CENTRAL BANK OF TRINIDAD AND TOBAGO

CARIBBEAN CENTRE FOR MONETARY STUDIES

XXVIIIth ANNUAL CONFERENCE ON MONETARY STUDIES

FINANCIAL INTERMEDIATION AND ECONOMIC DEVELOPMENT IN BARBADOS: 1946-1995

Roland Craigwell
Cleviston Haynes
Anthony Wood

CENTRAL BANK OF BARBADOS

October 28 - November 1, 1996
Conference Facilities - 16th Floor, Central Bank of Trinidad & Tobago

FINANCIAL INTERMEDIATION AND ECONOMIC DEVELOPMENT IN BARBADOS: 1946-1995

by

ROLAND C. CRAIGWELL
Chief Forcasting Analyst
Central Bank of Barbados

CLEVISTON HAYNES
Advisor to the Governor
Central Bank of Barbados

ANTHONY P. WOOD
Department of Economics
University of the West Indies
Cave Hill

October 1996

FINANCIAL INTERMEDIATION AND ECONOMIC DEVELOPMENT IN BARBADOS: 1946-1995

INTRODUCTION

Financial intermediation is considered important to economic growth and development by channelling savings to firms (see Roubini and Sala-y-Martin (1992)), increasing the social marginal productivity of capital (see Greenwood and Javonovic (1990)), and affecting the private saving rate through household borrowing and the interest rate effect typified by financial repression and a lack of competition (see Japelli and Pagano (1992) De Gregorio (1992) McKinnon (1973) and Shaw (1973)). This positive view of the contribution of financial institutions and markets is not universally accepted. For example, Gurley (1967a,b) argues that some countries have realized growth in the past through other methods including foreign savings, central planning and fiscal measures. However, while these alternative techniques may prove feasible in a country's comprehensive aggregate planning approach[1], Gurley (1967a) accepts that the development of financial institutions flourishes when there is a decentralization of decision-making, specialization of savings and investment, and heavy emphasis on external rather than internal financing of investment.

Moreover, Patrick (1966) raises the question of causality. When financial institutions are created before the demand for their assets and liabilities is evident, then the financial sector can be classified as taking the 'supply leading' financial development approach. The type of financial development that is viewed as somehow accommodating or reacting passively to the growth of the real economy he terms demand-following finance.[2]

Goldsmith (1969) and King and Levine (1992) have demonstrated a positive relationship between financial development and growth using statistical methods but left the causality controversy unresolved. Atje and Jovanovic (1993) studied the correlation between growth and the trading volume of the stock market scaled by GDP and found a large effect of stock markets on subsequent development.[3] King and Levine (1992) used a range of indicators of financial development for 80 countries over the period 1960-1989 and found that the various measures of the level of financial development are strongly correlated with real per capita GDP growth, the rate of physical capital accumulation, and improvements in the efficiency with physical capital. They concluded that the data are consistent with the view that financial development can promote economic growth by increasing the rate of capital accumulation and by improving the efficiency with which economies used that capital. Gupta (1984) and Jung (1986) in substantial but less exhaustive studies, used statistical techniques to investigate the direction of causality and found generally that the direction ran from financial to real development, thus suggesting an activist role for the financial sector. The causality study of St. Hill (1992) provided empirical evidence consistent with the "stage" theory of banking development which implies that there is a supply-leading pattern among LDCs at a relatively low level of financial development and then a shift to a demand-following once the banking sector has developed.

Recognition of the potential of financial intermediation in advanced economies has enabled new financial institutions to emerge and stimulate growth of the financial sector in excess of that in the real economy. While some developing countries, especially in East Asia, have forged strong financial sectors, in many lesser developed countries the sluggishness of the real economy has been paralleled by weak financial systems. Where formal financial sectors are not entrenched it is often the case that high inflation rates, government controls on the intermediation process and poor supervision of institutions have accounted for the low level of financial assets in the economy.

This paper examines the development of the financial sector in Barbados over the period 1946-1995. Since the end of the second world war, the financial system has undergone significant changes, resulting in increased accessibility to financial institutions and improved mobilization and allocation of resources. The size of the financial sector has expanded in relation to the real economy, while the dominance of commercial banks has receded with the emergence of new instruments and institutions. This blend is common in many countries and is documented in Goldsmith (1969). However, despite these gains in the intermediation process, the financial system remains unsophisticated by international standards. In particular, the stock and bond markets are still in the embryonic stage of development and offer only a limited range of investment opportunities.

The paper is divided into three sections, with Section II reviewing the institutional development of the Barbadian financial sector while Section III provides empirical evidence on the interrelationship between real and financial sector development in Barbados and on the financial repression hypothesis. This section also discusses the current evidence on the causal relationship between financial and real development in Barbados. Concluding remarks are in the final section.

II.INSTITUTIONAL DEVELOPMENT OF THE BARBADIAN FINANCIAL SECTOR

By developing country standards, the Barbadian economy has performed well over the past fifty years. Size and a limited resource base have left the economy very open and vulnerable to adverse external influences. However, the economy has grown by an estimated 2% per annum, enabling a substantial rise in the standard of living. Initially, this growth was stimulated by foreign investment and a strong export drive in tourism and manufacturing but more recently there has been increased reliance on external borrowings to finance growth in the non-traded sectors (see Table 1).

The domestic financial system has played a significant role in both phases of economic activity. Most economic transactions are monetized and the system has proved to be a relatively efficient conduit of funds between savers and spenders. The institutional network, consist of a Central Bank, several commercial banks, fledgling stock and bond markets, and a growing complement of non-banks mobilize adequate levels of resources for the provision of short, medium and long term finance. Financial instruments are of the more basic types found in developed country markets - such as various types of deposit accounts and consumer loans, interest bearing chequing accounts, mortgages, commercial and trade bills, letters of credit and so on which include insurance companies, finance companies, government owned development finance institutions and indigenous credit unions.

Unlike in many developing countries, the system is predominantly private sector owned as Government has limited its direct involvement in the financial sector to a few specialized institutions. In addition, there has been no apparent effort to localize the financial services sector and only in the insurance industry have dominant privately owned indigenous institutions been developed.

The current structure of the financial sector is in direct contrast to that of the pre-1950 period. Up until that time, the financial system, represented largely by foreign commercial banks, served mainly as a store of savings and a source of short term working capital for the agricultural and mercantile community. Now there is a more varied institutional network providing more opportunities for investment and for capital accumulation outside of traditional sectors. Table 3 indicates this significant reduction in the share of commercial bank credit going to traditional sectors like agriculture over the period 1966-1995.

The transition from a small underdeveloped system to its current level of sophistication has been chronicled in several existing studies on institutional aspects of financial sector developments in Barbados. Of these, Worrell and Prescod (1983) and Haynes (1991) studies provide the most comprehensive review of trends in the sector. The authors present a broad view of the financial landscape by incorporating a discussion on the contribution of the emerging non-bank sector, a subject which, despite the pioneering work on non-bank intermediaries in the Caribbean by Odle (1972, 1974), has been generally ignored in writings on Barbados.[4]

The other major surveys are provided by Howard (1989) and Wood (1992). However, while they recognize the growing importance of the non-bank sector, their subsequent analyses are conducted in terms of the role of commercial banks in mobilizing and allocating resources in the economy. The value of Howard's work lies in its pragmatic interpretation of the concept of social efficiency in Caribbean type economies. In particular, Howard's argument that lending to traditional sectors can be considered as socially efficient represents an important departure from the previously held view defined by Thomas (1965) and McClean (1975) in their writings on Guyana and Barbados respectively in the pre-Central Bank era.

Part of the critique of the Thomas-McClean thesis is that commercial bank decisions were based on the Caribbean islands as profit centres. Howard (1981) and Howard and Haynes (1991), who examine this view directly by looking at the operating efficiency and profitability of commercial banks, found that foreign owned banks have been able to maintain relatively high profits despite rising operating costs and the regulatory influence of the Central Bank. These observations underscore the significant costs to the economy of financial intermediation under imperfect capital markets.

Savings Mobilization and Resource Allocation

The Barbadian financial system has traditionally been an effective mobilizer of resources. By 1950 the financial system was already attracting almost 61% of GDP in deposits (Table 6). This level of mobilization despite the traditional nature of the economy and the absence of a wide range of formal deposit taking institutions reflected an already impressive level of monetization in the agriculture based economy and a strong savings ethic. The low interest rates (Table 4) and the high portion of demand deposits in total savings (see Table 5) suggest deposits were used to facilitate transactions demand and as a store of value during this period. The Savings Bank could only pay 3% on deposits while commercial Banks also faced restrictions on the size of deposits on which interest could be paid, necessitating adjustments over the years to reflect the growth of savings.

Interestingly, the data suggests a very low level of currency holdings by the Barbadian public which, if true, would run counter to conventional thinking on the nature of financial savings during the primitive stages of economic development. However, it must be recalled that the common use of currencies between the islands almost certainly meant that the circulation was severely understated.

By the end of the decade (1950) the savings process had weakened, falling to just over 50% of GDP. Despite the decentralization of its operations by Barclays and the entry of the Bank of Nova Scotia in the second half of the decade, the ravages of Hurricane Janet and economic contraction in 1958 seemed to have stalled the institutional savings process. Commercial banks continued to account for about two-thirds of deposits during this period while the Savings Bank took up almost all of the remainder.

While deposit growth slowed after 1955, there was a marked shift in the extent of bank lending. In 1950, of the deposits mobilized within the domestic economy, only about 40% were loaned out domestically (see Tables 6 & 7). Instead commercial banks and the Savings Bank invested their balances abroad. However, commercial banks' loan activity increased substantially in the second half of the 1950s when they were over 70% loaned up. After 1957 the Barbados Savings Bank also raised the local investments portion of its portfolio, reaching almost 30% in 1959 when government issued debentures to help finance its capital program.

In the 1960s deposits grew by 12.6% per annum and, perhaps even more critically, banks were by 1969 lending out 80% of their deposits. The booming tourism industry absorbed a significant share of the new lending but equally important was the introduction of consumer installment lending. This helped spur private consumption, deepen the intermediation process and quicken the pace of economic activity. In the 1970s, economic activity strengthened but the rise in inflation rates may have had a negative impact on financial intermediation. In real terms, there was a decline in deposits, which fell to about 56% of GDP. In the inflationary environment, the currency-deposit ratio was in double digits for the entire period. In addition, the process of extending the branch network slowed and one bank had closed five of its branches by the end of the decade. One of the American banks also ceased operations but given that the other three American banks followed in the 1980s, this may simply reflect the difficulty faced by new banks in penetrating the market.

The high inflation rates continued to have some impact on deposit mobilization during the early 1970s. At the same time, loan demand accelerated to the extent that banks had to borrow to finance consumption. Loan-deposit ratios exceeded 100%, necessitating strong action by the Central Bank in its formative stages. The decline in deposit mobilization may also have been affected by exchange rate uncertainty, but as these fears dwindled and as inflation tapered off, the deposit GDP/ratio began to rise again. After the slowdown in lending in the mid-1970s the loans extended by the financial system as a share of deposits rose but this is partly attributable to the increasing share of non-banks including those which lend without raising their own deposits.

An important aspect of the financial sector developments is the shifting role of commercial bank lending. In 1970 the traded sectors and construction accounted for 36.6% of commercial bank lending, principally due to a 13% share going to tourism and 6.7% to agriculture (Table 3). However, the importance of the BNB-AD as financial institution of the sugar industry and the retirement of commercial bank debt by foreign based hotels have significantly reduced the share of commercial bank resources going to the sectors. The consumption oriented personal and distributive sectors which accounted for almost 45% of commercial bank credit in 1972 now absorb 39% but the growth of non-banks providing resources which banks used to provide and the fungibility of financial resources are largely responsible for these shifts in their shares. The growth of mortgages at non-bank institutions has rapidly increased the share of consumer debt in the overall loan portfolio of commercial banks.

The remainder of this section provides a review of selected developments in the Barbadian financial sector.

i) Diversification of the Financial Sector

Tables 6-8 show that commercial banks still remain the dominant form of financial institutions, a reflection of their historic role in the financial system and the variety of services which they provide. At present there are seven banks operating a forty-three branch network (see Table 2). While banks remain the main institutions for deposit funds, nonbanks are playing an increasingly larger role in the system. In addition to deposit sources, government has tapped the National Insurance Scheme and various domestic and external loans to finance the activities of the Barbados Development Bank (BDB) and the Barbados Mortgage Finance Company(BMFC). The low cost resources of the Central Bank have also been used to help finance the agricultural division of the BNB.

Although Financial institutions were established in Barbados in 1830s institutional diversification has only taken root in the last ten to fifteen years. The level of development of the economy and the distribution of wealth probably mitigated against faster expansion in the 1850-1960 period but as the economy took off in the 1960s, the financial system became more varied. The commercial banks extended their branch network while competition was heightened by the arrival of two American banks and the introduction of consumer instalment credit. New institutions providing mortgage finance and the government owned Barbados Development Bank also came on stream but did not make a significant impact during the period.

Initially, the financial sector became more concentrated as increased accessibility to commercial bank credit, particularly consumer installment loans, diminished the role of the Savings Bank. Its deposit base shrunk by almost 15% and its share of deposits fell from almost one third to less than 9% of overall deposits by the end of the decade. Of note is that the structure of deposits at banks underwent significant change, with the share of demand deposits declining from almost 50% to 25% (see Table 5). McClean (1975) attributes this shift to successful marketing by commercial banks for household savings.

During the 1970s commercial banks continued to dominate the intermediation process, but there was an emerging role for the public and private non-bank institutions. The trust companies, which are extensions of the commercial banks began accepting medium term deposits which were onlent for mortgages. This represented an important contribution to the intermediation process by improving the opportunities for diversifying the maturity structure of deposit holdings. The presence of the new National Insurance Scheme with resources to invest enhanced the potential of medium-term deposit mobilization. With the Barbados Mortgage Finance Company (BMFC) also making funds available for low and middle income housing, consumer debt began to take on a different profile to its early beginnings.

The 1980s was marked by the entrenchment of the nonbanks in the financial system. While there was no expansion in the range of institutions, non-banks more than doubled their share of deposits, reaching 25 % in 1992 in comparison to just over 12% in 1980. Their contribution to loan supply was even more significant, accounting for 43% of all loans compared to 27% in 1980 (Table 7).

Several factors account for this expansion in non-bank activity. First, the weakness of the sugar industry finances raised demand for funds from the agricultural division of the Barbados National Bank (BNB-AD) which assumed responsibility for financing the industry, thus relieving commercial banks of the role they had performed in better times. While the BNB-AD raised its own funds, especially from other government institutions, it relied heavily for additional financing from the Central Bank's discount scheme and its own commercial division. Secondly, the Barbados Development Bank pursued an aggressive lending policy in the early part of the 1980s which led to a quadrupling of its loan portfolio. Later it experienced high levels of delinquency as output in the manufacturing sector contracted. Thirdly, Central Bank regulations on the banking sector encouraged the growth of non-bank institutions providing consumer oriented lending. While finance companies were unable to significantly penetrate the market, in part because of the failure of one such institution, credit unions expanded rapidly in number, membership and assets. Their growth was facilitated by tax incentives which encouraged membership. In addition, with government allowing 100% interest deductibility, home ownership became more affordable and mortgage lending institutions, including insurance companies, substantially increased their lending.

Goldsmith Hypothesis

One of the major findings of Goldsmith (1969) in his comprehensive study on the theory of financial structure was that economic development is associated with a declining share of banks and an increasing share of non-banking financial institutions in relation to both the assets of all financial institutions as well as total financial assets. In Barbados, the share of commercial banks in the total assets of the financial system declined steadily from 75% for the period 1969-1972 to 49% during the 1980s (Table 8). At the same time, the share of non-banking financial institutions increased from 9.9% in the period 1965-1968 to its highest level of 36% between 1985 and 1990. The share of insurance companies in the total assets of the financial system showed a decline during the early 1970s but rose steadily since 1976, reaching a level of 10.4% for the period 1985 - 1990 (Table 8).

The results are not altogether surprising since commercial banks, being the first most important branch of financial intermediation, would necessarily decline in relative importance as other intermediaries come into existence. Part of the commercial banks' decline is attributable to non-market forces, in particular, the growth of government intermediation.

The relative decline of commercial banks may have certain economic consequences. Firstly, monetary policy might be less effective because the medium through which it works, the commercial banking system, is decreasing relative to national income. For example, the fact that financial regulations do not extend to the operations of credit unions in Barbados has allowed their members to escape the hire purchase and credit restrictions formerly imposed by the Central Bank particularly for the purchase of major consumer durables, with possible deleterious economic consequences. This situation, along with the desire to provide a level playing field for all financial institutions and avoid financial bankruptcies as happened in case of the finance company `Trade Confirmers', prompted the Central Bank to consider including credit unions with other financial institutions under a new Financial Institutions Act (see Cherebin (1993)). Secondly, there may be a loss of flexibility in the financial system; that is, diminution of the ability of the system to channel available credit rapidly from one sector of the economy to another in response to changing credit needs (see Wood (1992)).

The relative decline in the size of commercial banks in Barbados does not necessarily mean that they have declined in economic importance. Crude indicators of their economic importance are the ratio of their assets to national income and the ratio of loans and advances to national income. The results presented in Table 8 indicate that commercial banks reached the highest level of economic importance during the period 1969 to 1972, a period of intense competition in the banking industry. The results also indicate a steady increase in economic importance of non-banking institutions; the ratio of non-banks' assets to gross domestic product increased from 24.9% for the period 1973-76 to 50.3% during the period 1985-1990. Further, the ratio of the assets of insurance companies to national income increased during the 1980s, reaching a level of 14.5% for the period 1985-1990.

ii) Role of Government

Although the financial sector is predominantly privately owned, Government has played an important role in financial sector developments. In the first instance, government institutions have been strategically established to enhance the role of supply oriented finance. Of these the most successful enterprise appears to have been the Insurance Corporation of Barbados, a general insurance company which has, despite increased competition, carved out a significant market share and remained profitable.

In contrast, government lending institutions have been less successful. The BDB was established to meet demand in areas and to persons who it was felt traditional banks would not lend. The rationale for this type of credit rationing is that such individuals lack adequate collateral or that they are unable to evaluate the viability of non-traditional projects (see Zephirin (1990) and Wood (1993a) for a detailed discussion). However, many of the projects financed by the BDB have been undercapitalized and unable to withstand the shocks of the 1980s. The experience underscores the view that successful entrepreneurial development in non-traditional areas requires much more input than pure financial resources. Institutions like development banks can play a critical role but the chances of sustained growth depend critically on how they manage the high level of risk which they face. The monitoring role identified in our earlier discussion is particularly important where risks are high and portfolios are not adequately diversified. Moreover, as Wood (1993a) states "improved informational channels and staff training and acquiring the services of project appraisal and investment specialists are essential if Barbadian banks are to improve the terms of their loans and increase the volume of firm loans".

The other major intervention of government was in its establishment of the Barbados National Bank (BNB) with its commercial, trust, and agricultural divisions. The BMFC is also a subsidiary of the BNB. The commercial division has played a significant role in financing government enterprises and in providing working capital for small manufacturing companies. While Coppin and Codrington (1988) suggests that the BNB's loans to these entities represent an important contribution to the development process, there is concern about the efficiency of the intermediary process when resources are diverted to enterprises which contribute little to output or whose inefficiency places a contingent liability on the public purse.

Government's other major contribution to the financial system has been due to its supply of government paper as an alternative financial asset for the private sector. With three month treasury bills only coming on stream in the early 1960s and with limited issues of longer term debentures, there were few alternative investment opportunities prior to 1970. However, the establishment of the Central Bank in the 1970s saw a rise in these securities and, in fact, enabled the government to extract resources from the banking system and thus incur larger fiscal deficits.

While the availability of non-deposit financial instruments is often associated with vibrant money and bond markets in more advanced economies, the market in Barbados remains relatively thin. A number of factors are responsible for this. First, while treasury bill rates are determined by auction , the mandatory requirement that commercial banks often maintain a large segment of treasury bills in their portfolio may have served to depress the rate on occasions. Secondly, longer term debentures may be seen as an alternative to mortgages by some institutions but they do not appear to rank high in institutional portfolios. Additionally, until recently there were no opportunities to trade government paper which, apart from the shorter treasury bills were of maturities exceeding ten years. The introduction of three to five year treasury notes has helped diversify the menu but trading remains limited.

From their modest beginnings of approximately 10% of GDP in 1960, claims issued by government accounted for 32% of GDP in 1990 (Table 9). As indicated, a significant portion of these claims are held by commercial banks as part of their mandatory holdings, thus diverting funds that might have previously been onlent to the private sector. The National Insurance Scheme (NIS) with its large accumulated surplus has also been a major purchaser of government paper.

Government has also set up the Securities Exchange of Barbados aimed to improve the efficiency in the trading of securities in order to stimulate growth of new ventures and to reduce reliance by the private sector on the banking system for long-term finance (Johnson (1991)). However, as Wood (1994a) notes the performance of the stock exchange established in 1987 has been lackluster. Trading activity has been low (Table 10). The ratio of turnover to market capitalisation is less than 4%, and there has been little mobilisation of long-term capital. Reasons for this slow growth include the unwillingness to dilute family or `closed circle' ownership and control of business, desire to minimise the public availability of information about company operations and performances, taxation bias in favour of debt finance, ready availability of relatively cheap commercial bank finance and the ability of some established firms to attract deposits from customers.

iii) Monetary and Regulatory Control

The Central Bank stands at the apex of the financial system, directing monetary policy and regulating financial institutions. However, this was not always the case as the colonial monetary arrangements which existed before 1972 assigned no regulatory role to the monetary authority.

The Royal Charter which set up the first formal financial institution in 1837 vested the Colonial Bank with the authority to issue its own notes. Interestingly, the Barbados government did not issue its own currency until 1937 and then for a short period only, as the British Caribbean Currency Board (BCCB) was set up in 1951 to take over the currency issuing functions in the Eastern Caribbean (See Greaves (1952)). The BCCB and its successor the East Caribbean Currency Authority have been criticized by Thomas (1965) and McClean (1975) for their inflexible arrangements and the dominant role of foreign commercial banks[5].

Thus the establishment of the Central Bank of Barbados (1972) and the issue of a local currency in 1973 represented principal financial developments during this period. The Bank is charged with devising a policy framework to keep the economy on track, and the role of the Central Bank was felt immediately as its establishment coincided with liquidity problems in the banking system, rising inflation and a weakening external position (see Haynes and Holder (1989) and Campbell (1993)). The Bank introduced reserve and securities requirements on banks to cut the supply of loans to the private sector and finance the growing size of fiscal deficits, manipulated interest rates and with the aid of selective credit controls attempted to regulate the flow of credit to consumption oriented sectors. In addition, the scope of exchange controls was extended to cover the sterling area and banks were mandated to seek Central Bank permission before borrowing to onlend in the domestic economy.

By the end of the 1970s, the Central Bank was diverting 25% of bank deposits away from lending to the private sector through its reserve requirement policies (Table 4). In addition, the Bank manipulated interest rates to curb domestic demand, support the balance of payments and reduce the opportunities for collusion by foreign banks. In real terms, interest rates were negative during high inflation periods but a high interest rate strategy was probably ruled out on the grounds that it would destroy the productive sectors without mobilizing additional resources as suggested by the theoretical literature emanating from Keynes.

The interest rates issue (to be discussed in detail in the next section) has been reviewed by a number of researchers including Howard (1976), Zephirin (1983), Worrell and Prescod (1983), Haynes and Holder (1989), Craigwell (1990) and Ferreira (1993) and Wood (1995). The consensus among these authors was that the regulation of interest rates did not impair the mobilization of savings nor the performance of the economy. Instead the view was held that high interest rates are inflationary and contribute nothing to stabilization. However, there is emerging sentiment that wide differentials between foreign and domestic interest rates do constrain deposit mobilisation and contribute to a weakening of the balance of payments (see, for example, Haynes and Holder 1989)). However, inadequate attention has been paid to the destabilizing effect of exchange rate speculation on deposit growth.

Although the new Financial Intermediaries Regulatory Act (FIR Act) gives the Central Bank increased regulatory and supervisory powers over commercial banks and allows for regulation and licensing of trust and finance companies, merchant banks and deposit taking commercial houses, the regulatory framework in general has not kept pace with developments in the financial sector. In this context, the decision of the Bank not to set reserve requirements for non-banks represents a glaring example. This places undue burden on banks at a time when non-banks are assuming a greater role in the economy. The credit union movement remains outside the regulatory control of the Bank even though it has greater potential than other regulated institutions to undermine the Bank's objectives of maintaining a fixed exchange rate through adequate levels of foreign reserves. Supervision of credit unions and insurance companies are restricted to the submission and review of periodic returns. BDB is not supervised by any agency except so far as its audited accounts are submitted to Parliament. For the most of this review period, the Rate of Interest Act remains on the statute book for some institutions even though adherence to it would severely constrain competitive forces in the financial sector. A review of the FIR - Act is given in Cherebin (1993). Early attention on the state of prudential and supervisory aspects of the regulatory regime can be found in Johnson and Springer (1978) and Williams (1989, 1991).

IV. EVIDENCE ON THE BARBADIAN EXPERIENCE

This section provides a review of the empirical evidence on the relationship between financial development and real growth. The evidence on the all important hypothesis of financial repression is also quantitatively examined.

Relationship Between Economic Growth and Financial Development in Barbados

The importance of the organised money market is measured by the ratio of assets of all financial institutions to GDP (that is, broad money to GDP) as in Goldsmith (1969). A rise in this ratio (FIR) is an indication that the size of the financial sector has grown more rapidly than the real economy. The movements in the FIR over time are rather slow because the average usually amounts to a negligible percentage of the total value per year. In other words, FIR is a stock measure as it is the accumulation of assets over the years. In the short-run a much more sensitive measure is provided by the ratio of the change in the assets of financial institutions to GDP. This ratio can be taken to be equal to the new issue ratio (NIR) of financial institutions. It has been argued that this ratio is closely related to the extent to which economic activities and economic growth are financed internally and from external sources. The reasoning here is that as more business enterprises, governments and households are able to finance their capital expenditures out of their internal savings, the smaller will be the volume of new issues and hence the smaller the NIR, ceteris paribus. The degree of self-financing in turn is closely related to a country's economic and financial structure, especially the degree of separation of saving and investment which is measured by the difference between the savings of individual economic units and their capital expenditure (Goldsmith (1969)).

The NIR is also used as a measure of the importance of financial institutions within the financial superstructure. Apart from financial institutions, other sectors such as government and private institutions also issue financial instruments. The higher the volume of new issues of financial instruments by institutions in relation to the issues by other sectors, the greater the relative importance of financial institutions in the financial process.

The results of the ratios computed (FIR and NIR) for the period 1946-1990 is summarized in Table 11. The FIR ratio has grown steadily over the period covered by the study.[6] The study thus confirmed that as the country grew, its financial sector has not been left behind, The trend in NIR has not been so predictable as to warrant any definite conclusion. However, the ratios are quite similar to those of other countries.[7]

Does the causal relationship run from financial development to growth, the reverse, or both? If financial development causes growth some justification for the policy of establishing and promoting financial institutions in Barbados is necessary. Wood (1993b) using Hsaio's version of Granger (1969) causality technique that the future cannot cause the past presents evidence on this causal relationship. He found evidence of a bi-directional causal relationship between financial development as proxied by the FIR and economic growth measured by real gross domestic product over the period 1946 - 1990. Wood's tests also indicate a uni-directional causal flow from economic growth to financial development during the early stages of development (1946 - 1968). The absence of a supply-leading relation in this early period, suggests that the financial sector was not a statistically significant link in the saving-investment process. This observation corroborates the claim of regional commentators (for example, Thomas (1965) and McClean (1975)) that the structure and operation of financial entities in Barbados (and the wider Caribbean) did not promote economic growth during the colonial period.

The results for the second subsample indicate a supply-leading relation as well as a reverse causal relationship from economic growth to financial development. The latter suggests the importance of economic growth in stimulating the development of the Barbadian financial sector while the former indicates that the Barbadian financial sector constituted a leading sector in the transformation process, and confirms the recent finding of Codrington and Coppin (1989), attained through a casual inspection of the evidence, that "there were clear cases where the expansion of the financial sector served to improve the rate of economic growth".

Wood's (1993b) results thus provide no support for the hypothesis established by Patrick (1966) that the direction of causality between financial development and economic growth changes over the course of development. Recall, Patrick (1966) argues that financial development is able to induce real innovation-type investment before sustained modern economic growth gets underway and "as modern economic growth occurs, the supply-leading impetus gradually becomes less important and the demand-following financial response become dominant".

Financial Repression

The result that financial development causes growth suggest the need to understand what determines financial growth. Foremost is the question of whether real positive deposit rates increase financial savings and consequently the quality and quantity of investment and growth. Taylor (1983), van Wijnbergen (1983), and Zephirin (1990) have challenged the basic rationale of the hypothesis while empirical tests conducted by Agarwala (1983), Khatkhate (1988) and Gonzalez-Arrieta (1988) have failed to level support to it. However, Lanyi and Saracoglu (1983) and Fry (1988) provide evidence that gives credence to the hypothesis.

In Barbados, characteristics of a financially repressed economy are present, that is, control of interest rates, selective credit controls, directed lending, high reserve requirements, and so on. However, in the last decade or so, the Barbados Government has been pursuing a financial liberalisation strategy. As Wood (1994b) points out the main reason for this change in policy stance is the belief, based on the notion that interventionist financial policies are detrimental to economic prosperity, that liberalisation would promote growth and stability, by stimulating savings and improving overall economic efficiency. This begs the question "Will financial liberalisation work in Barbados?" One of the important assumptions of the theory is that real interest rates have a major impact on the level of savings. Recent empirical work on the determinants of real private savings in Barbados [Wood (1995)] indicates that, contrary to the basic tenants of financial liberalisation, real interest rates have a negative (and statistically insignificant) impact on savings in both the long run and the short run. In addition, Craigwell (1990) and Modeste (1993) found that real interest rates do not play an important role in determining financial savings in Barbados.

These findings corroborate the earlier works of Worrell and Prescod (1983) Zephirin (1983), and Howard (1976).

Financial liberalisation theorists also contend that investment is positively related to the rate of interest. Their argument is premised on the hypothesis that higher interest rates attract higher levels of savings, and because profitable investment opportunities abound in less developed countries 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). Boamah and Holder (1994) recent study found a negative and insignificant relationship between private investment and the real user cost of capital. See also Wood (1992) and Worrell (1993) who confirmed this latter result.

V. CONCLUSION

This paper examined the development of the financial sector in Barbados. It was found that this sector has undergone significant changes since 1946 seen through the increased accessibility of the populace to new financial institutions and the improved mobilisation and allocation of resources. The financial sector in general has grown in line with gross domestic product and has borne little or no relationship to the high real positive interest rate policy of McKinnon (1973) and Shaw (1973). However, the dominance of commercial banks has receded with the advance of new instruments and non-bank institutions, the growth prompted by favourable government-regulatory and supervisory policies. We also found that by international standards, the stock and bond markets are still in the embryonic stage of development and suggests that more needs to be done to offer a more varied range of investment opportunities.

REFERENCES

1. Agarwala (1983), 'Price Distortions and Growth in Developing Countries', World Bank Staff Working Papers No. 575.

2. Atje, R. land Jovanovic, (1993), 'Stock Markets and Development, European Economic Review, Vol. 37, p. 632-640.

3. Boamah, D. and C. Holder, (1994), 'On the Traditional Nexus of Savings, Investment and Current Accounts for a Small Open Economy', Central Bank of Barbados, Money Affairs, Vol. VII, No. 2, July-December, pp. 17-35.

4. Campbell, T. C. (1993), 'A Review of Monetary Instruments used by the Central Bank of Barbados', Central Bank of Barbados, Working Papers.

5. Cherebin, D. (1993), 'The Regulation and Supervision of Financial Institutions in Barbados", Central Bank of Barbados, mimeo, July.

6. Cox, W. (1977), 'Agricultural Credit in Barbados', Central Bank of Barbados Quarterly Review, Vol. IV, No. 2.

7. Codrington, H and A. Coppin, (1989), 'The Financial Structure and Allocation of Credit in Barbados: 1977-1987', Social and Economic Studies, Vol. 38, pp. 165-79.

8. Craigwell, R. (1990), 'Interest Rate Policies, Financial and Economic Growth in Barbados, 1973-1986', Money Affairs, Vol. III, p. 69-79.

9. ______ and C. Haynes (1987), 'The Demand for Life Insurance in Barbados: An Empirical Test', Central Bank of Barbados, mimeo, July.

10. ______, C. Haynes and P. Mason, (1994), 'Economic Aspects of the Life Insurance Industry in Barbados', Central Bank of Barbados, mimeo.

11. De-Gregorio, J. (1992), 'Liquidity Constraints, Human Capital Accumulation and Growth', mimeo, April.

12. Ferreira, J. (1993), "Financial Savings in the Caribbean", mimeo, Central Bank of Barbados.

13. Francis, G. (1977) ' Macroeconomic Aspects of the Insurance Industry in Barbados', mimeo, Central Bank of Barbados.

14. Fry, M. J., (1988) Money, Interest and Banking in Economic Development, John Hopkins.

15. Gonzalez-Arrieta (1988), 'Interest Rates, Savings and Growth in LDC's: An Assessment of Recent Empirical Research, World Development, Vol. 16, pp. 589-605.

16. Goldsmith, R.W., Financial Structure and Development, Yale University Press, 1969.

17. Granger, C. (1969) 'Investigating Causal Relations by Econometric Models and Cross-Spectral Methods', Econometrica., Vol. 37, pp. 424-38.

18. Greaves, J. (1952), 'Money and Currency in Barbados', The Journal of the Barbados Museum Historical Society.

19. Greenwood, J. and Javonovic (1990), 'Financial Development, Organise Growth and the Distribution of Income', Journal of Political Economy, Vol. 98, pp. 1076-1107.

20. Gupta, K.C. (1984) Financial and Economic Growth in Developing Countries, Croom Helm.

21. Gurley, J.G. (1967a), 'Financial Structures in Developing Economies', in Fiscal and Monetary Problems in Developing States, (ed) D. Krivine (New York: Praeger).

22. ______, (1967b) 'Review of Banking in the Early Stages of Industrialisation ed. Rando Cameron', American Economic Review, 950-53.

23. Haynes, C. (1991), 'Recent Developments in the Financial Sectors of Barbados', Central Bank of Barbados, mimeo.

24. Haynes, C. and Holder C. (1989), 'Monetary and Fiscal Policy in Barbados, 1970-1985, in Economic Adjustment Policies For Small Nations. Theory and Experience in the English-Speaking Caribbean ed. DeLisle Worrell and Compton Bourne, (New York: Praeger).

25. Howard, M. (1976), 'Interest Rate Behaviour in an Open Economy: The Barbados Experience, 1965-1976, Central Bank of Barbados. Quarterly Review, Vol. III No. 4.

26. _______ (1981), 'A Note on the Cost and Revenue Structure of Commercial Banking in Barbados', Social and Economic Studies, Vol. 29, No. 2.

27. _________ (1989), 'Dependence and Development in Barbados', Bridgetown: Caribbean Research and Publishing Incorporated.

28. Howard, M. and Haynes, C. (1991), 'Financial Efficiency, Intermediation Costs and the Regulatory Framework", mimeo, Central Bank of Barbados.

29. Japelli, T. and M. Pagano, (1992), 'Saving, Growth and Liquidity Constraints', Discussion Paper No. 662, Centre for Economic Policy Research, London.

30. Johnson, A. (1991) Towards Economic Democracy: The Role of the Securities Exchange of Barbados. Hoyos Publishing Incorporated.

31. Johnson, C. and Springer, D. (1981), 'Commercial Bank Supervision in Barbados', Central Bank of Barbados, Quarterly Review, Vol. V., No. 4.

32. Jung, W. S., 'Financial Development and Economic Growth: International Evidence', Economic Development and Cultural Change, Vol. 34, p. 333.46.

33. Khatkhate, D. (1988), 'Assessing the Impact of Real Investment Rates in LDC; World Development, Vol. 16, p. 577-88.

34. King, R. and R. Levine (1992), 'Financial Indicators and Growth in a Cross Section of Countries', Working Paper No. 609, World Bank.

35. Lanyi and Saracoglu (1983), 'Interest Rate Policies in Developing Countries', IMF Occasional Paper No. 22.

36. Mathias, P. (1973), 'Capital, Credit and Enterprise in the Industrial Revolution', Journal of European History, Vol. 2.

37. McClean, A.W.A. (1975), Money and Banking in the Eastern Caribbean Currency, Institute of Social and Economic Research.

38. McKinnon, R. (1973), Money and Capital in Economic Development, (Washington, D.C: The Brookings Institution).

39. Odle, M.A. (1972), The Significance of Non-Bank Financial Intermediaries in the Caribbean, Institute of Social and Economic Research.

40. Odle, M.A. (1974), Pension Funds in Labour Surplus Economies, Institute of Social and Economic Research.

41. Patrick, H. (1966), 'Financial Development and Economic Growth in Underdeveloped Countries' (1966), Economic Development and Cultural Change, Vol. 14, 1966.

42. Phillips, E. (1977), 'Financial Aspects of the Barbados Sugar Industry Central Bank of Barbados Quarterly Review, Vol. IV, No. 4.

43. Roubini, N. and X. Sala-Y-Martin (1992) "Financial Repression and Economic Growth", Journal of Development Economics, Vol. 39, pp 5 - 30.

44. Shaw, E. (1973), "Financial Deepening in Economic Development", Oxford University Press.

45. St. Hill, R. (1992), Stages of Banking and Economic Development', Savings and Development, Vol. 16, pp.5-21.

46. Taylor, L. (1983), 'Structuralist Macroeconomics: Applicable Models for the Third World, (New York: Basic Books).

47. Thomas, (1965), 'Monetary and Financial Arrangements in a Dependent Monetary Economy: A Study of British Guyana, 1945-1962 in Social and Economic Studies Supplement Vol. 14, No. 4.

48. van Wijnberger, (1983), 'Credit Policy, Inflation and Growth in a Financially Repressed Economy', Journal of Development Economics, Vol. 13, p.45-65.

49. Williams, M. (1989), 'Regulation of Financial Institutions in the Caribbean: Implications for Growth and Development', Social and Economic Studies, Vol. 38, p. 181-199.

50. ____ (1991), 'Regulation in the Caribbean and the Implications for Commercial Banks Adjustment', mimeo, Central Bank of Barbados, November.

51. Wood, A. P. (1992), 'An Analysis of Savings, Investment and the Financial System in Barbados', PhD. Thesis, University of Cambridge.

52. _______ (1993a), 'Bank Lending to Firms and the Nature of Credit Rationing in Barbados', Money Affairs, Vol. VII, No. 2, July-December, p. 104-136.

53. ___________ (1993b), 'Financial Development and Economic Growth in Barbados: Causal Evidence', Savings and Development, Vol. XVII, pp. 379-390.

54. _________ (1994a) "The Stock Exchange in the Caribbean, The Barbadian Experience", in the BALAS conference Preceedings, ed. A Vasquez-Parraga, Florida International University, April, pp. 195-205.

55. _______(1994b) "Improving the Contribution of Finance to the Growth Process in Barbados - Is Financial Liberalisation a Desirable Option?" Social and Economic Studies, Vol. 34, No. 4, pp. 1-19.

56. _______(1995), Determinants of Private Savings in Barbados." Savings and Development, Vol. 19, No. 1, January, pp. 79-95.

57. Worrell, D. (1993), 'Investment in the Caribbean', Social and Economic Studies, Vol. 42, p. 243-260.

58. Worrell, D. and Prescod, R. (1983), 'The Development of the Financial Sector in Barbados, 1946-82', Central Bank of Barbados. Economic Review, Vol. X, No. 7.

59. Zephirin, M., (1983), 'Interest Rates, Savings and Credit Allocation', mimeo, Central Bank of Barbados.

60. ____ , (1990), "Imperfect Information and Financial Liberalisation in LDC's", Unpublished PhD. Thesis, University of Warwick.

Table 1

Economic and Monetary Indicators

	1950	1960	1970	1980	1990	1994
Population ('000)	209.0	234.0	239.0	249.0	258.0	258.0
Per Capital GDP (US$)	154.0	299.0	669.0	2,979.0	5,746.0	5666.7
External Debt/GDP[1] (%)	-	10.9	8.3	14.9	31.5	30.2
Money/GDP (%)[2]	20.9	20.4	20.9	17.2	20.3	27.2

Sources: Barbados Statistical Service Abstract of Statistics 1969
Central Bank of Barbados Annual Statistical Digest 1995
World Bank World Tables 1991 edition

Notes: [1]Data excludes unguaranteed private sector debt. In 1994 this debt was approximately 4.6% of GDP.

[2] Money is narrow money, that is, currency plus demand deposits

Table 2

Expansion of Financial Institutions

	1950	1960	1970	1980	1990	1994
Commercial Banks	4	4	6	7	7	7
Bank Branches	4	6	26	43	43	43
Non-Banks	3	3	9	11	12	12

In this Table, non-banks do not include insurance companies.

Source: Research Department, Central Bank of Barbados

Table 3

Sectoral Distribution of Commercial Bank loans (percentages) (Periodic Averages)

	1966-1970	1971-1975	1976-1980	1981-1985	1986-1990	1991-1995
Agriculture	11.5	5.3	3.9	4.4	2.6	2.5
Manufacturing	9.0	8.8	12.0	15.4	12.8	11.2
Distribution	21.0	20.0	16.1	14.0	17.2	19.5
Tourism & Catering	11.7	11.7	12.7	15.1	9.8	9.5
Public Utilities	8.9	4.6	5.8	6.8	4.9	1.6
Construction	7.0	11.9	9.2	4.5	3.8	4.6
Government & Statutory Bodies	2.4	4.5	3.6	1.8	2.1	3.2
Personal	15.6	22.5	26.3	20.1	24.3	24.7
Other	12.9	10.7	10.4	17.9	22.5	23.2

Source: The Central Bank of Barbados, Economic Financial Statistics, May 1996.

Note: The "Other" sector includes Mining and Quarrying, Transportation, Financial Institutions, Professional and Other Services, and Fisheries.

Table 4

Interest Rates, Inflation and Reserve Ratios

	1965	1970	1975	1980	1985	1990	1995
Cash Reserve	-	-	6.0	8.0	8.0	8.0	6.0
Government Securities	-	-	9.0	17.0	19.0	22.0	23.0
Savings Deposit Rate	3.0	4.5	5.0	5.0	4.0	5.5	5.0
Bank Rate	-	-	7.5	7.0	13.0	13.5	12.5
Treasury Bill Rate	n.a.	7.1	4.0	6.2	4.6	8.1	8.3
Inflation Rate	n.a.	7.8	20.3	14.4	3.9	3.1	2.8

Source: Central Bank of Barbados, Economic and Financial Statistics, May 1996.

Table 5

Nature of Deposits at Commercial Banks

($ Million)

Year	Demand	Time	Savings	Total
1946	10.3	0.3	7.9	18.5
1950	10.1	3.6	8.9	22.6
1955	14.6	13.7	10.4	38.7
1960	19.1	4.7	17.2	41.0
1965	24.3	16.2	31.1	71.5
1970	45.2	66.2	69.0	180.4
1975	72.1	164.7	123.7	360.6
1980	164.2	230.2	348.1	742.5
1985	252.3	355.8	512.3	1,120.3
1990	446.5	435.5	950.7	1,832.7
1995	694.6	515.7	1,328.9	2,539.2

Source: Central Bank of Barbados, Economic and Financial Statistics, May 1996.

Table 6

Monetary Liabilities in Barbados
BDS$ Milion

	Commercial banks	Friendly Societies/ Credit Unions[3]	Savings Bank	Trust Companies[4]	Finance Companies[1]	SIAB/ BNB-AD	Deposits	Currency	Deposits/ GDP	Banks' Deposit Share	Currency/ Deposits
1950	22.5	0.2	10.4	-	-	-	33.1	1.3	60.6	65.8	3.8
1955	38.6	0.2	14.7	-	-	-	53.5	4.6	66.9	66.4	7.9
1960	41.0	0.1	19.5	-	-	-	60.6	5.3	50.6	62.2	8.0
1965	71.5	0.4	17.6	-	-	-	89.5	9.1	67.8	72.5	9.2
1970	180.4	0.6	17.8	2.0	-	-	198.8	21.5	62.8	90.8	10.8
1975	360.6	1.4	25.7	19.8	-	-	407.5	39.6	55.7	88.5	9.7
1980	742.5	4.7	-	69.9	12.6	15.6	845.3	101.6	57.0	87.8	12.0
1985	1,120.3	32.0	-	148.2	22.8	31.6	1,354.9	123.5	61.8	82.7	9.1
1990	1,832.7	143.0	-	320.3	40.4	97.7	2,434.3	192.8	81.9	75.2	7.9
1994	2,239.1	186.9	-	336.2	35.7	136.5	2,934.4	189.6	100.4	76.3	6.5

1. An insignificant level of double counting is captured in the data.

2. Exclude foreign currency deposits after 1975; before 1975 such balances are insignificant.

3. In the 1950s and 1960s friendly societies were the dominant informal deposit institutions; their deposits were subject to seasonality.

4. *Small levels of deposits held on demand by these institutions are excluded.*

Source: Statistical Service, Abstract of Statistics
Central Bank of Barbados, Annual Statistical Digest

Table 7

Financial Institution Lending
BDS$ Million

	Commercial banks	Barbados Development Bank	SIAB/ BNB-AD	Trust Companies	BMFC	Finance Companies	Credit Unions	Total Loans	Loans/ Deposits
1950	12.6	-	0.1	-	-	-	-	12.7	38.4
1955	16.6	-	0.4	-	-	-	-	17.0	31.8
1960	39.7	-	0.7	-	-	-	-	40.4	66.7
1965	59.0	-	0.8	-	-	-	-	59.8	66.8
1970	170.0	0.8	1.2	-	1.5	-	0.3	173.8	87.4
1975	295.3	4.1	5.9	13.3	14.0	-	1.0	333.6	81.8
1980	546.6	23.2	68.0	71.5	33.3	12.0	4.1	758.7	89.8
1985	848.9	84.8	110.9	123.5	55.5	26.3	22.9	1,272.8	93.9
1990	1,235.7	94.6	180.7	330.1	90.1	39.5	109.2	2,079.7	85.4
1994	1,456.8	81.5	10.2	396.5	96.3	40.6	139.3	2,221.2	75.7

1. After 1975 loans to financial institutions excluded to avoid double counting of flows.

Source: Statistical Service, Abstract of Statistics
Central Bank of Barbados, Annual Statistical Digest

Table 8

Assets of Financial Institutions
$M

	Monetary Authorities	Commercial Banks	Barbados Savings Bank	Trust Companies	Finance Companies	BMFC	BDB	SIAB/ BNB-AD	Local Assets Insurance Companies	NIS	Total
1946	1.5	20.3									21.8
1950	1.3	24.4									25.7
1955	4.6	40.3	14.2								59.1
1960	5.3	51.8	19.3								76.4
1965	12.2	81.1	19.4					1.9			112.7
1970	31.4	240.9	23.9			1.7	1.5	2.0		20.2	321.6
1975	121.0	450.9	36.3	22.5	-	14.7	13.8	6.4	50.7	74.4	789.8
1980	255.1	883.8		78.2	14.7	33.6	43.4	43.0	140.1	181.8	1,673.7
1985	498.9	1,410.2		167.9	34.1	57.3	106.4	126.5	300.8	362.5	3,064.0
1990	641.1	2,180.4		383.4	58.0	94.0	1113.8	177.3	511.0	513.2	4,672.2
1994	753.7	2,650.1		435.8	57.9	101.6	98.5*	221.8	680.5	646.8	5,646.7

*Figure for 1993

Source: Abstract of Statistics, Barbados Statistical Service
Annual Statistical Digest, Central Bank of Barbados

Table 9

Bonds Outstanding

	Treasury Bills	Debentures/ Treasury Notes	Savings Bonds	Gov't Guaranteed	Total Claims	Claims/ GDP
1960	n.a.	12.1	-	-	12.1	10.1
1965	1.5	16.0	-	-	17.5	13.3
1970	6.9	29.0	-	-	35.0	10.9
1975	56.9	82.4	-	-	139.3	19.9
1980	164.2	130.6	-	15.9	310.7	20.9
1985	405.0	154.7	6.9	67.9	634.5	28.6
1990	506.2	341.2	34.6	101.3	983.3	32.0

Source: Central Bank of Barbados, Annual Statistical Digest

Table 10

STOCK MARKET ACTIVITY
Transactions Details: June 1987 - December 1992

Period	Number of Transactions	Volume ('000)		Value of All Transactions (BDS$'000)	Closing Index
		Ordinary Shares	Preference Shares		
Jun.-Dec. 1987	453	1,506	31	3,564	1,000.00
Jan.-Dec. 1988	385	1,466	14	4,167	n.a.
Jan.-Dec. 1989	441	2,111	9	6,425	1,268.75
Jan.-Dec. 1990	416	3,728	47	10,143	1,205.95
Jan.-Dec. 1991	634	7,199	8	18,272	1,319.25
Jan.-Dec. 1992	289	1,885	13	4,799	1,099.13
Jan.-Dec. 1993	500	3,245	4	8,923	1,338.58
Jan.-Dec. 1994	499	2,228	6	11,504	1,395.18

Source: Securities Exchange of Barbados

N.A. Not available

Table 11

FINANCIAL SECTOR INDICATORS 1947-90

OBS	FIR	NIR
1947	0.47	-0.07
1950	0.47	0.12
1955	0.80	-0.08
1960	0.63	-0.05
1965	0.71	0.07
1970	1.17	0.08
1975	1.12	0.10
1980	1.12	-0.11
1985	1.40	0.04
1990	1.57	0.12

Source: Barbados Statistical Service, Abstract or Statistics
Barbados Central Bank, Statistical Digest

END NOTES

1. Prominent historical examples would include the financial development experiences of Germany since 1830 and Japan since 1870.

2. Such demand-following financial development phenomena are often associated with the English banking system of the later eighteenth and early nineteenth centuries, and those modelled after it. The traditional short-term, commercial loan specialization of these English banks is considered to be one of the main properties of demand-following banking systems (see Mathias (1973, p. 135).

3. Japelli and Pagano (1992) found that the saving and growth rates are negatively and significantly correlated with indicators of the development of household lending, such as the ratio of consumer credit to GDP and the maximum loan-to-value ratio in the mortgage market, a finding that confirms that some forms of financial development are not conducive to faster economic growth. This result indicates that studying the correlation between financial development and growth may require a finer disaggregation of financial intermediation measures.

4. A review of the literature for Barbados indicate five studies on non-banks: Cox (1977) and Phillips (1977) on agricultural finance and Francis (1977), Craigwell and Haynes (1987) and Craigwell et al (1994) on insurance.

5. McClean argues that the East Caribbean Currency Authority (ECCA) which replaced the BCCB behaved in this way and did not represent a significant improvement in monetary arrangements. Two aspects of ECCA's behaviour which received criticism and which disappeared with the establishment of the Central Bank were the need for the currency to be partially backed by reserves and strict limitations on the extent of government borrowings from the monetary authority.

6. The financial deepening phenomenon observed on the Barbadian economy, was, in part the consequence of transactions between financial institutions themselves. The financial layering ratio - the ratio of intrafinancial sector assets to total financial assets of the financial system - increased from 0.1 in 1973 to around 0.2 in 1990 (Wood (1992)).

7. Goldsmith (1969, p.45) found a ratio of 1 - 1.5 for developed financial systems.