

Arestis, Philip; Nissanke, Machiko; Stein, Howard

**Working Paper**

## Finance and development: institutional and policy alternatives to financial liberalization

Working Paper, No. 377

**Provided in Cooperation with:**

Levy Economics Institute of Bard College

*Suggested Citation:* Arestis, Philip; Nissanke, Machiko; Stein, Howard (2003) : Finance and development: institutional and policy alternatives to financial liberalization, Working Paper, No. 377, Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

This Version is available at:

<https://hdl.handle.net/10419/31618>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



---

**Working Paper No. 377**

**Finance and Development: Institutional and  
Policy Alternatives to Financial Liberalization**

by

[Philip Arestis](#),

The Levy Economics Institute of Bard College

[p.arestis@levy.org](mailto:p.arestis@levy.org)

Machiko Nissanke

School of Oriental and African Studies, University of London

and

Howard Stein

Roosevelt University, Chicago

April, 2003

## **1. INTRODUCTION**

On August 7, 2002, Brazil received a \$30 billion dollar package that was the largest loan granted in IMF history and brought total Fund lending to the country to \$63 billion since 1998. The bailout was simply the latest chapter in a recent saga of unprecedented financial instability and crisis affecting virtually every region of the global economy mercilessly. Since 1997 there have also been major crises in Argentina, Ecuador, Thailand, Russia, Uruguay, Columbia, Indonesia, Kenya, and Korea. Much of this instability has been associated with rapid financial liberalization, without exception. It is well known, for example, that in Korea, the crisis of November, 1997, followed the deregulation of interest rates, the opening of the capital market, foreign exchange liberalization, the granting of new banking licenses and the dismantling of government monitoring mechanisms which were part of the policy loan system.

The post-1997 pattern of liberalization leading to crisis is a continuation of earlier trends that have become ubiquitous in Latin America and elsewhere. In 1989, Venezuela implemented financial liberalization as part of a standard orthodox IMF and World Bank adjustment package and sectoral loan. Policies related to finance included the removal of quotas for priority lending, the liberalization of interest rates, the opening up of the banking sector to foreign ownership and the privatization of commercial banks. By 1994 the banking system was in a full-fledged meltdown. Between January 1994 and August 1995, 17 financial institutions failed encompassing 60% of the total assets of the financial system and 50% of the deposits and an

estimated 20% of the GDP to clean up (Vera, 2002). In Mexico liberalization and privatization in the early 1990s has proven also to be enormously costly. By 1999 the cost of the government intervention reached \$65 billion or roughly 17% of the 1998 GDP (Financial Times, March 12, 1999). Other countries in different regions including the Caribbean and Africa have followed orthodox courses of financial liberalization, with very similar results (see, for example, Stein et al, 2002a, 2002b, for a number of individual cases in these regions).

These examples are not isolated exceptions but more the rule. Demirguc-Kunt and Detragiache (1999) survey banking crises in 53 countries covering the period between 1980 and 1995 and find that 78% of all crises were linked to periods of financial liberalization (see, also, World Bank, 2001, Table 2.1, p. 83), for a comprehensive list of the costs involved in these and other crises, amounting to 50 percent of GDP in some cases). Given the ubiquity of these crises why do governments pursue financial liberalization exercises? There are a number of answers to this question, including the institutionalization in recent decades of norms of "acceptable" financial policies, the perceived potential gains of attracting private capital inflows, the nature of global systems and the asymmetric power relations embedded in global structures that delimit nation-state options and finally the expected gains arising from the economic logic embedded in the theory underlying financial liberalization. This paper will focus on the latter question, arguing financial liberalization policy is built on shaky theoretical premises. We suggest that the recent financial crises that have hit so many developing countries and transitional economies are the condition induced not merely by the inappropriate sequencing, pacing or timing of internal and external financial liberalization, but importantly they are the inevitable outcome from adopting the policy prescription which is based on a very shallow understanding of the dynamic relationships between finance and economic development. In our view, financial transformation in the image of McKinnon-Shaw has engendered widespread banking crises precisely because of the weak foundations of the theory. Hence, the paper aims at sketching an alternative theoretical perspective, by examining institutional requirements for building and transforming financial systems for economic development.

The paper is structured as follows: We first proceed with a brief presentation of main theses embedded in financial liberalization theory (section 2). This is followed by a critique from both theoretical (sections 3 and 4) and empirical (section 5) points of view. Section 6 offers an alternative perspective on financial transformation more consistent with economic development that draws on a rather different set of theoretical tools and ideas. Finally, section 7 summarizes and concludes.

## **2. FINANCIAL LIBERALIZATION THEORY: RETURNING TO THE ORIGINAL TEXTS**

Financial liberalization theory has its origins in the work of McKinnon (1973) and Shaw (1973). However, it was Patrick (1966) who published the seminal work on the relationship between financial development and economic growth. He hypothesized two possible relationships, a "demand-following" approach where financial development arises as the economy develops and a "supply-leading" phenomenon where the widespread expansion of financial institutions leads

to economic growth. Prior to Patrick (op. cit.) there had been a great deal of debate on the issue, with contributors ranging from Bagehot (1873) and Schumpeter (1912) to Robinson (1952), to mention only the main protagonists, with the first two supporting the "supply-leading" view while the latter voicing strong support for the "demand-following" approach.

The financial liberalization school leans towards the supply-leading relationship between growth and development: McKinnon (1973) puts it as follows: "Our basic thesis of complementarity between money and capital implies that large and fast-growing real cash balances, M/P, contribute to rapid growth in investment and output (p. 89). The argument arises out of a highly simplified world without financial intermediaries whereby the purchase of capital can only arise from self-finance; for when individuals that are limited to self-finance wish to "purchase physical capital of a type that is different from his own output ... He may store inventories of his own output for eventual sale when the capital assets are acquired or he may steadily accumulate cash balances for the same purpose" (p. 57).

In their view, prior savings are seen to help the accumulation process. Consequently according to this view the key is to alter the incentives between consumption and saving. Following classical economics, interest rates are seen as providing the return for this choice.<sup>1</sup> When interest rates are kept artificially low, the result will be shallow financing. For example, Shaw (1973) argues: "Deepening implies that interest rates must report more accurately the opportunities that exist for substitution of investment for current consumption and the disinclination of consumers to wait. Real rates of interest are high where finance is deepening" (p. 8). Unlike Keynes (1936) where interest rates affect the demand for and supply of money, Shaw (op. cit.) follows the classical model where the equilibrium between savings and investment is determined by interest rates: "[I]f financial policy including inflation reduces real rates of interest and makes savings appear cheap, so cheap that they must be rigorously rationed," the result will be "excess demand" for savings (p. 12). A rise in real interest rates increases the flow of savings and reduces the excess demand. Rates of return on holding money also play a role in increasing investment levels: "If the real return on holding money increases so will self-financed investment over a significant range of investment opportunities ... The financial "conduit" for capital accumulation is thereby enlarged" (McKinnon, 1973, p. 60).

In this paradigm, the desire to hold money is also positively affected by the rate of return on capital, contrary to the portfolio approach (which has a negative relationship): "In contrast, the traditional portfolio approach treats money and physical capital as substitutable forms of wealth-holding in a quite static sense where the accumulation process per se is ignored. However, if money is viewed as a conduit through which accumulation takes place--rather than as a competing asset--the demand for money rises pari-passu with the productivity of physical capital" (McKinnon, 1973, p. 60). With higher investment, there will also be a related improvement in the quality of investment and a rise in the savings levels allocated through the market. However, rationing of credit reduces the quality of intermediation, with negative consequences to investment: "Rationing is expensive to administer. It is vulnerable to corruption and conspiracy in dividing between borrowers and officers of the intermediary monopoly rent that arises from the difference between low, regulated loan rate and the market-clearing rate.

Borrowers who simply do not repay loans and keep their place in the ration queue by extending maturities can frustrate it. The rationing process discriminates poorly among investment opportunities ... and the social cost of this misallocation is suggested by the high incremental ratios of investment to output that lagging economies report (Shaw, 1973, p. 86).

It is further argued that competition through private ownership can shrink the difference between deposit and loan rates, encouraging "optimal" agreements between banks, and among borrowers and lenders, in turn increasing the efficiency of intermediation: "Optimal monetary policy seeks equilibrium on the markets for money and savings that minimizes the gap between loan and deposit rates while it allows supply price for equity in banking. One counts upon competitive pressures to bring about agreements between bank and depositors regarding efficient substitution between payment services and deposit rate as well as between banks and borrowers concerning substitution between allocative services and loan rates. The rate gap would be minimized for the quality of product upon which buyers and sellers agree under competitive circumstances and subject to specifications in insurance programs for deposits and loans" (Shaw, 1973, p. 134-135).

Moreover, "fragmentation" in developing countries: "... in the sense that firms and households face...different effective prices for land, labor, capital and produced commodities ..... has been largely the result of government policy" (McKinnon, 1973, pp. 5-7). Reversing fragmentation by creating a single capital market through the retraction of state intervention is then regarded as the sine qua non of economic development: "Arbitrary measures to introduce modern technology via tariffs, or to increase the rate of capital accumulation by relying on foreign aid or domestic forced saving, will not necessarily lead to economic development. Thus it is hypothesized that unification of the capital market, which sharply increases rates of return to domestic savers by widening exploitable investment opportunities, is essential for eliminating other forms of fragmentation (McKinnon, 1973, p.9).<sup>2</sup> By implication, McKinnon (1973) and Shaw (1973) support the liberalization of the capital account in order to provide a unified capital market for private decision makers to undertake utility maximizing inter-temporal choice.<sup>3</sup>

### **3. A THEORETICAL COMMENT ON THE FINANCIAL LIBERALIZATION HYPOTHESIS**

There are several fundamental problems with the financial liberalization hypothesis. To begin with, the argument is developed in an almost Robinson Crusoe framework in which all investment is self-financing. This is abstracted from the complexities of money as a social institution. In reality, money is by nature socially embedded. The holding of money even in the simple rural setting discussed by McKinnon (1973), is subject to social obligations and constraints, and not simply driven by investment needs, the productivity of capital and real return on holding money. Moreover, the presentation is contradictory. It is just not possible to talk about self-financing as if no other financial options exist, and discuss a return to holding money as some "weighted average of nominal interest rates of all forms of deposits" (p. 39), which presupposes the existence of a sophisticated financial system.

McKinnon (1973) is, of course, determined to show a positive relationship between higher interest rates, financial development and investment and growth. He is critical of the neo-classical portfolio approach in which individuals choose between money and assets, since it posits a negative relationship between the demand for real balances and the return on non-financial assets. However, he really is not escaping from a portfolio approach; he simply redefines it as a choice between a non-interest bearing asset (own stocks of products) and money (which is interest bearing). By introducing a lagged time dimension into the choice between money balances and non-monetary assets, holding the portfolio as a store of value becomes the focal point in his analysis. The total of this portfolio is related to the desired rate of future capital investment. The higher the expected rate of return, the greater the desire to hold money balances.

McKinnon (1973) would argue that in properly operating capital markets without fragmentation, all that is necessary is a single unifying marginal rate of return. Economy-wide choices then simply operate like individual choices. The problem with this perception is that capital markets have never operated in this manner. Markets are always fragmented and replete with different levels of risk and uncertainty even in the most advanced economies. Perceptions of rates of return vary not only with different types of financial vehicles but also by individuals. An individual on a particular project perceives interest rates paid by governments very differently than the anticipated future return. There is nothing that will automatically unify them into a single concatenating vision of a future payout.

The theory of financial liberalization also relies on the assumption of the competitive model. However, the divergence between the financial world and the competitive model is profound. Finance is replete with asymmetries of risk and information that are less evident in goods markets. Stiglitz (1989, 1994) points to a host of market imperfections embedded in financial markets. These go beyond the well-known issues of moral hazard and adverse selection. They include: 1) the large divergence between the social and private costs of bank failures; 2) the public good nature of the solvency of institutions that are likely to be undersupplied; 3) the externality effect of the presence of a few bad banks in the confidence of the sector; 4) the divergence between the private (those with rapid turnover) and social benefits (projects are likely to have longer turnover periods and higher risk) of loans. Furthermore, and contrary to the standard assumption of markets, financial markets will not be Pareto efficient (where the price represents the marginal benefit to the buyer and the marginal cost to the supplier), since the lender (buyer) willing to pay the most for a loan, may not provide the highest profit to the lender (seller). An important recent contribution by the imperfect information school goes at the heart of financial liberalization thesis, that is the enhanced degree of competition it creates (Hellman, Murdock, and Stiglitz, 2000). More competition, according to this contribution, erodes franchise value, which reduces incentives for prudential behavior, thereby increasing risk substantially in the system. However, the problem of finance in developing countries is much deeper and multifaceted than suggested by the imperfect information school, as argued below.

The focal point of financial liberalization is on retracting the sources of repression that have distorted the signaling effect of interest rates. Either the signals themselves are disrupted by the

"fragmentation" created by government policy or the signals are misread due to the state ownership pattern of financial organizations. On the latter point, it is an axiomatic belief that the public ownership or control always leads to political or patronage influences, while private owners will react to the signals with Pareto efficient decisions on the allocation of credit. Stiglitz (1989, 1994), and the imperfect information school, recognize that financial markets left to their own devices are generally incapable of providing correct signals. State intervention should be aimed at creating moderate forms of financial repression to alter the signals that lead to more socially optimal outcomes. The problem is that, given the poorly developed nature of financial markets in developing countries, even adjusted signaling may not have the desired results and may even lead to unintended consequences. In countries like Nigeria, where regulation is poor, norms of trust are not developed, and a military government hands out banking licenses to military officials, subsidizing interest rates would have done little to reverse the financial chaos created by liberalization after 1986. While interest rates are important, they are only one dimension of the incentives and disincentives that influence the decision-making process in financial systems.

The McKinnon-Shaw world of finance is one where financial intermediaries via markets for depositing and lending simply set interest rates to balance the supply and demand for savings of borrowers and depositors. In this world, there are three actors in two exchanges with the difference in the price of the two exchanges simply reflecting the cost of intermediation (which will be kept low with sufficient competition). One only needs the unfettered operation of self-seeking atomistic individuals to arrive at Pareto optimality. There is no need for institutions. However, in the real world, interest rates and incentives are only one dimension of finance, which is a complex institution embedded in a broader system of non-financial institutions. As we will see below, many of the econometric studies have difficulty pinpointing clear causality between finance and development. We would argue this is precisely because of the intertwining and interaction between the development of financial institutions and the finance of developing institutions. These issues will be explored below.

Financial transformation in the image of McKinnon-Shaw has engendered widespread banking crises precisely because of the weak foundations of the theory. However, McKinnon (1993) has argued that it is not a problem with the theory or the policies arising from the theory, but one of sequencing, particularly when deregulation is introduced before macroeconomic stabilization is completed. We turn our attention next to this issue.

#### **4. SEQUENCING, MACROSTABILITY AND POLITICAL ECONOMY**

McKinnon's (1993) optimal order would begin with the control of inflation, leading to the deregulation of interest rates, banking privatization and commercialization, foreign exchange rate unification, trade liberalization and only then opening up the capital account. There is a growing body of evidence indicating that financial liberalization in any sequence has engendered the same difficulties. Weller (2001) surveys 26 countries representing every region of the world to evaluate the relationship between financial liberalization and crisis.<sup>4</sup> Among the sample are many variations in the sequencing of policies. Drawing on the work of Minsky

(1984), a number of hypotheses about the relationship between financial liberalization and the banking crises that typically follow, are tested. Internal and external deregulation fosters financial fragility by encouraging flows to speculative ventures. Asset inflation can raise the collateral of borrowers and increase the euphoria. Speculation becomes self-fulfilling as greater flows into speculation in turn perpetuate the speculative boom. Short-term capital inflows after liberalization can raise the exchange rates leading to deterioration in the current account with implications to real growth in sectors like industry. This is exacerbated by the shift away from investment finance to speculation. Eventually asset prices begin to deflate, default risk rises and maturity risk increases as short-term outflows increase in response to the worsening balance sheet of banks. Ultimately the economy is marked by a rise in interest rates, credit contraction, import price inflation and depleted domestic demand.

Weller's (2001) results confirm these hypotheses, especially that of the growth of financial fragility after financial liberalization. Indeed, more speculative financing greatly enhances the chances of a banking crisis after financial liberalization. Of particular interest is how long financial liberalization will continue to increase the chances of future financial crises. It has been frequently argued that financial liberalization might lead to short term dislocation but it will be beneficial in the long-term. However, not only do the results indicate that the likelihood of a banking crisis does not disappear, but it increases over time. The study by Arestis and Glickman (2002) reach similar conclusions in the case of the South East Asian crisis, supporting the hypotheses referred to above.

Other studies have also confirmed the lack of significance of "sequencing". Arestis et al (2003) survey the literature and, also, offer their own empirical investigation, and find no evidence that varying the sequence of financial liberalization along McKinnon's (1993) optimal lines leads to any different results. In line with Weller's (2001) findings, there is strong evidence of increasing frequency and severity of financial crises in the wake of liberalization. A World Bank econometric study (Demirguc-Kunt and Detragiache, 1999) of the relationship between banking crises and a series of explanatory factors, found it to be highly correlated with financial liberalization policies even when controlling for factors like the sequencing recommended by McKinnon (1993).

The notion of the existence of some optimal sequence can be questioned for other reasons. Any evaluation of financial liberalization should not be merely based on economic criteria. It should, also, contain elements from the realm of politics (Armijo, 1999). There is also the rather flawed belief that orthodox financial liberalization will lead to an improvement, which is growth enhancing. Underhill (1997), in contrast, is far less sanguine concerning the prospect of economic gains from following some optimal sequence of financial transformation. By nature, any change in existing financial arrangements creates new winners and losers with implications to the political realm. He characterizes the new changes in financial system as constituting desegmentation (unifying various branches of finance into a single branch), marketization (domestic financial market liberalization) and transnationalization (integrating financial markets across national boundaries). The actual outcome of change varies in accordance with the relative strength of the constituent members of the financial community (government players including



central bankers and regulators, national and multinational banks, pressures from international financial institutions, strength of private involvement in privatization etc). The final outcome is unpredictable with no guarantee of any economic improvements and involves considerable downside risk following any sequence.

Examples of Underhill's (1997) observation abound. In Nigeria, under the military rule of Babingida, applications for all new banking licenses were reviewed by the President's office and Federal Executive Council controlled by the military. Retired military officials with no banking experience were instrumental in obtaining banking licenses without the proper procedures being followed. Central bank officials interviewed indicated the near impossibility of turning down applications in the climate of military control. It is hard to conceive of any sequence of reform working in this climate or changing the results of the now well-documented banking crisis that followed. In addition, politics played a major role in the attempt to reorganize the financial system after the banking crisis. In Nigeria, after 1996, General Abacha used the opportunity to punish political opponents and challenge the independence of some business groups (Lewis and Stein, 2002).

The importance of examining the broader conditions before transforming financial systems goes beyond the framework of political economy to the underlying structures of any developing economy. While there is broad agreement on the complications of undertaking liberalization in the midst of macro instability, where economies are structurally weak, subject to the vicissitudes of international commodity prices and shifting financial flows with few stabilizing reserves, instability is likely to be the rule rather than the exception. Even when bankers are completely honest and regulatory systems are in place, macro instability or the likelihood of a future occurrence will encourage bankers to hold reserves in government paper and to limit loans to short term duration. In places like Venezuela, Nigeria and Russia, financial liberalization led to a decrease in the duration of loans and increase in the holding of government paper (Stein et al., 2002a). In Tanzania, although most of the banking system is now in foreign private hands and inflation has fallen below 5%, banks are sitting on 60% excess reserves with much of it being held in government paper (The African, June, 2002).

## **5. EMPIRICAL STUDIES OF THE FINANCIAL LIBERALIZATION HYPOTHESIS**

Given the central role of the financial liberalization hypothesis in liberalization programs and the evolving literature, there has been a proliferation of econometric testing of the theory and attendant policy correctives. In general, despite continuing efforts to discern the postulated positive relationship between financial liberalization and growth by mainstream economists through cross-country studies,<sup>5</sup> support for the financial liberalization hypothesis is not very strong, and there is growing evidence confirming Keynes' (1936) view of the linkage between interest rates, investment and savings.

We begin with the literature that tests the finance to development causation or supply-leading relationship. Habibullah (1999) surveys the literature for the financial led growth hypothesis and undertakes his own testing finding little evidence to support this hypothesis.<sup>6</sup> Akinboade (1998)

also uses Granger causality testing in a cointegration framework, on Botswana data covering the period 1972 to 1995, to find clear bi-directional causality. Similarly, Sahoo et al (2001) note in the case of India in the 1970s high levels of savings did not lead to higher levels of growth. Later periods of growth seemed to occur without an appreciable rise in savings. To examine this more systematically, they apply causality testing of real savings and real GDP data from 1950/51 to 1998/99. They manage to establish a strong one way linkage from growth to savings and thereby refute the proposition that savings was the engine of growth in the case of India.

The growth-to-savings causality has also been confirmed by some World Bank's studies. Countries in Asia were very successful in mobilizing savings, yet there is strong evidence indicating investment and growth led to savings rather than savings to growth. It was not savings that led to the phenomenal investment and growth rates of recent decades, but the rise of income that increased savings. The World Bank (1993) found the causation from growth to savings in five countries (Indonesia, Japan, Korea, Thailand and Taiwan), ambiguity in two (Hong Kong and Malaysia) and in one it was due to other factors (in Singapore, the state provident fund was salient).

Surveys of the literature indicate little or no evidence of a positive relationship between interest rates and savings (Dornbusch and Reynoso, 1993). Various econometric testing from Asia and Latin America and Africa also confirm the lack of correspondence between interest and savings even among strong proponents of orthodoxy like Fry (1988) as well as many others (for example, Giovannini, 1985; Gupta, 1987; Cho and Khatkhate, 1990; Gonzalez, 1988; De Melo and Tybout, 1986; Warman and Thirwall, 1994; Oshikoya, 1992; Taiwo, 1992; Reichel, 1991). The overwhelming evidence has even encouraged McKinnon (1993) to abandon the higher interest to prior savings argument in favor of a rise in the "quality" of investment after liberalization.

Worse for the financial liberalization thesis, there are studies that have actually shown a negative relationship between interest rates and savings. Matsheka (1998) tests the relationship between the variables for the period 1976 to 1995 in the case of Botswana. A negative and significant relationship between real deposit interest rates and the log of real domestic savings is found to prevail. The same study also examines the effect of deposit rates on private saving levels (since savings are overwhelmingly dominated by the government in the mineral economy of Botswana) and still finds it negative and significant. Matsheka (op. cit.) takes it one step further and disaggregates the impact of real interest rates into the nominal portion and the inflation component. The financial liberalization school predicts that the nominal interest rate will have a positive impact on private savings and the inflation rate a negative impact. Contrary to their prediction the results are the very opposite. The nominal rate is negative and significant and the inflation rate positive and significant. This is consistent with a Keynesian type precautionary motive of savings rather than a monetarist type portfolio shift from savings to assets that are inflation hedges.

Studies utilizing data on real interest rates and financial savings have produced more mixed results, even though they are consistent with both Keynesian and financial liberalization theory.

Warman and Thirwall (1994) show a strong correlation between real interest rates and M4, net of demand deposits in the Mexican context. Seck and Yasim (1993) indicate a correlation between M2/GDP and real deposit interest rates for a pooled sample of 21 countries within Africa (and also for a sub-group of nine of the countries that includes Botswana). However, this is using a simple regression with an absurdly low adjusted R-squared (.084). Moreover, Matsheka (1998) is unable to confirm these results for Botswana. The real deposit rate is negative and insignificant.<sup>7</sup>

Further, literature testing on the relationship between real interest rates and investment seldom confirms the relationship predicted by McKinnon and Shaw. Warman and Thirwall (1994) use Mexican data and find an overall negative relationship. In a sample of nine African countries Seck and Yasim (1993) find a positive relationship between real deposit rates and investment rates in a simple regression with ridiculously low adjusted R squares (0.039). However, once the effect is broken down into nominal interest rates and inflation and other variables are introduced, the relationship no longer holds. Nominal interest rates have a negative and significant relationship with investment.<sup>8</sup> In the case of Botswana, Matsheka (1998) shows a negative but insignificant relationship between real deposit rates and the log of gross domestic investment. By contrast, the availability of credit and a lagged accelerator relationship are positive and significant. As the author points out, credit has actually become less available to the private sector in the wake of financial liberalization, a phenomenon also seen in Nigeria and in Jamaica. In the case of Jamaica, for example, real lending to manufacturing plummeted 83% between 1989 when financial liberalization began and 1999 (Stein et al, 2002b). Similarly in Nigeria, there was a negative and very significant relationship between the number of banks and real lending to the private sector and the number of banks and the level of financial savings relative to GDP. Financial disintermediation and a vicious circle arose from liberalization not the virtuous circle predicted by McKinnon-Shaw (Lewis and Stein, 2002).

Other surveys have indicated negative consequences of financial liberalization. Ndung'u (1997) surveys nine English speaking African countries introducing orthodox financial liberalization and finds declining investment, few examples of a rise of savings, reduced efficiency of intermediation as measured by the rising spread between deposit and lending rates and falling GDP growth rates. Other authors have documented rising interest rate spreads in places like Venezuela (Vera, 2002) and a mix of African countries (Nissanke, 2002). For Jamaica, Stein et al. (2002a) test the relationship between the growth of financial institutions and the spread between deposit and lending rates, and establish a positive and significant relationship between the number of financial institutions and the spread, completely contrary to the prediction of McKinnon-Shaw. The chaos caused by financial liberalization was leading to growing inefficiency of intermediation.

It follows from the above analysis and empirical results, that it is paramount to develop alternatives to the McKinnon-Shaw thesis, given its weak theoretical base and poor empirical performance. For this, we propose to adopt an institutional-centric view of finance and development as a way towards alternative financial policy formulation.

## **6. FINANCIAL SYSTEM DEVELOPMENT: TOWARD AN INSTITUTIONAL PERSPECTIVE**

Our analysis so far clearly indicates that the focus on price formation largely renders financial liberalization theory a-institutional. Yet, the critical importance of "institutional endowments" for economic growth has increasingly been emphasized by many recent econometric studies--see, for example, Rodrik (1999) and Acemoglu et al (2002) for the institutions-growth-macroeconomic performances, and Chinn and Ito (2002) for the institutions-financial development link. Even authors largely in favor of the goal of monetary restraint, have recognized the importance of designing new policies in the context of the "institutional endowments" of countries (Ball, 1999). The performance of new institutional arrangements like independent central banks depends on the country's other formal arrangements, such as fiscal policy and many informal institutional arrangements, like domestic interest group organizations, international relations, and the history, norms and ideology of a country. What is useful from Ball's analysis is the recognition that financial transformation is fundamentally an institutional phenomenon, which interacts with the existing institutional endowment. What is less useful is the dichotomous distinction between formal and informal institutions. The formal-informal distinction arises from the work of North (1990) and is aimed at explaining the hidden constraints on formal levels of transformation. In the case of Ball (op. cit.) these hidden constraints affect the extent of the rigidity needed in new monetary institutions in creating rules for monetary constraint. The greater the informal commitment to monetary constraint, the greater the flexibility in using monetary policy in reacting to unforeseen shocks.

There are problems with Ball's framework. First, the distinction between formal and informal is rather arbitrary. As Sindzingre and Stein (2002) note, differences between the formal and informal constitute a continuum of activities rather than duality of polar opposites. Secondly, the formal/informal distinction is used in the sense of maximizing an objective function subject to constraints. The relationship is unidirectional in the sense that the informal acts to limit the formal in reaching the goal or objective function. In fact the aim of transformation is not one of designing formal rules to be consistent with informal institutional constraints but to transform the existing institutional endowment for specific purposes. This is complicated in the framework due to a third problem, namely the conflating of dimensions of institutions with the framework of institutions themselves. Norms in the Veblenian sense of "habits of thought common to the generality of men and women" can be institutions themselves. Thus, ideology and history play a central role in creating the framework of institutional transformation, while organizations, or even interest groups, are an important dimension of institutions in the sense of concatenating people in a structure with common rules and purposes. Lumping all these together as informal institutions is rather conceptually problematic.

A great deal of backing of the importance of institutions emanate from the imperfect information school (for example, Stiglitz, 1985, 1994). Imperfect information in the financial markets dictates the existence of information gathering institutions. Institutions matter, therefore, especially of the financial intermediation variety. Under such circumstances, the structure of finance, debt versus equity, becomes of paramount importance. Three schools of

thought can be identified on this score: the bank-based view, which emphasizes the positive role of banks in development and growth (Gerschenkron, 1962; Stiglitz, 1985; Singh, 1997); the market-based theory, which highlights the advantages of well-functioning markets (Beck and Levine, 2002); and the financial services view, according to which neither banks nor markets matter; it is financial services themselves that are by far more important, than the form of their delivery. They are different components of the financial system; they do not compete, and as such ameliorate different costs, transaction and information, in the system (Boyd and Smith, 1998). These views are concerned with building institutions that support the development of markets. The workings of these institutions become the focus of the analysis especially the regulatory aspects of the institutional framework.<sup>9</sup>

While information gathering is an important aspect of institutional design, it is only one dimension of financial institutions. We propose going beyond the ideas that underlie those of the imperfect information school, and also beyond the misleading distinction between formal and informal institutions, to an institutional-centric theory of the transformation of a developmentally oriented financial system. It is important to distinguish institutional forces from institutional purposes and institutional outcomes in terms of the genesis, evolution and maturation of institutions. For conceptual clarity there needs to be a careful understanding of the relationship between institutional contexts and potential institutional transformation paths. Financial systems can be disaggregated into five institutionally related components that are interactive in producing particular outcomes. Each operates in a particular institutional context. The five components are norms, incentives, regulations, capacities and organizations.<sup>10</sup> In the context of financial systems, norms are habits of thought that arise from social esteem and sanctions that arise through established patterns of banking. They involve not only rules of thumb, the development of trust and professional habits that encourage probity, and the proper conduct that is the backbone of banking. While these are central to the development and operation of any banking system, banking for development must also incorporate norms that encourage the extension of time-horizons as an integral part of intermediation.

Incentives focus on the rewards and penalties that arise from different modes of behavior. The institutional-centric view of incentives is very dissimilar to marginal calculating utility maximizers embedded in neo-classical economics. First, incentives are not simply delivered via markets but can arise within a variety of different organizational constructs. Second, humans are foremost social beings that are motivated by rewards and penalties that go well beyond income or material factors. In the context of banking, financial variables like interest rates are only one dimension of a variety of factors that shape banking decisions and behavior. Promotions, the loss of social esteem, threats of ostracism, social responsibility, legal repercussions, professionalism and pride etc., are all central for generating the incentives for expanding and operating banking systems in developing countries.

Regulations constitute the legal boundaries that help set the rules of operation in financial systems. The regulatory dimensions are well known and include prudential guidelines on the provisions for and categorization of asset risk, accounting standards, auditing schedules, deposit insurance stipulations, capital requirements, licensing rules and procedures, regulation on

interest rate determination and inter-bank markets, scope of operations in terms of the types of financial devices sold, property right issues including rules to access collateral when loan payments are in default etc. What is particularly important is a careful specification of the spheres of interaction between the components of the economy including ownership between the different segments of the financial system and their linkage to industrial, agricultural and other service sectors. One of the reasons the empirical testing between finance and growth is so indeterminate, is precisely because cases of successful banking in developing countries have arisen when there is a dynamic interface between investment, production and banking.

The issue of legally setting out incentives to loan, monitor and supervise activities that have higher risk but are more developmental becomes an important part of the juridical design of financial systems. An equally important issue is the mechanisms to institutionalize the legal system in the sense of encouraging the internalization of the rules of operation. Rewards and punitive measures may be necessary to enforce regulations in the initial phases. However, the ultimate aim of the design of any regulatory system is one in which monitoring becomes the prime function and intervening enforcement becomes the exception not the rule.

Capacities are related to the underlying capabilities of the constitutive members (individuals and other sub-units) of organizations to operate in an effective manner to achieve the goals of an organization within the confines of its norms and rules. These capabilities must be developed in a consonant manner on the regulatory and banking side. One of the great tragedies of liberalization has been the asymmetric expansion of banking entities compared to the auditing and other regulatory capacities of supervising agencies. While new legal organizations expanded in places like Nigeria, the capabilities of the individuals within these new structures were extremely weak providing the opportunity for misuse relative to their stated purpose.

Organizations are legally recognized structures that combine groups of people with defined common rules and purposes. They include both state regulatory agencies and financial intermediaries. As intermediaries, countries should focus on creating an assortment of ownership and banking types to deal with the multi-tiered financial needs of a developing economy (merchant, development, commercial, micro-finance, local, state, international and cooperative ownership, etc.). In all these structures the state will need to assume risk both on the deposit and loan side (given that the most developmental project will often have the higher risks). Without the socialization of private risk, it is difficult to see how private investment and accumulation will occur in developing countries. There are many options for ensuring that the criteria for subsidization or access to funds are being met and are consistent with developmental needs (Korean style policy loans, Japanese main bank system, business-government councils, planning agencies, partial state ownership of banks, developmental banks, etc.). To avoid instability, capital accounts need to be carefully controlled including access of banking systems to international loans.

Unfortunately, little of this is currently happening. In the wake of the widespread failure of financial liberalization (including privatization to domestic owners) in the 1990s, developing and transitional economies have been turning increasingly to selling off financial institutions to

foreign banks using a single type of organizational construct, the commercial bank. The move has been particularly strong in transitional economies like Hungary and the Czech Republic. The Czech Republic has paid an estimated 21% of the GDP to clean up the financial system after an exercise in orthodox liberalization. In response, 95% of the banking sector has been sold off. The focus of these banks is on servicing richer clients and multinational investors. Few funds are being made available to domestic investors. Small and medium enterprises (SMEs) employ nearly 60% of the country's workforce and generate about 40% of the GDP. However, it is estimated that only 2% of SMEs were able to obtain a loan in 2000. Many are holding their assets in government paper or loans to the inter-bank market (Financial Times, December 12, 2001; November 21, 2002). For some countries like Tanzania, they have simply moved from state ownership to foreign ownership. While this has avoided the enormously costly exercise in financial liberalization experienced by their neighbors in East Africa, the new foreign banks are holding massive excess reserves in the form of government paper with only few loans in the hands of a handful of wealthy customers. Moreover, instead of accessing global finance, foreign banks in many countries are exporting national savings to safer havens.

## **7. SUMMARY AND CONCLUSIONS**

We have argued in this paper that the financial liberalization thesis is weak on both theoretical and empirical grounds. An alternative is desperately needed. We have sketched the essentials of such an alternative, but more research is clearly required. At the core of the project is the institutionalization of finance. For new financial systems to be institutionalized, they must become legitimate entities in the sense that they are embedded in the circuits of social and economic production. Ultimately for banking norms to be developmental, they need to be absorbed into the consciousness of the general population, which is more likely to happen when structures are diverse, participatory and accessible. A belief that financial systems in developing countries can be built by adjusting price signals and retracting state intervention will continue to lead to the chaos we have witnessed in many places for far too many years.

## **REFERENCES**

- Acemoglu D., Johnson, S. Robinson, J. and Thaicharoen, Y. 2002. "Institutional Causes, Macroeconomic Systems: Volatility, Crises and Growth." NBER Working Paper 9124. September 2002.
- Akinboade, O. A. 1998. "Financial Development and Economic Growth in Botswana: A Test of Causality." *Savings and Development* 22(3): 331-348.
- Arestis, P. and Glickman, M. 2002. "Financial Crisis in South East Asia: Dispelling Illusion the Minskyan Way." *Cambridge Journal of Economics* 26(2): 237-260.
- Arestis, P., Demetriades, P. and Fattouh, B. 2003. "Financial Policies and the Aggregate Productivity of the Capital Stock: Evidence from Developed and Developing Countries." *Eastern Economic Journal* 29 (2): 219-244.

Armijo, L. 1999. "Mixed Blessing: Expectations about Foreign Capital Flows and Democracy in Emerging Markets." In L. Armijo, ed. *Financial Globalization and Democracy in Emerging Markets*. Basingstoke: Macmillan.

Bagehot, W. 1873. *Lombard Street*. Homewood, IL: Richard D. Irwin.

Ball, R. 1999. "The Institutional Foundations of Monetary Commitment: A Comparative Analysis." *World Development* 27(10): 1821-1842.

Bayoumi, T. 1993. "Financial Saving and Household Saving." *Economic Journal* 103 (November).

Beck, T. and Levine, R. 2002. "Industry Growth and Capital Allocation: Does Having a Market-or Bank-Based System Matter?" NBER Working Paper No. 8982.

Bekaert G., Harvey, C. R. and Lundbrad, C. 2002. "Does Financial Liberalization Spur Growth?" Paper presented at World Bank Conference on Financial Globalization, May 2002.

Boyd, J. H. and Smith, B. D. 1998. "The Evolution of Debt and Equity Markets in Economic Development." *Economic Theory* 12: 519-560.

Chinn D. M. and Ito, H. 2002. "Capital Account Liberalization, Institutions and Financial Development: Cross Country Evidence." Mimeo, Department of Economics, University of California-Santa Cruz.

Cho, Y-J. and Khatkhate, D. 1990. "Financial Liberalization: Issues and Evidence." *Economic and Political Weekly*, May.

De Melo, J. and Tybout, J. 1986. "The Effects of Financial Liberalization on Savings and Investment in Uruguay." *Economic Development and Cultural Change* 34 (April).

Demirguc-Kunt, A. and Detragiache, E. 1999. "Financial Liberalization and Financial Fragility." In B. Pleskovic and J. E. Stiglitz, eds. *Proceedings of the 1998 World Bank Conference on Development Economics*. Washington, D.C.: World Bank.

Dornbusch, R. and Reynoso, A. 1993. "Financial Factors in Economic Development." In R. Dornbusch, ed. *Policy Making in the Open Economy: Concepts and Case Studies in Economic Performance*. Oxford: Oxford University Press.

Fry, M. 1988. *Money, Interest and Banking in Economic Development*, Baltimore: Johns Hopkins University Press.

Galindo A., A. Micco and G. Ordonez. 2002. "Financial Liberalization and Growth: Empirical



Evidence." Paper presented at World Bank Conference on Financial Globalization. May 2002.

Gerschenkron, A. 1962. *Economic Backwardness in Historical Perspective. A Book of Essays*, Cambridge, Mass.: Harvard University Press.

Gersovitz, M. 1988. "Savings and Development." In H. Chenery and S. Srinivasan, eds. *Handbook of Development Economics*. Amsterdam: North-Holland.

Gibson, H. and Tsakalotos, E. 1994. "The Scope and Limits of Financial Liberalization in Developing Countries." *Journal of Development Studies* 30(3): 578-628.

Giovannini, A. 1985. "Savings and Real Interest Rates in LDCs." *Journal of Development Economics*, 18 (2-3).

Gonzalez, A. 1988. "Interest Rates, Savings and Growth in LDCs: an Assessment of Recent Empirical Research." *World Development* 16(5).

Gupta, K. L. 1987. "Aggregate Savings, Financial Intermediation and Interest Rates." *Review of Economics and Statistics* 69(2).

Habibullah, M. S. 1999. "Financial Development and Economic Growth in Asian Countries: Testing the Financial-Led Growth Hypothesis." *Savings and Development* 23(3): 279-290.

Hellman, T. F., Murdock, K. C. and Stiglitz, J. E. 2000. "Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?" *American Economic Review* 90: 147-165.

Hirshleifer, J. 1970. *Investment, Interest and Capital*. Englewood Cliffs, N.J.: Prentice-Hall.

Keynes, J. M. 1936. *The General Theory of Employment, Interest, and Money*. New York: Harvest/Harcourt Brace Johanovich.

Lewis, P. and Stein, H. 2002. "The Political Economy of Financial Liberalization in Nigeria." In H. Stein, O. Ajakaiye and Lewis, P. eds. *Deregulation and the Banking Crisis in Nigeria: A Comparative Study*. Basingstoke: Palgrave (21-52).

Matsheka, T. C. 1998. "Interest Rates and the Saving-Investment Process in Botswana." *African Review of Money, Finance and Banking* (1-2): 5-23.

Mavrotas, G. and Kelly, R. 2001. "Savings Mobilization and Financial Sector Development: The Nexus." *Savings and Development* 25(1): 33-64.

M'Bet, A. 1994. "Reforms of the Financial Sector in the Franc Zone." In *Financial Sector Reforms for Economic Recovery in Africa*. African Development Bank Symposium Report.

- McKinnon, R. 1973. *Money and Capital in Economic Development*. Washington, D.C: Brookings Institution.
- , 1993. *The Order of Financial Liberalization*. Baltimore: Johns Hopkins Press.
- Minsky, H. P. 1984. *Can "It" Happen Again? Essays on Instability and Finance*. Armonk, N.Y.: M.E. Sharpe.
- Nabli, M. K. and Nugent, J. B. eds. 1989. *The New Institutional Economics and Development Theory and Applications to Tunisia*. Amsterdam: North Holland.
- Ndung'u, Njuguna. 1997. "The Impact of Financial Sector Liberalization on Savings, Investment, Growth, and Financial Development in Anglophone Africa." *African Development Review* 9(1): 20-51.
- Nissanke, M. 2002. "African Experience with Financial Sector Reforms: What Has Been Achieved So Far?" In H. Stein, O. Ajakaiye and Lewis, P. eds. *Deregulation and the Banking Crisis in Nigeria: A Comparative Study*. Basingstoke: Palgrave, 129-167.
- Nissanke, M. and Stein, H. 2003. "Financial Globalization and Economic Development: Toward an Institutional Foundation." *Eastern Economic Review* 29(2): Forthcoming.
- North, D. C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- , 1991. "Institutions." *Journal of Economic Perspectives* 5(1): 97-112.
- Oshikoya, T. W. 1992. "Interest Rate Liberalization, Savings, Investment, and Growth: The Case of Kenya." *Savings and Development* 16: 305-321.
- Patrick, H. 1966. "Financial Development and Economic Growth in Developing Countries." *Economic Development and Cultural Change* 14(2): 174-189.
- Reichel, R. 1991. "The Macroeconomic Impact of Negative Real Interest Rates in Nigeria: Some Econometric Evidence." *Savings and Development* 15: 273-283.
- Reinhart C. M. and Tokatlidis, L. 2002. "Before and After Financial Liberalization." Paper presented at World Bank Conference on Financial Globalization, May 2002.
- Robinson, J. 1952. "The Generalization of the General Theory." In J. Robinson. *The Rate of Interest and Other Essays*. London: MacMillan.

- Rodrik, D. 1999. "Institutions for High-Quality Growth: What They Are and How to Acquire Them." Paper presented at IMF Conference on Second-Generation Reform, 8-9 November, 1999.
- Sahoo, P. Geethanjali, N. and Kamaiah, B. 2001. "Savings and Economic Growth in India: The Long-Run Nexus." *Savings and Development* 25(1): 66-80.
- Schumpeter, J. A. 1912. *The Theory of Economic Development*. Leipzig: Dunker and Humblot.
- Seck, D. and Yasim H.E.N. 1993. "Financial Liberalization in Africa." *World Development* 21(11): 1867-1890.
- Shaw, E. 1973. *Financial Deepening in Economic Development*. New York: Oxford University Press.
- Sindzingre A. and Stein, H. 2002. "Institutions, Development, and Global Integration: A Theoretical Contribution." Mimeo, CNRS, July 2002.
- Singh, A. 1997. "Stock Markets, Financial Liberalization, and Economic Development." *Economic Journal* 107: 771-782.
- Stein, H., Ajakaiye, O. and Lewis, P. eds. 2002a. *Deregulation and the Banking Crisis in Nigeria: A Comparative Study*. Basingstoke: Palgrave.
- Stein, H., Cuesta, M. and McLennon, R. 2002b. "Financial Liberalization and the Jamaican Financial Debacle." Mimeo. Department of Economics, Roosevelt University.
- Stiglitz, J. E. 1985. "Credit Markets and the Control of Capital." *Journal of Money, Credit, and Banking* 17(1): 133-152.
- . 1989. "Financial Markets and Development." *Oxford Review of Economic Policy* 5(4).
- . 1994. "The Role of the State in Financial Markets." In World Bank *Proceedings of the World Bank Annual Conference on Development Economics, 1993*. Washington, D.C.: World Bank.
- Taiwo, I. O. 1992. "A Flow-of-Funds Approach to Savings Mobilization Using Nigerian Data." *Savings and Development* 16(2): 168-182.
- Underhill, G. ed. 1997. *The New World Order in International Finance*, Basingstoke: Macmillan.
- Vera, L. 2002. "A Chronicle of a Latin American Country Financial Crash: The Case of Venezuela." In H. Stein, O. Ajakaiye and Lewis, P. eds. *Deregulation and the Banking Crisis*

*in Nigeria: A Comparative Study*. Basingstoke: Palgrave, 168-192.

Warman, F. and Thirlwall, A. P. 1994. "Interest Rates, Savings, Investment and Growth in Mexico 1960-90: Test of the Financial Liberalization Hypothesis." *Journal of Development Studies* 30(3): 629-649.

Weller, C. 2001. "Financial Crises and Financial Liberalization: Exceptional Circumstances or Structural Weaknesses." *Journal of Development Studies* 38(1): 98-126.

World Bank. 1983. *World Development Report, 1983*. Washington D.C.: World Bank.

World Bank. 1989. *Sub-Saharan Africa, From Crisis to Sustainable Growth: A Long Term Perspective Study*. Washington D.C.: World Bank.

World Bank. 1993. *The East Asian Miracle: Economic Growth and Public Policy*. Washington, D.C.: World Bank.

World Bank. 1994. *Adjustment in Africa, Reforms, Results and the Road Ahead*. Washington D.C.: World Bank.

World Bank. 2001. *Finance for Growth: Policy Choices in a Volatile World*. A World Bank Policy Research Report. Washington D.C.: World Bank.

World Bank. 2002. *World Development Report, 2002, Building Institutions for Markets*. Washington, D.C.: World Bank.

## NOTES:

1. In neo-classical terms the first order condition for intertemporal utility maximization from consumption is such that the ratio between marginal utilities in any two periods must be equal to the expected discount rate. In this model it is assumed that financial liberalization not only raises real interest rates, but also allows individuals new access to borrowing to smooth consumption over time within a life cycle framework. In the credit-constrained world, the marginal utility of present consumption exceeds the marginal utility of future consumption. The new access to credit increases consumption initially since the consumption of the young rises. The fall in savings that results is short lived as individuals adjust their consumption over time (consumption will fall as they get older). What is most important is an increase of sensitivity to variables like interest rates. A rise in the interest rate decreases the incentive to borrow and lowers the utility of consumption raising the inducement to save and lowering the excess demand for savings. See, for example, Gersovitz (1988), Bayoumi (1993) and Mavrotas and Kelly (2001).
2. McKinnon (1973) uses a Fisher/Hirshleifer (see, for example, Hirshleifer, 1970) approach to capital theory in which the utility of an entrepreneur in inter-temporal decision making

is related to three issues: his endowment or potential self-deployed capital; his investment opportunities and his market opportunities for external lending or borrowing. In a fragmented market typical of developing countries, the three components of decision-making are badly correlated. For example, those with internal funds might have few profitable opportunities. The way forward is through the reduction of the dispersion of rates of return to a "single allocative mechanism" which can "accurately reflect the prevailing scarcity of capital" (McKinnon, p. 11-12). By drawing on Hirshleifer's (1970) view of capital McKinnon (1973) is taking a rather extreme position in which the interest rate is not only equal to the return to capital, the opportunity cost of using internal funds, but also reflects the rate of inter-temporal preference (for example, the rate of discounting the future).

3. The financial liberalization school has heavily influenced World Bank thinking, throughout the 1980s and 1990s. This is evident throughout their own publications; see, for example, World Bank, 1983 pp. 58-59; World Bank, 1989, p. 171; and World Bank, 1994, pp. 114-115.
4. Weller (2001) tests these relationships by using univariate tests on a series of variables measuring their deviation from their average in non-crisis times (using Wilcoxon rank sum). Financial crises periods are 18 months before and after the banking crisis month, which is defined as bad loan ratios of greater than 10%. He looks at the level and growth of real credit, stock market growth rates to measure the extent of an asset bubble, the level and growth rate of industrial production, an interest rate differential between the domestic and USA rate as an indicator of deteriorating conditions, the exchange rate deviation from their averages, the current account balance relative to reserves, the rate of multinational bank loans relative to total credit (to see if their entry is stabilizing or destabilizing), changes in official reserves, and real deposits and real M1 to measure the growth of the monetary base. The results confirm the hypotheses. Banking crises variables were significantly different than non-crises years and crisis months before financial liberalization were varied from crisis months after liberalization. There was a widening gap between credit expansion and industrial expansion after financial liberalization indicating more speculative financing. Rapidly expanding credit after financial liberalization financed lower real sector growth where as before liberalization slower credit growth fueled a more rapid increase in the real economy. Both the level and growth rate of industrial production were lower than the average growth rate after liberalization. After financial liberalization stock market prices seem to slow before the crisis years indicating the growing sign of a bubble bursting just prior to the onslaught of a crisis. Real interest rate differentials rise appreciably after financial liberalization increasing default rates prior to the crisis. Overvalued currencies and current account imbalances relative to reserves are all worse after financial liberalization.
5. For most recent cross-country exercises for this purpose, see Reinhart and Tokatlidis (2002), Galindo et.al (2002) and Bekaert et al (2002).
6. His statistical work uses Granger causality tests and quarterly data, spanning the period 1981-1994, for seven Asian countries. This period was one that exhibited a good deal of financial liberalization in these countries, including interest rate liberalization and a variety of new financial instruments. In five of the seven cases the causal relationship was from

growth to finance or bi-directionality.

7. Matsheka(1998) also breaks down the impact of inflation and nominal interest rates on financial savings and finds that interest rates have a negative and significant effect and inflation a positive but insignificant impact. In contrast, Seck and Yasim (1993) in the nine country African sample discover the nominal rate to be negative but insignificant and the inflation rate to be also negative but significant (although again the R-squared is absurdly low even with the addition of per capita income). Beyond the tendency to rely on simple regressions Seck and Yasim (op. cit.) do not remove currency and demand deposits from their calculations of financial savings. They are, therefore, not properly distinguishing monetization from financial development. Currency and demand deposits are not interest bearing and should not be included in financial savings. The result is inflation that is likely to have a larger negative impact and interest rates a smaller impact on financial savings when it includes currency and demand deposits.
8. They argue that the impact of interest rates is still positive through their influence on financial savings. However, from the discussion above that has certainly not been established. It is interesting that the impact of real interest rates on economic growth while positive in simple regressions, again with absurdly low levels of explanation, become insignificant (positive for the 9 country case and negative for the larger sample of 21 countries) when other variables are included in the equation. The authors conclude from this that since factors like financial savings in their equations raise growth, their impact is mostly indirect. However, this is not clearly established in their empirical work. There is no evidence that the mechanisms are in any way arising from those suggested by McKinnon-Shaw.
9. This definition of institutions as "rules, enforcement mechanisms, and organizations ..... that support market transactions" (World Bank, 2002, p. 6) draws on two contributions. The first is North (1990), in which, as mentioned above, there is the formal/informal aspect, complemented by "norms of behavior, conventions and self-imposed codes of conduct" (North, 1991). The second is the work of Nabli and Nugent (1989) who are concerned with how institutions change with respect to their organizational nature. Their focus is on the extent to which institutions and organizations coincide. Our approach, by contrast, looks at five institutionally related but conceptually distinct components that interact to produce valid outcome.
10. See Nissanke and Stein (2003) for a more detailed breakdown of these components.