Financial Markets and Economic Development

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Abstract

Financial markets can influence economic growth by improving productivity of capital, channeling investment to firms and increasing savings for greater capital accumulation. Because of asymmetric information, however, prudential regulation is necessary to ensure the stability of financial markets, particularly during financial liberalization. At times of liberalization, interest rate controls may be a potentially stabilizing force that should not be viewed only as a form of financial repression. This is particularly true given the potential the negative impact of stock markets — due to the associated volatility and speculation — on economic development.

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ملخــــــص

يمكن لأسواق المال أن تؤثر إيجابياً على النمو الاقتصادى عن طريق رفع إنتاجية رأس المال وتوزيع الاستثمارات بكفاءة على الأوجه المختلفة للإنتاج، وتعبئة المدخرات، وزيادة تراكم رأس المال. ولكن بسبب عدم اكتمال هيكل المعلومات يجب الحفاظ على استقرار أسواق المال عن طريق تدعيم الرقابة المالية الحصيفة خاصة أثناء عملية التحرير المالى. لذلك فى أثناء هذه العملية، يعد وضع ضوابط على أسعار الفائدة ممكناً من أجل الحفاظ على الاستقرار والتوازن وهو ما لا يجب النظر إليه فقط كإجراء من إجراءات الكبح المالى، خاصة إذا أخذنا فى الاعتبار الآثار السلبية لنشاط أسواق الأوراق المالية على النمو الاقتصادى التى تصاحب التقلبات الاقتصادية وأعمال المضاربة غير الرشيدة.

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I. Introduction

Financial markets provide a vital link between savings and investment. Their effectiveness and efficiency can positively influence both the volume and quality of investment, an important determinant of economic growth. This paper begins by drawing on neoclassical and endogenous growth models to explain the channels through which financial markets can contribute to the process of economic growth drawing on neoclassical and endogenous growth models. It examines what can go wrong in relation to financial development by examining the problem of financial fragility and its causes. This paper argues in favor of strong prudential supervision of financial institutions and points out the merits of interest rate restrictions which have been neglected largely in the existing literature. Finally, the paper addresses the role of stock markets in the process of economic development which, until recently, has not been researched extensively. The analysis examines both positive and negative aspects of this relationship and draws attention to the effects of stock market volatility on growth.

The paper is organized as follows. Section 2 outlines the positive role financial markets can play in the process of economic development. Section 3 examines the problems of financial fragility and crisis and suggests ways in which they can be avoided. Section 4 discusses the role of stock markets and section 5 summarizes and concludes by presenting some policy implications that may be relevant for Egypt.

II. How Financial Markets Can Contribute To Economic Growth

Depending on the theoretical framework employed, the effects of financial markets on growth can be transient or lasting. In traditional growth theories, the effects are transient; they are present only during the transition to an economy's steady-state growth path. In new theories of endogenous growth, the effects of financial markets can be lasting, they can elevate the economy to a higher growth path permanently. This section analyses the channels through which financial markets may influence the process of economic growth in these two theoretical frameworks, concluding that regardless of the framework adopted financial markets have a potentially positive impact on growth.

Traditional Growth Theories

In the neoclassical model of economic growth (Solow 1956; Swan 1956), the steady-state growth rate of the economy depends on both population growth and exogenous variables of technological progress. Thus, the long-run level of output per capita grows at the exogenously determined rate of technological progress. The level of output per capita in the steady state of the model is determined by the savings ratio, the parameters of the production function, the depreciation rate of physical capital and the rate of population growth, all of which are exogenously determined.

If we assume that the rate of technological progress is zero, then the level of per capita output in the steady state remains constant. Let us now consider a permanent increase in the savings ratio. This may be brought about by a change in the degree of time preference or, importantly, through an increase in the degree of savings mobilization—due to an expansion of the branch network in the banking system. This study concentrates on the labor factor.

A higher savings ratio implies that more resources are available for investment in each period, thus a higher stock of capital per capita becomes sustainable in the steady state and consequently a higher level of long-run output per capita. The new steady rate of economic growth is still the same: aggregate output grows by the rate of population growth, but output per head is constant. In the transition period, however, output per capita grows at a positive rate. Thus, in the neoclassical growth model the financial system can have a positive effect on the steady-state level of output per capita—a permanent effect. It can also have a transient effect on the growth rate of output per capita.

These effects can be interpreted as 'catching-up', 'development' or 'convergence'. To analyze these effects we can consider any two economies identical in all respects except their ability to mobilize saving. In other words, they have identical production technologies, the same rate of population growth and the same depreciation rate, but different savings rates. One has a very low savings rate, due to an underdeveloped banking system. As a result, its level of capital per capita is low and its level of output per head is also low, say $1,000. The second economy has a highly developed banking system and is successful in mobilizing savings. As a result, its saving ratio is much higher, its capital per head is high and it has a higher level of per capita income, say $10,000.

Now, assume that the poor economy's banking system undergoes a major transition and becomes as effective and efficient as the banking system in the rich economy. The savings ratio increases substantially as do resources devoted to capital accumulation. Thus, the capital stock and output per capita begin to grow rapidly. In the new steady state, the two economies have the same capital stocks and outputs per head. The poor economy's level of output per head has converged to that of the rich economy *(see Figures 1 and 2, p.19).* The question that arises is, how quickly can the poor economy's per capita income converge with that of the rich economy? Theory tells us that this depends negatively on the share of capital in output and positively on technical progress, the rate of depreciation and the rate of population growth. Assuming a capital share of one-third, population and technical progress growth rates of 2 percent per year and a depreciation rate of 5 percent, the speed of convergence would be 6 percent per year.[1] Thus, it would take 12 years to double the living standards. Unfortunately, however, empirical evidence suggests that speeds of convergence are much lower than predicted by neoclassical theory, ranging between 1.5 to 3.0 percent per year.[2] This evidence has been seen as inconsistent with the neoclassical model, creating skepticism about its empirical relevance.

The conclusion that we can draw from the traditional growth literature is that while the financial system may not be able to influence the growth rate permanently, it can have permanent effects on the level of output. This may turn an underdeveloped economy into a developed one, even though the process of transition may take a long time.

New Growth Theories

These theories, unlike traditional growth theories, advance the notion of constant or increasing returns to capital itself or, in a wider sense, to the stock of reproducible resources. The latter may include not only physical, but also human capital. There are several reasons that might explain why, at the aggregate level, the returns to the reproducible inputs may be non-decreasing. These relate to positive externalities in production, spillover effects, learning by doing and the like. For example, when a firm

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[1] Utilizing a Cobb-Douglas technology.

[2] See for example, Barro and Sala-I-Martin (1995).

increases its stock of physical capital, it learns at the same time how to produce more efficiently. This has a positive effect on labor productivity, which may have benefits for other firms in the economy. The stock of knowledge may be thought of as a public good, so that when a firm invests the public good available to other firms increases. Thus, while an individual firm may experience diminishing returns to its own capital stock, in aggregate there may be constant or even increasing returns to capital due to the spillover effects on labor productivity.

When the returns to reproducible inputs are not declining, an economy can grow indefinitely at rates that exceed the rate of population growth and the exogenous rate of technical progress. In such economies, the steady-state rate of growth of output per capita would depend positively on the proportion of resources devoted to capital accumulation, broadly defined, and the average product of capital. It would depend negatively on the depreciation rate of the capital stock, also broadly defined, and the rate of population growth *(see Figure 3, p.20)*.

The financial system may, therefore, influence the growth rate permanently in one of the following ways:

(i) Improving the average productivity of capital. The financial system is responsible for channeling funds from surplus to deficit units (funneling). In this process, financial intermediaries collect information and evaluate alternative investment projects (screening). They may also engage in monitoring borrowers to ensure that the loaned funds are efficiently utilized.[3] The more effective the functions of screening and monitoring, the more productive the financed investments.

Another way in which the financial system may improve the productivity of capital is by inducing individuals to invest in riskier but more productive technologies by providing risk-sharing opportunities. There are several theoretical models which illustrate the risk-sharing aspects of financial intermediation showing that savings channeled through financial intermediaries are allocated more efficiently and that the higher productivity of capital results in higher growth (e.g., Greenwood and Jovanovic 1990; Bencivenga and Smith 1991).

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[3] The latter function is more prevalent in bank-based financial systems, such as those of Japan and Germany (see Arestis and Demetriades, 1996).

(ii) Channeling investment funds to firms. In the process of financial intermediation, the intermediaries themselves absorb real resources. These resources reflect in some part the reward for services provided, however they may also reflect the efficiency of the financial intermediation process. The less efficient this process is, the fewer resources are made available for investment out of a given amount of savings.

Inefficiencies in financial intermediation may be technical ones, such as inferior deposit collection and loan technologies, which may in turn be the result of outdated technologies, rigidities and bureaucratic controls or insufficiently trained bank personnel. Technical inefficiency may also be the result of state ownership or bureaucratic controls imposed by the political decision-making process on the intermediaries. These may also be the result of human capital shortages in the economy. A technically inefficient financial system will experience high costs mobilizing saving and channeling these funds to investors. Higher costs will be passed on to both lenders and borrowers in the form of low deposit rates and high lending rates, commissions, fees and the like. They represent a real resource cost to the economy; resources, which could have been invested in the real economy, are instead swallowed up by the financial system in the process of intermediation.

An oligopolistic market structure can lead to a similar outcome without any technical inefficiency present. Yet another factor may be government policy, in the form of excessively large reserve requirements which reduce the amount of resources available for investment for every dollar that is saved. This assumes that reserve requirements are used to finance government consumption (e.g., salaries of civil servants, social security payments), instead of government investment, which in principle could be productive.

Thus, in the context of endogenous growth models, increases in the efficiency of financial intermediation are likely to have lasting effects on the steady-state growth rate. Such increases may be secured by all the factors which make financial intermediaries internally more efficient, such as improvements in management. These may come about by appointing better-educated managers, improving staff training, adopting modern technology (which itself has implications for staff training and education), implementing flexible work practices and eliminating bureaucratic rigidities and controls. Though internal efficiency is a necessary condition, it is not sufficient for making the financial system more efficient economy-wide. Ensuring a healthy degree of competition in the financial system would help to ensure that the rest of the economy enjoys the economic benefits of technical efficiency as well.

(iii) Saving. By mobilizing savings, the financial system influences the amount of resources devoted to capital accumulation. Given that returns to capital (broadly defined) are non-decreasing, the financial system is capable of permanently raising the rate of growth of output per capita. The effect of financial development on saving, however, is ambiguous. This is because financial development may enhance risk-sharing opportunities, allowing individuals to share both endowment risks (e.g., health risks) and rate-of-return risks (e.g., volatility of equity returns). For example, it is well known that the introduction of insurance markets, such as health insurance, may reduce the need for precautionary saving.

The inefficiencies described in (ii) above provide another mechanism for negative effects on saving. A large spread between deposit and lending rates, either due to technical inefficiencies or oligopolistic tendencies, depresses the rate of return on savings and increases the cost of investing. This is likely to lead to lower volumes of savings and investment. Thus, addressing inefficiencies in the financial system is likely to be doubly useful working on growth through raising the amount of saving and, secondly, through the amount of saving that is intermediated (made available for investment).

One can conclude, that whichever class of growth models is adopted the financial system can play a major role in the process of economic growth. Whether its effects are level effects or growth effects, they can be sufficiently large to make the difference between development and stagnation.

The empirical evidence on the relationship between financial development and economic growth confirms that the financial system *can* make a positive contribution to economic growth. It also demonstrates that the causality between financial development and growth does not always run from the former to the latter. In a study of 16 developing countries, Demetriades and Hussein find that even though the causality between financial development and growth is mostly bi-directional, there are important cases in which it runs from growth to finance. Arestis and Demetriades (1996a) suggest that variations in causality reflect country-specific factors, such as the quality of non-financial institutions including the degree of sound governance, the type of financial policies followed and the effectiveness of the government institutions which design and implement these policies. Reverse causality and weak links between financial development and growth suggest that it is possible for the financial system to play a negative role in the process of economic development. This possibility is discussed in the following section.

III. How Financial Markets May Undermine Economic Development

Having presented all the positive aspects of financial development, it is necessary to can consider what may go wrong in financial markets and what can undermine the process of development. This allows for preventive measures to ensure that the economy stays firmly on its path towards economic development. This paper argues that negative effects occur when regulation is inadequate or slack. Thus, efficient financial markets are also well-regulated financial markets.

In order to construct this argument, it is necessary to consider some fundamental principles. To this end, we must discuss the role of asymmetric information in financial markets, the kind of problems it leads to and how these can be addressed by effective regulation. It is then necessary to examine how asymmetric information may interact with financial liberalization to produce outcomes that were never

intended: financial crises instead of financial development. The argument is that: if financial liberalization is to be successful it must be accompanied by strengthening prudential supervision rather than relaxing it. In addition, financial liberalization is not a panacea; quite a few successful cases of financial development and growth were not characterized by liberalization. The argument offers a new perspective on the dangers of unreasonably high real interest rates and the positive role interest rate restrictions can play in this context.

Asymmetric Information

Asymmetric information refers to the unequal distribution of information between two parties in a transaction. It is inherently present in financial transactions, as the borrower is usually more informed than the lender about the likelihood of repayment of the loan. Supposing the borrower intends to undertake an investment project, he is usually more informed than the lender about the probability of its success. Information asymmetries lead to two types of problems: adverse selection and moral hazard. Adverse selection occurs before a transaction takes place and refers to the problem of attracting individuals who are likely to produce an adverse outcome; in a loan contract these are the borrowers who are most likely to default.

Adverse selection worsens when interest rates rise; the higher the cost of a loan the fewer low-risk borrowers apply (adverse selection) and the less willing investors are to underrate low-risk projects (adverse incentives). Thus, the higher the interest rate, the more probable it becomes that borrowers are likely to default. Looking at this problem from the point of view of a financial institution suggests that profits may not be an increasing function of the lending rate. In a classic paper, Stiglitz and Weiss (1981) demonstrate that there is an interest rate above which the relationship between the bank's expected profit and the lending rate becomes negative. Thus, profit-maximizing banks may charge an interest rate at which the demand for loans outstrips the supply. They would therefore need to ration credit and might even turn down prospective borrowers who might be willing to accept high interest rates (a sign of high risk).

The second problem which asymmetric information leads to is moral hazard. Moral hazard refers to a situation, after a transaction has taken place, in which the borrower acts in a way that is 'immoral' from the lender's point of view. In practice, it refers to borrowers undertaking a greater degree of risk than the lender would find acceptable. For example, consider an investor with an excellent investment idea, which will cost $1,000, who ask for a loan at a 10 percent interest rate. This project has a 100 percent probability of success and yields a return of 20 percent. The lender is willing to endorse this and lends the money to the investor, who stands to make a profit of $100. Once the investor has obtained the loan, he discovers an alternative project which yields $4,000 (a return of 400 percent) with a 20 percent chance of success (this is speculation). The investor may well prefer to get $3,900 with 20 percent probability rather than $100 with 100 percent probability. This is of course unacceptable to

the lender because he looses the loan with 80 percent probability. If the lender, however, does not monitor the investor's actions, he is incapable of preventing him from misusing funds.

Adverse selection and moral hazard are closely linked to the financial structure that we observe in reality. They explain why people may prefer to put their money in a bank rather than lend to friends. Their friends can then borrow these funds from the bank, which is more capable of dealing with the problems of imperfect information. Financial intermediaries have important advantages in information collection vis-à-vis private individuals. These information advantages stem from long-term bank/customer relationships, their specialized knowledge of the local economy and their ability to analyze economy-wide and industry trends. Thus, banks are in an advantageous position to collect and analyze information about prospective borrowers and to monitor them after they have offered loans. Through the screening and monitoring process, banks lessen the problems of adverse selection and moral hazard.

Interestingly, financial intermediaries may themselves be the source of moral hazard and adverse selection. In fact, this to a large extent justifies prudential regulation and supervision. Financial intermediaries borrow funds from surplus units in the economy. These surplus units may not be fully informed about the activities of the intermediaries (i.e., who they lend to and for what purpose). This means that depositors are subject to the same kind of moral hazard and adverse selection problems that intermediaries face when lending money.

Consider, for example, a completely unregulated financial system: no restrictions on who sets up a bank, no capital adequacy requirements, no bank supervision of any kind and no lender of last resort. Assume that there are two kinds of bankers: prudent and careless ones, and that depositors cannot distinguish between them. In such a system, who is likely to offer high interest rates to depositors: the prudent bankers or the careless ones? Clearly, the latter. The problem with such an unregulated market is not just that some careless bankers offer excessively high interest rates and collect deposits, but also that the prudent bankers may be forced to follow them on the slippery road to high interest rates or risk their deposits to careless bankers. To compete they must charge their borrowers high lending rates, thus exacerbating the problems of adverse selection and moral hazard. It takes little to turn this situation into a financial crisis. Some borrowers default because they are unable to pay such high interest rates on their loans, and the banks themselves begin to dig into their loan reserves. If the problem is widespread, the bank's reserves will soon be depleted, and the prospect of insolvency becomes apparent. If even just one bank fails, the interlinkages between banks are such that contagious effects are likely to follow. Hence, without a lender of last resort, financial crises ensue with all the deleterious consequences for the real economy.

Although this scenario is hypothetical, it cannot be dismissed as totally irrelevant by arguing that in reality financial markets are regulated. Examples of bank supervision failures are plentiful and painful. In many instances, these led to conditions of financial distress and, in some cases, financial crises. While the existence of a lender of last resort perhaps rules out the worst stages of a financial crisis, supervisory failures can lead to substantial real costs, both direct, in terms of the costs of rescuing and restructuring financial institutions, and indirect, in terms of the misallocation of resources which

accompanies conditions of financial distress. The World Bank (1989), for example, cites that in the 1980s more than 25 countries suffered from financial distress, including developed countries such as the US and Norway. We can conclude that asymmetric information and the concomitant adverse selection and moral hazard are problems that justify the need for effective prudential regulation. One can also add that it is in large part because of these information problems in financial markets, as well as in other markets, that we cannot use orthodox neoclassical economic theory to demonstrate the advantages of market-determined solutions (i.e., demand and supply analysis). The theories which we have on the efficiency of market outcomes are based on economies in which there are no such informational asymmetries. It is only for such economies, which are unlikely to exist in reality, that we can say the free market outcome is efficient (in the Pareto sense).

Financial Liberalization

The theoretical underpinnings of earlier literature on financial liberalization (McKinnon 1972; Shaw 1972) predate the information economics revolution. Consequently, the problems of imperfect information in financial markets are not addressed. The conclusions of this literature are, therefore, not surprising. Interest rate controls are seen as 'financial repression', the main symptoms of which are low savings, low investment and an underdeveloped financial system. Moreover, directed credit programs, reserve requirements and the like are seen as impediments to free markets which reduce the quantity and quality of investment *(see figure 4, p.20).*

This literature does not acknowledge that, in some instances, financial liberalization may lead to excessively high real interest rates, which may result in financial fragility and disintermediation. There are two reasons why this may happen, namely asymmetric information and imperfect competition. This discussion addresses asymmetric information first.

We have already explained that in an unregulated market asymmetric information is likely to lead to financial fragility or even financial crisis, because it is possible for careless bankers to offer excessively high interest rates. In reality, many cases of financial liberalization and bank privatization, especially in Latin America but also in other countries, were characterized by excessive competition for funds. This lead to inflated deposit and lending rates, in some cases exceeding 20 percent in real terms (e.g., Villanueva and Mirakhor 1990; Diaz-Alejandro 1986; World Bank 1989). These excessively high real interest rates exacerbated adverse selection and moral hazard in the credit market leading to excessive risk-taking by firms. In combination with adverse real shocks, this resulted in many firms being unable to repay their loans. Numerous bad debts and waves of bank failures followed, and as a result the real sectors of these economies entered severe and prolonged recessions (Diaz-Alejandro 1985; Dornbusch and Reynoso 1989; Burkett and Dutt 1991).

In Chile, for example, where financial liberalization and bank privatization led to real interest rates of 30 percent, the government liquidated eight financial institutions which accounted for 35 percent of the financial system's total assets in 1981. In 1983, another eight institutions, representing 45 percent of

total assets, were taken over; of these, three were liquidated and the others restructured. Argentina, Uruguay, Turkey and the Philippines had similar experiences with their financial liberalization and bank privatization programs. It is now widely recognized that in these countries regulation failures had much to do with the unsuccessful outcome of their reforms (World Bank 1989; Villanueva and Mirakhor 1990). This experience is the basis for the argument that bank supervision must be strengthened under conditions of financial liberalization.

The second reason why financial liberalization may lead to excessively high real interest rates is due to imperfect competition. Following Courakis (1984), and to simplify matters, assume that the banking system is characterized by monopoly conditions and that there is no imperfect information. This is not wholly unrealistic; in developing countries there were cases of bank cartels stepping in to fix interest rates when interest rates restrictions were lifted.[4] It is then possible to show that removal of a lending-rate ceiling may reduce financial intermediation, because it changes the shape of the marginal revenue curve of the bank. In Figure 5 (*see p.21*), this is a flat instead of a downward sloping curve.

Demetriades and Luintel (1996b) present evidence from South Korea that is consistent with this result. This evidence shows that the imposition of interest rate controls by the Korean authorities increased financial development. This effect is independent of interest rates levels. That is to say, even though a reduction in the real interest rate would lead to a lower level of financial saving, the imposition of interest rate controls resulted in an outward shift of the financial development schedule which more than outweighed the effect of lower interest rates. As a result, the net effect of interest rate controls was an increase in financial saving.[5]

Interest Rate Controls?

This analysis suggests that there may be some merit in maintaining a degree of control over lending and deposit rates, particularly when a country is going through financial reforms. These controls should not aim at keeping real interest rates artificially low but should instead address the problems of excessively high real interest rates. The latter may be the result of inadequately supervised, newly privatized, inexperienced banks operating in a liberalized environment, or it may be due to the existence of bank cartels.

Interest rate controls offer a cheap and straightforward way of addressing some of the problems, such as excessively risky lending, which banking supervision and prudential regulation are normally expected to address. Even in a system with a fair amount of regulation, it is fair to assume that there are

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[5] I should, however, point out that similar work on India has found that the direct effects of interest rate controls there were negative (Demetriades and Luintel, 1996a). My preferred interpretation of this is that "market failure does not guarantee government success."

some imperfections in the regulatory process that warrant interest rate controls to act as a safety device. Such measures would be particularly valuable during times of financial reforms, such as the privatization of state banks and the liberalization of capital flows, which tend to create fertile ground for moral hazard. Bank supervision is a complex business even in normal times when conditions are not changing rapidly, but under changing financial conditions supervision may become even more complex and demanding. At the same time, the demands on central bankers during reforms are likely to be greater, and they may be busy implementing and managing the reforms. Moreover, they may encounter new kinds of problems increasing the demands on their time and skills. The dangers of moral hazard can be exacerbated by the rapidly changing conditions in financial markets, and central bankers may not have sufficient time to address these. Thus, it may be unrealistic and impractical to expect that central bankers not only continue regular supervision of financial intermediaries but also strengthen it under these circumstances (presumably also increasing its frequency). Maintaining a degree of control over deposit and lending rates may be a simple and effective alternative to strengthening bank supervision during times of reform. The experiences of two countries support this position.

The first example is South Korea, widely acknowledged as one of the most successful cases of financial reform. It is well known that the Korean government maintained tight and effective control over most interest rates during the reforms (Amsden and Euh 1993; Fry and Nuti 1992). Interest rate policy in South Korea aimed at maintaining positive, albeit low real interest rates. Even after interest rates were liberalized in the early 1990s, the Korean authorities maintained a close watch on lending and deposit rates and did not hesitate to intervene by using moral suasion on commercial banks to ensure that interest rates did not rise to excessively high levels.

The second example, Cyprus, is a striking one because since 1944 Cyprus has imposed legally a 9 percent ceiling on interest rates. Not only did the Cypriot banking system not stagnate, it flourished. The financial indicators are amongst the highest in the world, the banking system is highly developed, it is sound (bank failures are unheard of) and banks are profitable businesses. Since independence from British rule in 1960, the Cypriot economy grew at remarkable rates, averaging 6 percent per annum over a 30-year period, and currently has a standard of living higher than that of many EU countries. Arestis and Demetriades (1996b) present evidence supporting the view that the role of interest rate controls in the development process is a positive one.

This section can be concluded with the following three points:

- Because of the presence of asymmetric information in financial markets, effective regulation and supervision of financial intermediaries is vital to ensure the stability of the financial system.

- Regulation and supervision may need to be strengthened during episodes of financial liberalization; however, this may be impractical and unrealistic.

- Maintaining a degree of control over interest rates during financial reforms may act as a safety device ensuring the health of the banking system; this may be

particularly valuable when rapidly changing circumstances make effective bank supervision difficult.

IV. Stock Markets

Until recently, the literature on financial development has focused almost exclusively on the relationship between financial intermediaries and economic development, yet equity markets in developing countries now constitute an important source of development finance. Emerging market capitalization now constitutes 13 percent of total world capitalization (US$1,976 billion). Moreover, emerging capital markets now attract substantial portfolio flows of equity investment amounting to $39 billion in 1995 (Demigurc-Kunt and Levine 1996).

Recent studies of the relationship between stock markets and economic development suggest that stock market development goes hand-in-hand with other aspects of financial development. It has been suggested that stock markets may encourage specialization, as well as acquisition and dissemination of information, (Diamond 1984; Greenwood and Jovanovic 1990; Williamson 1986) and that they may reduce the cost of mobilizing savings thereby facilitating investment (Greenwood and Smith 1996). Moreover, well-developed stock markets may enhance corporate control mitigating principal/agent problems by aligning the interests of managers and owners, in which case managers strive to maximize firm value thereby promoting economic growth (Diamond and Verrecchia 1982; Jensen and Murphy 1990). Furthermore, sufficiently liquid stock markets reduce the risk of holding stocks by allowing savers to buy and sell quickly and cheaply when they wish to alter their portfolios. At the same time, they enable companies to have access to capital through equity issues. As a result, well-developed and liquid stock markets may improve the allocation of capital and enhance prospects of economic growth.

Increased stock market liquidity can, however, deter growth. There are three channels through which this may occur (Demirguc-Kunt and Levine 1996). The first is that greater stock market liquidity may reduce savings rates by increasing the returns to investment. Second, given the ambiguous effect of uncertainty on savings, greater stock market liquidity might in fact reduce savings rates through its negative impact on uncertainty. Less uncertainty decreases the demand for precautionary savings. The third channel operates through the euphoria and myopia that may be encouraged by highly liquid stock markets. Dissatisfied participants find it easy to sell quickly. This apparent advantage for investors can lead to disincentives to exert corporate control, thus adversely affecting corporate governance and damaging economic growth in the process. These three channels suggest that enhanced stock market liquidity may not boost economic growth after all.

The relationship between stock markets and growth may also be influenced by the link between stock markets and financial intermediaries, which is not always entirely clear. Stock market development may reduce the volume of bank business,so that stock markets and banks can be substitute sources for corporate finance. The evidence,

however, points to stock market development taking place in tandem with other aspects of financial development. Demirguc-Kunt and Levine (1996) find that countries with well-developed stock markets also have well-developed banks and non-bank financial intermediaries. Similarly, countries with weak stock markets tend to have weak banks and financial intermediaries. Demigurc-Kunt and Maksimovic (1996), in their investigation of the effect of stock market development on firms' financing choices in 30 industrial and developing economies from 1980 to 1991, find that initial improvements in the functioning of a developing stock market produce higher debt/equity ratios for large firms while small firms are not significantly affected. In developed stock markets, further development leads to substitution of equity for debt financing, especially for long-term debt.

Empirical evidence by Levine and Zervos (1996), utilizing pooled cross-country regressions and data for 41 countries during the period 1976 to 1993, demonstrates that various measures of equity market activity are positively correlated with measures of real activity and that the association is particularly strong for developing countries. Using aggregate indexes of overall stock market development (constructed by Demirguc-Kunt and Levine 1996) which combine information on stock market size, liquidity and international integration, Levine and Zervos (1996) show that these measures are robustly correlated with current and future rates of economic growth. They also show that stock market effects are additional to those of banking-system development. They, therefore, conclude that stock markets provide financial services different from banks. Levine (1996) strengthens the argument and suggests that stock markets may enhance growth through liquidity, which makes investment less risky, thereby enabling companies to enjoy permanent access to capital through liquid equity issues. This argument leads to the conclusion that "stock market development explains future economic growth" (Levine 1996, p. 8). Atje and Jovanovic (1993), using a similar approach, also find a significant correlation between economic growth and the value of stock market trading relative to GDP for 40 countries from 1980 to 1981.

Many economists remain skeptical, however, as to whether stock markets can play an important role in promoting economic development. Even in developed economies only a small fraction of corporate investment is financed through equity issues (Mayer 1988). Furthermore, the stock market is frequently accused of being a source of too much volatility in the economy. For example, Keynes (1936) has argued that, "As the

organization of investment markets improves, the risk of the predominance of speculation does . . . increase," and that although, "speculators may do no harm as bubbles on a steady stream of enterprise," a serious situation can develop, "when enterprise becomes the bubble on a whirlpool of speculation." (p.158) When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill done. It is usually agreed that casinos should, in the public interest, be inaccessible and expensive. And perhaps the same is true of stock exchanges" (p.159).[6]

The pressures Keynes referred to emanate from the apparent security afforded by the high degree of liquidity available in 'deep' stock markets. This liquidity allows speculators to alter their portfolios quickly and cheaply in response to changes in mood, rumors and fads and provides independence of stock market asset values from underlying fundamentals. This may impart excessive volatility to stock market returns, although there is disagreement in the literature over the existence of *excess* volatility in stock returns (Shiller 1981, 1989). Speculative pressures may also emanate from transactions induced by the euphoria created by financial liberalization, which rewards speculators with short-term horizons and punishes those with a long-term view (Keynes 1936, Ch. 12). Furthermore, speculative pressures may emanate from non-financial corporations (ranging from insurance to industrial manufacturing companies) which enter stock markets to chase the higher returns available through speculation, thereby diverting resources from their normal activities to the stock market. A critical manifestation of these activities is increased borrowing to finance short-term stock market speculation. Lenders in turn may feel compelled to provide this type of finance, essentially because of fear of slower growth in their capital base and loss of market share (Keynes 1936; Minsky 1986).

An undesirable implication of speculation is that economies may be forced to bear a greater degree of 'ambient' risk than hitherto, and even prudent financial institutions may be driven to abandon financing of real sector activities. As speculative projects grow in importance, volatility of returns increases (DeLong, et al 1989; Grabel 1995). This may hinder investment and therefore hinder growth while exerting upward pressures on real interest rates in view of the higher risk (Federer 1993; DeLong, et al 1989). As a result, economies may become more susceptible to financial crises, with possible disruptive effects in the real sector. This may further compound the problems of bank distress and loan defaults giving rise to a 'credit crunch'

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[6] See also Singh 1997.

(DeLong, et al 1989; Grabel 1995). Furthermore, the increase in speculative activities is clearly a waste of resources, since real resources are devoted to seeking returns from speculation. If the social costs of speculation outweigh the private gains, these activities can then be viewed as 'directly profit-seeking' (Bhagwati 1982; Grabel 1995). Thus credit and capital may be misallocated and misdirected (Grabel 1995).

The negative effects of stock market volatility on the real economy and the process of financial development are demonstrated by Arestis and Demetriades (1997) in the case of the German and American economies.[7] Others have examined the 'volatility' characteristic of stock markets from the point of view of its relationship to the size of stock markets and capital control liberalization. Demirguc-Kunt and Levine (1996), in a sample of 45 developed and emerging markets from 1986 to 1993, find that large, internationally integrated markets tend to be less volatile. Levine and Zervos (1995) explore the effect of liberalizing capital controls in 16 countries, which substantially reduced barriers to international capital and dividend flows in the 1980s. They conclude that stock market volatility increases significantly immediately following capital control liberalization in approximately half of the countries considered and does not decrease significantly in any of them. This finding may be considered with that of Demirguc-Kunt and Levine (1996) to suggest that, in the long run, stock return volatility is lower in countries with more open capital markets.

V. Concluding Remarks

This paper argues that well-regulated financial markets *can* play a vital role in the process of economic development. This is, of course, a view that is widely shared among economists and international financial institutions.[8] We have also put forward some relatively new ideas. First, that the traditional view of interest rate controls as a source of financial repression needs to be reassessed. Interest rate controls may have beneficial aspects, especially during periods of financial reform, which have been overlooked by the literature on financial liberalization. Second, we have provided arguments that express a fair degree of skepticism about the positive effects stock markets can play in the process of development. Recent and not so recent research suggests that Keynes' distrust of them may not have been totally unfounded.

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[7] Work by Arestis and Demetriades (1996c) has found similar results in the case of five economies (US, Germany, France, Japan, S. Korea).

[8] See World Bank 1989.

As far as the Egyptian financial system is concerned, the substantial steps made in recent years are undoubtedly commendable. Financial reforms were clearly successful, and we note that interest rates have already been deregulated without any adverse consequences for the economy. The success of the past should not, however, lead to complacency in the future; privatization of state banks is one of the items on the reform agenda that must be keenly pursued. This could be an important step forward for the Egyptian financial system. On the basis of this argument, however, it is necessary to advise some caution. This move may well contain hidden dangers, especially in relation to the level of interest rates, which the Egyptian authorities should be aware of. Closely monitoring interest rate developments and taking all necessary steps to ensure that excessively high interest rates do not become a feature of the Egyptian financial system could help to safeguard the success of future reforms.
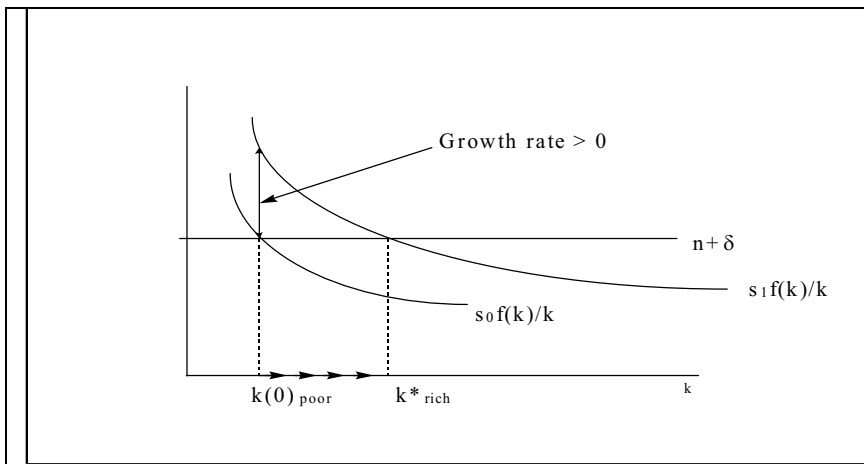
Figure 1:   Steady States for Rich and Poor Economies.
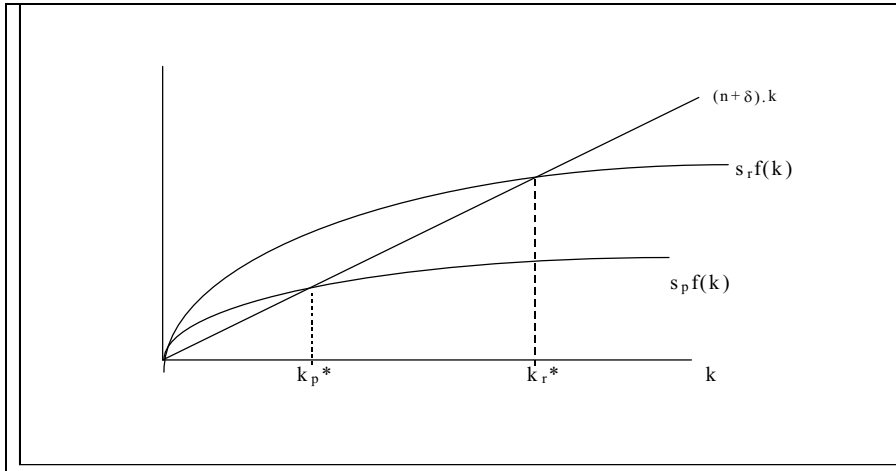
Variables:

   f(k): output per capita

   k: capital stock per capita

   s_r: savings ratio (rich)

   s : savings ratio (poor)

   n: rate of population growth
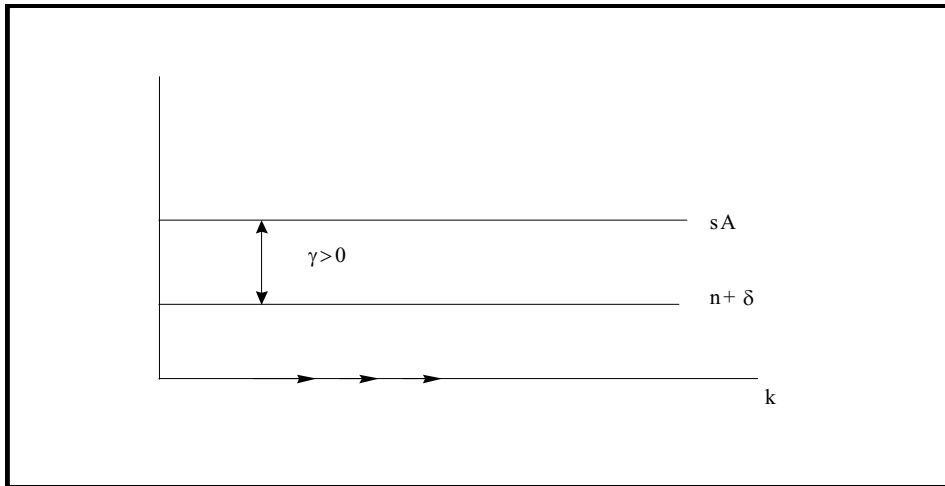
   δ: rate of depreciation

Figure 2:   Convergence in the Neoclassical Model

Variables:

   k: capital stock per capita

   n: population growth rate

   δ: Depreciation rate

   s: Savings rate

   f(k): Output per capita

Figure 3:   Growth in the AK Model

Variables:

s: savings rate

A: average product of capital

k: capital stock per capita

n: population growth rate

δ: depreciation rate.

1γ: growth rate of capital per capita

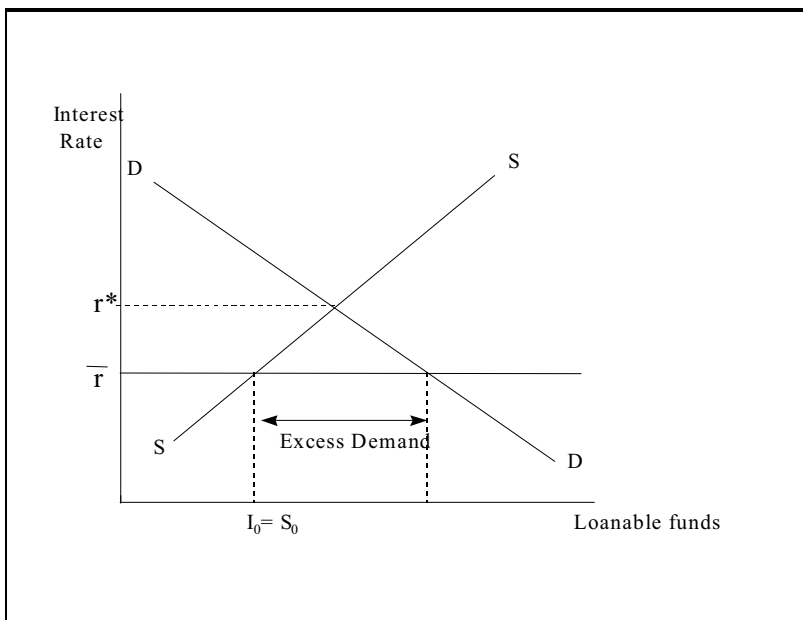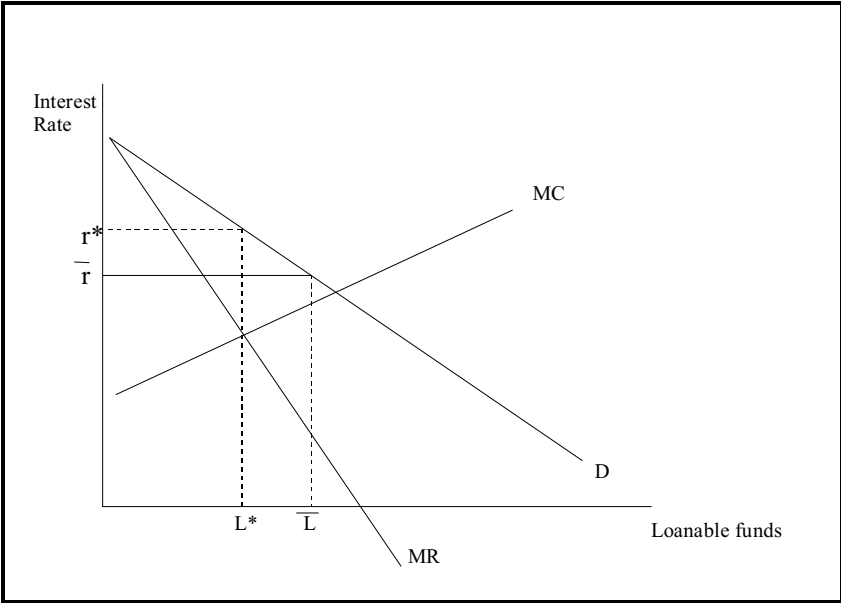**Figure 4:   The Financial Repression Model**

Figure 5:   The Monopoly Banking Model

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