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Financial Liberalization: The African Experience

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Abstract

Almost a decade after their initiation, financial reforms appear to have had little effect on the economies of Sub-Sahara Africa. Whether the blame is to fall on their initial design itself, or on the partial nature of their implementation, liberalization policies have not mobilized savings, deepened intermediation or raised investment. Yet, Africa needs properly functioning financial markets for a more efficient allocation of resources for growth and risk diversification. How can African governments "correct' their approach towards financial policy reform? A first step towards refining future policy choices requires an assessment of the short African experience with financial reform. How has progress in institutional and policy reform affected the financial depth of these economies? How have the gains in financial depth, if any, affected saving, consumption and investment? How does the African reform experience compare with that of other developing countries? How do the countries that during the period of reforms experienced substantial increases in aggregate saving compare to those that experienced substantial declines? These are some of the key issues we address in this paper.

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I. Introduction

By the late 1980's and early 1990's, against an unfavorable background of rapidly deteriorating economic and financial conditions, many countries in Sub-Sahara Africa undertook far reaching economic reforms. Within the framework of IMF and World Bank supported structural adjustment programs, these countries were to restructure their economies, in order to achieve private sector led growth, through a market based system.[1]

Financial liberalization was a significant component of these reforms. Countries were to grant their central banks more autonomy in conducting monetary policy, liberalize interest rates, avoid or abolish the direct allocation of credit, implement monetary policy through indirect instruments, restructure and privatize banks and, more generally, develop and foster the environment for the proper functioning of financial markets. [2] All in the hope of reversing decades of financial repression, and enabling their economies to grow faster.

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[1]See Wold Bank(1994)

[2]See Mehran et. all (1998)

Today, almost a decade after their initiation, financial reforms appear to have affected the economies in Sub-Sahara Africa very little. [3] Whether the blame is to fall on their initial design itself, or on the difficulties and partial nature of their implementation, liberalization policies have seemed insufficient in mobilizing savings, deepening intermediation through the financial sector, or raising investment. Yet, Africa needs properly functioning financial markets badly. Both for a more efficient allocation of resources, and, perhaps more importantly, for a more efficient and growth inducing risk diversification. How can African governments refine, correct and invigorate their approach towards financial policy reform? How can they enhance the effectiveness of their interventions and measures? The first step towards refining future policy choices requires an accurate assessment of the short African experience with financial reform. How has progress in institutional and policy reform, whatever its extent, affected the financial depth of the African economies? How have the gains in financial depth, if any, affected saving, consumption and investment? How does the African reform experience in these regards, so far, compare with that of other developing countries? Has the experience of the poorer countries in the region been comparable to that of the more advanced middle income countries? Has the level of indebtedness affected the experience with financial liberalization in Sub-Sahara Africa? How do the countries that during the period of reforms experienced substantial increases in aggregate saving compare to the countries that experienced substantial declines.

[3] See Nissanke and Aryeetey(1998) for a comprehensive analysis and a detailed investigation of financial reforms in Ghana, Malawi, Nigeria and Tanzania. Collier and Gunning(1999) make a similar assessment within their broader examination of African economic performance.

These questions inspire our study, which proceeds as follows. In section II, we briefly review the main analytical lenses through which we can understand the consequences of financial liberalization on consumption and saving. In section III, we review the relevant empirical evidence on the effects of financial liberalization in developing countries. In section IV, we describe our methodology and proceed to establish the aggregate profile of the reform process in Africa. First, we compare the experience of Sub-Saharan countries to that of other developing countries. Second, in order to understand the diversity of responses within the African group, we examine the association of the progress in financial development, the level of income, and the level of indebtedness with the picture that emerges after the reforms. Finally we take a closer look at those countries that did substantially better or worse, in terms of aggregate saving ratios during liberalization. The last section discusses some of the policy implications of our findings.

Section II. Analytical Background

Financial liberalization entails reform along a number of distinct but interrelated dimensions: liberalization of the interest rates, reduction in reserve requirements, partial or complete abandonment of directed credit, privatization of the banking and wider financial sector, establishing and fostering the development of securities markets. The above exercises in deregulation and building of market mechanisms are expected to be accompanied by an exercise in re-regulation: measures that enhance the competitiveness of the financial environment and guarantee the soundness of operations through increased prudential oversight. Finally, but no less importantly, the reforms adopted on the domestic front may be accompanied by measures that increase openness through the current and capital account transactions.

All these reform measures, individually and in combination, are expected to affect saving and investment through their effect on asset returns and their characteristics, and through their effect on the availability and allocation of credit. We discuss in turn the models that may shed some light on the anticipated effects of financial liberalization through each one of these prime channels of influence.

1. The interest rate channel

At least since McKinnon(1973) and Shaw(1973), the presumption is that growth in a financially repressed environment is hindered primarily by the low level of saving, not the lack of investment opportunities. Controlled interest rates reflect capital scarcity inaccurately, inducing inefficient mis-allocation of resources. They prohibit appropriate risk-taking by financial institutions, as they eliminate or reduce the scope for risk premia. Lifting controls on interest rates, allows them to increase to levels that stimulate higher saving. Assuming a strong responsiveness of saving to interest rates, higher interest rates are expected to reduce disintermediation. Within this optimistic framework, financial liberalization produces higher interest rates and higher savings that, in turn, induce higher and better quality investment, and, ultimately economic growth.

Of course, within the standard intertemporal model the effect of a change in interest rates on consumption and saving is ambiguous. Its income and substitution effects work in opposite directions. Higher returns on saving raises the stream of future income and wealth, raising current consumption. At the same time, postponing current consumption allows for higher future consumption, as returns on saving have gone up. In such a framework the intertemporal elasticity of substitution is crucial in determining the direction of change in savings that follows an increase in the interest rate.

Further, Ogaki, Ostry and Reinhart(1996) have shown that the intertemporal elasticity of substitution may itself depend on the level of permanent income or wealth of a country. If households must first achieve a subsistence consumption level, and then allow intertemporal considerations to guide their consumption choices for the residual of their budget left after subsistence needs are met. Hence, in countries where the representative household consumption is close to subsistence levels, consumption and saving will be insensitive to changes in the real rate of interest In wealthier countries, consumption would decline and saving increase following an increase in the real interest rate.[4]

2. The credit channel

Not all households have access to credit markets. Consequently, some households have no ability to smooth consumption over time, at least through intermediation afforded through the formal financial sector. Liquidity constrained households determine their consumption and saving on the basis of their current income. Relaxing the liquidity constraints on borrowers that used to be rationed out of the market, may produce a consumption boom and a decline in aggregate saving. The more binding the constraints and the greater the proportion of constrained consumers before the liberalization of the financial markets, the greater the consumption boom that may be expected after the reforms.

[4]For models that stress the role played by subsistence considerations in consumption and saving decisions, see Rebelo(1992) and Easterly(1994).

The idea that aggregate consumption and saving patterns respond not just to changes in permanent income, but also to changes in current income is associated with the work of Campbell and Mankiw (1989, 1993)[5]. Hence, a reduction in reserve requirements may make more resources available for lending, especially to households. Also, a redirection of credit may also favor consumers, loosening their liquidity constraints. At the microeconomic level, a privatized and more competitive banking sector may search the additional business of consumer lending.

Many of the past liberalization episodes unleashed a period of rapid growth in bank lending, asset price booms, and increases in consumption that often coincided with a decline in private saving rates. Many of those episodes also ended in a full-fledged financial crisis. Hence, no analysis of saving is complete without an assessment of the pervasiveness of liquidity constraints.

Section III Financial Liberalization in Developing Countries: A Review of the Empirical Literature

[5]Interestingly however, Campbell and Mankiw(1993) find no evidence that the fraction of constrained consumers declined during their sample period -up to 1988- in the industrial countries in their sample.

The empirical literature tends to reflect the theoretical ambiguities presented above.[6] Though it mostly confirms the separate importance of subsistence consumption and the pervasiveness of liquidity constraints for the understanding of saving patterns in developing countries, it remains inconclusive on their relative weight, and their ultimate combined effect on savings after financial reform..

There is little consensus, however, on the interaction between saving and the real rate of interest.[7] Some research detected only unimportant effects of changes in real interest rates on domestic saving in developing countries. For example, Giovannini (1985), who examines this issue for eighteen developing countries, concludes that for the majority of cases, the response of consumption growth to the real rate of interest is insignificantly different from zero. One should therefore expect negligible responses of aggregate saving to the real rate of interest.

In a model with a single consumption good, Ostry and Reinhart (1992) confirm these findings. However, when they use a disaggregated commodity structure to account substitution between traded and nontraded goods, they find higher and statistically significant estimates of the sensitivity of consumption to interest rates. On the other hand, Ogaki, Ostry and Reinhart(1996) establish that, where subsistence consumption considerations are important, the saving elasticity is not very sensitive

[6]Reinhart(1999) offers a useful collection of country case studies that complements the empirical literature briefly reviewed in this paper.

[7] See, for instance, Savastano (1994) and Schmidt-Hebbel, et al. (1992) for a review of this literature.

to the level of the real interest rate. In their results, if the country in question is at the lower end of the income spectrum, higher saving rates may not follow, even after large increases in real interest rates. The growth effects of higher interest rates would also tend to be small for the relatively poor countries.

Saving may be less responsive to changes in real interest rates in low-income than in middle-income countries because of the way the credit channel is working in less developed financial systems. Rossi (1988), for example, argues that in low-income developing countries that are characterized by pervasive liquidity constraints, consumption growth is more likely to follow income growth than changes in expected rates of return.[8] The empirical evidence confirms the pervasiveness of liquidity constraints in many developing countries; however, Haque and Montiel (1989) highlight that the severity of these constraints varies considerably across countries. More recently, Vaidyanathan (1993) showed that the incidence of liquidity constraints among households is inversely related to the degree of economic development which would imply--following Rossi (1988)--that saving in poorer countries should be less responsive to interest rate changes.[9]

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[8]Deaton (1989) has also emphasized the importance of liquidity constraints in explaining consumption/saving behavior in developing countries.

[9]Vaidyanathan (1993) also found that financial liberalization in developing countries reduced the severity of borrowing constraints. Although no direct tests were undertaken, the implication would be that financial liberalization, by reducing the fraction of households for which liquidity constraints are binding, should increase the interest-rate sensitivity of private saving. For a direct test of this hypothesis, see Bayoumi (1993) for the case of the United

Kingdom, and Ostry and Levy (1995) for the case of France.

This is not necessarily the case for industrial countries. The available, sporadic, econometric evaluation of the effects of liberalization on savings tends to favor the scenario of declining savings after financial deregulation. Bayoumi(1993) shows that in an overlapping generations framework deregulation increases the sensitivity of saving to wealth, current income, real interest rates and demographic factors. Following deregulation, savings decline, to recover only partially over time. The scenario is tested successfully with U.K. data. Though his results imply that much of the decline in savings was caused by the rise in wealth, financial deregulation also played an important role. Lehmussaari(1990) provides similar evidence for a sharp decline in saving and increased sensitivity of consumer responses to real wealth after deregulation in the Nordic countries, testing a model inspired by the life-cycle tradition. Jappeli and Pagano(1994) generalize the decline-in-savings result for the OECD countries for the period from 60 to 87. In their overlapping generations model, capital market imperfections, in the form of liquidity constraints on consumers, increase saving and strengthen the effect of growth on saving. Their empirical tests suggest that the deregulation of the 80's contributed to the decline in savings in the OECD countries.[10]

Bandiera et all.(2000) attempt thoroughly to assess the impact of financial liberalization in a sample of eight developing countries Chile, Indonesia, Korea, Malaysia, Mexico, Turkey, and from Africa, Ghana and Zimbabwe. Their study covers the period from 1970 to 1994. They construct an

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[10]In a somewhat different line of research that focuses on effects of financial deregulation through the housing market, Miles(1992) and Koskela et. all (1992) present additional evidence that reducing borrowing constraints affects household savings negatively. Miles for the US and UK, Koskela et all for Finland.

index of financial liberalization on the basis of eight different dimensions: interest rate deregulation, pro-competition measures, reserve requirements, directed credit, bank ownership, prudential regulation, securities markets deregulation and capital account liberalization. This index is used as an independent variable along with the log of per capital disposable income, the real interest rate, inflation and the government saving rate, to explain the variation in the private saving rate. In country-by-country estimations, they find no evidence of a positive effect of the real interest rate on saving. In most cases the relationship is negative, and significantly so in the cases of Ghana and Indonesia. The effects of the financial liberalization index are mixed: they are negative and significant in Korea and Mexico, but, positive and significant in Turkey and Ghana. The long run impact of liberalization is sizeable. Corresponding to the realized change in the index, the estimated model indicates a permanent decline in the saving rate of 12% and 6% in Korea and Mexico, and a rise of 13% and 6% in Turkey and Ghana. A likelihood ratio test within the context of a panel estimation rejects the hypothesis that the coefficients are equal across countries.

By estimating augmented Euler equations, a la Campbell and Mankiw, they find evidence for the presence of liquidity constraints: for the majority of countries, income is significant at conventional levels, and its coefficient is positive and significant when constrained to be equal across countries. Nevertheless, they were not able to pin down whether financial liberalization relaxes liquidity constraints. Assuming away econometric problems, they suggest that their Euler equation results may indicate, at best, that financial liberalization has had little impact on the amount of credit available to consumers through the formal financial sector. In summary, they identify no strong and reliable real interest rate effect on saving, while the aggregate liberalization index has a mixed record.

Finally, before we turn to our empirical investigation, a result that emerges from this literature which is of some importanceBthe household and the business sector may not be reacting similarly to the effects of financial reforms. Honohan and Atiyas(1993) using a simple model of intersectoral financial interactions, and with data mainly form the early 1980's for developing countries, find empirical support for a Abusiness spending crowding-out≅ scenario: a change in the flow of funds from the foreign and government sectors causes, at most, a small response in the flow from the household sector by comparison to the response of the business sector. Exogenous swings in the availability of foreign finance, or in the government=s surplus are absorbed, almost entirely, by changes in the rate of investment by the business sector. The household sector does not come forward, to any large extent, with additional financial saving to compensate for the shortfall in foreign financing or government borrowing.

Section IV. Financial Liberalization in Africa: Some Stylized Evidence

Progress with financial reform in Sub-Saharan African countries has been difficult. Some countries advanced faster and with bolder steps, in an effort to bring about radical changes in their financial sector and their economies. Other countries made little progress. Within the same country, implementation of reforms has been more successful in some areas than in others. According to a recent survey of financial sector developments in Sub-Saharan Africa by the IMF, (Mehran et all. 1998), countries made more progress in the area of domestic operations, by establishing market based monetary policy instruments and procedures, than in any other area of reform. By 1997, in almost all countries, interest rate and credit policies had been liberalized, and the cental bank was increasingly using some form of open market operations. Still, activity in primary markets was mostly dedicated in trading of government securities. Interbank markets were limited and secondary markets, if they existed, were at their initial stages.

Most countries made substantial progress in liberalizing the current account and in developing foreign currency interbank markets. Much less progress was achieved in liberalizing capital account transactions. According to the IMF survey, most countries were still following restrictive policies regarding the capital account transactions, maintaining controls over capital receipts and outflows. Also, controls over portfolio investment, seemed to discourage private capital flows, in combination with the current limitations and inadequacies of the domestic capital markets.[11]

[11]Collier and Patillo(2000) provide a thorough investigation of the issues concerning investment in Africa.

In what follows, we are interested in establishing the emerging patterns of response of the Sub-Saharan economies to these attempts at financial reform, at the aggregate level. We look at a sample of 29 of the 48 Sub-Saharan countries for the period from 1970 to 1998.[12] For each country we split the sample in a ABEFORE≅ and AAFTER≅ period. The ABEFORE≅ period is one of financial repression, (interest rate controls, directed credit, etc) of diverse forms and intensity. The AAFTER≅, is the period after the authorities in the country undertook commitments and adopted measures to move towards a more liberal financial system. In other words, AAFTER≅, for the purposes of this study, is not synonymous to Aafter liberalization≅ but with Aafter entering a process of financial policy reforms towards liberalization≅.

Appendix Table 1 reports the dates/years that were chosen as the Aturning points≅ for each country. The same table reports the corresponding dates for the other developing countries that serve as a comparison group for our study. In the table we report both the domestic and the external liberalization Aturning points≅. Our study, however, focuses on the before/after split of the domestic liberalization. The corresponding external liberalization dating offers few observations for any statistically meaningful testing. Interest rate deregulation was the focal point in deciding the date of the Aturning point≅ for domestic liberalization, but not the only consideration, given the many components of liberalization. The dating was based on information found in Mehran et all(1998), Gelbard and Pereira Leite(1999), numerous IMF Staff country reports for the countries in the sample,

[12]The Sub-Saharan countries that are not included in the sample, were excluded for lack of sufficiently long series, or, for lack of information concerning their financial liberalization policies and/or reforms.

and sources from national monetary authorities in the respective countries.

For each of the groups that we identify later in the study, we compare the average behavior of a number of aggregate indicators in the BEFORE period to its average behavior in the AFTER period. The indicators, besides availability and sufficient length of the series, were chosen on the basis of the theoretical and empirical clarifications of the previous part of this paper. Our concern is with establishing, to the extent possible: First, the impact of the process of financial liberalization, understood as institutional and policy reform on the real interest rate, the spread between deposit and lending rate, and the financial depth of the economy, as captured by the monetary aggregates M1/M2, M2/GDP, M3/GDP, (Total credit to the private sector)/GDP, (Domestic Credit provided by the Banking Sector)/GDP. Secondly, the impact of interest rate increases and financial deepening on saving consumption and investment, as measured by the ratios Gross Domestic Saving/GDP, Gross National Saving/GDP, Gross Domestic Investment/GDP, Private Consumption/GDP Government Consumption/GDP and Total Consumption/GDP..

In order to detect the presence, or absence, of other influences, -intervening variables-, we include in our exercises a number of variables-indicators that have been identified in the literature as important determinants of saving. Growth rates, of both GDP and GNP, Per Capita Income, both Atlas Method and constant 95US$ series, Inflation, both CPI and GDP deflator. Another group of variables-indicators clarifies the changes in the external position, and the potential for influences from foreign flows: Current Account Balance/GDP, Gross Capital Flows/GDP, Foreign Direct Investment/GDP, Trade/GDP, (for lack of a proper Terms of Trade series), Aid/GNP, Total External Debt/GNP. The Data Appendix offers the complete list, the definitions, and sources of the series used in this study.

In a certain sense, our approach allows us to Aapproximate≅ a reduced form estimation of an aggregate savings equation through a comparative static lense.[13] Whatever the groups of comparison are, we contrast average behavior DURING the process of liberalization, for most countries the 1990's, to the average historical behavior of the roughly two decades of financial repression that preceded the reforms.

The comparisons involve first, Sub-Saharan Africa, as a group, versus other developing countries. After establishing the post-reform profile for the whole African group, we delve into the diversity of experiences within it. We compare the responses of the countries that made more progress in financial development to the countries that made little progress in that respect. We then contrast the behavior of the low income countries to that of the middle income countries, as well as the behavior of the severely indebted countries to those that are moderately or less indebted. Finally we contrast the group of countries that improved significantly their aggregate saving ratios to a group of countries that saw their saving ratios decline significantly, during the liberalization period.

1. A Comparison of the Sub-Saharan African Experience to Other Developing Countries

Tables 1 and 2 report the means and standard deviations for the relevant indicators for the comparison groups. Tables 1 and 2 also report the results of two kinds of hypothesis tests: A t-test for the equality of means Abefore≅ and Aafter≅ within each group; an F-test on the equality of standard deviations Abefore≅ and Aafter≅ within each group.

The main results that emerge are: While the real lending rate increased in both groups, the

[13] See Loayza et all(2000) for one of the most recent reduced form studies of savings determinants in panels, that also surveys previous literature. and Hadjimichael et all (1995, 1996) for cross country estimation of savings and investment equations.

deposit to lending rate ratios remained at roughly pre-liberalization levels. The spreads are higher in Africa. The monetary and credit aggregates go in the same direction for both groups. However, the other developing countries start from a deeper position and make more significant progress than African countries do. Moreover, while the monetary aggregates show some deepening for Africa, the credit aggregate remain statistically indistinguishable from pre-liberalization levels.

As regards changes in aggregate savings ratios, there appear to be none. When we look at the averages for the groups, neither domestic nor national saving ratios are statistically different in the post-liberalization times from their respective pre-liberalization levels. Saving ratios, of course, remain much higher in the other developing countries. The levels of domestic investment are somewhat closer. However, Africa records a statistically significant decline in its gross domestic investment ratio. Total consumption stagnates (=no statistically significant difference in the level of the ratio before and after) in both groups, with Africa at a much higher level. Interestingly, there is a reallocation of consumption between the private and the public sector in Africa. The private ratio increases while the government ratio declines. In the other developing countries private consumption stagnates, and government consumption declines slightly.

While growth stagnates in both groups, at higher levels for the other developing countries, the gap between them in average per capita income widens dramatically. While both groups experience declines in average current account deficit ratios, which are lower for the other developing countries both before and after financial reform, both gross private capital flows and foreign direct investment decline in Africa and rise in the other developing countries. Crucially, the average gap between the two groups with respect to aid dependency and debt burden widens.

At least on average, it appears that the other developing countries not only have a longer experience with financial reform, but they also have a Adeeper≅ experience. Besides the dramatic increase of the real interest rate after liberalization and the indiscernible effect of Aliberalization≅ on saving , the two groups have little in common. Africa as a group experiences growth rate and income stagnation (factors that do not enhance aggregate saving) and high and volatile rates of inflation. Inflation in industrial country settings is understood as a signal of uncertainty that triggers the precautionary motive for savings. In Africa, it is more likely to be treated as a signal of uncertainty that induces consumers to stay away of the intermediation circuit (correlation coefficients and panel estimates show inflation to be negatively correlated with saving in Africa instead of the positive correlation in industrial countries).

Financial deepening has not followed financial liberalization in Africa. The monetary aggregates made some progress, but the credit aggregates stagnated. In fact there has been a credit crunch in many countries in Africa in the last decade. (Nissanke and Aryeetey(1998), Aryeetey et all (1996)). Foreign capital flows decline in Africa in this period with a negative impact on investment, while aid dependency and debt burdens skyrocket. Aid eases liquidity constraints for those that receive it, though its impact depends ultimately on the policy setting through which it is filtered. Debt is likely to have an adverse effect on saving, either as a signal of macroeconomic uncertainty and in-credibility of reforms, or through the anticipation of future tax liabilities (on this latter point see Hadjimichael et all (1996)). In summary, financial reforms were undertaken in Africa under relatively more adverse circumstances, and progress in financial deepening is hard to detect at all. Mobilization in savings or increases in investment have not been observed so far, at the aggregate level. Negative influences on saving (and investment) persist. [14]

[14] A caveat is in order, however, this group comparison and those that follow does not

2. A comparison among the fast and slow reformers

allow us to detect movements at the informal sector of the economy. In the case of Africa, and for the study of credit and saving this is not a trivial problem, as shown in Nissanke and Aryeetey(1998).

Appendix Tables 3 and 4 report the means and standard deviations for the relevant indicators, and the results of the hypothesis tests. Table 3 presents the results on the equality of means Abefore≅ and Aafter≅ within each group with an asterisk in the after columns, and a test of equality of means Aafter≅ across groups in the last column of the table with a double asterisk. The classification of the African countries in the sample according to their level of progress in financial development, -understood here as pertaining to institution building and policy stance, not as financial deepening on the basis of monetary and credit indicators- is based on Mehran et all(1998).[15]

Appendix Table 2 reports the classification of the countries in the sample according to this criterion. Splitting the sample into two groups, only, obscures somewhat the within group diversity. Nevertheless it allows a sufficiently clear first approximation to the issues involved with the assessment of the consequences of financial reforms. The classification is based on the profile of the financial setting and policy environment of these countries at the **end** of the period, that is by 1997. The less advanced group is characterized on the domestic front by: some progress in developing indirect instruments of monetary policy, at least some limited activity in secondary markets. Operating stock markets, liberalized (or partially liberalized) financial markets in general; market-determined interest rates. On the external front they are characterized by restrictiveness in terms of both current and capital account convertibility. The more advanced group has made substantially more progress than the less advanced group along the dimensions referred to above in the domestic sector and they

[15]Similar results can be obtained using an alternative IMF survey, Gelbard and Pereira Leite(1999) that reach similar conclusions regarding the degree of financial development of the African countries.

have achieved, at least, some partial liberalization on the current account, (if not the capital account).

Our results show that countries with less advanced financial sectors experienced the surge in real lending rates, as the more advanced countries did, but also, unlike this second group, they experienced, on average, an increase in spreads between deposit and lending ratios. All monetary and credit aggregates indicate that the more advanced countries recorded substantial gains in financial depth too. The less advanced, made little progress in monetary expansion, and credit, either as total credit to the private sector or domestic credit provided by the banking sector declined. Inflation was higher on average and more volatile in the advanced group. Domestic saving ratios stagnated for the two groups; it seems at slightly higher levels for the advanced group, but the difference between the two after reforms is not significant. While national savings also stagnated for the less advanced group, it increased substantially and significantly for the more advanced countries. Domestic investment declined for the two groups, significantly for the more advanced.

The substitution between private and government consumption is more pronounced in the advanced group. Nevertheless, this group has a lower private consumption ratio and a higher government consumption ratio after liberalization than the less advanced group. Total consumption remains at statistically similar levels in both groups, even though the more advanced countries register a nominal increase. Growth rates stagnated for both groups, while the income gap between them increased substantially. The current account balance ratio improved greatly for the advanced group, much less so for the less advanced countries. Interestingly the gross private capital flows ratio remains higher in the less advanced group, as the advanced countries record a significant decline. On the other hand, foreign direct investment remains higher in the advanced group. Also, this group is significantly more open in terms of trade. Aid dependency ratios register significant increases for both groups, and reach statistically similar levels during the liberalization years in the sample. The two groups differ however, along the total external debt dimension. The less advanced are also more heavily indebted by the end of the period, though they started at a more favorable position debt-wise.

The most telling result of this comparison is that the actual setting and policy environment matters for the consequences of liberalization. The countries that have made more progress in reforms, record also some degree of financial deepening. In fact their record resembles that of the other developing countries.

In the less advanced countries pre-reform patterns persist in saving and investment. The subsistence consumption argument would indicate for this group little effect or no effect from the increase in the real interest rate on consumption and saving. Credit declines rather than increase. In this context, if liquidity constraints remained at pre-liberalization levels for the government or the private sector, the offset may have come from abroad: aid and foreign borrowing. A timid version of the Aliquidity- contraint scenario≅ of financial liberalization, which results in a decline in saving and an increase in private consumption probably applies to the more advanced group.

3. Comparison between the low- and middle-income countries

The classification of the countries in the sample across income levels is based on the World Bank=s classification for the year 2000 (World Development Indicators 2000); these are reported in. Appendix 2. For our study, we grouped the low income countries on one hand, and the two categories of middle income -lower and upper- on the other. Tables 5 and 6 report the usual statistics for the relevant indicators for the comparison groups

The low income group differs from the middle income group, in almost every respect, that is according to almost every aggregate indicator used in this study. By the end of the period under consideration they have few things in common besides that the real lending rate increased substantially in both. The spreads between deposit and lending rate remain higher in the low income countries. While the middle income countries made substantial and significant advances in terms of financial depth, both in terms of the monetary and credit aggregates, the low income countries stagnated in terms of M2 and M3 ratios and receded substantially and significantly in terms of the credit aggregates. In one word, the gap in financial depth between the two groups widened quite spectacularly by the end of the period under consideration.

Inflation has been substantially higher and more volatile in the low income group during this period of transition to a more liberal financial regime. The middle income group had experienced higher growth rates before liberalization. After liberalization average growth rates declined in this group too, so that by the end of the period the two groups recorded statistically similar rates. Despite this negative trend, the income gap further widened between the two groups after liberalization. Given the above, it follows naturally that the middle income group has substantially higher levels of saving and investment than the low income group(both before and after the reforms). It is important to notice however, that while the after liberalization decline in domestic saving and investment for the low income group are small and statistically insignificant, the decline of national saving and domestic investment are important and significant for the middle income countries.

Among the low income countries we observe the substitution between private and government consumption that we noticed elsewhere too: significant decline in government consumption and significant increase in private consumption. In the middle income group, private consumption remains at pre-liberalization levels, while government consumption rises. The consequent rise in total consumption is not statistically significant. Still, the total consumption ratio remains much lower in the middle income group. Both groups register declines in the current account deficit ratios and the gross private capital flows ratios, with the declines being greater and significant for the middle income countries. Foreign direct investment rises but not significantly in the low income group but declines substantially in the middle income group. Exposure to trade flows declines for the middle income group; despite the decline, middle income countries remain more open to trade than low income countries. At the same time, they become less dependent on aid, and their debt burden rises but not significantly . For low income countries aid dependency and debt burden climb to precipitous levels.

In other words, the comparison of the experience of the low income group to middle income group offers a similar picture than the one afforded by the comparison across financial development levels. The low income group is also the group that has made less progress in financial reforms. The contrast between groups however is much sharper between income level groups than financial development level groups. The middle income country group pre- and post- reform profile strongly resembles that of the other developing countries, the low income group profile sharply contrasts with it.

The high association between income levels and financial development levels makes it difficult to disentangle the individual influences that shaped the post reform profile of poor and middle income countries. Reforms have advanced little or failed in the low income countries. The areas of little progress probably matter a lot on whether financial reform has any impact on the economy.

At the same time, however, predictions on the basis of subsistence consumption considerations or liquidity constraints would be equally compatible with the emerging saving patterns.

4. Comparison between severely indebted and moderately or less indebted countries

The classification of countries by debt level is based on the corresponding World Bank classification for 2000. Appendix Table 2 reports this and other classifications we use. We group the severely indebted countries on the one hand, and the moderately and less indebted on the other. The tables with these results are not reported here in the interest of space but the picture that emerges is similar to that of the other cuts in our sample. Specifically, because of the significant overlap between low income and severely indebted countries, the results of this comparison are to some extent similar to those obtained for the comparison between low and middle income countries.

The gap in domestic and national savings between the two groups is smaller than the respective gap between low and middle income groups. Domestic investment is comparable across groups.

The severely indebted group registered the significant decline in government consumption with a significant increase in private consumption that we observed elsewhere, while maintaining similar levels of total consumption before and after liberalization. For moderately indebted group, the increase in private consumption and the decline in government consumption are not statistically significant, and total consumption remained at pre-liberalization levels.

Though the income gap favors the moderately indebted countries, its magnitude is smaller between severely and moderately indebted countries than between low and middle income countries. Also, the severely indebted countries have a higher aid dependency and a total debt ratio than the low income countries, while the moderately indebted countries have a higher aid dependency and total debt ratio than the middle income countries. Foreign direct investment ratios and urbanization rates are similar across debt level groups, while differences in trade openness and age dependency ratios are less pronounced between debt level groups than between income level groups. Moderately indebted countries registered an improvement in terms of financial depth, while severely indebted countries tended to register a worsening: their monetary aggregates remained stagnant while their credit aggregates declined significantly.

Severely indebted countries registered in the post liberalization times inflation rates that were almost double those of the moderately indebted, and with standard deviations almost triple those of the moderately indebted. In so doing however, the two groups did not deviate significantly from their pre-liberalization record. Basically, the tale of two Africas does not change significantly -qualitatively- when we look at the contrast through the lense of the debt levels.

V. Conclusions

Financial reform in Sub-Sahara Africa started later and under more unfavorable circumstances than in other developing countries. Some progress has been made in the front of institution building and policy stance as reported by the assessments of international financial institutions. This progress however was not sufficient to transform the preexisting patterns of saving and investment in Africa. This picture of course is shaped by the overwhelming presence in the sample of the low income, severely indebted countries, that are the countries that also made less progress in financial reform. In a certain sense, this is the tale of two Africas. The small group of middle income, less indebted countries, that made more progress in financial developments, already enjoys some of the Abenefits≅ of financial liberalization, namely declining saving and investment. However, these developments can only partly be attributed to the higher interest rates and the monetary and credit expansion that followed the financial liberalization.

Taking the results of the preceding section at face value, it appears that financial liberalization delivers: higher real interest rates (possibly reflecting the allocation of capital toward more productive, higher return projects); lower investment, but not lower growth (again, possibly owing to a shift to more productive uses of financial resources). Liberalization appears to deliver financial deepening, as measured by the credit and monetary aggregates--but, again, low income countries do not appear to show as clear signs of such a benefit. Financial deepening has not followed financial liberalization in Africa, as it has in other regions. The monetary aggregates made some progress, but the credit aggregates stagnated. In fact there has been a credit crunch in many countries in Africa in the last decade. One can speculate that, unlike in many other liberalization episodes in other regions, liberalization in Africa has not been accompanied by the kind of fiscal discipline that allows credit to flow to the private sector. Indeed, the evidence presented in the previous section is not incompatible with a Acrowding-out≅ environment.

As regards saving, anything goes. In some regions saving increased following financial liberalization; but in the majority of cases saving declined following the reforms. Thus our findings, which are in line with several earlier studies, do not settle the issue of the impact of liberalization on saving. It would appear, though, that those that stress the relaxation of liquidity constraints effects are on a more solid footing.

What financial liberalization appeared to deliver many developing countries is greater access to international capital markets, as it is followed, more often than not by significantly higher levels of foreign direct investment and higher gross capital flowsByet this has not occurred in the African case, where capital account liberalization has been more sluggish.

As noted, financial liberalization does not appear to deliver unambiguous gainsBat least from the standpoint of growth. However, the evidence presented in Levine (1992) suggests that to the extent that financial deepening does take root, it has positive and significant consequences for long term growth. Yet, our results suggest that for Africa as a whole, but for the low income countries in particular, financial deepening is not guaranteed following liberalization.

Why then liberalize? The answer to this question depends importantly on learning from history. Financial liberalization may fall short of delivering the rosy outcome depicted in the earlier literatureBbut given the track record of financial repressionBit still appears to dominate the alternative. From the numerous financial crises of the 1990s, we know that for emerging markets access to international capital markets is precarious in the best of times and nonexistent in the worst. International capital flows are volatile and in some regions, notably Asia, appear to become even more so following liberalization. Yet, for countries that need to import capital from abroad, the absence of liberalization usually leaves them shut out of international capital markets even in the best of times. It could be said that liberalization is like running in a race, you may run and not winBbut you can=t win if you don=t run.

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DATA APPENDIX

Source: World Bank, World Development Indicators 2000. Period covered in study: annual observations for 1970-1998.

Series: Gross domestic savings (% of GDP) (NY.GDS.TOTL.ZS)
Gross domestic savings are calculated as the difference between GDP and total consumption. For more information, see WDI table 4.9.

Series: Gross national savings, including NCTR (% of GDP) (NY.GNS.ICTR.ZS)
Gross national savings including net current transfers is equal to gross domestic savings plus net income and net current transfers from abroad.

Series: Gross domestic investment (% of GDP) (NE.GDI.TOTL.ZS)
Gross domestic investment consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including commercial and industrial buildings, offices, schools, hospitals, and private residential dwellings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales. For more information, see WDI tables 1.4 and 4.9.

Series: Private consumption, etc. (% of GDP) (NE.CON.PETC.ZS)
Private consumption is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers) purchased or received as income in kind by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses. In practice, private consumption may include any statistical discrepancy in the use of resources relative to the supply of resources. For more information, see WDI table 4.9.

Series: General government consumption (% of GDP) (NE.CON.GOVT.ZS)
General government consumption includes all current spending for purchases of goods and services (including wages and salaries). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. For more information, see WDI table 4.9.

Series: Total consumption, etc. (% of GDP) (NE.CON.TETC.ZS)
Total consumption is the sum of private and general government consumption. This estimate includes any statistical discrepancy in the use of resources. For more information, see WDI table 4.9.

Series: General government consumption (annual % growth) (NE.CON.GOVT.KD.ZG)
Annual percentage growth of general government consumption based on constant local currency. Aggregates are based on constant 1995 U.S. dollars. General government consumption includes all current spending for purchases of goods and services (including wages and salaries). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. For more information, see WDI table 4.10.

Series: GDP growth (annual %) (NY.GDP.MKTP.KD.ZG)
Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 1995 U.S. dollars. GDP measures the total output of goods and services for final use occurring within the domestic territory of a given country, regardless of the allocation to domestic and foreign claims. Gross domestic product at purchaser prices is the sum of gross value added by all resident producers in the economy plus any taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. The residency of an institution is determined on the basis of economic interest in the territory for more than a year. For more information, see WDI tables 4.1 and 4.2.

Series: GNP growth (annual %) (NY.GNP.MKTP.KD.ZG)

Annual growth rate of GNP at market prices based on constant local currency. Aggregates are based on constant 1995 U.S. dollars. GNP is the sum of gross value added by all resident producers plus any taxes (less subsidies) that are not included in the valuation of output plus net receipts of primary income (employee compensation and property income) from nonresident sources. For more information, see WDI table 1.1.

Series: Real interest rate (%) (FR.INR.RINR)
Real interest rate is the lending rate adjusted for inflation as measured by the GDP deflator. For more information see WDI table 5.6

The ratio of the nominal deposit to the nominal lending rate is constructed using the following two series:
Series: Deposit interest rate (%) (FR.INR.DPST)
Deposit interest rate is the rate paid by commercial or similar banks for demand, time, or savings deposits. For more information, see WDI table 5.6.

Series: Lending interest rate (%) (FR.INR.LEND)
Lending interest rate is the rate charged by banks on loans to prime customers. For more information, see WDI table 5.6.

The ratio of M1 to M2 is constructed using the following two series:
Series: Money (current LCU) (FM.LBL.MONY.CN)
Money is the sum of currency outside banks and demand deposits other than those of central government. This series, frequently referred to as M1 is a narrower definition of money than M2. Data are in current local currency. For more information, see WDI table 4.16.

Series: Money and quasi money (M2) (current LCU) (FM.LBL.MQMY.CN)
Money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of money supply is frequently called M2; it corresponds to lines 34 and 35 in the International Monetary Fund's (IMF) International Financial Statistics (IFS). Data are in current local currency. For more information, see WDI table 4.16.

Series: Money and quasi money (M2) as % of GDP (FM.LBL.MQMY.GD.ZS)
Money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of money supply is frequently called M2; it corresponds to lines 34 and 35 in the International Monetary Fund's (IMF) International Financial Statistics (IFS). For more information, see WDI tables 1.5 and 4.16.

Series: Liquid liabilities (M3) as % of GDP (FS.LBL.LIQU.GD.ZS)
Liquid liabilities are also known as broad money, or M3. They are the sum of currency and deposits in the central bank (M0), plus transferable deposits and electronic currency (M1), plus time and savings deposits, foreign currency transferable deposits, certificates of deposit, and securities repurchase agreements (M2), plus travelers checks, foreign currency time deposits, commercial paper, and shares of mutual funds or market funds held by residents. For more information, see WDI table 5.4.

Series: Credit to private sector (% of GDP) (FS.AST.PRVT.GD.ZS)
Credit to private sector refers to financial resources provided to the private sector-such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable-that establish a claim for repayment. For some countries these claims include credit to public enterprises. For more information, see WDI table 5.1.

Series: Domestic credit provided by banking sector (% of GDP) (FS.AST.DOMS.GD.ZS)
Domestic credit provided by the banking sector includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net. The banking sector includes monetary authorities and deposit money banks, as well as other banking institutions where data are available (including institutions that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other banking institutions are savings and mortgage loan institutions and building and loan associations. For more information, see WDI table 5.4.

Series: Bank liquid reserves to bank assets ratio (FD.RES.LIQU.AS.ZS)
Ratio of bank liquid reserves to bank assets is the ratio of domestic currency holdings and deposits with the monetary authorities to claims on other governments, nonfinancial public enterprises, the private sector, and other banking institutions. For more information, see WDI table 5.4.

Series: Inflation, GDP deflator (annual %) (NY.GDP.DEFL.KD.ZG)
Inflation as measured by the annual growth rate of the GDP implicit deflator. GDP implicit deflator measures the average annual rate of price change in the economy as a whole for the periods shown. For more information, see WDI table 4.16.

Series: Inflation, consumer prices (annual %) (FP.CPI.TOTL.ZG)
Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a fixed basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used. For more information, see WDI table 4.16.

Series: Current account balance (% of GDP) (BN.CAB.XOKA.GD.ZS)
Current account balance is the sum of net exports of goods, services, net income, and net current transfers. For more information, see WDI table 4.17.

Series: Gross private capital flows (% of GDP, PPP) (BG.KAC.FNEI.GD.PP.ZS)
Gross private capital flows are the sum of the absolute values of direct, portfolio, and other investment inflows and outflows recorded in the balance of payments financial account, excluding changes in the assets and liabilities of monetary authorities and general government. The indicator is calculated as a ratio to GDP converted to international dollars using purchasing power parities (see WDI tables 4.10 and 4.11 for a discussion of PPP). For more information, see WDI table 6.1.

Series: Foreign direct investment, net inflows (% of GDP) (BX.KLT.DINV.DT.GD.ZS)
Foreign direct investment is net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. For more information, see WDI table 5.1.

Series: Trade (% of GDP) (NE.TRD.GNFS.ZS)
Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product. For more information, see WDI table 4.9.

Series: Aid (% of GNP) (DT.ODA.ALLD.GN.ZS)
Official development assistance and net official aid record the actual international transfer by the donor of financial resources or of goods or services valued at the cost to the donor, less any repayments of loan principal during the same period. Aid dependency ratios are computed using values in U.S. dollars converted at official exchange rates. For more information, see WDI table 6.10.

The series Total External Debt as a % of GNP is constructed using the following two series:
Series: External debt, total (DOD, current US$) (DT.DOD.DECT.CD)
Total external debt is debt owed to nonresidents repayable in foreign currency, goods, or services. Total external debt is the sum of public, publicly guaranteed, and private nonguaranteed long-term debt, use of IMF credit, and short-term debt. Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt. Data are in current U.S. dollars. For more information, see WDI table 4.18.

Series: GNP at market prices (current US$) (NY.GNP.MKTP.CD)
GNP is the sum of gross value added by all resident producers plus any taxes (less subsidies) that are not included in the valuation of output plus net receipts of primary income (employee compensation and property income) from nonresident sources. Data are in current U.S. dollars.

APPENDIX TABLE 1.1 :DATES INDICATING THE SWITCH TOWARDS A MORE LIBERAL REGIME					
SUB-SAHARAN AFRICA			OTHER DEVELOPING COUNTRIES		
	DOMESTIC	EXTERNAL		DOMESTIC	EXTERNAL
Benin	1989	1996	**India**	1992	1991
Botswana	1991	1995	**Indonesia**	1983	1985
Burkina Faso	1989	1996	**Malaysia**	1978-85,1987	1987
Cameroon	1990	1996	**Pakistan**	1991	1994
Central Afr. Rep.	1990	1996	**Philippines**	1981	1992
Chad	1990	1996	**South Korea**	1991	1991
Congo, Rep.	1990	1996	**Sri Lanka**	1980	1978
Cote d=Ivoire	1989	1996	**Thailand**	1989	1991
Gabon	1990	1996			
Gambia	1986	1988	**Argentina**	77-82,87,91	77-82,91
Ghana	1988	1994	**Bolivia**	1985	1985
Guinea-Bissau	1989	1996	**Brazil**	76-79,89	1984
Kenya	1991	1993	**Chile**	74-81,84	1979
Madagascar	1994	1996	**Colombia**	1980	1991
Malawi	1988	1995	**Mexico**	1988	1985
Mali	1989	1996	**Peru**	1991	1990
Mauritania	1990	1995	**Uruguay**	1976	1974
Mauritius	1993	1993	**Venezuela**	91-94,96	89-94,96
Mozambique	1994	1994			
Namibia	1991	1995	**Egypt**	1991	1991
Niger	1989	1996	**Israel**	1987	77-79,87
Nigeria	1987-91,1995	1995	**Morocco**	1989	1993
Senegal	1989	1996	**Turkey**	80-82,87	1989
South Africa	1980	1983			
Tanzania	1991	1996			
Togo	1989	1996			
Uganda	1988	1990			
Zambia	1992	1994			
Zimbabwe	1991	1994			

APPENDIX TABLE 2: CLASSIFICATION OF SUB-SAHARAN AFRICAN COUNTRIES

Countries	PROGRESS IN FINANCIAL DEVELOPMENT	INCOME LEVEL/ WORLD BANK CLASSIFICATION	DEBT LEVEL/ WORLD BANK CLASSIFICATION
Benin	LESS ADVANCED	LOW	MODERATELY
Botswana	MORE ADVANCED	UPPER MIDDLE	LESS
Burkina Faso	LESS ADVANCED	LOW	SEVERELY
Cameroon	LESS ADVANCED	LOW	SEVERELY
Central Afr. Rep.	LESS ADVANCED	LOW	SEVERELY
Chad	LESS ADVANCED	LOW	MODERATELY
Congo, Rep.	LESS ADVANCED	LOW	SEVERELY
Cote d=Ivoire	LESS ADVANCED	LOW	SEVERELY
Gabon	LESS ADVANCED	UPPER MIDDLE	SEVERELY
Gambia	LESS ADVANCED	LOW	MODERATELY
Ghana	MORE ADVANCED	LOW	MODERATELY
Guinea-Bissau	LESS ADVANCED	LOW	SEVERELY
Kenya	MORE ADVANCED	LOW	MODERATELY
Madagascar	LESS ADVANCED	LOW	SEVERELY
Malawi	MORE ADVANCED	LOW	SEVERELY
Mali	LESS ADVANCED	LOW	SEVERELY
Mauritania	LESS ADVANCED	LOW	SEVERELY
Mauritius	MORE ADVANCED	UPPER MIDDLE	MODERATELY
Mozambique	LESS ADVANCED	LOW	SEVERELY
Namibia	MORE ADVANCED	LOWER MIDDLE	LESS
Niger	LESS ADVANCED	LOW	SEVERELY
Nigeria	LESS ADVANCED	LOW	SEVERELY
Senegal	LESS ADVANCED	LOW	MODERATELY
South Africa	MORE ADVANCED	LOWER MIDDLE	LESS
Tanzania	LESS ADVANCED	LOW	SEVERELY
Togo	LESS ADVANCED	LOW	MODERATELY
Uganda	MORE ADVANCED	LOW	SEVERELY
Zambia	MORE ADVANCED	LOW	SEVERELY
Zimbabwe	LESS ADVANCED	LOW	MODERATELY

Table 1. A Comparison of the Sub-Saharan African Experience to Other Developing Countries: Means

VARIABLES	SUB-SAHARAN AFRICAN COUNTRIES			OTHER DEVELOPING COUNTRIES		
	ALL	BEFORE	AFTER	ALL	BEFORE	AFTER
SAVINGS -INVESTMENT-CONSUMPTION						
GROSS DOMESTIC SAVINGS %GDP	12.44	12.72	11.87	20.13	19.73	20.61
GROSS NATIONAL SAVINGS %GDP	13.13	12.60	13.93	19.68	19.48	19.84
GROSS DOM. INVESTMENT %GDP	19.37	19.85	18.44*	23.17	23.12	23.22
PRIVATE CONSUMPTION % GDP	71.77	70.71	73.77*	67.15	67.08	67.22
GEN. GOVERN. CONSUM.% GDP	15.64	16.34	14.33*	12.75	13.24	12.19*
TOTAL CONSUMPTION %GDP	87.56	87.28	88.13	79.87	80.27	79.39
GOV. CONS. ANNUAL % GROWTH	4.18	5.56	1.63*	4.68	5.80	3.43*
GROWTH						
GDP ANNUAL GROWTH RATE	3.41	3.62	3.03	4.52	4.71	4.31
GNP ANNUAL % GROWTH	3.44	3.59	3.14	4.58	4.75	4.38
MONEY AND FINANCE						
REAL LENDING RATE	4.48	1.72	8.60*	7.98	5.19	9.63*
NOM. DEPOSIT/LENDING INT.RT	0.56	0.56	0.55	0.75	0.76	0.75
M1/M2	67.80	71.58	60.61*	45.13	55.58	32.96*
M2/GDP	22.13	21.39	23.48*	32.22	28.72	36.28*
LIQUID LIABILITIES M3 % GDP	23.83	23.19	25.00*	36.54	32.70	40.98*
TOT. CREDIT/PRIV.SECTOR %GDP	19.72	19.29	20.53	33.11	27.34	39.81*
DOM.CREDIT BY BANK.SECT. %GDP	28.10	28.37	27.59	49.51	45.67	54.00*
BANK LIQUID RESERVES TO ASSETS	16.83	17.56	15.44	17.01	20.24	13.23*
INFLATION - GDP DEF.ANNUAL %	14.67	13.92	16.10	101.12	77.97	127.60
INFLATION - CPI ANNUAL %	16.39	15.97	17.01	97.48	72.53	126.41
OPENNESS AND EXTERNAL INFLUENCES						
CURR. ACC. BALANCE %GDP	-6.49	-7.45	-5.07*	-3.07	-3.17	-2.99
GROSS PRIV.CAP. FLOWS %GDP	4.82	5.30	4.07*	3.95	3.22	4.47*
FOREIGN DIRECT INVESTMENT %GDP	0.87	0.92	0.75	1.08	0.55	1.67*
TRADE % OF GDP	65.23	64.74	66.17	47.93	42.91	53.75*
AID % GNP	11.70	9.82	15.42*	1.83	1.92	1.74
TOTAL EXTERNAL DEBT % GNP	81.36	61.24	119.82*	46.99	41.69	52.43*

Table 2. A Comparison of the Sub-Saharan African Experience to Other Developing Countries: Standard Deviations

VARIABLES	SUB-SAHARAN AFRICAN COUNTRIES			OTHER DEVELOPING COUNTRIES		
	ALL	BEFORE	AFTER	ALL	BEFORE	AFTER
SAVINGS -INVESTMENT-CONSUMPTION						
GROSS DOMESTIC SAVINGS %GDP	13.61	14.80	10.91*	8.32	8.38	8.23
GROSS NATIONAL SAVINGS %GDP	10.87	11.95	8.95*	7.96	7.56	8.29
GROSS DOM. INVESTMENT %GDP	8.98	9.81	6.98*	6.33	6.05	6.64
PRIVATE CONSUMPTION % GDP	15.54	16.42	13.52*	7.80	7.61	8.04
GEN. GOVERN. CONSUM.% GDP	6.39	6.81	5.27*	5.87	6.65	4.76*
TOTAL CONSUMPTION %GDP	13.61	14.80	10.91*	8.32	8.38	8.23
GOV. CONS. ANNUAL % GROWTH	15.40	13.71	17.87*	7.67	8.86	5.86*
GROWTH						
GDP ANNUAL GROWTH RATE	6.24	6.92	4.67*	4.30	4.31	4.28
GNP ANNUAL % GROWTH	6.77	7.41	5.34*	4.72	4.61	4.85
MONEY AND FINANCE						
REAL LENDING RATE	13.22	12.85	12.72	18.17	21.48	15.72*
NOM. DEPOSIT/LENDING INT.RT	0.16	0.14	0.19*	0.23	0.19	0.24*
M1/M2	18.45	17.98	17.18	22.17	20.53	17.30*
M2/GDP	10.94	10.02	12.36*	17.97	15.39	19.82*
LIQUID LIABILITIES M3 % GDP	11.77	10.88	13.19*	19.58	17.76	20.67*
TOT. CREDIT/PRIV.SECTOR %GDP	15.96	11.23	22.25*	23.03	15.46	28.06*
DOM.CREDIT BY BANK.SECT. %GDP	23.67	19.17	30.30*	30.16	28.52	31.43*
BANK LIQUID RESERVES TO ASSETS	41.70	50.39	14.89*	16.75	20.18	10.34*
INFLATION - GDP DEF.ANNUAL %	21.86	20.82	23.69*	634.16	470.17	780.67*
INFLATION - CPI ANNUAL %	23.66	22.74	25.00	616.24	389.82	802.37*
OPENNESS AND EXTERNAL INFLUENCES						
CURR. ACC. BALANCE %GDP	9.10	9.19	8.81	4.49	5.13	3.87*
GROSS PRIV.CAP. FLOWS %GDP	6.68	7.59	4.86*	3.55	3.60	3.42
FOREIGN DIRECT INVESTMENT %GDP	2.13	2.42	1.39*	1.57	1.02	1.85*
TRADE % OF GDP	28.17	28.44	27.66	28.32	23.53	32.09*
AID % GNP	11.69	10.34	13.24*	2.83	2.81	2.86
TOTAL EXTERNAL DEBT % GNP	73.48	58.04	83.94*	26.72	27.33	24.98

Table 3.A comparison among the fast and slow reformers: Means

VARIABLES	Group with Little Progress in Financial Development			Group with More Progress in Financial Development		
	ALL	**BEFORE**	**AFTER**	**ALL**	**BEFORE**	**AFTER**
<u>SAVINGS -INVESTMENT-CONSUMPTION</u>						
GROSS DOMESTIC SAVINGS %GDP	**11.32**	**11.37**	**11.21**	**14.61***	**15.46**	**13.07**
GROSS NATIONAL SAVINGS %GDP	**11.90**	**12.07**	**11.64**	**15.64***	**13.73**	**18.31***
GROSS DOMESTIC INVESTMENT %GDP	**19.05**	**19.42**	**18.29**	**20.00**	**20.71**	**18.70***
PRIVATE CONSUMPTION % GDP	**74.05**	**73.26**	**75.65**	**67.02***	**64.93**	**70.39***
GEN. GOVERN. CONSUM.% GDP	**14.64**	**15.39**	**13.12***	**17.76***	**18.51**	**16.55***
TOTAL CONSUMPTION %GDP	**88.68**	**88.63**	**88.79**	**85.39***	**84.54**	**86.93**
GOV. CONS. ANNUAL % GROWTH	**4.19**	**5.43**	**1.67***	**4.16**	**5.87**	**1.54***
<u>GROWTH AND INCOME</u>						
GDP ANNUAL GROWTH RATE	**2.95**	**3.11**	**2.64**	**4.37***	**4.75**	**3.75**
GNP ANNUAL % GROWTH	**2.91**	**3.02**	**2.68**	**4.53***	**4.87**	**3.98**
<u>MONEY AND FINANCE</u>						
REAL LENDING RATE	**5.59**	**2.97**	**10.39***	**2.54***	**-1.01**	**6.32***
NOM. DEPOSIT/LENDING INT.RT	**0.51**	**0.53**	**0.48***	**0.64***	**0.64**	**0.64**
M1/M2	**75.30**	**78.57**	**68.59***	**51.89***	**55.47**	**46.07***
M2/GDP	**18.78**	**18.32**	**19.68***	**28.96***	**28.04**	**30.48**
LIQUID LIABILITIES M3 % GDP	**19.98**	**19.62**	**20.67**	**31.59***	**30.81**	**32.88**
TOT. CREDIT/PRIV.SECTOR %GDP	**17.05**	**18.54**	**14.17***	**25.21***	**20.88**	**32.75***
DOM.CREDIT BY BANK.SECT. %GDP	**23.84**	**24.90**	**21.80***	**36.96***	**35.93**	**38.72**
BANK LIQUID RESERVES TO ASSETS	**16.08**	**16.06**	**16.13**	**18.37**	**20.90**	**14.18***
INFLATION - GDP DEF.ANNUAL %	**12.07**	**11.76**	**12.71**	**20.10***	**18.77**	**22.30**
INFLATION - CPI ANNUAL %	**13.44**	**13.34**	**13.61**	**22.26***	**21.69**	**23.00**
CURR. ACC. BALANCE %GDP	**-7.09**	**-7.36**	**-6.67**	**-5.18***	**-7.67**	**-1.97***
GROSS PRIV.CAP. FLOWS %GDP	**4.98**	**5.04**	**4.88**	**4.49**	**5.89**	**2.68***
FOREIGN DIRECT INVESTMENT %GDP	**0.80**	**0.88**	**0.63**	**1.03**	**1.02**	**1.04**
TRADE % OF GDP	**60.50**	**59.86**	**61.78**	**74.45***	**74.60**	**74.18**
AID % GNP	**11.36**	**9.58**	**14.99***	**12.48**	**10.39**	**16.31***
TOTAL EXTERNAL DEBT % GNP	**81.28**	**58.02**	**126.48***	**81.55**	**69.29**	**104.08***

Table 3.A comparison among the fast and slow reformers: Standard deviations

VARIABLES	Group with Little Progress in Financial Development			Group with More Progress in Financial Development		
	ALL	BEFORE	AFTER	ALL	BEFORE	AFTER
SAVINGS -INVESTMENT-CONSUMPTION						
GROSS DOMESTIC SAVINGS %GDP	13.78	15.02	10.89*	13.01	13.99	10.90*
GROSS NATIONAL SAVINGS %GDP	9.40	10.59	7.17*	13.04	14.41	10.34*
GROSS DOMESTIC INVESTMENT %GDP	9.27	9.86	7.90*	8.35	9.68	4.93*
PRIVATE CONSUMPTION % GDP	14.72	15.90	11.84*	16.15	16.18	15.61
GEN. GOVERN. CONSUM.% GDP	5.81	6.50	3.63*	7.02	7.02	6.88
TOTAL CONSUMPTION %GDP	13.78	15.02	10.89*	13.01	13.99	10.90*
GOV. CONS. ANNUAL % GROWTH	16.94	14.73	20.53*	11.41	10.91	11.72
GROWTH AND INCOME						
GDP ANNUAL GROWTH RATE	6.50	7.15	4.93*	5.54	6.24	4.07*
GNP ANNUAL % GROWTH	6.71	7.32	5.27*	6.78	7.49	5.39*
MONEY AND FINANCE						
REAL LENDING RATE	13.01	12.51	12.58	13.41	13.21	12.62
NOM. DEPOSIT/LENDING INT.RT	0.16	0.13	0.20*	0.14	0.13	0.14
M1/M2	13.24	12.77	11.57	17.86	17.95	16.20
M2/GDP	6.16	6.46	5.42*	14.75	12.77	17.50*
LIQUID LIABILITIES M3 % GDP	6.37	6.72	5.58*	15.69	13.78	18.44*
TOT. CREDIT/PRIV.SECTOR %GDP	9.34	8.98	9.37	23.55	14.82	32.52*
DOM.CREDIT BY BANK.SECT. %GDP	11.95	11.80	11.99	36.28	28.01	47.27*
BANK LIQUID RESERVES TO ASSETS	49.14	59.00	16.34*	18.24	20.84	11.76*
INFLATION - GDP DEF.ANNUAL %	16.49	16.15	17.17	29.43	28.09	31.54
INFLATION - CPI ANNUAL %	16.98	16.54	17.72	32.45	31.70	33.57
OPENNESS AND EXTERNAL INFLUENCES						
CURR. ACC. BALANCE %GDP	9.07	9.26	8.77	9.06	9.04	8.08
GROSS PRIV.CAP. FLOWS %GDP	6.43	6.86	5.64*	7.16	9.04	2.60*
FOREIGN DIRECT INVESTMENT %GDP	2.04	2.31	1.29*	2.34	2.67	1.57*
TRADE % OF GDP	25.37	26.31	23.39	30.98	30.05	32.74
AID % GNP	10.99	9.91	12.18*	13.13	11.29	15.30*
TOTAL EXTERNAL DEBT % GNP	73.57	53.05	85.98*	73.42	68.51	77.20

Table 5. Comparison between the low- and middle-income countries: Means

VARIABLES	Group of Low Income Countries			Group of Lower and Upper Middle Income Countries		
	ALL	**BEFORE**	**AFTER**	**ALL**	**BEFORE**	**AFTER**
SAVINGS -INVESTMENT-CONSUMPTION						
GROSS DOMESTIC SAVINGS %GDP	9.14	9.40	8.63	28.53*	29.97	26.10
GROSS NATIONAL SAVINGS %GDP	10.38	9.92	11.13	27.45*	29.92	24.98*
GROSS DOMESTIC INVESTMENT %GDP	17.92	18.01	17.74	26.48*	29.43	21.48*
PRIVATE CONSUMPTION % GDP	75.72	74.35	78.36*	53.04*	52.69	53.65
GEN. GOVERN. CONSUM.% GDP	15.06	16.13	12.99*	18.42*	17.35	20.25*
TOTAL CONSUMPTION %GDP	90.86	90.60	91.37	71.47*	70.03	73.90
GOV. CONS. ANNUAL % GROWTH	3.84	5.29	1.03*	5.97*	7.19	4.24
GROWTH						
GDP ANNUAL GROWTH RATE	3.01	3.02	2.98	5.40*	6.68	3.25*
GNP ANNUAL % GROWTH	3.00	2.92	3.15	5.58*	7.05	3.10*
MONEY AND FINANCE						
REAL LENDING RATE	4.27	1.54	8.89*	5.35	2.72	7.72*
NOM. DEPOSIT/LENDING INT.RT	0.54	0.54	0.52	0.66*	0.69	0.63*
M1/M2	72.18	75.42	65.64*	43.55*	47.08	38.68*
M2/GDP	19.67	19.55	19.90	35.04*	32.24	39.01*
LIQUID LIABILITIES M3 % GDP	21.21	21.24	21.16	37.45*	34.51	41.74*
TOT. CREDIT/PRIV.SECTOR %GDP	16.80	18.24	14.01*	34.82*	25.31	49.00*
DOM.CREDIT BY BANK.SECT. %GDP	25.92	27.88	22.11*	39.74*	31.36	51.54*
BANK LIQUID RESERVES TO ASSETS	18.48	18.96	17.53	7.91*	9.15	6.06*
INFLATION - GDP DEF.ANNUAL %	15.42	14.37	17.47	11.03*	11.61	10.05
INFLATION - CPI ANNUAL %	17.89	17.39	18.62	10.29*	10.44	10.04
OPENNESS AND EXTERNAL INFLUENCES						
CURR. ACC. BALANCE %GDP	-7.68	-8.19	-6.87	-0.33*	-2.76	2.11*
GROSS PRIV.CAP. FLOWS %GDP	4.29	4.61	3.76	7.42*	9.46	5.26*
FOREIGN DIRECT INVESTMENT %GDP	0.80	0.78	0.85	1.32	1.91	-0.04*
TRADE % OF GDP	59.60	58.08	62.64*	92.77*	99.24	81.78*
AID % GNP	12.97	10.63	17.59*	4.12*	4.96	2.45*
TOTAL EXTERNAL DEBT % GNP	87.12	64.78	129.09*	40.17*	37.17	46.70

Table 6. Comparison between the low- and middle-income countries: Standard Deviations

VARIABLES	Group of Low Income Countries			Group of Lower and Upper Middle Income Countries		
	ALL	BEFORE	AFTER	ALL	BEFORE	AFTER
SAVINGS -INVESTMENT-CONSUMPTION						
GROSS DOMESTIC SAVINGS %GDP	10.79	11.96	7.95*	14.48*	16.16	10.79*
GROSS NATIONAL SAVINGS %GDP	8.64	9.61	6.68*	10.03*	11.08	8.23*
GROSS DOMESTIC INVESTMENT %GDP	7.87	8.23	7.10*	10.58*	11.70	5.54*
PRIVATE CONSUMPTION % GDP	12.72	13.98	9.31*	14.00	15.82	10.31*
GEN. GOVERN. CONSUM.% GDP	6.28	7.02	3.76*	6.18	5.57	6.78
TOTAL CONSUMPTION %GDP	10.79	11.96	7.95*	14.48*	16.16	10.79*
GOV. CONS. ANNUAL % GROWTH	16.20	13.92	19.63*	10.01*	12.34	4.74*
GROWTH						
GDP ANNUAL GROWTH RATE	5.79	6.18	4.94*	7.80*	9.32	3.27*
GNP ANNUAL % GROWTH	6.20	6.47	5.65*	8.77*	10.44	3.72*
MONEY AND FINANCE						
REAL LENDING RATE	13.97	13.40	13.73	9.44*	9.16	9.13
NOM. DEPOSIT/LENDING INT.RT	0.15	0.13	0.19*	0.15	0.10	0.18*
M1/M2	14.69	14.20	13.47	18.37*	20.26	14.19*
M2/GDP	6.82	6.97	6.54	17.54*	16.49	18.39
LIQUID LIABILITIES M3 % GDP	7.39	7.66	6.86	18.85*	17.79	19.70
TOT. CREDIT/PRIV.SECTOR %GDP	9.68	9.44	9.55	28.65*	17.26	35.77*
DOM.CREDIT BY BANK.SECT. %GDP	15.26	15.25	14.57	46.53*	34.47	57.88*
BANK LIQUID RESERVES TO ASSETS	45.12	54.22	15.62*	6.86*	8.09	3.82*
INFLATION - GDP DEF.ANNUAL %	23.47	22.17	25.74*	10.45*	11.46	8.49*
INFLATION - CPI ANNUAL %	26.00	25.08	27.31	6.69*	6.58	6.93
OPENNESS AND EXTERNAL INFLUENCES						
CURR. ACC. BALANCE %GDP	8.79	8.77	8.78	8.22	10.41	4.00*
GROSS PRIV.CAP. FLOWS %GDP	6.27	6.89	5.01*	7.96*	10.00	4.05*
FOREIGN DIRECT INVESTMENT %GDP	1.99	2.26	1.27*	2.95*	3.12	1.94*
TRADE % OF GDP	24.85	24.27	25.74	27.31	23.00	30.60*
AID % GNP	12.09	10.84	13.09*	3.70*	4.08	1.95*
TOTAL EXTERNAL DEBT % GNP	76.13	60.95	83.82*	25.36*	18.97	35.09*