to financial institutions. Poor people have to use all or more than all of their income simply to stay alive.

The lack of savings in turn acts as a constraint on investment. The lack of long-term markets is not only a problem for the financing of government deficits, but also for the financing of domestic private investment. Even in South Africa, it is only recently that the domestic private bond market has expanded significantly. Hernandez-Cata (2000) argues that the narrow tax base results in high levels of taxation, which in turn explains the low levels of investment.

Access to borrowing by government is essential if fiscal policy, particularly for capital and other infrastructural investment, is constrained by the narrowness of the tax base. The general Poverty Reduction Strategy Paper (PRSP) recommendations with respect to tax policies have been to avoid corporate or personal taxation because of the disincentive effects, and the process of trade liberalisation would also reduce trade taxes. The alternatives therefore are consumption taxes such as VAT, and improved administration. However, consumption taxes are regressive and could reinforce poverty. Tax revenues can be increased by improving the tax administration and tax structure. For example, tax revenues have been increased significantly in South Africa over the past few years through efficiency gains in collection, and this has allowed for a reduction in personal tax rates. According to Rwegasira and Mwegu (2003), many African countries have undertaken tax modernisation programmes to broaden the government revenue base including changes in tax rates, tax bands, coverage of taxation and the revamping of the major collection departments. However, there are limits to these efficiency gains.

As an alternative to increased taxation, there has been increasing focus on the introduction of user charges in education and health in particular, to take some pressure off the fiscus. These policies obviously have their limits, depending on distributional patterns in the country and income levels.

A recent study by Christensen (2004) looks at the issue of domestic debt in SSA. Money and domestic debt markets have an impact on the implementation of both monetary and fiscal policies. Table 1 shows that although most SSA countries have some form of domestic debt market, there are wide variations between them. The average ratio of domestic debt increased from 11 percent in the 1980s to 15 percent in the late 1990s, and the number of countries with debt ratios exceeding 20 percent of GDP increasing from three in 1980 to nine in 2000.

Table 1 Domestic Debt/GDP of Selected Sub-Sahara African Countries
(percentages)

	1980-89	1990-94	1995-2000
Angola	0	0	0
Botswana	0	0	0
Burundi	3	2	6
Congo, DR	0	0	0
Ethiopia	16	9	10
Gambia	3	13	23
Ghana	12	8	24
Kenya	21	23	22
Lesotho	8	8	5
Madagascar	3	3	3
Malawi	13	8	9
Mauritius	27	29	33
Mozambique	0	0	0
Namibia	0	8	19
Nigeria	28	29	16
Rwanda	8	9	5
Seychelles	14	45	68
Sierra Leone	13	5	7
South Africa	30	37	45
Swaziland	4	37	1
Tanzania	26	6	12
Uganda	2	1	2
Zambia	25	9	6
Zimbabwe	35	29	37
<i>Average</i>	<i>11</i>	<i>12</i>	<i>15</i>
HIPC	9	66	8
Non-HIPC	14	18	23

Source: Christensen (2004).

Countries that have relied on domestic debt have included Ethiopia, Kenya, Mauritius, Nigeria, South Africa, Tanzania, Zambia and Zimbabwe. Botswana's lack of debt market is a result of the fact that until recently the government always had fiscal surpluses.

Not surprisingly, the table shows that the HIPCs have a much smaller debt burden, given their reliance on external debt. However, what is not clear is whether the lack of a domestic debt market results in excessive reliance on external debt, or if access to cheap external debt

Table 2 Financial Sector Depth and Domestic Debt, 1980-2000

	M2 (percent of GDP)			Domestic Debt (percent of M2)		
	1980-89	1990-94	1995-00	1980-89	1990-94	1995-00
Angola	107	72	18	0	0	0
Botswana	19	20	21	0	0	0
Burundi	18	18	19	19	11	30
Congo, DR	8	14	7	0	0	0
Ethiopia	28	41	41	57	47	25
Gambia	21	22	29	13	57	80
Ghana	15	16	22	83	47	106
Kenya	29	38	50	71	63	44
Lesotho	49	34	31	18	25	16
Madagascar	21	22	21	15	13	12
Malawi	22	22	16	59	38	57
Mauritius	47	67	77	57	44	43
Mozambique	37	22	21	0	0	1
Namibia	12	30	42	0	25	44
Nigeria	27	21	17	106	137	95
Rwanda	13	16	17	62	59	30
Seychelles	32	42	78	43	107	86
Sierra Leone	19	12	14	53	71	81
South Africa	56	53	56	53	71	81
Swaziland	33	32	26	12	3	4
Tanzania	27	17	16	93	38	74
Uganda	9	8	13	24	7	16
Zambia	17	20	19	145	44	30
Zimbabwe	27	22	42	129	130	91
<i>Average</i>	<i>231</i>	<i>30</i>	<i>32</i>	<i>39</i>	<i>39</i>	<i>42</i>

Source: Christensen (2004).

makes domestic debt unattractive and therefore restricts the development of the market. Domestic debt in HIPCs was 8 percent of GDP while in non-HIPCs the domestic debt to GDP ratio increased from 14 percent in the 1980s to 23 percent by the end of the 1990s. As a proportion of total debt, domestic debt remains small.

The scope for expanding domestic debt depends on the depth of the financial sector. The traditional variable to measure this is the M2/GDP ratio shown in Table 2. The table shows that African financial sectors are

Table 3 Average Maturity of Domestic Debt (2000)

	Domestic Debt/GDP (in percentages)	Maturity in days
Burundi	9	77
Uganda	2	93
Gambia	31	112
Ghana	29	122
Malawi	11	177
Sierra Leone	10	190
Lesotho	11	203
Nigeria	21	228
Cape Verde	26	256
Zambia	5	296
Rwanda	6	351
Kenya	22	382
Namibia	19	859
Swaziland	1	1145
South Africa	42	1748
<i>Average</i>	<i>15</i>	<i>231</i>
Mexico	23	720
Brazil		1085
India		3050

Source: Christensen (2004).

relatively small and smaller in the HIPCs. The countries with the highest ratios are Cape Verde, Kenya, Mauritius, Seychelles and South Africa. The small size of financial sectors limits the scope to expand domestic debt. The table also shows the depth of South Africa's domestic debt market, with most of the government budget deficit being financed through domestic borrowing. The South African government has refrained from accumulating foreign debt because of the exchange rate risk involved.¹⁰

One of the implications of shallow financial markets for macro-economic policy is the preponderance of short-term debt, resulting in increased risk for governments. Christensen (2004) estimates that the

¹⁰ South Africa is not eligible for highly concessionary loans from the IFIs.

average maturity was about five and half years or seven times longer in six developed and emerging market countries for which data were available, than in Africa.¹¹ Table 3 shows that, in general, public debt maturities in Africa are less than one year. With short-term debt, the government has to roll over debt more frequently and is therefore exposed to increased vulnerability with respect to interest rates and consequently to the cost of debt servicing. This could lead to a loss of confidence in government bonds and further rises in interest rates on government debt.

Longer-term savings instruments are important to prevent excessive exposure to short-term debt portfolios by government, which could cause a significant burden on, and risk to the budget. However, if Christensen is correct in his observation that the length of maturity is related to per capita GDP rather than the size of the domestic debt market relative to GDP, then as African economies develop, their debt markets can be expected to become more sophisticated and long-term in nature.

An important issue for fiscal policy is the cost of debt servicing. Financial liberalisation in most countries in Africa in the 1980s and 1990s has resulted in higher real interest rates, implying increased costs of servicing domestic government debt, or, as Rwegasira and Mweya (2003) note, a shift from a high inflation regime to a high real interest rates regime. It is generally the case that the cost of servicing domestic debt is higher than that of foreign debt. Many SSA countries have access to foreign financing at very low concessionary rates and at very long maturity from international aid agencies or on grant terms. Domestic borrowing is generally at higher interest rates and shorter maturities.

Another important issue is that of currency risk. Whether or not the effective interest rates paid on domestic debt are in fact higher than foreign interest rates depends on exchange rate changes. A real depreciation, for example, increases the real burden of foreign debt. This in turn may provide an incentive for governments to intervene to prevent a depreciation or delay a necessary devaluation. Beaugrand *et al.* (2002), however, argue that even after adjusting for exchange rate risk, highly concessional loans are still the most attractive way to finance budget deficits.

In cases where domestic interest rates are high, domestic debt service can become a significant proportion of government revenues, implying

¹¹ The length of maturity appears to be roughly related to levels of per capita income rather than to the size of the debt market relative to GDP.

less expenditure on other items. The interest cost of domestic borrowing can rise quickly along with increases in the outstanding stock of debt, especially in shallow financial markets. Under such circumstances, increases in domestic debt will lead to higher domestic interest rates, which in turn could result in crowding out of private investment. The ratio of interest payments to GDP is over two percent in a number of countries, including Zimbabwe, Ghana, Malawi and Sierra Leone. Of note is the fact that interest payments on domestic debt are similar in size to interest payments on foreign debt despite significantly lower levels of domestic debt. Christensen notes that domestic interest payments exceeded foreign interest payments in almost half of the 22 countries for which data were available.

Similarly, Rwegasira and Mwegu (2003) show that in Kenya's 1999/00 budget, the interest payments on domestic debt were more than double those allocated to financing external debt even though the stock of external debt was about three times the stock of domestic debt. Servicing of public debt accounted for 16 percent of total government expenditure. According to the World Bank (2001, p. 82), six heavily indebted countries in Africa spend more than a third of their national budgets on debt service and less than a tenth on basic social services. In this context, the UNCTAD (2002) report argues that the trade-off between capital investment and current social spending is aggravated when interest payments absorb large and even increasing proportions of the budget, while government revenues cannot be raised sufficiently rapidly because of sluggish growth. The higher cost of servicing government domestic debt is at the expense of social and capital expenditure programmes.

UNCTAD (2002) cautions strongly against excessive zeal in developing domestic debt markets. It is argued that the shift from central bank financing to direct financing through issuance of treasury bills and government bonds has injected new elements of instability into African economies. "Rather than securing greater fiscal discipline, they have resulted in increased accumulation of domestic debt, with consequences for income distribution no less serious than inflationary financing. Indeed, the shift to financing public deficits by government debt on market terms under conditions of very thin financial markets has led to very high and volatile real interest rates. Rapid accumulation of domestic debt at high real interest rates has often resulted in excessive debt burdens on the budget, leading to Ponzi financing..." (UNCTAD, 2002, p. 29).

Although it is true that there is an additional level of uncertainty, it is not clear how the process of financial deepening can proceed without the development of a domestic debt market. It would also seem to imply that countries should prefer foreign debt. However if a country is reliant on foreign debt financing with little domestic debt, constraints on macroeconomic policy appear when for example inflows dry up, or if there is a significant depreciation of the exchange rate. A deeper domestic debt market may make it easier to spread this risk, but as noted above, the higher interest rates may constrain public expenditure as a higher proportion of the budget goes to interest payments.

The bottom line however is that any form of debt, whether domestic or external, comes at a cost, and the issue is the sustainability of the debt. Debt sustainability will be a function of real interest rates and real growth. If foreign debt is involved, the foreign real interest rate and the real exchange rate become additional factors in determining sustainability.

With respect to how to deal with the growing domestic debt burdens in a number of African countries, two of the options put forward by Christensen (2004) include: (1) extend the maturity structure of debt, in part through strengthening and expanding the insurance and pension sector. This would require a significant increase in domestic savings, and (2) improve foreign access to holdings of domestic debt. This would result in increased competition, which would reduce financing costs and possibly contribute to a more efficient market through the introduction of financial technology and innovation. This would depend on the extent to which the country is able to attract foreign funds, i.e. to overcome the problem of original sin.

5 Conclusion

As argued above, the state would benefit from the existence of a developed bond market if it results in a more efficient mobilisation of resources and a deeper pool of savings, particularly if non-residents are attracted to it. If bond markets are to be developed in SSA or in other emerging markets, the role of the state becomes critical, as a range of policies would be required. At the domestic level, it requires appropriate macroeconomic policies, including fiscal and monetary discipline to promote a virtuous cycle in bond market development. Default risk and high inflation are important impediments.

Of importance would be the creation of institutions to provide the incentives for foreigners to invest in these new bond markets. Such institutions would include the development of a repo market for government bonds, a system of primary dealers and liquid money markets. Governments could also ensure that borrowing is not fragmented by co-ordinating bond issues between different government departments and agencies and a transparent regulatory framework, including taxation. There are of course dangers that excessive government intervention in these markets could stultify their development.

The question is, to what extent can this be generalised to all countries? Some, (for example Goldstein and Turner), take issue with the argument that it would be too costly for emerging markets to wait for the very slow impact of improved policies to impact on original sin, and that only a few emerging markets have the potential to escape from original sin (given the costs of diversification noted earlier). They also question whether an international solution should merit first priority.

There does not seem to be a strong case for delaying attempts at financial market deepening, including the development of domestic bond markets, as such developments are important in the development process. There is also much evidence that a number of emerging markets have been able to develop viable bond markets, although the ability to attract foreign participation varies. Although domestic solutions may be slow, international solutions may even be slower, given the lack of will regarding any changes to the international financial architecture. It would seem that initiatives on both fronts are important, and that domestic initiatives are a necessary condition for the success of any international initiative.

Given the nature of most financial markets in SSA, it is likely that Africa will continue to lag behind other regions with respect to bond market development. It is also likely that many SSA countries are simply too small to develop viable and deep enough markets to attract foreign interest even with the appropriate macroeconomic policies and institutions. The diversification argument of Eichengreen *et al.* seems compelling in the African context. It would appear that the solution would be to move towards a regional bond market(s), which would help overcome the diversification problem. Moving in this direction would be consistent with the current regional monetary integration proposals, and strengthens the argument for regional capital markets in Africa.

References

- Beaugrand, P., B. Loko and M.P. Mlachila (2002), “The Choice Between External and Domestic Debt in Financing Budget Deficits: The Case of Central and West African Countries”, IMF Working Paper WP/02/79, IMF, Washington D.C.
- Bordo, M.D., C. Meissner and A. Redish (2003), “How ‘Original Sin’ Was Overcome: The Evolution of External Debt Denominated in Domestic Currencies in the United States and the British Dominions 1800-2000”, NBER Working Paper 9841, NBER, Cambridge MA, July.
- Burger, J.D. and F.E. Warnock (2004), “Foreign Participation in Local-Currency Bond Markets”, International Finance Discussion Papers No 794, Board of Governors of the Federal Reserve System, Washington D.C.
- Christensen, J. (2004), “Domestic Debt Markets in Sub-Saharan Africa”, IMF Working Paper WP/04/46, IMF, Washington D.C.
- Duesenberry, J.S. and M.F. McPherson (2001), “Restarting and Sustaining Growth and Development in Africa: The Macroeconomic Management Dimension”, African Economic Policy Discussion Paper No. 52, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University, April.
- Eichengreen, B. and R. Hausmann (1999), “Exchange Rate and Financial Fragility”, NBER Working Paper 7418, NBER, Cambridge MA.
- Eichengreen, B., R. Hausmann and U. Panizza (2003), “Currency Mismatches, Debt Intolerance and Original Sin: Why They are Not the Same and Why it Matters”, NBER Working Paper 10036, NBER, Cambridge MA.
- Goldstein, M. and P. Turner (2004), *Controlling Currency Mismatches in Emerging Markets*, Institute for International Economics, Washington D.C.
- Hernández-Cata, E. (2000), “Raising Growth and Investment in Sub-Saharan Africa: What Can Be Done?”, IMF Policy Discussion Paper 00/4, IMF, Washington D.C.
- Herring, R.J. and N. Chatusripitak (2000), “The Case of the Missing Market: The Bond Market and Why it Matters for Financial Development”, ADB Institute Working Paper 11, ADB, Tokyo.
- Kahn, B. (2004), “Constraints to Macroeconomic Policies in Sub-Saharan Africa”, paper presented to the G-24 conference on Constraints to Growth in Sub-Saharan Africa, Pretoria, 29-30 November.

- Levine, R. (1996), "Financial Development and Economic Growth", World Bank Policy Research Working Paper 1678, The World Bank, Washington D.C.
- Montiel, P.J. (2003), "Development of Financial Markets and Macroeconomic Policy", In: *Journal of African Economies*, Vol. 12 (supplement 2).
- PECC (2004), "Developing Bond Markets in the APEC Region: Need and Agenda for Public-Private Sector Partnership", Issues at PECC, PECC International Secretariat, Singapore.
- Rwegasira D.G. and F.M. Mwege (2003), "Public Debt and Macroeconomic Management in Sub-Saharan Africa", In: UNCTAD, *Management of Capital Flows: Comparative Experiences and Implications for Africa*, United Nations, New York/Geneva, April.
- Sachs, J.D., J.W. McArthur, M.K. Schmidt-Traub, C. Bahadur, M. Faye and G. McCord (2004) "Ending Africa's Poverty Trap", Brookings Papers on Economic Activity 1, The Brookings Institution, Washington D.C.
- Ul Haque, N. (2002), "Developing of Financial Markets in Developing Economies", Address given at the Financial Reform Conference, Colombo, Sri Lanka.
- UNCTAD (2002), *Economic Development in Africa. From Adjustment to Poverty Reduction: What is New?*, United Nations, New York/Geneva.
- (2003), *Economic Development in Africa: Trade Performance and Commodity Dependence*, United Nations, New York/Geneva.
- World Bank (2001), *World Development Report 2000/2001: Attacking Poverty*, Oxford University Press, New York.
- World Bank (2004), *African Development Indicators*, The World Bank, Washington D.C.
- World Bank/IMF (2001), *Developing Government Bond Markets*, The World Bank, Washington D.C.