IMPROVING THE CONTRIBUTION OF FINANCE TO THE GROWTH PROCESS IN BARBADOS - IS FINANCIAL LIBERALIZATION A DESIRABLE OPTION?

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1. INTRODUCTION

It took some time before economists recognized that financial intermediaries might play an essential role in the development process. As Shaw (1973) commented "this theme (that the financial sector of an economy does matter in economic development) is excluded from dominant traditions of theory and practice in economic development. Some development theory seems to be designed for a barter world ..... There is a doctrine that ranks financial deepening among obstacles to development and recommends financial repression. That guiding beacon of development practice, the plan, gives scant heed to finance in the usual case." The recent evidence from the numerous studies on the relationship between finance and real development for both developed and developing countries indicate that a developed and well-managed financial system is beneficial to the growth of economic activity [see Bourne (1988a), World Bank (1989) and Wood 1993a)].

In recent years the role of the financial sector in the functioning of developing economies has assumed greater importance given the significant decline in the supply of finance from external sources to these economies, which has resulted in a reduction in investment rates and ultimately their disappointing growth performance.[1] In Barbados, for example, the investment rate fell from an average annual rate of 27 percent during the 1970 - 1979 period to an average of 22 percent a year during 1980-1987;

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[1]It is well recognised that investment is crucial for successful economic growth [see International Monetary Fund (1988), Khan and Reinhart (1990) and Sheehey (1993)].

growth rates fell from 2.3 percent to less than 1 percent for the corresponding periods. For the most part in the latter period net private foreign capital to Barbados has been negative as the interest payments on portfolio investment outstripped inflows of direct foreign investment. Government policy should be directed at raising the level of domestic savings mobilized through the financial system and ensuring the optimal allocation of the financial resources in order to promote growth and development.

This paper discusses ways of improving the role of the financial system in the functioning of the Barbadian economy. In this connection, we assess the (in) appropriateness of the popular financial liberalization policy in the financially repressed Barbadian economy.[2] Financial liberalization entails the removal of administrative controls on the asset portfolio and pricing behaviour of financial institutions; it being presumed that interest rates will then rise to levels that will result not only in increased savings and loanable funds but also in a more efficient allocation of these funds, both contributing to a higher economic growth. The evidence presented in the paper indicates that interest rate liberalization, which is central to financial liberalization, will provide no meaningful benefits to the Barbadian economy. However, there are instances where a reduction in direct government control over the financial system might facilitate an improvement in the allocation of financial resources.

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[2]Terminology introduced by McKinnon (1973). When governments tax and otherwise distort their financial markets, the economy is said to be financially repressed.

These instances are discussed in Section IV.

Section II outlines the theory of financial liberalization. Section III then evaluates the relevance of financial liberalization in the Barbadian economy. In Section IV we discuss ways of improving the allocation of financial resources in the Barbadian economy. Concluding remarks are in the final section.

II. THEORY OF FINANCIAL LIBERALIZATION

In the 1970s, financial markets of most developing countries were characterized by a high degree of government intervention. Elements of government interventionist policy typically include ceilings on interest rates below market clearing levels, high reserve requirements, overall and selective credit ceilings etc [see McKinnon, 1973 and Shaw, 1973]. External controls on financial markets are introduced both for macro-policy purposes; to reduce credit extension, monetary growth and aggregate expenditures without having to raise interest rates as high as would otherwise be required, and for micro-policy reasons, to channel credit towards projects or sectors designated as "high priority" by government, that is, to improve the allocation of financial resources.

However, since the writings of McKinnon and Shaw, government intervention in the financial market ("financial repression") has been associated with distortions that hamper growth. It is argued that regulated low interest rates limit the capacities of financial intermediaries to raise resources, and lead to an inefficient allocation of resources as scarce financial resources are allocated not according to the expected productivity of the investment project but according to transactions cost and perceived risk of default. Such non-price rationing criteria result in higher yielding, higher-risk projects and projects presented by younger (and possibly more enterprising) entrepreneurs being denied valuable institutional finance. Also, both McKinnon and Shaw note that below equilibrium interest rates (often negative real interest rates) encourages capital flight, thereby reducing the availability of savings for domestic investment. Thus, capital controls are needed to prevent the outflow of domestic savings. Furthermore, in a financially repressed economy, the creation of a wide range of financial instruments is discouraged and entry into the financial market is restricted.

The policy recommendations arising from an analysis of financial repression centers on financial liberalization.[3] Financial liberalization involves the removal of regulatory interventions in the financial sector; it being presumed that interest rates will rise to levels which stimulate higher levels of domestic financial savings and attract foreign capital to the country. Financial institutions (especially banks) would then increase the supply of credit to finance investment both in short-term working capital (e.g. intermediate inputs, raw materials, labour) and longer-term fixed capital, thus increasing output and growth. Financial liberalization theorists also argue that, in the

[3]For a survey of the research into the workings of financially repressed economies and the beneficial effects of financial liberalization, see Fry (1988), and Balassa (1989).

absence of financial regulations, competition in the financial system is improved through institutional development, and the average return or efficiency of investment increases as financial institutions allocate the increased levels of investible funds via the price mechanism. The low-yielding projects which enjoyed institutional finance at the previously low real interest rates will be deterred because they are no longer profitable at the higher levels of interest rates.

Thus, the ultimate objective of financial liberalization is to provide a stimulus for economic growth. The advocates of deregulation and liberalization of the financial sector expect positive growth effects through increased financial savings (financial deepening), a more competitive financial system and greater efficiency of capital allocation. The idea that financial activity should be determined by market forces has become an orthodoxy in academia as well as in the major international institutions that provide economic adjustment programmes for developing countries.

III. THE LIMITS TO FINANCIAL LIBERALIZATION IN THE BARBADIAN ECONOMY

The Barbadian economy displays the characteristics of a financially repressed economy: control on interest rates, selective credit controls, directed lending, high reserve requirements etc. In the last two decades a number of such developing economies have pursued, with different intensity, financial liberalization as part of a broader liberalization strategy.[4] The main impulse behind liberalization in developing countries has been the belief, based on the notion that interventionist financial policies were detrimental to economic prosperity, that liberalization would promote growth and stability, by stimulating savings and improving overall economic efficiency; greater reliance on domestic savings was necessary given the continual decline in external financing.

This section assesses the (in)appropriateness of the popular financial liberalization policy in the Barbadian context.

One of the most important assumptions of financial liberalization theory is that real interest rates have a major impact on the level of savings. If in an individual country the interest rates are not an important determinant of the level of savings then the theory loses its appeal, and liberalizing or raising interest rates will not have the desired effects. Recent empirical work on the determinants of real private savings in Barbados [Craigwell and Wood (1993)] indicates that, contrary to the tenets of financial liberalization, real interest rates have a negative (and statistically insignificant) impact on savings (in the national account sense) in both the long run and the short run (see Appendix for estimation results). The observed negative relationship between real interest rates and private savings

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[4]Among the countries embarking on financial deregulation are Argentina, Chile, Uruguay, Indonesia, Malaysia, Korea, Taiwan, New Zealand, the Philippines, Turkey and Yugoslavia. See Cho and Khatkhate (1989), Villanueva and Mirakhor (1990), Caprio et al (1993) and Fischer (1993) for accounts of financial liberalization experiences in developing economies.

corroborates the finding of Giovannini (1985).[5] In addition, Wood (1990) and Ferreira (1993) found that real interest rates do not play an important role in determining financial savings in Barbados.

Second, the financial liberalization theory has not dealt with the market structure, for example, the oligopolistic or cartelized banking systems found in most less developed economies (LDCs). In the case of Barbados the historical developments of the financial system have imposed a peculiar size and structure on the financial system. In terms of structure the financial system tends toward an oligopolistic structure in spite of the development of indigenous institutions [see Wood (1992) for details].

Commercial banks dominate the financial sector. At the end of December 1988, commercial banks had a 77.8% share of total deposit liabilities at deposit-taking institutions[6] and their loans represented 60% of credit extended by the major financial

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[5]At the theoretical level a negative interest elasticity of savings can be explained by the following: (i) higher interest rates decreasing the savings necessary to purchase a given amount of future consumption (income effect). For instance, Amsden and Euh (1990) contend that low interest rates combined with high real estate prices have tended to raise household savings in the Republic of Korea and Japan; (ii) financial liberalization and higher interest rates lowering household savings by allowing easier access to credit and relaxing the income constraint on consumption spending [Blundell-Wignall and Browne (1991)]; and (iii) even if higher interest rates do not lower personal savings, they can reduce total private savings and aggregate savings by redistributing income away from corporations to households [Akyuz (1993)].

[6]The deposit-taking institutions are commercial banks, trust companies, finance companies, credit unions and life insurance companies.

institutions.[7] When one considers that trust companies are affiliates of commercial banks (and are unlikely to be price competitors) we get an even clearer picture of the dominance of commercial banks in the financial system. Commercial banks and trust companies together had a 91.2% share of total deposit liabilities at deposit-taking institutions and their loans accounted for 74.3% of credit extended by major financial institutions at December 1988. These figures indicate that there are no good substitutes for commercial banks on the side of either the saver or the borrower. Further, exchange control regulations tend to insulate the financial sector from foreign markets [Zephirin (1990)].

Various models of oligopolistic behaviour have been identified in the literature [see Henderson and Quandt (1985) for a discussion]. The model that best describes the practice of the dominant financial institutions in Barbados - the commercial banks - is the collusive model. The small number of firms and limited size of the market mean that agreements could be cheaply (and easily) policed. Also, the fact that interest rates have tended to be similar throughout the banking system in the absence of active competition, as highlighted by Saunders and Worrell (1978) and Zephirin (1984), strongly suggests some form of agreement among

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[7]These include the deposit-taking institutions plus the Barbados Development Bank and the Barbados Mortgage Finance Corporation.

Source: Central Bank of Barbados, Annual Statistical Digest, 1989.

banks about interest rates. Further, Saunders and Worrell make the interesting point that the banks' scope for manipulating local interest rates was limited since decision-making was concentrated in their overseas head offices. They also noted (p.32) "banks had little incentive to compete for funds among themselves or with any other institution since they could always rely on their head offices in times of tight liquidity".

Since the conditions for the existence of a competitive financial system cannot be readily established because of institutional, behavioural and other factors we cannot expect that a policy of interest rates liberalization will lead to market-determined interest rates in Barbados. In addition, one should note that with liberalized interest rates in an oligopolistic financial system there exists the possibility that collusion among financial institutions may lead to a widening interest rate spread[8] and, as a result, in abnormally high financial sector profits.[9]

[8]See Cho and Khatkhate (1989) discussion on financial reform in Malaysia, and Abebe (1990).

[9]In practice, however, one cannot expect to observe high accounting (reported) profits because of the fear of financial institutions that the authorities or other segments of society would identify these profits as a sign of their oligopolistic behaviour. More frequently, profits would be dissipated in internal inefficiencies, high managerial salaries and employees' wages, bonuses and special advantages for shareholders and managers, conspicuous consumption expenditures (such as stylish buildings, expensive art collections etc.) [see Edwards (1977)]. More generally, these considerations suggest that oligopolistic behaviour might not necessarily be captured in any measurement of profits of financial institutions. Galbis (1986) notes that under oligopolistic conditions and a bank holding company structure the objective of collusion among bank holding companies might be to receive oligopolistic profits from financial operations at the level of non-financial firms rather than their related financial

Financial liberalization theorists also contend that investment in developing countries is positively related to the rate of interest. As mentioned earlier, their argument is premised on the hypothesis that higher interest rates attract higher levels of savings, and because profitable investment opportunities abound in LDCs [McKinnon (1973), Shaw (1973)] and financial institutions (especially banks) are in an informational advantageous position, the increase in savings will necessarily stimulate higher levels of investment activity (despite the fact that some low-yielding investment projects will be choked off). However in a recent study, Boamah and Holder (1993) found that the real user cost of capital has a negative influence on private investment in Barbados.[10] This finding is more consistent with the neoclassical model of investment (than the McKinnon-Shaw hypothesis) as it suggests that higher real interest rates, by raising the user cost of capital, serve more to deter investment.

Perhaps the aspect of financial liberalization theory receiving most attention in recent years is the claim that removal of exogenous constraints will lead to a more efficient allocation of resources. If, as Stiglitz (1989) notes, government intervention in the financial market was the only distortion in an otherwise competitive economy, we might argue that their removal would

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companies.

[10]The value of the coefficient on the real user cost variable was -0.024 and its t-value was 1.657, making it statistically significant at the 20 percent level. Boamah and Holder's study covered the 1965-1989 period.

eventually produce efficiency gains. However, when other imperfections exist, no such assertions can be made. In fact a number of authors have demonstrated that natural imperfections in the credit market, such as imperfect or asymmetric information, may be significant barriers to efficient credit allocation even when exogenous constraints, particularly interest-rate ceilings, are eliminated [Stiglitz and Weiss (1981), Cho (1986), Mankiw (1986)]. Stiglitz and Weiss discuss the possibility that given several groups of observationally distinguishable borrowers, imperfect information results in some groups being totally excluded from the credit market although the total expected returns to the excluded groups' investment may be higher than those of the groups that get credit.

The works of Zephirin (1990) and Wood (1993b) indicate that the Stiglitz-Weiss "equilibrium rationing" model provides an adequate theoretical explanation of credit allocation and the nature of credit rationing in the Barbadian banking market. Informational asymmetry problems, which are common to financial markets, are especially important in Barbados where the informational bases of the dominant foreign-owned commercial banks are not very extensive and banks generally lack the technical expertise to enable them to assess the riskiness of lending especially well. Further, the monitoring activities carried out by banks are routine and not continuous or detailed [Wood (1993b)]. As a result banks place considerable emphasis on collateral security as a way of obtaining information about the creditworthiness of borrowers and a means of protection against lending risk. However, in Barbados (and other LDCs) where collaterizable wealth is limited, strict adherence to collateral screening (by banks) and not actively pursuing other direct ways of obtaining information and controlling behaviour will result in significant rationing of funds, both by exclusion and of loan size. In Barbados the groups most commonly rationed are small-scale, more innovative (and essentially riskier) manufacturers, non-traditional agriculture, etc, areas with high growth potential [Zephirin (1990)]. Carter (1988) also used the Stiglitz-Weiss analysis to argue that liberalization of financial markets will not be sufficient to guarantee small farms access to credit in formal markets.

To further substantiate our claim that interest rate liberalization will not produce significant efficiency gains for the Barbadian economy, we examine the empirical evidence on the relationship between real interest rates and the quality of investment or investment efficiency. In a regression of investment efficiency (proxied by the incremental capital-output ratio)[11] on real deposit rates for the period 1965-1990, we found that real

[11]One should note that since the incremental capital-output ratio (ICOR) is affected by the gestation period of capital investment, the changes in composition of output and capacity utilization, and the correct estimation of capital replacement expenditures, some caution must be taken in interpreting it as reflecting the efficiency of investment alone. Also, Schiantarelli et al (1992) noted that ICOR only gives a good indication of efficiency under the assumption that factors of production are used in fixed proportions.

deposit rates have a very minor (and statistically insignificant) influence on the quality of investment - the value of the estimated coefficient was 0.0035 and its t-value just 0.77.

The weight of the evidence suggests that a policy of outright liberalization of the financial sector will not have the desired effects on the Barbadian economy, as suggested by the McKinnon-Shaw analysis. The oligopolistic structure of the Barbadian financial system renders a policy of interest rate liberalization largely ineffective and imperfect or asymmentric information in the credit market may be a significant barrier to efficient credit allocation even in a liberalized environment. These results suggest that some degree of government intervention is warranted.[12] But as Cho (1989) rightly pointed out, the optimal intervention is not possible in practice and unless government policy is carefully directed it may create more distortions than the ones created by the market imperfections themselves. Government policy aimed at improving the role of the financial system in the development process should take into account the precise nature of imperfections in the financial market, and the complex and pervasive interrelationship between the real and financial sectors of the economy.[13]

In the next section we consider ways of reducing the

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[12]Indeed, almost all modern examples of industrialization have been accompanied by government intervention in the financial markets. Directed and preferential credits have been the most important instruments of successful industrializers in East Asia [Harris (1985), Bradford (1986), Cho (1989), Lee (1992)].

[13]For empirical evidence on the relationship between the real and financial sectors of the Barbadian economy, see Wood (1993a).

distortions created by market imperfections and government intervention, thereby facilitating an improvement in the allocation of financial resources in the Barbadian economy.

IV. IMPROVING CAPITAL ALLOCATION IN THE BARBADIAN ECONOMY

A major challenge facing Barbadian policy makers is to achieve a greater flow of institutional finance to the innovative, non-established, riskier activities, for example, smaller-scale manufacturing and non-traditional agriculture; areas with high growth potential and which are usually excluded from the private credit market. The introduction of selective credit controls and provision of rediscounting schemes for loans to the "rationing" groups have had very little success. Commercial banks remain committed to extending credit to large well-established customers and those with adequate collateral security.

A possible way of improving the financing of risky ventures in Barbados is to establish more, and expand the operations of, existing specialized institutions providing high risk capital, for example, venture capital companies (VCC). Such institutions are well-suited for the manufacturing sector.[14] VCC provide equity, loans and support services to small- and medium-sized enterprises, in several cases business start-ups, based on their growth and

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[14]Venture capital has come to be associated, especially in the USA, with the financing of high, and new, technology based enterprises. However, such enterprises are merely a special case of high risk businesses, and as Pratt (1983) and Kitchen (1989) pointed out, it is a misconception to associate venture capital exclusively with high technology businesses. For a discussion of the importance of venture capital in industrial countries, see Wall (1986), Kitchen (1989) and Green (1991). Wall, Kitchen and Lalta (1991) also analyze venture capital in developing countries.

profit potential rather than an established record.[15] Unlike conventional investors, venture capitalists need particular expertise in spotting potentially high growth, early stage, investment opportunities.

Venture capitalists not only share the risk of investment with the shareholders of the company but also provide strategic, managerial and marketing advice which can enhance the overall management of smaller businesses and so reduce the investment risk. The close relationship between venture capitalist and firm management mitigates information and incentive problems which are significant barriers to an efficient allocation of capital. Moreover, the venture capitalist is usually involved for several years. As Pratt (1983) notes, "the venture capital investment time frame is really only mnedium term, five to seven years, but this is extremely long term in view of the quarterly performance of most portfolio investment managers".

While a venture capital sector may be desirable it may be difficult to stimulate. Given the poor performance record of government-owned financial institutions in Barbados, we share the view of Miller and Cote (1985) and Kitchen (1989) that for VCC to have maximum impact private participation at the level of both funding and management should dominate. A similar point was made

[15]Penso (1989) notes that in the UK, pre-start and start-up stages of businesses accounted for 9 and 25 percent, respectively, of venture capital funds in 1987. See also McNaughton and Green (1989) and Pratt (1990) for empirical evidence on the financing stages of venture capital investments in Canada and the United Kingdom, respectively.

by an expert in the Barbadian insurance industry in a recent interview. The official, while welcoming the idea of a venture capital facility, stressed the need for the involvement of successful businessmen as well as contributions from private financial institutions, particularly pension funds. But while direct public sector involvement is discouraged government has an important role to play in creating the right economic, financial and social environment for VCC to succeed. Taxation policy, for example, should encourage equity ownership and a suitable divestment avenue for VCC, such as an over-the-counter (OTC) market or a second-tier market, will be necessary.[16]

The establishment of unit trusts - a mutual funds investment institution - is another way of providing equity financing for businesses. Both individual investors and financial institutions should be encouraged to participate effectively in the fund. Unit trusts already exist in Jamaica and Trinidad and Tobago.

In recent years a number of studies have attached great importance to equity markets in the development process of LDCs, arguing that such markets offer some competition to debt markets, and give firms the possibility of deepening their equity bases and improving their ratio of debt/shareholder's funds [Drake (1980), Kitchen (1986)]. Others stress the risk-sharing characteristics of equity that leads firms to act in a less risk-averse manner [Cho

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[16]Over-the-counter (OTC) and second-tier markets permit dealings in the shares of small- and medium-sized businesses; that is, those companies which normally would not qualify for listing on the first (main) market.

(1986), World Bank (1989)]. However, we do not have the same optimism. At present the role of the stock market in Barbados is concentrated on financing only a few large well-established firms that have ready access to relatively cheap bank finance.[17] Further, the available evidence, though restrictive, does not support Diamond (1991) claim that market finance is related to the firm's development cycle [see Wood (1992)].

The stock market in Barbados can be termed supply constrained. Two important factors, in descending order of importance, constraining primary market activity are the reluctance to dilute ownership and 'closed circle' control of businesses, and the taxation bias in favour of debt finance. While interest payments are tax deductible, dividends on preferred and common shares are paid out of corporate after-tax profits. Although a change in taxation policy would make equity finance more attractive to controllers of large firms, the strength of the first factor will continue to put limits on the supply of securities. Another factor explaining the inactivity on the primary market is the easy access to the relatively cheap commercial bank credit by established firms. Commercial bank loan rates of interest are low and are frequently negative in real terms. Partly on tradition with respect to credit criteria and partly because of interlocking directorates, many enterprises are virtually assured a ready supply of bank

[17]For an assessment of the performance of the Barbados stock market, see Wood (1993c).

finance.[18]

In recent times changes in the regulations governing the operations of the stock market have been made in order to improve its importance in the capital market. For example, the launching of an Unlisted Securities Market in 1992, with less stringent requirements for admission (than the main market) facilitates dealings in the shares of smaller companies and is an important route for small- and medium-sized companies to raise capital for investment.[19] However, with the stock market still in its early years, such developments are unlikely to have major beneficial effects in the very near future; in fact, no listing has been made on the Unlisted Securities Market to date.

The banking system will continue to be the chief source of external financing for businesses in Barbados. Thus, changes in the operations of both privately- and publicly-owned institutions are necessary in order to improve the efficiency of the allocation process. As mentioned earlier, informational problems are especially important in Barbados where the informational bases of commercial banks are not very extensive and the staff have limited ability to evaluate projects on the basis of sound economic and financial criteria. The limits to information and staff capability in assessing risk affect both the terms of the loans and the

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[18]This point was previously made by Bourne (1988b) in explaining the preference of enterprises in Trinidad and Tobago for bank finance over equity finance.

[19]For a discussion of how equity markets have assisted the financing of small- and medium-sized enterprises in recent years, see Kitchen [(1989, pp. 302-305)].

ability of banks to provide loans for certain desirable investments. Improving the allocation of finance for investment activities depends heavily on private commercial banks increasing their willingness (and ability) to manage a more investment-oriented portfolio.[20] Improving the level of staff training, acquiring the services of project appraisal and investment specialists, and strengthening their information bases are essential if commercial banks are to operate more as universal banks.[21] Participation in an expanded venture capital system and taking more equity positions in the larger companies listed on the stock exchange are ways of fostering a closer relationship between themselves and businesses, and obtaining more information about clients.

However, risk-taking is not easy business. Improved informational channels and training wil not be enough for largely conservative banks to venture into new lending territory. The government would have to undertake policies which reduce the riskiness of the environments in which firms operate, and given the

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[20]This also applies to life insurance companies and pension funds.

[21]It is important to note that universal banking has advantages as well as disadvantages. Arguments in favour of universal banking include savings in overhead costs, better information about clients and greater diversification of risks. The questions raised against universal banking are more prudential: it could lead to undue exposure to risk and a concentration of power [see Khatkhate and Riechel (1980) for a detailed discussion].

limited risk-sharing opportunities provided by the markets,[22] this can provide a strong stimulus for the economy. In particular, it can increase both the willingness of firms to invest and the willingness of banks to lend. These policies can be both microeconomic and macroeconomic in nature. Given the current depressed state of the Barbadian economy, the government needs to implement a credible (and consistent) policy programme aimed at stabilizing the economy and then returning it to a positive growth path.

Changes are also necessary at publicly-owned financial institutions in order to improve their operational efficiency. Monitoring and control of borrowers have posed particular problems for the state-owned development finance institution - Barbados Development Bank (BDB). This has resulted from the heavy involvement of the political directorate in its daily operations which led to low effort levels by bank officers, and a shortage of qualified staff during the earlier period [Wood (1993b)]. Further, the narrow specialization of the BDB has made it difficult for the institution to diversify its risks; it has been particularly vulnerable to fluctuations in economic activity. Operational independence from undesirable political interference would provide greater incentives for bank officers to do a better job in selecting projects and monitoring loans. Also, the BDB could expand its range of services within the constraints of its institutional

[22]Risk-sharing opportunities are limited in the sense that the equity market is non-active and venture capital companies are very limited.

capabilities and professional skills. Activities potentially suitable for the BDB include consulting and leasing; the skills are similar to those required by BDB's existing activities.

V. CONCLUSION

This paper has dealt with suggestions to improve the allocation of financial resources in the promotion of growth and development of the Barbadian economy. Recognizing the ineffectiveness of interest rate liberalization in the oligopolistic-structured financial system of Barbados and the fact that informational asymmetries significantly affect the allocation of credit, emphasis was placed on the design of financial institutions and fostering a closer relationship between financial institutions and businesses. The government will thus have to ensure that the system of examination and supervision of financial institutions is strong and effective. The government also has an important role to play in adopting a programme which encourages investment in the Barbadian economy. In this regard, Collier and Mayer (1989, p.12) remarked, "good government and sound banking systems are central to the development process and it is to the design of these that most attention should in the future be devoted."

But the availability and efficient use of financial resources, though vital to the development process, should be seen as only one of a number of factors, alongside entrepreneurial ability, investment in human capital, exploitation of markets, availability of strategic natural resources, production methods and management practices. Economic development is basically a national enterprise, and development begins in the hearts and souls of those who aspire to greater mastery of their own destiny.

Appendix

The model of real private savings was tested econometrically using the recent literature on cointegration and error correction mechanism [see Engle and Granger (1987)]. The estimation period is 1968-1991. The level of real income (GDP), real interest rates (IR), real foreign savings (FS), real government savings (GS) and labour market constraints [proxied by the unemployment rate (UR)] were identified as important determinants of real private savings (PS).

The estimation results for the 'long run' private savings model were as follows:

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LPS= -9.01 + 1.61LGDP-0.80GS  -0.47FS -0.45LUR -0.01IR....(1)
    (-4.73)*(5.31)* (-2.85)**(-3.03)*(-2.65)**(-1.41)
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R^2=0.73
DW=1.96

R^2 is the coefficient of multiple correlation; DW is the Dubin-Watson statistic; L is the natural logarithm; figures in parenthesis indicate t-values for the coefficients.

The results of estimating a dynamic 'short run' or error correction version of equation (1) were as follows:

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DLPS= 0.01 + 1.21DLGDP-0.99DGS-0.60DFS-0.50DLUR -0.004DIR
     (0.32) (0.98)   (-5.64)*(-5.49)*(-1.93)***(-0.77)

     -1.05ECM(-1)
    (-3.45)*
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R^2=0.85
DW=2.19

D is the first difference operator; ECM(-1) is the lagged error term from the 'long run' equation; one asterisk (*) indicates significance at the 1% level, two asterisks indicate significance at the 5% level and three asterisks indicate significance at the 10% level.

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