

**Economic Development, Finance and Liberalisation: A Survey and Some Unresolved Issues**

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### **Abstract**

The financial sector has always played a central role in the development of market capitalist economies, but analysis of the precise nature of this role has been hampered by the emphasis on `real' factors in the main stream of economic thought and the static nature of financial theory. Strategies for financial liberalisation are now broadly taken to be a pivotal aspect of the economic reforms necessary in developing economies. Any such liberalisation in this sector must be seen in the context of the acute problems of asymmetric information and the need for resolute policies promoting competition and disclosure of information.

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## **Introduction: The Ambivalent Role of Finance in Economic Development**

The role of finance and financial institutions is central to contemporary debates surrounding strategies for economic development. In recent decades, the need to develop an understanding and justification for financial allocation has taken on a renewed urgency, most especially in the post Cold War period, as international agencies such as the IMF and the World Bank have indicated that financial reform is a central aspect of the economic integration into the world economy of developing and post socialist economies. It is in this context that a new literature giving a significant place to the role of finance in economic development has emerged and become predominant. Surveys of this literature may be found in Gibson and Tsakalotos (1994), Fry (1995) and Levine (1997). Much of the literature surveyed is concerned with issues at the macroeconomic level, though Levine (1997) gives extensive coverage to microeconomic allocation, which will be the focus of the present discussion.

Even though the development of finance and financial institutions has been co-extensive with that of capitalism itself, there has remained in this literature an ambivalent attitude with regard to the role of finance in economic development. One explanation for this ambivalence might seem to be the controversial role this sector has played in such unproductive phenomena as financial scandals and panics. Another possible explanation is that the utility of the financial sector to the economy as a whole is far less straightforward than sectors such as agriculture, manufacturing or retailing: the justification for financial activity inevitably takes place at a high level of abstraction. These explanations are, however, of a peripheral nature.

The main reason for the presence of an ambivalent attitude towards finance among economists concerned with economic development is that the main stream of economic theory, most certainly from

the time of Adam Smith and David Ricardo, has focused on the role of 'real' factors in the determination of economic outcomes, including economic growth. This 'classical dichotomy' postulates that finance, if it is not to obscure the role of these real factors, is to be seen as a diaphanous veil through which real outcomes may be viewed. A doubling or a halving of the amount of money in an economy will have its effect upon the general price level, but relative prices within the economy - the relationships between the prices of apples, labour and land - will stay the same: prices of every single good or service in this 'frictionless' economy will rise or fall by the same percentage as a result of this change in the stock of money. Since real outcomes in the economy - the allocation of goods and services - are dictated by relative prices, they will therefore be unaffected by changes in the stock of money. Changes in the stock of money will only affect the general price level - the monetary economy. This grand simplification greatly facilitates the analysis of monetary changes on the economy and has permitted the development modern macroeconomics.

It has been primarily this 'hard wiring' of the classical dichotomy into modern economic theory which has served as an obstacle to the analysis of the role of finance in economic development rather than, for instance, the opposition of Keynesian economists to a consideration of monetary factors.<sup>1</sup> During the early Cold War period, '[the] wider aspects of the role of financial development, and the part that might be played by improving capital markets, was scarcely mentioned' (Little (1982), p. 110). This fact might seem somewhat surprising, given that in the context of economic rivalry with centrally planned economies, there was a powerful motivation for a justification for the role of financial allocation, since such forms of allocation were largely absent in the centrally planned system<sup>2</sup>. The 'real factors' emphasis of economic theory has, however, inhibited a coherent integration of the theoretical and practical considerations which surround the role of finance in microeconomic allocation and its effect upon economic growth.

In part I, we shall review the issues surrounding the influence of finance on economic allocation and growth. In part II we examine these issues in the context of financial liberalisation and its effect upon economic growth in LDCs - the most substantive policy question in which these issues are currently engaged. Part III considers the arguments of the critics of financial liberalisation. We conclude with a brief summary of the issues surrounding financial liberalisation. While there are issues which are yet to be resolved concerning finance and financial liberalisation in economic growth, some straightforward lessons can clearly be drawn even in the present state of knowledge.

## **Part I The Role of Finance in Economic Allocation and Growth**

### *Static theory and the neutrality of money*

The implications of the presumption of monetary neutrality to other aspects of economic analysis were only fully brought home with the publication of the famous theorem of Modigliani and Miller (1958): the value of a firm will not be contingent on its debt to equity ratio or (as subsequently proved) its dividend payout ratio in the context of the classical dichotomy and its associated perfect capital market. Over 40 years after the publication of the theorem, the economics profession has still not recovered from the shock of discovering that the standard presumption in economic theory of the presence of a perfect capital market implies that finance and financial variables can have no effect upon real economic outcomes in the business world.

Thus, in a perfect capital market, the commonplace calculations made in the financial analysis of a firm - liquidity ratios, ratios of short and long term indebtedness to the term structure of assets, as well as the aforementioned debt to equity and dividend payout ratios will have no effect on the fortunes of the firm.

In the context of economic development, probity in the handling of financial affairs at the microeconomic level is often a key aspect of the advice offered to developing nations. The core of economic theory suggests that such matters are not worthy of consideration.<sup>3</sup>

Modern economic theory puts further obstacles before us if we wish to make the traditional arguments for the role of finance in the economy. The traditional arguments for the role of finance fall into two classes. Firstly, finance and financial institutions increase the efficiency of the use of investment funds. But at the heart of modern economic theory is the presence in the economy of a state of competitive

equilibrium, in which the economy's inputs, in conjunction with existing technology and ideas, are already being used optimally on the frontier of the economy's aggregate production. Discussions concerning how societies can use their existing inputs more efficiently (e.g. Porter (1990)) are redundant in this context,<sup>4</sup> as are any notions that financial institutions can increase the efficiency of the use of investment funds in an economy. In addition, the statistical estimation techniques used in economics almost invariably presume that the economy's inputs are being used efficiently on the frontier of the economy's production function, therefore making it difficult to test any propositions concerning the role of financial institutions in improving the efficiency of the use of inputs (see Aigner *et al.* (1977) and Comelli *et al.* (1998) for a survey).

The second class of arguments suggests a role for finance in increasing the rate of saving in the economy.

This argument is reduced in significance by neo-classical growth theory, which predicts that financial variables only influence the level of income rather than the growth of income. The presence of diminishing returns to capital in neo-classical growth theory dictates that the long term growth rate in *per capita* income will not be enhanced by an increase in the level of investment (see Solow (1956)): as Lucas argued, 'a thrifty society will, in the long-run, be wealthier than an impatient one, but it will not grow faster' (Lucas (1988), p.10). Any increase in the rate of saving generated by financial institutions will therefore not affect the rate of growth. In the new, or endogenous growth theory, this problematic result is overcome by presuming that increased investment by one firm has spillover effects for other firms. As a result, increases in productivity are generated for the industry as a whole and hence economic growth can result from increased investment (Romer (1986)). Finance and growth in the context of endogenous growth theory will be analysed below.

#### *The static ideal of a perfect capital market*

A further difficulty in the application of economic theory to economic development is its static nature.

Thus, the perfect capital market model serves the important purpose in economic theory of setting a standard for how a capital market *should* work. But, very much like the model of perfect competition for goods to which it corresponds, the model proves of limited usefulness in the context of economic development, since change and innovation fit awkwardly here. In the perfect capital market model, the capital market plays a passive role as a provider of funds. There is little room here for the dynamics of competition in the form of the development of new instruments for savers, new mechanisms for the financing of projects and the extension of the geographical domain of finance. Yet these factors are central to the evaluation of the efficacy of a financial system and are an important aspect of the heuristic justification for the role of finance to be found in Levine (1997) and others.

The perfect capital market is objective and anonymous. Just as in other forms of a perfect market (e.g. the market for copper), in which the commodities of different producers are viewed as identical, so in a perfect capital market, equivalent projects from different sources (whether a giant firm or a local producer) will be viewed identically. Thus, let us consider the calculation of the net present value (NPV) on a project, be it by a firm or government:

$$NPV = R_0 + \frac{R_1}{(1+r)} + \frac{R_2}{(1+r)^2} + \dots + \frac{R_n}{(1+r)^n}$$

where  $R_i$  is the cash flow in period  $i$  and  $r$  is the rate of discount. The theory of the perfect capital market offers some hints of the characteristics of capital market that is functioning appropriately. In such a market, the supply (mostly saving) and demand (investment in plant, etc.) for a society's loanable funds will yield a price, a rate of discount  $r$  which is strictly analogous to the way in which a (perfectly) competitive market for copper, if it existed, would yield a uniform price for copper. This price  $r$  will be common to all buyers and sellers, in the same way that the price of copper is common to all in a perfect market.<sup>5</sup>

In a perfect capital market, there is a universal and uniform rate of discount upon which all projects are judged, which emerges from the intersection of the marginal disutility of saving and the marginal productivity of investment. Using this as an ideal, we shall see below that, as a rule<sup>6</sup>, a *too low* rate of discount will be linked to the defect of 'long termism', in which finance will be found for projects yielding too low a rate of return or which are overly ambitious, while a *too high* rate of discount will be linked to the defect of short termism.

There is a powerful presumption that a perfect capital market would have desirable, rational characteristics. With every project incorporating the same  $r$  into the formula (with account having been taken of the riskiness of different projects - not at all a trivial task), the capital market will disinterestedly rank projects in terms of their contribution to net value. Thus mathematicians from the University of Craków may have a project for the design and sale of software which has excellent prospects for generating a great stream of cash flow. In the days of central planning, however, such a project might never see the light of day, as it loses out to other projects with poorer prospects for returns, but with greater political clout - such as the drilling of more coal mines, with a consequent loss of general efficiency.

A perfect capital market will use, without prejudice, the same measuring rod  $r$  for the evaluation of all projects. Competitive forces dictate that outcomes in the market emerge under conditions of objectivity and anonymity, with a minimum gap between the borrowing and lending rate. Finance will be allocated to its most highly valued use in society. The model of the perfect capital market is important for setting a normative standard by which real life capital markets can be judged, though as we shall see below, there are limitations to its use even in this context. As a description of the workings of actual capital markets,

however, it is wholly inadequate.

### *Financial efficiency versus financial evolution*

Contemporary financial theory and its associated empirical research rests on the presumption that financial markets are efficient.<sup>7</sup> But this notion of efficiency is different from, and not to be confused with, the concept of capital market perfection discussed above. In the context of economic development this concept does not provide us with a meaningful framework in which to discuss changes in the efficacy and speed with which capital market institutions respond to profitable opportunities. Many of the central issues concerning the role of finance in economic development are thus excluded from consideration in the efficiency framework.

The doctrine of financial efficiency falls into three categories<sup>8</sup>. Weak form efficiency suggests it is impossible to make money on a consistent basis on financial markets solely by discerning trends in financial prices; with semi-strong efficiency, money cannot be made even with the use of publicly available information; in the case of strong form efficiency, financial markets are presumed to reflect the true state of affairs so accurately that money cannot be made even in the presence of privileged groups or insider information.

Of these forms of financial efficiency, by far the most interesting is the semi-strong form, since a real life approximation to weak form efficiency is a minimum prerequisite to a rationally functioning market, while strong form efficiency has never existed. The semi-strong form of efficiency asks the question - given the availability of public information about financial and business affairs, does the market absorb this information into the prices of financial assets with sufficient speed and accuracy that it is impossible to use this information on a consistent basis to 'beat the market' and make money?

What we find, however, is that even this concept of financial efficiency is inadequate as a tool for the analysis of developmental trends in the financial sector. Since semi strong form efficiency asks whether a market is efficient *given* the state of publicly available information, it may well be that, in this sense, the financial markets in the coffee houses of seventeenth Britain were 'efficient' then, and that they are efficient today as well. The question begged, in this context, is how the expansion in the quantity and quality of publicly available information have changed the workings of the capital market, moving it perhaps closer in the direction of 'perfection', if we evaluate financial markets in static terms. In a dynamic context, this expansion of information may have even greater significance for the evolution of financial markets.

The theory of financial market efficiency, since it postulates a *given* state of publicly available information, tends to obscure the dynamics of the *creation* of such information in different financial market systems and contexts and obscures the role of financial innovation and evolution. These changes can affect both saving and investment. Financial institutions and other actors can affect the context in which saving takes place by taking initiatives to attract more saving and by creating new and more attractive savings mechanisms and instruments; they can encroach on the domain of other financial institutions (e.g. banks moving into the sale of insurance), thereby increasing the range of choices available to savers. These institutions can also be innovative through the creation of new forms and terms of lending, including the creation of forms of money and near money such as credit cards (which can influence the rate of saving as well as investment), by the seeking out of new opportunities for lending (e.g. to smaller firms or new industries) and in the creation of innovative forms of finance (the bundling and securitisation of mortgages; equity based participation schemes).

Other forms of innovation may conflict with the traditional roles of financial institutions when they take the form of disintermediation - the by-passing of the financial intermediaries in the raising of funds from the public. Thus, the use of equity finance and, in recent times, the growth of securitised forms of finance contest the central role of banks as the source of firm finance. Even these 'marketised' alternatives exist to a great extent because of the aggressive role played by investment banks and other financial institutions in creating them, as well as the initiatives taken by firms themselves to reduce the cost of finance.

Financial evolution also takes the form of geographical dispersion. While, at one level, finance and trade have always linked the peoples of the Eastern Hemisphere, the interpenetration of finance between countries and even within them is an on-going process. Financial evolution and innovation cannot be explained merely as a reflection of changes in the technology of transportation and communication. These changes, rather, evolve and interact with new attitudes to the conduct of business and finance, and gradually transform the whole environment in which economic decisions are made. No simple, systematic tendency can be detected in these changes (e.g. a movement from finance provided by institutions to financing in open markets), but after taking into consideration the retrogressive effects of war and differences in national histories, there is a long term tendency for business and financial affairs to be conducted more aggressively over time, and over an ever wider geographical domain.

The above claim might seem to put an optimistic gloss on the history of finance, with its presumption of an increasingly competitive and efficacious financial sector. But innovation in the domain of finance is not necessarily comparable to equivalent effects in the 'real' sector of the economy, and may have drastically different consequences. We offer the following example. In the 'real' sector, we have observed in recent years improvements in the control of inventories (stocks and work in progress) emerging from

the innovation of the 'just in time' system from Japanese industry. This managerial innovation has resulted in substantial financial savings for firms such as Toyota, as they have been able to reduce their holdings of glass, steel and rubber in the manufacture of cars. But these innovations do not simply generate financial benefits to Toyota alone. They also reflect a net rise in the productivity, and therefore the real income, of the society as a whole, as the same number of cars are manufactured with reduced holdings of glass, steel and rubber.

We may contrast this real event with an imaginary one. Suppose an innovation emerges from the financial sector which permits every enterprise in the economy to perform the same volume of transactions with only half of their present holdings of cash. For every *individual* enterprise, this innovation will appear to be a financial saving of the same kind as that specified above for Toyota. But from a social perspective, the results are very different. The saving of cash by each individual enterprise from this innovation might be of very little value from society's point of view. Unlike the savings made above in the holdings of goods such as glass, steel and rubber, which have substantial real marginal costs of production for society as a whole, no equivalent gains emerge for an increase in the efficiency of cash holdings by individual enterprises: the marginal cost to society of (fiduciary) money creation by the government is close to zero. Thus, financial innovations of this kind may yield little of the net benefits to society we see in the case of the savings by Toyota of their holdings of real resources such as steel, rubber and glass. On the contrary, an innovation which merely permits every firm to economise on its holdings of cash may merely have reduced the liquidity of firms, so that this 'financial innovation' has merely added to the fragility of the economy.<sup>9</sup>

In general, innovation in the financial sector must be appraised differently from changes in other areas of the economy because of the special considerations which emerge in the context of macroeconomic

regulation. The fact that the medium of exchange in modern economies is dominated by the issuances of banks and other privately owned profit making institutions makes for perpetual tension and difficulties: for instance, strong government commitments to back up the financial sector in a crisis can encourage, rather than prevent, risky behaviour. Political questions of regulation and control are thus particularly difficult and unavoidable in the financial sector.

### *Financial institutions and economic development*

The provision of finance is thus not merely a question of the presence of financial 'markets', but of institutions actively engaged in facilitating the operation of these markets. In the contemporary literature, financial institutions are seen to be contributing to raising the efficiency of investment by providing the following three services (King and Levine (1993a), p. 516): firstly, financial institutions efficiently evaluate projects and select the most promising ones. Evaluating projects is very costly and requires very high fixed costs which are generally the out of the range of individuals; specialised financial institutions develop cumulative experience in the evaluation of projects. Secondly, financial institutions pool household savings and mobilise them to finance the more promising projects. Thirdly, financial institutions share and diversify risks associated with innovations.

It is also claimed that financial institutions can contribute in increasing efficiency by facilitating the quality or accumulation of human capital, an essential growth enhancing factor in endogenous growth theory, by offering finance to financially constrained households (Gregorio (1996)). We may note here that the financing of education – most especially higher education, is likely to be for the very top share of the income distribution in developing countries; secondly, it is traditionally recognised that free capital markets tend to underinvest in human capital because of the problems in indenturing future income streams. It is common practice, therefore, to use 'non liberalised' forms of credit, such as government guaranteed loans, to subsidise students.

Furthermore, the presence of financial institutions will increase the fraction of investment which is directed to projects with high levels of social return (Greewood and Jovanovic (1990)), since in the early stages of development, an economy is likely to possess a poor level of organisation and information concerning the range of potential productive activities. (This same argument has been used in the defence of government planning.) Financial institutions act as 'monitoring stations', assembling information concerning investment opportunities and providing professional advice regarding productive investment projects and may thus add to the fluidity of investment by siphoning funds away from traditional venues and into new domains.

Financial institutions, however, must pass through a transitional period of learning. During this period, they supply funds to projects and learn about good projects (Lee (1996), p. 160). This learning is positively affected by the amount of loans disbursed by the financial institutions. The greater the intensity and efficiency of a financial system, the more rapid the improvement in the flow of information. Thus, the higher the level of loans to firms, the greater more rapid be the improvement in learning and economic growth. However, in our opinion, this process is likely only to be of much use if there is the possibility of competition among financial institutions: after all, governments and nationalised sectors should as well be able to 'learn by experience', but there is no obvious process forcing them to *use* this experience in the future to raise efficiency.

For many projects, 'non-convexity' in investment is likely to prevail, i.e. there will be projects in which efficient operation involves a scale of funds which is unlikely to be forthcoming from an individual investor or entrepreneur (Greewood and Jovanovic (1990)). Financial institutions pool individual funds and channel them into the productive projects. Along with the quantity (saving and investment) and

quality (efficiency) effects discussed above, financial institutions increase the proportion of saving that goes to investment (Pagano (1993)). That is, an increase in the activities of financial institutions resulting from financial liberalisation raises competition among financial institutions and thereby reduces the leakage of investment caused by profits and commissions charged by financial institutions.

Diamond and Dybvig (1983) point to the ability of financial institutions to pool risk and thereby invest in projects which are productive, but of relatively longer term and therefore too illiquid for individual investors due to the uncertainties about future liquidity demand. This ability of financial institutions to invest in these illiquid, but highly productive projects enhances the efficiency of investment and hence a rise in economic growth (Bencivenga and Smith (1991)).

Bencivenga and Smith (1997) has further extended the work of Diamond and Dybvig (1983) to show that economic development will tend to generate specialisation in (financial) markets. The setting up of markets incurs costs. These costs are more affordable for societies on high levels of per capita income than for those where it is low. An increase in income raises the level of transactions through markets which reduce the average (or marginal) costs of transactions. These productivity gains lead to specialisation in market structures. Diamond (1984) suggests further that the fixed costs of acquiring information by every individual investor in a new investment will mean that financial institutions can economise on the duplication of research efforts.

Most of the roles performed by financial institutions mentioned above could be performed as well by governments. A preference for privately run financial institutions would have to be linked to the presence of competition among financial institutions and the possibility that they could make losses and not be bailed out by the government. Note that the proponents of financial liberalisation argue that the privatisation of nationalised banks and the removal of entry barriers will enhance competition among the

financial institutions, and hence an increase in functional and allocative efficiencies.

The arguments here closely resemble, and appear to be a modernised form of those of Alexander Gerschenkron (most especially as elaborated by Charles Kindleberger in the context of finance; to be discussed below) that in less developed economies, there is more of a tendency to use administrative mechanisms in finance (e.g. banks) in place of the (financial) markets which exist in more developed (e.g. Anglo Saxon) economies. The reason for the greater use of these centralised administrative mechanisms in developing economies is that such mechanisms are more efficient in the conservation of the scarce resources in skilled manpower than the sophisticated, marketised arrangements that exist in richer countries. It is curious that arguments usually identified as favouring 'the market' (i.e. financial liberalisation) are so closely linked to the defence of administrative centralisation from Gerschenkron.

### *Forms of capital market failure*

Capital markets may well work inappropriately. They may evidence serious distortions simply because of the presence of monopoly power among financial institutions, be they the high street clearing banks in a rich country or the local money lender in a remote village in a poor one. Problems of informational asymmetry can cause problems in any market context, but are especially problematic in the context of finance.

The McKinnon-Shaw hypothesis (to be discussed below) states that credit rationing mainly results from ceilings on interest rates since they cause an under-supply of saving which generates an excess demand for credit. This hypothesis predicts that there would be no excess demand if interest rates are allowed to be determined by the rule of supply and demand. However, critics of financial liberalisation argue that

market clearing is neither a law nor should be viewed as assumption necessary for competitive analyses (Stiglitz and Weiss (1981), p. 409; Stiglitz (1991)). The prediction, as Stiglitz and Weiss argue, that ceilings on interest rates cause credit rationing is based mainly on the unrealistic assumption that financial markets are the same as those for other goods, e.g. 'markets for chairs and tables' and thus that the prices have neither sorting nor incentive effects.

Contrary to this underlying assumption, lending rates - the prices of loans - help in distinguishing risky borrowers from safe ones, as only risky ones would be willing to borrow with high rates (sorting effects). In addition, high rates force borrowers to undertake high return projects in order to repay loans (incentive effects). Note that the rate of return and the probability of the success of a project are generally negatively correlated. Thus, interest rates convey a signal of the probability of the default of borrowers.

The expected returns on risky projects to risk averse lenders are lower than those from safe projects. Thus, a safe borrower, unlike a risky one, would be unwilling to pay a high interest rate. Consequently, financial institutions maximising expected profits usually charge lower than equilibrium rates. In fact, financial institutions will decline to provide loans to borrowers who are willing to pay equilibrium rates, which would generally be higher in LDCs than the available rates. If, however, it is hypothetically assumed that banks charge market clearing rates, then borrowers would be forced to use loans in high yielding, and therefore risky, projects to pay the costs of loans. Financial institutions avoid adverse selection and moral hazard problems<sup>10</sup> by avoiding high interest rates and risky borrowers. Hence, a loan market in equilibrium is generally associated with credit rationing.

In addition, the collection of strong collateral, suggested by the McKinnon-Shaw school, from risky

borrowers does not eliminate the adverse selection and moral hazard problems (Stiglitz and Weiss (1981)). The requirements of strong collateral force entrepreneurs without strong collateral to start with small projects, which have relatively higher failure rates (Dunne and Hughes (1994)). Moreover, starting with the same level of equity, wealthier borrowers are the entrepreneurs who have taken risks and succeeded. Thus, wealthier borrowers are risk lovers and are able to provide strong collateral. Hence, taking strong collateral has two types of negative effects: first, it excludes potential entrepreneurs who are unable to provide strong collateral and secondly, it selects only wealthy borrowers who are risk lovers and hence, the probability of default for them is higher, *ceteris paribus*. Thus, a reduction in the debt-equity ratio of borrowers is not optimal if small projects have the high probability of failure<sup>11</sup>.

Furthermore, credit rationing prevails in equilibrium even when collateral in conjunction with interest rates is used optimally (Stiglitz and Weiss (1992)). Consider two types of loan contracts that banks can offer. One is denoted by F which is associated with high interest rates and weak collateral. The other contract is G and associated with low interest rates but strong collateral. Poor and rich borrowers buy F and G contracts, respectively. Banks would prefer F contracts as they yield high expected returns. Conversely, if banks offer G, they would be unable to offer high deposit rates, since a low lending rate is associated with G. Thus, both rich and poor borrowers have to accept F contracts as they do not have any other options. Therefore, a pooling equilibrium exists in which both risky and safe borrowers are offered the same loan contract. Similarly, if the supply of loans is less than the demand, some borrowers regardless whether they are poor or rich, fail to obtain loans through F contracts, while only some rich borrowers will be offered G contracts in order to cover the cost of funds. That is, there exists a separating equilibrium. Under both equilibria, credit may be rationed to differentiate borrowers, where lenders only know whether the borrowers are rich or poor, while the riskiness of the borrowers is unknown. Thus, the use of collateral with interest rates does not serve to allocate credits optimally.

Consequently, the expected returns in Walrasian equilibrium are lower than those from some other contracts in which credit rationing exists.

The probability of success and failure, which generally changes over the business cycle also affects real interest rates, causing a violation of conventional macroeconomic presumptions that there is a pro-cyclical relationship between interest rates (i.e. returns on capital) and the marginal productivity of capital. More precisely, the probability of success (failure) of a project is higher when the economy is in boom (recession) and hence the proportion of total returns to an investment project captured by lenders varies over the business cycle. Thus, there is a rise in expected returns to lenders to safe projects and a fall in credit rationing when the economy is in boom, and vice versa.

Traditional theory predicts that an increase in the money supply reduces interest rates and increases investment and growth. By contrast, it is argued (Stiglitz and Weiss (1992)) that an increase in the money supply raises economic growth by increasing the availability of credit rather than by decreasing interest rates. The increase in money supply will enable banks to offer more loans to poor borrowers, i.e. F contracts with high interest rates and weak collateral in our earlier example. This type of borrower is generally proportionately more excluded from obtaining loans when banks have inadequate funds, since these borrowers cannot meet the demand for high valued collateral. Thus, an increase in the money supply raises the capacity of lenders to extend new loans with high average lending rates to the high return projects which are generally undertaken by poor borrowers. Contractionary monetary policies reduce the availability of credits for poor borrowers and hence, reduce average lending rates. This view is supported by the general finding that it is the availability of credit rather than its cost which is important in LDCs and by the fact that most of the available funds in, for instance, Bangladesh are taken by 'selective' big borrowers, with very little left for small ones (Ghatak (1995); Siddiki (1999)). Thus, a

rise in the money supply would increase loans to small borrowers who are willing to pay high interest rates, as is the case in the Grameen Bank of Bangladesh.

### *Market failure and instability in financial markets*

In many LDCs, the flow of information regarding borrowers and lenders is very often manipulated against small depositors, with loans often granted to inefficient or even false investment projects undertaken by big borrowers. An uninterrupted flow of information and appropriate monitoring is important to avoid such manipulation. However, information and monitoring are costly and they have externalities, i.e. public good characteristics: information collected by one financial institution can be copied by others, and hence information and monitoring are under-supplied by competitive markets (Stiglitz (1994)). The absence of appropriate monitoring and information about the credit worthiness of borrowers or projects generates liquidity problems for financial institutions and creates instability in the financial markets ((Diaz-Alejandro (1985)).

Similarly, the lack of monitoring of banks encourages the officials of the banks to divert funds in their own use, which in turn damage the credibility of financial institutions, causing depositors to allocate less resources through financial institutions. The resulting financial crises, e.g. the bankruptcies of banks have macroeconomic consequences: the problems of the bankruptcies of banks reduces the credibility of the banking system (Diaz-Alejandro (1985)). The government role in circumventing financial crises or rescuing the financial system from a crisis is vital. Governments' assurances that they will protect the interests of depositors would help to increase the credibility of the financial system and hence depositors would avoid rushing to withdraw their money from banks. The moral hazard problem discussed above, however, indicates that there may be a high social cost to such policies.

Furthermore, the presence of large fixed costs in evaluating and monitoring borrowers or projects prevents financial institutions from acting in competitive manner. Financial institutions prefer to establish long-run relationships with existing customers and keep their transaction records and credit histories unknown to other financial institutions. This special knowledge is used to sell other products to the existing customers. In other words, information regarding the behaviour of customers has scale economies which could be used in product diversification. Thus, a competitive market is sub-optimal and cannot generate functional and allocative efficiencies in the presence of scale economies (Gibon *et al.* (1994), p. 617). Moreover, customers are generally reluctant to change to a new bank as banks are also generally hesitant to lend new customers without knowing their credit histories. Thus, although there are many lenders and borrowers, financial markets may well not behave in a competitive manner.

Another straightforward form of capital market distortion may take place because of corruption: the resources of the state are allocated on the basis of what we may call non economic criteria. The orders of magnitude of this form of capital market distortion can be enormous. Among international economic agencies, governmental corruption seems to have displaced even inflation as the leading enemy of the day.

In the absence of these phenomena, capital markets may still work imperfectly. Defects may appear in the following forms. First, we may observe real investment on the part of enterprises taking place under conditions of long termism (a level of  $r$  which is 'too low'). One claim, widespread in the academic literature is that in situations of a separation of ownership from control, managers may wish to pursue projects with low rates of return to the shareholders because it protects or enhances their own position. For instance, a company with cash and/or opportunities to raise funds, but poor prospects for returns on new investment projects may indulge in uneconomic takeovers of other companies, rather than handing

the cash over to the shareholders and permitting them to gain higher returns from the re-investment of these funds. A common explanation for the universal conclusion that corporate takeovers are usually unwise investments for the shareholders of the acquiring firms is that the managers of the acquiring firms would rather use any excess cash even in an unwise acquisition than hand the money back to shareholders. Investment banks have also been accused in recent years of promoting uneconomic mergers and managerial buy-outs for the sake of the fees gained thereby.

A further form of long termism may take place in which the benefits of cumulative experience on the part of specialised financial institutions is neutralised by their tendency to finance poor projects in established industries rather than move capital broadly into sectors outside of the financial institution's specialisation. In recent years, critical comments about German capital markets have centred around continued investment in automotive, engineering and steel technology at the expense of new areas, such as telecommunications and biotechnology.

Secondly, it has been claimed that capital markets may show signs of short termism (a level of  $r$  which is 'too high'). In the period before the Second World War, it is widely held that shares in companies (both in the US and Britain) were held largely for the dividends they would yield, rather than on the basis of share valuation. Business historians have sometimes claimed<sup>12</sup> (in contradistinction to the comments above) that professional managers, tied to particular company for life, fought an heroic battle against 'short termism' on the part of dividend-hungry shareholders. According to this view, true value maximisation could not be left to mere owners, with their overly high subjective rate of discount on future earnings, but resided with professional managers.

At the height of the success of nations in which there were strong links between banks and firms, such as

Japan and South Korea, the claim was made that, by contrast, short termism emerges in the Anglo Saxon system with its prominent equity markets. Firms dare not undertake long term projects, it has been suggested, because any dip in current returns risks depressing the company's share price and leaving it open for takeover. Furthermore, Anglo Saxon banks, with no stake in the firm's equity and with a tradition of short term lending are, it is suggested, overly risk averse.

But, the above 'imperfections' imply capital markets are in place. Such problems, in the context of economic development, are of a second order of importance compared with the question of whether, in the first instance, capital market institutions exist at all, or whether any real competitive mechanism is present. In an historical context, this may be the critical issue. It is possible that competition is barely present between financial sources, and between investors, that for borrowers, physical mobility, lack of knowledge, and the poor 'travelling' of a business's reputation means that they face a local monopolist when dealing with lenders. There may exist cabals or groups privileged in the receipt of finance, and a whole host of behavioural constraints on competition: habits and rules of thumb in financial allocation; discrimination on the basis of size; urban/rural biases; political influence and/or corruption and its effects on financial allocation. Furthermore, the government may have failed to play its role in the creation of a proper environment for finance. Governments may act in arbitrary manner (e.g. fail to pay debts); there may be the absence of laws and the enforcement of property rights necessary for the maintenance of a financial sector; the government may have failed to maintain the domestic or international value of the currency.

Alexander Gerschenkron<sup>13</sup> suggests that, for late developing economies such as Germany and Russia, highly centralised, directed institutions are used *faut de mieux* as substitutes for the rich infrastructure of early developing economies. In areas of finance and investment, centralised forms of banking and direct

governmental involvement were used in place of the more marketised forms of finance to be found in the Anglo-Saxon economies<sup>14</sup>. Thus, in the context of late, or underdeveloped economies, financial infrastructure is not available. The strategy of centralisation is one that conserves scarce managerial resources and may permit a nation to use centralised resources to monitor information on 'best practice' from abroad for the sector in question.

#### *Limitations to a properly functioning decentralised capital market*

More striking are the reasons for believing in the limitations of decentralised capital market institutions *even when they are working properly according to the canons of the perfect capital market*. First, the 'market' may be myopic - from a *social* perspective may underestimate the returns on particular projects because the 'spillovers' to other industries may not have been given sufficient weight - the problem of so-called external economies. In some cases, co-ordinated development of several sectors simultaneously may be necessary (e.g. steel, machine tools and cars), both for the supply of necessary inputs (e.g. machine tools for the car industry) and for the presence of a market for the output of a sector for the realisation of scale economies (e.g. the presence of a car industry to absorb the output of the steel industry). Considerations of investment priorities from a more centralised perspective (e.g. governmental structures such as MITI in Japan, or the strategy of a large, diversified firm) may be critically important, *most especially* in early stages of economic development.

The experience of the second industrial revolution of the latter nineteenth century, with the demands for integration between steel, railways and other sectors is more typical of the economic development of most countries. This second industrial revolution also made crucial demands on the development of infrastructure - transport, municipal habitation (sanitation, etc.) and education. To the extent that a freely

functioning, competitive capital market will inappropriately value projects by treating each one 'on its merits' (i.e. not taking into consideration the return to a broad range of projects undertaken simultaneously), the perfect capital market may fail as an ideal even when seeming to function appropriately on a project-by-project basis.<sup>15</sup>

Secondly, returns to *human* capital may be underestimated. It is inherent in the nature of the contractual arrangements which exist under capitalism (where indenturing and slavery are banned) that firms are incapable of capturing all the returns to the improvements in the human capital which they employ, even though these improvements represents gains to society as a whole. There are two important cases here. In the first instance, the social returns to investment by firms in skill and knowledge-based sectors will tend to be underestimated, because much of the return cannot be captured, because it is embodied in individuals who are mobile.<sup>16</sup> Positive externalities in investment are most striking in the case of on the job training. Firms will tend to 'underinvest' in the training of their own work force, since in the absence of indenturing or slavery, it is impossible for the individual firm to reap the full value of this 'capital investment': other firms gain much of the value from this positive externality when workers change jobs. There is thus a gap in the value to society (or the industry in question) as a whole of on the job training, and the perceived value of this training to individual firms.

We see here one justification for the 'overinvestment' by the US Department of Defence in high technology industries in the post war period. This seemingly wasteful use of funds overcame what would have been an inherent tendency for the firms themselves to invest too little from a societal perspective. For instance, it is difficult to believe that a founding company of Silicon Valley, Fairchild Instruments, would have persevered with its high levels of investment in new technology without government 'overfunding', since much of its investment was in their personnel - their 'human capital',

which literally had the capacity to get up and walk away from the company (and indeed did so), taking the new technology with them in their heads when they formed new (and competing) companies.

A second important issue surrounding human capital is that when returns to improvements in human capital are correctly measured, free capital markets may be seen to be yielding inappropriate signals on the decision to invest domestically or abroad. Friedrich List, to this day, practically ignored in the Anglo Saxon world in the context of the history of economic thought, who advocated a national investment strategy for Imperial Germany, was making an argument which could now be supported by the 'new' or endogenous economic growth literature discussed above. Domestic investment within Germany in, for instance, its chemical or steel industries yielded not only the observable financial returns, but further invisible ones in terms of endogenous technological change and the development of the knowledge and the skills base of the work force. It is likely that these investments yielded higher 'returns' to the German economy as a whole than any portfolio investment which they could have made abroad, even when the nominal returns to investment abroad were higher than domestic investment. This problem creates a major issue of public policy for developing countries, because any attempt to deal with this question must also confront the fact that the imposition of bars on capital mobility on a broad scale are likely to be to the detriment of developing countries. It could well be argued that it was very much the high level of sophistication of British financial institutions by the latter part of the nineteenth century which made it exceptionally easy and attractive for investors to invest abroad rather than domestically, and that the Germans benefited from the 'primitive' nature of their financial institutions. Contemporaneous pressures promoting a greater approximation on an international basis to the universal rate of discount of the perfect capital market may in future thwart domestic strategies of growth linked to forms of long termism, as has been practiced for several decades in Japan and South Korea. If, indeed the 'human' element is having a growing significance in the historical evolution of capitalism, with the decline in the

importance of national raw materials advantages and of nationally based technologies, the gap between the true, or social return on projects and the returns as indicated by financial markets will tend to widen in the international context.

Thirdly, a traditional argument in favour of a governmental role in investment activity is that decentralised financial markets can fail if the transactions costs involved in getting a substantial number of investors together to pool risks for very large projects is too high. However, the very ability of individuals in government to initiate risky projects without personally bearing the financial costs of failure is also an aspect of weakness in such activity, this weakness taking its most extreme form in the campaigns of socialist countries, such as the collectivisation of Soviet agriculture initiated in the late 1920s and the 'Great Leap Forward' in China in the late 1950s. (Such a weakness in the decision making process is likely to apply as well to the managers of large companies, most especially where the constraints of competition are weak.)

Fourthly, Arrow (1962) has demonstrated that perfectly competitive commodity markets (and their associated capital markets) will yield a less than 'optimal' amount of invention (though more than in a monopolised market), thus yielding a role for governmental activity. The substantive importance of this problem has long been manifest in agriculture: a century before the publication of Arrow's article, Abraham Lincoln's Land Grant Act, setting up centres of agricultural research in the US, was, it may be surmised, implicitly based on this principle; the key role of the US Department of Defence in the post war development of the high technology sector is perhaps the most prominent recent example of the key role of governmental intervention in the process of innovation.

The efficacy of finance in the development and growth of a market economy is thus not in doubt. As we

have seen, however, questions have arisen with regard to the optimal functioning of financial institutions and structures. These issues will reappear in the context of the debate over financial liberalisation.

## **Part II Financial Liberalisation**

### *An overview*

At present, the role of finance in economic development manifests itself most prominently in the debates surrounding the liberalisation of the financial sectors of developing countries in the context of an increasing globalisation of financial affairs in general. Financial liberalisation implies a whole series of measures for the financial sector of a developing country in the direction of bringing practices in this sector in line with what is likely to be found in advanced capitalist, most especially Anglo Saxon countries: privatisation of banks and other financial institutions; interest rate deregulation; relatively low reserve requirements for banks; the reduction or elimination of directed credit towards preferential or priority sectors or for government borrowing. How appropriate is this programme of reforms for the developing nations of the world?

The theory of the perfect capital market, which acts as a model and motivation on policies for financial liberalisation, also hints at a preference for Anglo Saxon market based forms of finance (e.g. stock markets) as opposed to financial systems of the traditional Japanese or German type, with their strong links between firms and financial institutions. Financial liberalisation in developing countries also involves, by implication, the opening up of the financial sector to the influence of financial affairs from abroad. Such policies may take the form either of a liberalisation of restrictions on the activities of domestic financial institutions and others in functioning internationally (e.g. of restrictions on the flow of capital abroad), or in the freedom accorded to foreign financial institutions and foreign nationals to function in the domestic financial environment. Financial liberalisation may also involve the introduction of common practice international standards in the disclosure requirements, auditing and operating procedures demanded of financial institutions.

Until the 1970s, governments' financial policies in LDCs were influenced by Keynesian and structuralist views which advocated repressing the financial sector based on the belief that low levels of interest rates and the direction of credit towards priority sectors increased investment and economic growth. Keynesian economists also tended to favour rises in governmental expenditure to increase effective demand, which would in turn increase investment and economic growth (Bottomley (1971)). Lastly, financial policies undertaken by governments were often motivated by the notion that the financial sector is an 'easy' source of government revenues collected from monetary growth through seigniorage or inflation taxes. Thus, the financial sector in many developing countries was often repressed by imposing ceilings on interest rates, high reserve requirements on commercial banks and the presence of directed or preferential credit policies and inflation taxes.

The relative indifference to any effects of misallocation due to financial repression on the part of Keynesian economists is due to two divergent influences - the orthodox monetary neutrality theorem, which predicts that the money supply only influences the general price level but not the real economy as well as the critiques made above concerning tendencies in competitive financial markets to under-invest in infrastructure and human capital. McKinnon (1973) and Shaw (1973) argued against Keynesian and structuralist views, suggesting that financial repression exerts an adverse impact on saving, investment and the rate of economic growth. They therefore advocated the liberalisation of the financial sector.

We proceed below first to explore the McKinnon and Shaw hypothesis that economic growth rates are positively related to financial liberalisation. We then consider the views of the critics of financial liberalisation, including the post-Keynesian and neo-structuralist approaches and the controversy surrounding the writings of Joseph Stiglitz, in which it is argued that financial liberalisation is

stagflationary and that government intervention is needed to avoid instability in financial markets. We then consider the empirical literature concerned with financial liberalisation.

### *The McKinnon-Shaw Model*

McKinnon (1973) and Shaw (1973) argue that financial repression exerts an adverse impact on saving, investment and the rate of economic growth while financial liberalisation positively affects these factors<sup>17</sup>. Both models argue that the removal of ceilings on deposits results in positive real interest rates which increases saving, i.e. the availability of funds for investment, and economic growth. In these models, investment (I) is a negative function of real interest rates (r) while saving is positively influenced by r and rate of growth of national income (g):

$$I = I(r); I_r < 0$$

$$\text{and } S = S(r, g) \quad S_r > 0, S_g > 0$$

The impact of interest rate ceilings on savings and investment is explained in Figure 1.

Real interest rates

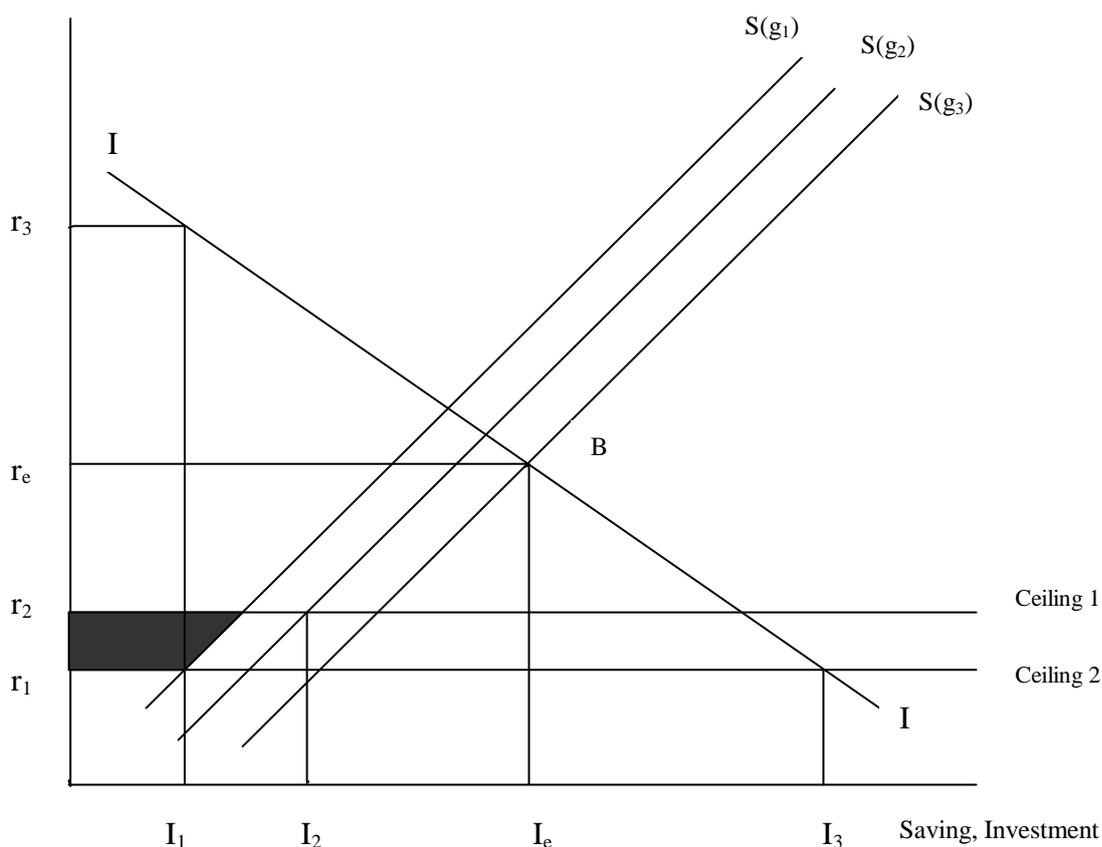


Figure 1: McKinnon-Shaw Hypothesis

Real interest rates and saving are measured on the vertical and horizontal axes, respectively. Let  $S(g_i)$  is the rate of savings,  $g_i$  is the rate of economic growth with  $g_{i-2} < g_{i-1} < g_i$ .

In a free market without government controls on interest rates, the equilibrium, i.e.  $S = I$ , would be at E with real interest rate  $r_e$  and investment and saving equal to  $I_e$ . Assume that the government has imposed a ceiling by setting the nominal interest rate, so that the real interest rate is  $r_1$ , which is lower than the rate in equilibrium  $r_e$ . With the controlled interest rate  $r_1$ , the level of saving is  $I_1$ , which is lower than both equilibrium rate  $I_e$  and demand for credit to invest ( $I_3$ ). Thus, investment is constrained by a lack of saving. With the ceiling on deposit rates and excess demand for investment, banks set lending rates at  $r_3$ .

The lending institutions use margins ( $r_3 - r_1$ ) for non-price competition. Furthermore, there is an excess demand ( $I_3 - I_1$ ) for credit, which leads to credit rationing. Consequently, some profitable projects fail to obtain credit from financial institutions.

Ceilings on interest rates thus distort the economy in the following ways (Fry (1995), p. 26; Fry (1997)): first, the low level of interest rates encourages agents to increase present consumption, which reduces saving for future consumption below the socially optimal level. Secondly, depositors prefer to invest directly in low-yielding projects rather than accumulating money in banks, who would otherwise lend to more highly productive investors. Thirdly, entrepreneurs choose more capital-intensive projects at the cost of labour-intensive ones, as price of capital funds is lower than that which would exist with market determined interest rates. Fourthly, entrepreneurs proceed with low-yielding projects which they would not want or could not afford to proceed with at market clearing interest rates. Fifthly, a low level of income resulting from low lending rates discourages financial institutions from spending money on collecting information about projects or borrowers. Finally, financial institutions with externally determined interest rates will show a preference for low risk projects, since financial institutions are barred from charging the high risk premia associated with high return projects. Consequently, many projects which have returns lower than the threshold level of returns are selected. These projects would not have been installed with market clearing rates.

Financial liberalisation in the form of removing or easing restrictions is thus seen to reduce inefficiency and to increase saving, investment and economic growth. Consider the case in which the government relaxes the restriction and raises the interest rate to  $r_2$  (Figure 1). Saving and investment increase to  $I_2$  and economic growth to  $g_2$ . Projects which have returns higher than  $r_1$  but lower than  $r_2$  will no longer be undertaken, so that easing restrictions can be seen to increase the efficiency of investment and reduce

credit rationing. Saving and investment increases to  $I_e$  and income growth to  $g_3$  when no restriction on the interest rates is imposed and credit rationing disappears.

By contrast, financial repression in the form of governments' borrowing from the financial sector adversely affects investment and its efficiency and economic growth (Schreft and Smith (1997); Roubini and Sala-i-Martin (1992a)). The main purpose of financial repression in LDCs is to raise governmental revenue (Roubini and Sala-i-Martin (1992a)). In countries with a high rate of tax evasion, the financial sector is the potential source of 'easy' resources for public budgets. Thus, governments in LDCs repress the financial sector by increasing monetary growth in order to finance their budget deficits. The resulting high inflation reduces the quantity and quality (i.e. efficiency) of investment and the rate of economic growth for a given level of saving. Thus, financial repression and economic growth are negatively correlated and the direct negative relationship between inflation and growth found by many studies is spurious, as the true cause of both the inflation and the slow growth (itself linked to inefficient investment) is the governmental budget deficits of the countries in question. Governments can further distort the financial sector by offering relatively high nominal interest rates on government bonds (Schreft and Smith (1997)). These high rates influence financial institutions or individuals to use a large proportion of their funds to buy government bonds in place of private capital investment, thus crowding out private investment.

### *Financial Policies and Endogenous Growth Models*

Using both neo-classical and endogenous growth theory, a large volume of empirical studies have been carried out to test the McKinnon-Shaw hypothesis<sup>18</sup>. Findings supporting this hypothesis have concluded that policies in LDCs involving high reserve requirements, inflation taxes and the imposition of ceilings on nominal interest rates have resulted in the repression of the financial sector in these countries and that

more liberalised financial regimes are associated with faster economic growth. (Fry (1995), pp. 4-6). However, other studies reach opposing conclusions. Since surveying the whole empirical literature is beyond the range of this survey, we will only review some important empirical studies, which include both the neo-classical and endogenous type of empirical growth models.

One complication with several of the studies below is that they blur the distinction between the efficacy of financial liberalisation as a policy with the efficacy of finance in general for the facilitation of economic growth. As a logical matter, the two issues are quite distinct. It is conceivable that countries pursuing policies of financial repression might, if successful with these policies, register increases in their rates of economic growth compared with countries pursuing more liberalised policies. As a result of the higher rates of growth in these 'repressed' economies, their financial sectors (as measured, for instance, by the level of liquid liabilities to national income) could well end up being more developed than in liberalised economies. As we have suggested in the Introduction, the development of finance and financial institutions has been co-extensive with that of capitalism itself: the question at hand here is the best way to facilitate that development.

Gelb (1989) in an extensive empirical study has examined the impact of financial policies on economic growth using a cross-section of 34 countries over the period of 1965-85. The author finds that both interest rates and financial deepening, measured by money supply as a percentage of GDP, positively affect economic growth. Interest rates increase both the quantity and quality (i.e. efficiency measured by the incremental capital-output ratio) of investment and both effects together stimulate economic growth. Importantly, Gelb finds the efficiency effect is at least twice as large as the investment, i.e. quantity, effect.

Ghatak (1997) examines the impact of financial liberalisation on economic growth in Sri Lanka during 1950-1987. He concludes that interest rates and financial deepening (measured by real monetary growth) increase economic growth. Demetriades *et al.* (1996a) explore the relationship between financial policies and economic growth in Nepal during 1962-1992. This study concludes that real per capita income is positively associated with financial deepening and negatively with bank branches. The negative relationship between per capita income and bank branches is said to reflect inefficiencies in financial intermediation for a given level of financial development. The authors also find that financial repression in form of selective intervention has a positive impact on economic growth. In another extensive study using time-series techniques, Demetriades *et al.* (1996b) find that there have been stable long-run relationships among real per capita income and at least one of the key financial indicators in 13 out of 16 countries, most of which have followed or been following financial reforms. In these long-run relationship, financial variables positively effects real per capita income.

Using data for 85 developing countries from 1971-1995, Fry (1997) finds an ‘inverted U shaped’ relationship between the annual rate of economic growth and financial development. This result implies that too high or low real interest rates are deleterious for economic growth: economic growth is maximised when interest rates are within the range of -5% to + 15%. Similarly, using the Chilean and Korean experiences, Clarke (1996) advocates positive but low interest rates and the broad regulation of the financial system to ensure macroeconomic stability. The author also argues that the equilibrium interest rate is undefined and unstable as the interest rate plays dual roles: this equilibrium rate equilibrates saving and investment and also determines portfolio readjustment, including capital inflows. Portfolio readjustment causes fluctuations in interest rates. These fluctuations are intensified by the uncertainty and volatility of expected returns to investment and potential inflows of capital, all of which may which distort the real exchange rate and increase cost of borrowing.

Using a simultaneous equation model and data for 16 developing countries over 1970-88, Fry (1998) concludes that financial repression proxied by real squared interest rate and black market exchange rate premiums<sup>19</sup> reduces the investment to GDP ratio and export growth. The reduction in investment and export growth in turn reduces output growth rates. Output growth is also directly reduced by financial distortions, possibly through a reduction in the efficiency of investment.

Contrarily, using data for Argentina over the period of 1961-1982, Morisset (1993) concludes that an increase in interest rates does not necessarily raise the availability of credit to the private sector. Since the increase merely results in a change in agents' portfolios from government bonds to bank deposits, it raises government budget deficits, which results in a rise in the government borrowing, which crowds out private borrowing. The implication of these results is that the government should bring about a balance in its revenues and expenditures before liberalising the financial sector.

The above studies use neo-classical growth theory in order to test the consequences of financial repression on economic growth and relationship between economic growth and financial variables. This dependence on neo-classical growth theory limits the significance of any positive relationship, since even on *a priori* grounds no such relationship is to be expected. To circumvent this criticism, many authors have adopted the endogenous growth theory framework to test the relationship. For example, Roubini and Sala-i-Martin (1992b) has empirically tested the consequences of financial repression and whether inflation directly causes lower economic growth. The authors do not find any direct causal relationship between high inflation and low economic growth. Instead, they find that financial repression causes the high rate of inflation, which reduces productivity of capital and hence the fall in economic growth rates. Using cross-section data for 80 countries over the period 1960-1989, King and Levine (1993b) show a

highly significant positive relationship between various financial indicators and real per capita income. Once again, we note the need to take care to differentiate between the efficacy of financial liberalisation as a policy and of finance in general.

Roubini and Sala-i-Martin (1992b) also examine that whether inclusion of financial variables into the Barro (1991) growth model can help to explain low rates of growth in the Latin American region. Barro in his model includes regional dummies along with initial income, human capital, government expenditures and political instability. The Roubini and Sala-i-Martin (1992b) model includes financial repression.<sup>20</sup> as explanatory variables. Their results show a negative and statistically significant impact on economic growth for financial repression. In addition, the inclusion of financial variables cause the regional dummies for Latin American countries in the Barro model to be insignificant and improves the overall explanatory power (the value of  $R^2$ ) of the model.

Gregorio and Guidotti (1995) have also extended the Barro (1991) growth model by incorporating financial variables. The authors use the share of private sector credit as a percentage of GDP as an indicator of financial liberalisation since, they argue, the private sector channels resources more efficiently than publicly owned institutions. The authors find that financial liberalisation generally increases economic growth. This relationship is relatively stronger in low and middle-income countries than that in high income countries. The results also show that three-quarters of the effect of private sector credit on growth is channelled through efficiency gains. These gains are relatively higher in low- and middle-income countries than in high income countries. The authors argue that the weak relationship between financial liberalisation and growth in high income countries is because financial liberalisation in these countries occurs to a large extent outside the banking sector. Thus, private sector credit in developed countries fails to capture financial liberalisation.

Using panel data set for 12 Latin American countries for 1950-85, Gregorio and Guidotti (1995), however, find a robust and significant negative relationship between financial liberalisation and growth in Latin American countries. The authors suggest that during the 1970s and 1980s financial liberalisation without appropriate regulation in the Latin American region caused the financial sector to collapse, which exerted a negative impact on economic growth. These findings suggest that financial liberalisation may well be a necessary condition for the financial sector to improve economic growth, but will hardly prove sufficient.

The results of King and Levine (1993b) have been criticised (Demetriades and Hussein (1996b)): first, the initial value of financial indicators defined by the ratio of liquid liabilities to GDP in 1960 is used by King and Levine in order to examine whether financial development has the long-term effect on growth. They find a positive association between growth and the initial financial development and argue that the financial development leads economic growth. However, these results only represent a contemporaneous relationship and not a long-term one: because financial indicators in a given country are correlated across time, they should be proxied by the level of current data rather than by initial ratios. An initial ratio may not embody important subsequent changes of the variable.

### **Part III The Critics of Financial Liberalisation**

#### *The neo-Keynsian critique*

In contrast with the McKinnon-Shaw approach, neo-Keynsian and post-Keynesian economists have argued that financial liberalisation reduces effective demand and economic growth and increases instability in the financial system (Burkett and Dutt (1991); Stiglitz (1994); Taylor (1983)). The post-Keynesian approach contests the view that investment matches saving for a market determined equilibrium interest rate since a investment decision depends on many other factors, namely, expectations about future demand (i.e. ‘animal spirits’), political stability etc. Saving, of course, in the Keynesian tradition, is primarily a function of income rather than interest rates. Thus, an increase in saving does not necessarily raise investment. Moreover, the presence of information asymmetries, externalities and economies of scale causes market failures. These failures of the unregulated market can create financial instability.

The post-Keynesian theory of finance and economic growth predicts that financial liberalisation in a closed economy with excess capacity reduces aggregate demand and profits. This reduction in turn reduce saving, investment and economic growth (Burkett and Dutt (1991); Gibson *et al.* (1994)). Financial liberalisation in the form of interest rate deregulation has two opposing effects in the short-run. First, the positive effect: a rise in interest rates influences agents to increase deposits and hence, there will be a rise in the supply of loans, which reduces the lending rate and boosts investment and economic growth. Second, the negative effect: the increase in saving reduces aggregate demand and hence, a decline in profits, saving, investment and output. Uncertainty, or a pessimistic view regarding future profits can further worsen the negative impact, so that the negative impact may predominate, with a resultant decline in saving, investment and economic growth. In the presence of long-run accelerator

effects on investment, an increase in nominal interest rates in an economy with excess capacity raises the costs of borrowing which in turn raises prices, reduces real wages and the aggregate demand ((Dutt (1991)). Hence, there is a decline in saving, investment and capacity utilisation. The long-run negative impact is more persistent and severe than that in the short-run.

An increase in interest rates has further negative consequences (Gibson and Tsakalotos (1994), pp. 607-609): first, it causes a real exchange rate appreciation, exerting a negative impact on the tradable sector by making exports more expensive. The appreciation reduces exports and increases imports and hence induces a rise in the trade deficit. Secondly, it may incur losses to a bank when it is lending long-term and borrowing on a short-term basis. Banks cannot change lending rates on old credits during the agreed period. However, deposit rates go up after financial liberalisation. Thus, from the banks' point of view, the cost of funds is higher than the returns from the funds and hence, banks experience losses. Thirdly, the increase in interest rates raises government budget deficits in LDCs, since a significant proportion of deficits are financed by bank loans. Moreover, financial liberalisation in terms of a reduction in reserve requirements and a relief from buying government bonds reduces tax revenues. The decline in government spending also reduces the aggregate demand, which further worsens the negative impact of financial liberalisation on output and growth.

Note that in LDCs, government budget deficits and the dependency of government revenues on inflationary taxes (seigniorage) are very high. In addition, the government is the main investor in education and other infrastructural development. Consequently, interest rate liberalisation would reduce government expenditures on education and other capital investment. Thus, the above arguments suggest that government budget deficits should be reduced before liberalising the financial sector.

### *'Upward Financial Repression' and instability in financial markets*

Assume that market clearing interest rates are non-positive or very low due to a low level of demand for investment funds. This low level of demand may be caused by depressed expectations and uncertainty about the future and/or either a preference for liquidity or for the accumulation of savings to make large purchases when access to credit markets is limited. Under such circumstances, saving may well take place even when interest rates are negative. Therefore, the setting of the real interest rate at a level above equilibrium by the government (termed upward financial repression), would cause an excess supply of funds, with the supply of investable funds higher than the demand derived from the stock of profitable investment opportunities (Beckerman (1988)). There is another way of expressing this phenomenon: there is a problem in the setting of a market clearing rate here even in the *absence* of government intervention. Keynesians such as Stiglitz (see section II) are suggesting that what appears to be financial liberalisation leading to a market clearing equilibrium may merely be a form of upward financial repression. Financial orthodoxy relates to the notion of 'getting the priced right'. But Keynesians ask – is there a 'right' price for finance in the same way that there is for chairs and tables?

Financial institutions under such conditions face a dilemma, as they can neither lend deposits nor keep deposits to themselves. As is the case in many LDCs, banks may hesitate to lend, since there is an absence of profitable investment opportunities due to infrastructural underdevelopment and political instability and hence the probability of default is very high. The widespread default of bank loans in Bangladesh is a case in point in this regard. On the other hand, banks which become excessively liquid by not lending out deposits cannot make profits. Thus, 'upward financial repression' damages the stability of the financial system.

### *Neo-structuralist views*

The McKinnon-Shaw School also argues that an increase in deposit rates reduces investment in unproductive assets, e.g. land, gold etc. and raises financial saving, investment and economic growth. This school has traditionally given little attention to the existence of unorganised money markets (UMMs) in LDCs where a significant proportion of (rural) people are out of the formal banking system (Ghatak (1975)). In addition, formal financial institutions in LDCs are not user friendly and poor borrowers cannot obtain loans due to their inability to provide the required collateral and meeting other formalities.

By contrast, poor borrowers can obtain loans from the UMMs with significantly less difficulty and thus use UMMs as their main source of funds. The UMMs are also more profitable to lenders as they usually charge relatively higher interest rates than in formal financial institutions. Hence, the UMMs in the LDCs act as substitutes for the formal banking system and a large amount of transactions are realised in the UMMs (Wijenbergen (1983a), Taylor (1983)).

UMMs can lend on a one for one basis and hence they are more efficient than the formal financial institutions which, unlike to UMMs, pay a proportion of their deposits to the central bank.<sup>21</sup> Assume that economic agents hold the following three types of assets in their portfolios: time deposits, UMM (kerb market) assets and inflation hedges, e.g. land. Note that the UMM assets are considered as productive assets while inflation hedges are unproductive. Hence an increase in deposit rates influences agents to substitute time deposits for UMM assets and thereby reduces saving, investment and economic growth. Moreover, the increase in interest rates raises costs of investment and hence, a rise in price level. Thus, interest rate liberalisation is stagflationary.

A tight monetary policy increases interest rates and reduces investment (a demand reducing impact)

(Wijenbergen (1983b)); while it also reduces production (a supply reducing impact) (Wijenbergen (1983a)). If the supply reducing impact is greater than demand reducing impact, a tight monetary policy would result in a deterioration in the current account of the balance of payments. The economy experiences deficits in the current account when the government does not reduce expenditures in order to reduce demand. However, a cut in government expenditures to improve the current account at the costs of reducing investment is again contractionary.

Neo-structuralists argue that ‘non-institutional’ lenders such as village money lenders, landlords or shopkeepers supply loans to small borrowers in rural areas of developing countries - individuals who are unable to obtain loans from formal financial institutions. However, the interest rates charged by these ‘non-institutional’ lenders are very high (Myint (1984), p. 58). These high interest rates are mainly caused by a shortage of financial savings, at least partially due to the fact that a substantial amount of the savings in the rural or peasant sector in many countries (e.g. India) remains locked up in hoarded gold and jewellery. Thus, there is a pressing need for establishing more efficient financial intermediaries which can offer attractive financial products and thereby increase financial savings and hence a rise in the supply of savings and a reduction in interest rates (Myint (1984), p. 58).

#### *Household liquidity and endogenous growth*

Households face financial imperfections, i.e. liquidity constraints to finance future consumption. They are therefore more concerned about their future than would be the case without any liquidity constraints, causing households to save more for the future than they could otherwise (Jappeli and Pagano (1994)). When financial institutions can lend households or firms, households may use the credit to smooth their consumption over time, while firms will use it to finance production expenditure. Thus, a reduction in credit to households increases the rate of saving and therefore the availability of credit to firms, implying

the possibility of increasing output and growth.

The positive impact of liquidity constraints on saving remains unchanged even in the presence of international perfect capital mobility<sup>22</sup> if it does not have any incremental impact on the availability of credit. However, consider that there is an (exogenous) rise in current income of the second generation which increases their current and future income and the desired level of wealth (positive effects). Under such circumstances, the presence of perfect international capital mobility would reduce the severity of liquidity constraints, encouraging agents to borrow from abroad and save less (negative effects). The net impact on saving, depending on the relative strength of both effects, is unknown. Thus, in an open economy model, the net impact of economic growth on saving is undetermined.

However, as explained earlier, liquidity constraints may reduce economic growth when they impose budgetary constraints on households which reduce investment in human capital accumulation (Gregori (1996)). Thus whether the liquidity constraint increases saving and economic growth depends on how credit is spent. More precisely, if credit is to spent on consumption and unproductive investment, liquidity constraints may enhance growth by reducing unproductive expenditures. On the other hand, if credit is to spent on increasing the quality of human capital, liquidity constraints reduce human capital formation and productivity growth (Buiter and Kletzer (1992)).

### *Financial liberalisation and its critics*

The proponents of financial liberalisation have a particularly strong case at present, if for no other reason than the fact that the increasing internationalisation of business and financial affairs progressively precludes alternative strategies that involve deviations from norms set (or imposed) by the leading economic powers. Central to the efficacy of liberalised financial structures is an active

public policy re-enforcing competition and the public disclosure of information. The most powerful critiques of critiques of financial liberalisation are those rooted in the particularly serious problems of information asymmetry which emerge in this sector.

## **Conclusion: A Balance Sheet on Financial Liberalisation**

There can be little doubt about the relationship between financial development and development in general. What can be said about the specific question of financial liberalisation?

### *The elimination of interest rate repression*

Policies of financial liberalization will, it is argued, permit the rate of saving to rise by way of a rise in interest rates; it is difficult, however, to disassociate the elimination of interest rate repression from anti-inflation strategies which, if successful, will also promote saving and are probably of greater importance than the rise in interest rates *per se*.

The setting of a 'proper' rate of discount will encourage investment efficiency; the possibility for setting 'realistic' levels of interest rates should encourage 'legitimate' financial institutions to consider lending to smaller, high risk borrowers who now can only borrow from 'kerb markets' and UMMs. (The critical literature on financial liberalisation spoke of this effect as a problem or difficulty; it may have, as we have seen, its favourable aspects.)

The setting of market levels of interest rates should, in principle, promote the control of corruption in the banking sector, since there will no longer be cheap loans which can just be handed out to selected borrowers. Such 'political economy' aspects of the defence of liberalisation are among the most telling points in this literature, (see, for instance, Fry (1997)) but overall it has tended to emphasise the 'hard' economics of these questions rather than the political economy and institutional aspects.

The arguments above presuppose the existence of a competitive context for the making of loans. In the absence of competition, there is no obvious reason why liberalisation, resulting in an expansion of the

range of financial resources in the private sphere, should be superior to governmental activity.

### *Competition, information and finance*

The policies surrounding financial liberalisation are intimately related to the notion that a privatised financial sector will operate more efficiently for the economy as a whole than one which is dominated by governmental institutions. This notion, however presupposes that the environment in which financial institutions function is a competitive one. Furthermore, the informational and moral hazard questions surrounding the financial sector must be confronted. We deal with each of these issues in turn:

Competition in the financial sector is important for efficiency as a process of *motivation* for lenders and borrowers to act efficiently. Competition among financial institutions will generate pressure to maximize returns on net worth, with the 'luxury' of lending corruptly and/or to friends and relatives is constrained. Borrowers know that they must use funds efficiently, because financial institutions will make real efforts to monitor their loans and to make sure their loans are repaid because of the pressure they are under. Lenders cannot afford to take a 'take it or leave it' attitude towards borrowers, since these borrowers can always turn towards the competition. Competition also acts as a generator of *informational signals* for lenders and borrowers, forcing lenders to explore new, high return sources of lending, thereby gathering up information about heretofore unknown sources of credit-worthy lending. Lenders competing with each other will make efforts (through advertising, etc.) to inform borrowers of the favourable terms on which loanable funds are available.

Analysis of the dynamic aspects of financial systems on the whole tend to favour the efficacy of the decentralised, marketised forms of finance associated with financial liberalisation, and yet the key

justifications for financial liberalization have remained those from the static, neo-Fisherian approach of the perfect capital market. Dynamic competition may be associated with a range of activities not easily falling within the rubric of the static ideal of the perfect capital market, such as the innovation of new forms of new forms of markets – such as the Eurobond or kerb markets, to replace, or compete with, institutional lending, and new financial instruments (e.g. 'Fanny May' bonds) to function on these markets; the innovation of new kinds of financial institutions (e.g. the Grameen Bank) to compete with existing financial institutions, or to provide sources of finance where none had heretofore existed. On occasion, these new sources of finance emanate from the non financial sector either as a major activity (General Motors, General Electric) and in other cases as a by-product of their non financial activities (e.g. an expansion or elaboration of a firm's offer of trade credit facilities to other business or consumer credit to the public); the expansion of the boundaries of existing financial institutions (e.g. the expansion of banks in the US and UK into insurance and investment banking activities).

In general, competitive processes do not function in the absence of good information. Decentralised financial systems have a contradictory role in the *generation* of financial information. Marketised forms of finance, most especially if money is to be raised from the public in, for instance, a new share issue, tend to cause the disclosure of relatively more information than institutionalised forms of finance, such as bank lending. Presumably, this aspect of marketised forms of finance has been a motivation behind the promotion by IMF/World Bank of stock market facilities in developing/former socialist economies. There is a widespread impression that, in many economies such as Russia, the results of this process have been disastrous, with small groups and cabals finding it easy to manipulate markets and to steal wealth from the public. Is it true that the greater 'openness' and 'fairness' of these marketised forms of finance have proved to be as corrupt (and corrupting) and institutionalised, 'closed door' forms of institutional lending? There are limitations, even in principle, to the process by which markets will encourage the

disclosure of more financial information for marketised forms of finance (the public issuance of debt or equity) than for institutionalised forms of finance, such as a bank loan. The disclosure of information by a firm has 'public good' aspects – unless standards of disclosure are set by public authorities, financial institutions, firms and others trying to raise money from the public will always have the excuse that much information must be withheld, because disclosure will reveal competitive secrets to rivals.

The moral hazard issue is an endemic one in the financial sector. If banks are in a competitive, profit making environment, but their failures will be supported by government guarantees, the results can be disastrous. The US Savings and Loan fiasco is only a recent manifestation of this problem.

#### *Financial liberalisation and internationalisation*

An important aspect of financial liberalisation is the loosening of the restrictions of the rights of foreign financial institutions and nationals to compete domestically in LDCs. Such policies may promote an increase in competition, but it has been suggested (Myint (1984), chapter 5) that an increase in the activities of foreign financial institutions is of no benefit to small borrowers. Financial liberalisation also entails loosening of the restrictions of the rights of domestic financial institutions and nationals in LDCs to function abroad financially (e.g. a lifting of restrictions on the flow of capital abroad). Such liberalisation might be thought to have some negative consequences for LDCs if it results in a long term net outflow of capital abroad.

Financial liberalisation may also be seen as part of a broader process of internationalisation, entailing the introduction of best practice international standards such as disclosure requirements and the auditing and

operating procedures demanded of financial institutions (e.g. international 'best practice' would not permit the giving out of loans from a bank to its own directors<sup>23</sup>), as well as the disclosure requirements and accounting standards demanded of firms, most especially those attempting to procure finance from abroad.

### *The political economy of financial liberalisation*

The intervention of the national government (or an international agency) might be needed to promote key forms financial innovation (e.g. the Grameen Bank) because of startup costs. There is a well known literature suggesting why new initiatives often emerge out of a centralised bureaucracy. First, large scale risk taking often initiates from 'monopolies' or governments who possess the appropriate financial resources (this is an argument often identified with the writings of Joseph Schumpeter); initiatives in developing countries often come from a centralised source because of the lack of sufficient specialised personnel for dispersed, decentralised operation (Gerschenkron (1966)); there are 'economies of scope' in the setting up of new initiatives which encourage large scale, vertically integrated operation, because marketised alternatives in which the constituent aspects of the new operation may be purchased simply do not exist (Chandler (1977)). Other reasons for governmental intervention are linked to the problems which emerge in financial markets from the presence of asymmetric information and the fact that a substantial portion of the benefits to the particular investments concerned may take the form of external effects not accruing to the borrower or lender (e.g. investments in which a by-product is an improvement or a reduction in the deterioration of the natural environment).

The political economy of government intervention in the context of finance emphasizes the notion that, for instance, the prioritisation of loan funds for the purposes of promoting a strategy of economic

development extends the scope for governmental corruption (Fry (1997)). The more general critique of government intervention in Shliefer and Vishny (1998) is to view government as a predator. They give a successful critique of the notion that corruption might promote efficiency; they fail, however, to distinguish between successful and unsuccessful intervention, and between interventions undertaken by democratic and by undemocratic governments, and with this failure create a form of 'right wing Leninism'. From less extreme perspectives, the quality of governmental action may be seen to be affected by the ability of the population to monitor governmental activity. Monitoring will be dependent on (among other parameters) the level of democratic participation and legality in the country and population literacy (as emphasized in Sen (1999)).

For even those with a strongly anti-governmental position, there is an unavoidable role for governments in the creation of conditions in which market activity can take place: the setting of standards and rules of behaviour for business activity; the creation of accounting and disclosure requirements to promote the generation of market information. A second role for governments which also has broad acceptability is for intervention in conditions of market failure; the range and limits of what constitutes 'market failure' is, of course, a central focus of controversy. The political economy literature has pointed to the potential costs to society of governmental intervention, most especially in the context of nations in which the institutions of civil society are weak. It remains to be seen whether financial liberalisation can eliminate some or all of these costs by replacing governmental activity with an anonymous, competitive mechanism which efficiently allocates resources through the financial sector.

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<sup>1</sup> Lucas (1988) excludes financial variables from his model and argues that "...the importance of financial matters is very over-stressed in popular and much professional discussions and so [I] am not too inclined to be apologetics for going to the other extreme." (p. 6)

<sup>2</sup> The by-passing of questions of financial allocation in centrally planned economies may once again reflect the Ricardian heritage by way of the interpretation given to the economic formulations found in Marx's *Capital*, most especially the posthumously published volume 2..

<sup>3</sup> It is perhaps curious that the Modigliani-Miller conclusions came as such a surprise to the economics profession, since these results have always been implicitly presumed in the context of standard expositions of the microeconomics of the firm, in which only the 'real' factors governing costs and revenues have any effect upon outcomes.

<sup>4</sup> On this question, see Auerbach and Skott (1995).

<sup>5</sup> Stiglitz (1994) (to be discussed below) cautions us that financial markets should not be compared to 'markets for chairs and tables'.

<sup>6</sup> This rule would apply in a strict way only for so-called normal projects in which there is a negative value for the initial outlay on the project ( $R_0$ ) and positive values for all subsequent cash flows ( $R_2 \dots R_n$ ).

<sup>7</sup> See Roll (1977). This result has not been superseded.

<sup>8</sup> See Fama (1991).

<sup>9</sup> It might be thought that such a saving of cash would increase the net supply of investable funds. But in a system of national fiduciary money, any such savings – increases in monetary velocity – are merely the equivalent of monetary creation, which can be done by governments at zero cost. By contrast, savings of non-fiduciary monies (e.g. silver) may increase national wealth by increasing net claims on foreign resources.

<sup>10</sup> The selection of only risky borrowers is termed as a *moral hazard* problem while the choice of risky projects is considered as an *adverse selection* problem.

<sup>11</sup> Note that the rate of delinquency in Bangladesh is much more higher for big borrowers with strong collateral than the case for small borrowers without collateral. These small borrowers without collateral often obtain loans from the Grameen Bank while large borrowers receive loans from other financial institutions. Thus, the experience of Bangladesh tends to contradict the McKinnon-Shaw suggestion for using strong collateral in order to avoid adverse selection and moral hazard problems.

<sup>12</sup> Chandler (1977), p.10; see also pp.146, 387.

<sup>13</sup> Gerschenkron (1966).

<sup>14</sup> See Kindleberger (1984).

<sup>15</sup> In a formal sense, we are arguing that the transactions costs of embodying the externalities across projects and sectors are likely to be too high for the decentralised institutional structures implied by the theory of the perfect capital market.

<sup>16</sup> The continuing battles between employees and former employees with their companies over the provenience of, and the rights to, inventions and processes are symptomatic of this question.

<sup>17</sup> Both the McKinnon and Shaw models argue that financial repression negatively affects saving, investment and economic growth. However, the transmission mechanisms through which these negative effects work differ between these models. McKinnon postulates that investors have to accumulate money balances before investment takes place. Thus, in the McKinnon model, the demand for money and physical capital are complementary to each other. This complementarity hypothesis is based on the following two assumptions: (i) all investment is self-financed; (ii) investment expenditure is more indivisible than consumption expenditure. Under such circumstances, a high real deposit rate increases the accumulation of monetary balances, i.e. saving, and hence, a rise in the supply of funds for investment. This complementarity hypothesis is also considered as an 'outside money model' as firms are unable to borrow to finance investment. The Shaw (1973) model, on the other hand, is based on the debt intermediation view, which asserts that degree of financial sophistication which facilitates intermediation between savers and investors positively affects per capita income. This model predict that financial liberalisation in the form of an increase in real deposit rates increases financial saving, which increases the capacity of the banking system as a loan provider. Hence, financial liberalisation increases the availability of funds for investment.

<sup>18</sup> Note that the McKinnon and Shaw model is based on neoclassical growth theory which predicts the presence of diminishing returns to capital. Thus, this type of theory dictates that long run growth rates in per capita income will not be enhanced by an increase in the level of saving and investment. This type of limitation of neoclassical growth theory motivates the emergence of endogenous growth theory, based on endogenous technological progress, which assumes the presence of constant or increasing returns to broadly defined capital. This theory predicts that financial liberalisation (King and Levine (1993a, 1993b) along with

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investment in physical (Romer (1986)) and human capital (Lucas (1988) enhance economic growth.

<sup>19</sup> The difference between black market and official exchange rates as a percentage of official rates.

<sup>20</sup> A dummy is used to capture financial repression. This dummy takes a value one when the real interest rate is positive, two when it is negative but higher than minus 5%, three when less than minus 5%. Two dummies are also included to capture the extent of negativity. One of them takes a value one when the real interest rate is greater than minus 5% otherwise it takes a value zero. The other dummy takes a value one when real interest rate is less than minus 5%; otherwise it takes a value zero.

<sup>21</sup> Note, however, that transactions involving financial institutions are likely to offer borrowers and lenders better legal protection and conditions of disclosure than are provided by UMMs. For the society as a whole, the formal sector has greater potentiality for developing in a competitive direction than the highly localised arrangements involving UMMs.

<sup>22</sup> In an open small economy with perfect capital mobility the interest rate is exogenous and is determined by international capital markets.

<sup>23</sup> Loans in Bangladesh are aimed at mainly patronising (socially and politically) influential quarters (Alamgir *et al.* (1991); Siddiki (1999)). Pressures from top executives and bribes are key determinants of obtaining loans from nationalised commercial banks in Bangladesh. These practices have caused the recovery of loans to be very low and thereby have created a default culture in Bangladesh.