XXVII ANNUAL CONFERENCE OF MONETARY STUDIES

NEW FINANCIAL INSTRUMENTS AND INNOVATIONS IN THE JAMAICAN ECONOMY: IMPLICATIONS FOR MONETARY POLICY AND FINANCIAL REGULATION

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Views expressed in this paper are not necessarily those of the Bank of Jamaica

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INTRODUCTION

This paper attempts to highlight recent innovations in the Jamaican financial system during the post-reform period of the late 1980's and the early 1990's. Financial reform measures were taken in response to features of financial repression which arose in the economy by 1985, and were regarded as impediments to economic growth.

The liberalization of the financial system has contributed to the creation of a more competitive financial environment. This has set the stage for innovation as financial institutions try to maintain market share and maximum profits.

In Jamaica, commercial banks are faced with increasing competition from growth and expansion of non-bank financial intermediaries. Differential regulatory control and government taxing policies over the years have been in relative favour of non-banks and have contributed to their success in using innovative ways to attract bank depositors' funds. Modern technology has added a new dimension to the innovative process as institutions have adapted to the age of computerization and have used this to enhance their services.

Deregulated interest rates have led to increased competition in the financial market and new securities have emerged broadening the type and maturity structure of the array offered on the market. Open market operations has become an important instrument of monetary control with the development of a secondary market for securities.

Paradoxically, as the system becomes liberalized, there is the need to strengthen the regulatory and supervisory capacity. This is so because as institutions continue to compete with each other, there is the potential of increasing their risk profile.

The thrust of supervision and regulation is to maintain soundness of the banking system while not stifling innovation.

Financial liberalization also requires a reassessment of monetary policy in the new environment. A review of the appropriateness of the existing objectives, targets, instruments, and implementation of monetary policy is a necessary exercise in this context.

The presentation is divided into five sections. The first sets the theoretical framework of the paper and attempts to answer the question - what drives innovation? Section 2 briefly reviews aspects of the financial reform programme in Jamaica during the late 1980s, while Section 3 describes market and banking innovations in the new environment. Sections 4 and 5 discuss some implications of financial innovation for regulatory control and monetary policy. A summary conclusion then follows.

SECTION 1

THEORETICAL FRAMEWORK
- What drives Innovation?

The financial system in developed countries consists of a wide variation of markets, institutions and instruments; and it is one which is changing as new instruments and institutions are developed. There is financial deepening in the economy, as the accumulation of financial assets is at a faster pace than the accumulation of non-financial wealth. (Shaw 1973).

In the lesser developed countries (LDC's) however, there is a narrow range of markets, institutions and investments. Shaw has argued that the development of financial markets and institutions is a necessary condition for economic growth. Economies at very low levels of development suffer from financial repression which keeps finance "shallow" due to restricted capital markets and this stunts economic growth.

Financial repression restricts growth of the financial sector and so the development of financial institutions, instruments and overall innovation is impaired. The McKinnon-Shaw model (1973) of finance in economic development gives the main features of financial repression:-

1. Administratively determined institutional nominal rates of interest, which gives rise to negative real rates of interest on deposits.

2. Rationing of investable funds. This may be through selective credit control or the non-price allocation of investable funds.

3. Government imposition of high reserve requirements on commercial banks which leads to the "crowding out" of private sector credit.

4. Government restrictions on the development of financial institutions, instruments, money and capital markets, which may discourage risk-taking.

The "developmental hypothesis" view maintains that the lack of a developed financial system restricts economic growth and therefore it is imperative that government policy is designed to encourage growth in the financial system. On the subject of the relationship between financial development and economic development, the consensus among most of the developmental economists is that financial development is important in some cases, leading to economic development. (Patrick (1966), Galbis (1977), Khatkhate (1972), Mckinnon (1973), Shaw (1973), and Drake (1980). Woolmer (1977) has, however, used the case of Nigeria to argue that financial development follows rather than leads economic development. Nonetheless, all view the financial system as a necessary accompaniment of the development process and, therefore, a necessary risk which has to be taken. To encourage financial deepening, the policy recommendation is usually one of financial liberalization. It is argued that liberalization of the financial sector will encourage savings, efficient investment and economic growth. Liberalization requires free market-determined interest rates, which will encourage the growth in financial assets and liabilities, and the development of institutions. Eventually the range of financial instruments would increase and the capital market would become more efficient in promoting economic growth. It is important to note that these are necessary but not sufficient criteria for economic development in LDCs.

It is within this changed financial environment and throughout the liberalization process that new financial instruments will emerge, and financial innovation will occur. An economic analysis of innovation suggests that "Innovation is produced by the desire of individuals and businesses to maximize profits. A change in the economic environment will stimulate a search for innovations that are likely to be profitable" (F. Mishkin 1992).

Financial institutions operating in financial markets face changes in the economic environment. Changes in rates of return resulting from different rates of inflation and interest, as well as rapid advancement in computer technology force financial intermediaries to research and develop new instruments and innovations in a bid to acquire funds while maximizing net income. In addition to changing market conditions and technological advancement that can drive innovation, financial innovation also can arise from the avoidance of existing regulations and from a response to fiscal policy. Analysing the USA financial system during the decade of the 1960's, Mishkin argues that financial institutions faced drastic changes in the economic environment. Interest and inflation rates became highly volatile, and computer technology advanced rapidly. Financial institutions found that their traditional banking functions no longer proved profitable. Many financial intermediaries found that they could no longer attract funds with their traditional financial instruments and in order to maintain profit levels in the new economic environment, institutions researched and developed new products that would prove profitable.

In the liberalized economy, changes in market conditions e.g. volatility in interest rates and inflation rates have resulted in financial innovations which reduce the risk on returns on investments. Mishkin has linked certain innovations in the US financial market to the dramatic increase in the volatility of interest rates. During the decade of the

'80's the 3 month treasury bill rate ranged from 5% to over 15%. Large fluctuations in interest rates led to substantial capital gains or losses and greater uncertainty about returns on investments. There was therefore a high level of interest rate risk which spurred the creation of new financial instruments and markets to help lower the risk. Adjustable-rate mortgages are common examples of these instruments. The mortgage loan interest rate changes when a market interest rate changes (usually the treasury bill rate). Compared to fixed-rate mortgages, adjustable-rate mortgages allow for lower initial interest rates making them more attractive to borrowers. Because these mortgages allow mortgage-issuing institutions to earn higher interest rates on mortgages when rates rise, profits can be kept higher during these periods. A financial futures market is another innovation arising from market velocity, enabling both buyers and sellers of financial futures contracts to hedge against interest-rate risk.

Advancement in technology stimulates financial innovation by lowering the cost of providing new financial services and instruments and making it profitable for offer to the public. Improvements in information technology has made it easier for persons in the business, household, and financial sectors to evaluate market offers of securities, thus enabling business firms to borrow directly from the public through security issues. Indeed, this has helped foster the development of the commercial paper market. Computer technology can stimulate financial innovation by lowering the cost by providing new financial services and instruments making it more profitable to offer them on the market. When computer technology that substantially lowered the cost of processing financial transactions became available, financial institutions across the United States developed new financial services and instruments that appealed to the public. Bank credit cards and the internationalization of financial markets are examples of these. Securitization, the process of transforming otherwise illiquid financial assets into marketable capital market

instruments has been also stimulated by advances in computer technology.

Regulatory constraints can lead to financial innovation by creating incentives to avoid this restriction. Two government regulations that can restrict financial institutions in profit making are high reserve requirements and ceilings on deposit interest rates. Restrictive bank regulations can create the opportunity for non-bank financial intermediaries to invent ways to offer bank depositors higher rates of return. This is because these non-banks are not subject to ceilings on deposits and high liquidity ratios. Commercial bank innovation that arise from these restrictions include the proliferation of NOW (negotiable order of withdrawal, chequing accounts that attract interest) accounts and rapid development in the commercial paper market. In response to tight fiscal policy, innovations in new financial instruments offering "tax shelters" arise.

Overall, financial innovations make financial instruments or markets more attractive and accessible to potential investors. The development of attractive non-price features associated with financial innovation can add to the pool of long and short-term funds by offering attractive alternatives to idle money balances.

SECTION II
FINANCIAL REFORM IN THE JAMAICAN CONTEXT

The Jamaican economy of the early eighties exhibited features of financial repression. By the mid 1980's, the financial market was bound by a high level of government regulation and control. Also, the financial system was dominated by commercial banks operating in the traditional mode. Monetary and credit policies distorted the financial markets and imposed constraints on capital market development.

The fiscal authorities imposed penalties on equity investments compared to other financial instruments. Corporate tax was high and taxes, (such as Stamp duty on new shares) were levied on stock exchange transactions. The private sector therefore tended to have a preference for loan financing as against equity financing. Distortions and inefficiencies in the fiscal sector constrained GDP growth. High liquid assets reserve requirements imposed by law on commercial banks had the effect of siphoning off a disproportionately large share of domestic credit for the public sector at relatively low rates of interest. The private sector was forced to compete for the remainder at high rates which compensated the banks for the low margin on public sector credit. Monetary policy in 1985 relied heavily on liquid asset reserve requirements. This requirement was fulfilled mainly with the purchase of government paper (treasury bills). This policy tool was therefore used for both controlling bank lending and for financing the fiscal deficit which expanded from 2.3% of GDP in 1972 to 12% in 1976 and 19% of GDP in 1985. About half of these deficits were financed through the banking sector, including the Central Bank, whose net claims on the government rose from $43.0 million (3% of GDP) in 1972 to over $3.0 billion (30% of GDP) in 1986. The financing of the large public sector deficits through the Bank of Jamaica created a number of policy issues including:

(a) distortions in credit allocation and interest rate structure;

(b) an entanglement of monetary and fiscal policies and instruments;

(c) constraints upon the development of the capital market.

Concurrent with high interest rates on private sector credit, subsidized credit was disbursed to the industrial, agricultural and housing sector. This further distorted credit allocation in the financial system. With relatively high inflation, real interest rates were low and the savings rate on deposits was administratively determined.

The above discussion shows that monetary policy was increasingly determined by the need to raise resources for the public sector. In November 1985, however, the Bank of Jamaica introduced its Certificates of Deposit on the market, with the intention to absorb liquidity in the economy in support of the tight monetary stance which prevailed. While the cash reserve ratio neutralized a block of deposits (20% in 1985), the Certificate of Deposit was designed to be the Bank's main instrument, and, served to fine-tune monetary policy. The maturity on these instruments ranged from one (1) to three (3) months.

The main objectives of financial reform are usually to develop a financial system that promotes savings and a more efficient allocation of resources while also providing a framework that allowed for the implementation of effective monetary control. The Jamaican government realized the need to promote savings and investment through a liberalized financial system, in order to facilitate desired economic growth.

In 1987, the World Bank approved a US$40.0 million Trade and Financial Sector Adjustment loan (TFSRP) to Jamaica. This was to facilitate a phased process of

reform in the trade and financial sectors. The financial sector reform measures were designed to achieve the following broad objectives:-

1. To separate, as far as practicable, fiscal and monetary policy. Elimination of these distortions would allow for free market forces to determine the interest rate level and financial resource allocation.

2. Reduction of bias against equity investments.

3. The creation of a fiscal and institutional environment so as to strengthen the capital market.

4. To strengthen the legislative and administrative framework in which monetary policy was conducted.

These objectives were to be accomplished by a phased programme of adjustments to the financial sector embodied in the following measures:

1. A reduction in the liquid assets ratio of the commercial banks and the inception of payment of interest by the Bank of Jamaica on a portion of the commercial banks' required cash reserves.

2. Abolition of stamp duties on traded shares.

3. Introduction of 180 and 360 day maturity Certificates of Deposit (CD's) by the Bank of Jamaica.

4. Liberalization of the interest rate structure.

The Government reduced the liquid assets ration from 48% to 38% of prescribed liabilities in 1986, and further to 35% including a non-cash portion of 15% in March 1997. The liquid assets ratio went to 20% in 1988 with the final elimination of the non-cash element. The Government agreed to maintain open market operations as a method of monetary policy application. To moderate distortions implicit in the cash reserve ratio, the Bank of Jamaica started paying market interest rates on a portion of commercial bank cash reserves in 1986. This was, however, discontinued in 1989. It was anticipated that with the successful implementation of these measures, the factors which impeded the efficient performance of the financial sector would be removed and the new environment would aid in accelerating economic growth.

The success of the policy reform may be measured through the extent to which the policy intentions were achieved. The success of the reform programme included the floor on the savings rate being removed in 1990 signaling market determined rates on commercial bank deposits.

The elimination of the non-cash portion of the liquid assets ratio was not sustained due to excess liquidity which was built up in the system during summer 1989, added to a liquidity injection in the aftermath of the September 1988 hurricane due to re-insurance inflows. The liquid assets ratio rose to 32.5% in 1990, with the cash reserve ratio at 20% and the non-cash portion 12.5%. The overall ratio now stands at 47% with the cash reserve at 25%. Credit ceilings were also re-introduced at end 1989 to help reduce the liquidity pressure and put the economy back on the programmed track, but these were lifted in January 1991. Current market distortions include a withholding tax on commercial bank and government securities interest proceeds as well as differential regulatory requirements between commercial banks, the other licensed financial institutions and building societies. The cash reserve and liquid assets ratio of LFIs now stands at 17% and building societies are now required to hold a cash reserve of 1% of deposits and withdrawable shares and a liquid assets ratio of 5%.

SECTION III

THE DECLINE OF TRADITIONAL BANKING FUNCTIONS - INNOVATIONS AND NEW INSTRUMENTS

Change in the world economy facilitated the implementation of financial sector reform with improvements in the domestic economy. Oil prices on the world market fell, with international interest rates declining during the late 1980's. This created a windfall effect on the Jamaican economy at a time when there was a recovery in the bauxite/alumina market. These developments led to a stable exchange rate, reduced inflation and facilitated a downward movement in interest rates towards the end of the decade.

A more competitive financial environment emerged from the implementation of the reform measures, which enhanced the financial intermediation process. There was growth in the number of types of financial institutions as well as the formation of financial conglomerates.

Worldwide, technological change and market liberalization spurred innovation in types of financial institutions and the products and services they offered. There was an expansion in the range of products offered to customers of financial institutions. These include credit cards, automatic teller machines, with new and improved forms of credit and investment-linked insurance facilities. Competition within the financial sector has fueled a shift of funds from traditional commercial bank deposits into securities and money market funds. In the United States commercial banks' share of total financial intermediary assets fell from 37.2% in 1980 to 28.6% in 1994. At the same time, off-balance-sheet mutual funds grew from 1.7% in 1980 to 15% in 1994. It has therefore argued that total financial intermediary assets held by the banking institutions does not necessarily indicate that the banking industry is in decline. Rather, it is traditional banking that is in decline, because banks have been increasing their off-balance-

sheet activities.

The structure of the financial system (June 1995) is shown in appendix 1. There are currently eleven (11) commercial banks operating in Jamaica with a little over two hundred (200) branches island wide. Total assets amounted to $105.6 billion in June 1995 with the bulk of assets concentrated in Bank of Nova Scotia (30%), National Commercial Bank (27.5%) and Mutual Security Bank (10.9%). This compares to December 1990, with 11 banks operating with one hundred and seventy (170) branches islandwide. Total assets amounted to $17.1 billion, concentrated in Bank of Nova Scotia (29%), National Commercial Bank (28%) and Mutual Security Bank (14%).

There is now a high level of non-bank operation. The number of Licensed Financial Institutions (LIFs) i.e. Merchant banks, Trust Companies and Financial Companies have grown from 25 in 1986 with combined assets of $1.4 billion, to 30 in June 1995 with combined assets of $16 billion. Building Societies have mushroomed over a two year period, moving from six (6) societies in 1992 to thirty (30) currently operating. It is seen therefore, that, in the recent past, non-banks and building societies have made significant inroads into the market traditionally controlled by commercial banks. The traditional banks have been faced with competition in attracting deposits and they have increasingly turned to new non-traditional financial activities as a way of maintaining their market share and profitability.

To recall the economic analysis of innovation as posited by Mishkin, financial innovation can arise from changes in the economic environment, advancement in technology, and the avoidance of government regulation and control.

The restrictive commercial bank regulations of the 1980's created the opportunity for non-banks to invent ways to offer bank depositors higher rates. This was so because the non-banks did not have the costs associated with having to hold low

interest bearing government securities. The non-bank cash reserve ratio stood at 5% compared to the 20% requirement of commercial banks. In building societies, there was no cash reserve ratio and, in addition, withholding tax on interest was not levied at source on building society deposits.

As the demand for traditional bank deposits continues to fall in an increasingly competitive environment, commercial banks have become innovative and strive to maximize profit through off-balance sheet transactions which utilize fee income and increase revenue. In Jamaica's financial system, Managed Funds or Portfolio Management Services are provided by most commercial banks and LFIs. The proceeds are predominantly invested in fixed interest government instruments which offer higher rates of return that traditional bank deposits. It was recently revealed, in a Bank of Jamaica paper presented at the XIII Annual Conference of Caribbean Bank Supervision hosted by the Bank of Jamaica, that one supervised entity held 70 percent of its liabilities in managed funds. Administered on behalf of clients, these transactions were recorded as off-balance sheet activities, and compared to a significantly lower 30 percent held as deposit liabilities.

High lending rates have facilitated growth in the commercial paper (CP) market since 1992. The Bank Supervision Department of the Bank of Jamaica stated that in 1994, the size of the commercial paper was about J$4 billion, of which 60 percent represented guaranteed paper. It is reported that in this market, banks act as guarantors for issuing customers; and this seems to enhance the marketability of commercial paper issued by these corporations. Acting as facilitators, banks charge a fee for each transaction.

The growing disadvantage of commercial banks in raising funds has led them to innovations in the type of deposits offered. There has been "niche marketing" with special deposit terms (incentives) offered to senior citizens, women, students, and

infants. Some banks allow a rate of interest to be paid on chequing accounts. Interest is earned on a daily basis and credited monthly.

With the advancement in technology, commercial banks have adopted the innovation in the area of electronic banking. Some banks have introduced on-line Automatic Banking Machines(ABMs) providing access to 24-hour routine banking services. Customer access is facilitated by a convenience card, and customers can obtain quick cash as well as pay utility bills through this system. Also, on-line teller systems facilitate transactions anywhere in the branch network and has been established in nine (9) commercial banks.

Three commercial banks have offered their corporate clients an added advantage by allowing them to access their accounts through a special electronic banking facility through computer terminals at their desks.

With the Central Bank supervisory authority applying differential regulation and control through reserve requirements and capital adequacy ratios for the various types of financial institutions, the response has been innovation in the financial system leading to financial institutions forming conglomerates. Commercial banks, LFIs, Building Societies, Insurance companies and Investment Companies have aligned themselves into "financial supermarkets". These conglomerates have common ownership and provide clients with a full range of financial services.

Credit card facilities have grown considerably, as commercial banks try to enhance their services and income-earning capacity. The use of credit cards eases the demand for small "bridging" personal loans, which can prove administratively cumbersome. Banks charge high interest rates on unpaid outstanding balances on credit cards thereby increasing their income.

New instruments have emerged contributing to vibrant money and capital markets. With the phasing out of the Bank of Jamaica Certificate of Deposit, in February 1995, new government securities with a broader range of maturities are continuously being offered on the market. There is $11.9 billion outstanding in Treasury Bills, with maturities of 6 months, 9 months and 1 year. Bank of Jamaica open market activity is conducted daily through repurchase and reverse repurchase transactions in Government of Jamaica Local Registered Stock (LRS) and Treasury Bills. At the end of October 1995, Bank of Jamaica had $4.8 billion of LRS in reverse repurchase agreements with the largest commercial bank holding the bulk of securities. Total offers outstanding in variable rate LRS currently stands at $35 billion, with the maturity structure ranging between 2 years and 8 years.

A drawback to the effectiveness of monetary policy was the absence of a functioning secondary market for government securities. As such, the Bank of Jamaica's secondary window became the "lender of first resort", which frustrated any stance of tight monetary policy. The secondary market has now been developed with operations in the market for securities conducted at the primary level where the Central Bank acts an agent for the government in new issues of government securities. The secondary market is facilitated by "primary dealers" (commercial banks, merchant banks and stock brokers) who underwrite primary issues and trade securities on the secondary market.

The high interest rate regime maintained by the monetary authorities, which prevailed during the 1992 - 1994 period, resulted in increased returns on fixed interest securities and money market instruments. This helped to increase the attractiveness of Unit Trust funds and equity linked insurance policies as alternative investments to bank deposits. Unit Trusts are offered by financial agents not falling under the Bank or Financial Institutions Act, and have grown in popularity over the years. This is so because these vehicles provide a high level of diversification of investor's funds. Funds are pooled and placed in government securities, real estate, and the stock market.

The growth and diversification of the financial system since liberalization has taken place in the context of foreign exchange liberalization, with exchange rate depreciations and relatively high and variable inflation rates. The exchange rate has moved from US$1.00 = J$20.91 in December 1991, currently averaging US$1.00 = J$37.75. The annual inflation rate was 80.2% in 1991, declining to 40.2% in 1992, 30.2% in 1993, 26.9% in 1994, with the point to point rate in July standing at 15.8%. This environment has facilitated growth and profitability of financial institutions and has encouraged risky portfolio behaviour with potential problems as the economy stabilizes.

SECTION IV
IMPLICATIONS FOR FINANCIAL REGULATION

The decline in traditional banking will present a challenge to the regulatory authority. Financial innovation, while increasing profitability also increases operational risks, and if unregulated could undermine the stability of the financial system. Financial institutions have increased their risk-taking in two ways. Some banks have attempted to maintain their traditional lending activity by expanding into more risky areas of lending. Loan loss provision in banks has grown from $238.9 million at December 31, 1990 (32.2% of past due loans) to $1 billion at December 31, 1994 (43% of past due loans). Also, banks have sought to maintain profit levels by pursuing new off balance-sheet fee based activities that prove to be more profitable.

The role of the regulatory authorities in the liberalized environment is essentially two fold:-

1. to maintain the soundness of the banking system, while
2. not stifling innovation.

The challenge is therefore to maintain the balance between financial innovation and risk in order to achieve long run financial stability.

In the Jamaican context, as financial institutions become more innovative, there is an increasing trend towards managed funds (investment banking) and Unit trust operations, with decreasing emphasis on traditional bank deposits. This increased evidence of off-balance-sheet transactions has heightened awareness of the inadequacy of existing regulation to monitor transactions in money and capital markets. Managed funds, recorded as off-balance-sheet liabilities are not counted as prescribed liabilities and therefore escape statutory and prudential requirements, e.g. reserve requirements and capital adequacy ratios. The recent growth in "financial supermarkets" (groups of

companies with different types of financial intermediaries) has served to reduce transparency in the financial system. Inter-company transactions increases risk exposure to depositor's funds and the Bank Supervision Department has been monitoring these transactions. There is as yet, no provision in the statutory and regulatory framework which allows for efficient and effective consolidated supervision of Licensed institutions within conglomerates. The revision of the Banking and Financial Institutions Act will address this deficiency.

In the commercial paper (CP) market, with banks acting as guarantors for their issuing customers, the facility may be regarded as a substitute for traditional bank lending, with a contingent liability created. The increased competition between the commercial paper market and commercial bank lending may lead banks into riskier areas of operations that could have a serious impact on viability and soundness of banks. The Securities Act covers the issuing of commercial paper. The Act is being revised and the regulatory framework for the monitoring of CP issues is being developed.

Building societies have only recently been brought within the ambit of Bank Supervision. Still, however, there are a number of institutions falling outside of the surveillance and authority of Bank Supervision. These include development banks, investment companies, saving institutions (credit unions, mutual funds, and unit trusts) and insurance companies. Some of these are self-regulated (e.g. credit unions) while others are unregulated (investment banks and mutual funds). The Acts governing unit trusts and insurance companies are in need of significant revisions.

The urgency for legislative modernization has been underlined by developments in the financial system in recent years. Financial institutions have undertaken great risks. The tendency has been to lend to customers, amounts that are in excess of the specified percentage of capital that is eligible under the law. This practice takes another dimension when these kinds of loans are made to shareholders, directors and

managers and to related parties. Circumventing the law and bank regulations, in the end, undermines viability and solvency of the institution as well as the financial system as a whole. The policy thrust is now geared towards the development of a Deposit Insurance Scheme. However, the regulatory authorities have recognized the fundamental importance of adequate legislative and supervisory framework.

Recently, working groups have been established at the Bank of Jamaica to:

1. Draft legislation for the establishment of a Deposit Insurance Corporation which would protect small savers and instill confidence in the financial system. This is to come on stream during the first half of 1996.

2. Review and make recommendations for amendments to legislation governing different areas of the financial system.

The objectives of these working groups include the following:-

- Ensuring the safety and soundness of individual financial institutions and thus the financial system as a whole, by revising the legislation to address deficiencies.
- Maintaining public confidence in the system, by introducing the deposit insurance scheme. Such confidence should be felt by both domestic and foreign users of the system.
- Enhancing public access to the financial system through the availability of more information.
- Promoting competition and innovation among financial institutions by "levelling the playing field" through amendments to the relevant financial legislation.
- Ensuring that the Board of Directors and Management of financial institutions assume greater responsibility and give primary recognition to the

rights of depositors, policy-holders, unit holders and others on preference to owners.

- Preventing or controlling self-dealing and conflicts of interest within and between institutions.

The challenge of the regulatory authorities at this time therefore is to develop an appropriate, efficient, consistent and transparent supervisory system, while ensuring a cohesive and consistent legislative framework within which the system may grow.

SECTION V
IMPLICATIONS FOR MONETARY POLICY

Financial reform brings many new challenges for the monetary authorities. These challenges relate to the way in which monetary policy is formulated and implemented. Liberalization can affect the relationship between money demand and incomes and interest rates. Financial liberalization can also cause a shift in money velocity or changes in the responsiveness of money demand to changes in income and interest rates. New influences may become important determinants of money demand after liberalization.

The existence of a stable and predictable relationship between the monetary aggregates, prices and interest rates is crucial in the formulation of monetary policy. Financial liberalization that alters the institutional environment, and expands the array of financial services creates potential for instability, in money demand. Innovations that promote financial market development could result in the availability of new, attractive assets leading to portfolio shifts away from monetary assets. These shifts might occur independently of developments in income and interest rates. In addition, the returns on the new assets might become important determinants of money demand.

Financial liberalization implies the move toward greater reliance on market-base instruments and away from direct controls. This change compliments the reform process because it widens the scope of monetary policy instruments while at the same time facilitating the dismantling of regulations and controls in the financial system.

Indirect instruments of monetary policy have the advantage of permitting economic decisions to be left to the market, resulting in a more efficient allocation of resources. The shift toward indirect monetary controls has generally entailed a greater reliance on open market operations, and less dependence on reserve requirements. Types

of open market operations include transactions in treasury bills and other government and Central Bank securities, reversed transactions such as repurchase agreements, and transfers of government deposits between the Central Bank and commercial banks. Market operations can be used both to provide the financial system with liquidity needs as well as to effect short-term fine-tuning.

In the Jamaican context, the main objective of monetary policy is price stability. The current intermediate targets are the exchange rate and the monetary aggregates. The Bank of Jamaica uses open market operations, reserve requirements, and the transfer of government deposits as the instruments of monetary policy in managing operating targets which are the monetary base and interest rates, to achieve the desired level in the intermediate targets. The Bank's primary objective is therefore achieved through the transmission process of policy instruments influencing the financial market and continuing through to influence spending, production and employment, ending with an effect on the inflation rate, in the price level.

The initial step in the transmission process takes place when the Bank of Jamaica affects a change in the monetary base which in turn affects interest rates. This is intended to influence the money supply through credit expansion via the multiplier process.

The Bank of Jamaica defines the monetary base as the total of the commercial banks' statutory cash reserves, their current account (free reserves) and the currency issue of the Central Bank. This definition however may be very narrow in light of the reform process which has altered the institutional environment (decline in traditional banking and increase in non-bank monetary assets) and expanded the array of monetary instruments. The appropriateness of the monetary base needs therefore be re-assessed as this is the ultimate form of liquidity in the financial system. A better measurement may

turn out to be one that captures the reserves of the Licenced non-banks, including the building societies, thereby capturing a wider cross-section of the financial system in liquidity management.

Open market operations at the Bank of Jamaica has relied on repurchase and reverse repurchase agreements in government securities to affect interest rates and liquidity levels in the financial system thereby influencing monetary expansion. The definition and measurement of the intermediate targets are therefore of critical importance, because it is through this variable that the ultimate objective of price stability can be achieved. The current intermediate targets of monetary policy are the exchange rate and the monetary aggregates. In the monetary aggregates, the money supply (M3) is currently measured as currency holdings of the public and private sector deposits (Demand, Time, Savings and other deposits) held in commercial banks in local currency. The traditional definition of money may have changed in the new liberalized economy, as new monetary instruments emerge and complicate the definition of what is money. Demand pressures within the economy can arise not only from commercial bank deposits but from non-bank deposits, credit card usage and the increased usage of other negotiable instruments. A review of base money management and the current definition of the money supply is therefore of utmost importance at this time in the Jamaican economy.

Financial reform may result in structural changes in the financial system which may affect the linkages between monetary policy and the domestic economy, the definition of the monetary aggregates, and the relative effectiveness of different monetary policy instruments.

The emergence of new financial institutions and markets, together with the liberalization of interest rates, create a greater role for interest rates to transmit the effects of monetary policy. Restrictive monetary policy, implemented through open market operations, or increases in reserve requirements, tends to raise interest rates, increase the

demand for financial assets and reduce aggregate demand. As financial markets become more integrated, changes in interest rates are transmitted more rapidly to all sectors of the economy, enabling interest rates to play a greater role as a channel for monetary policy.

If money is selected as the target of monetary policy, it is important to determine which monetary aggregate should be targeted. The choice would depend on which measure of money was the best indicator of economic activity and price pressures. In economies under financial reform, there may tend to be increased substitutability between different forms of financial assets. The distinction between narrow and broad money becomes blurred as new financial instruments can have both liquidity and investment feature resulting in greater volatility in the narrow definition of money. In this case, a broader aggregate may be more appropriate, although the monetary authorities may find it difficult to achieve targets for broad money given available instruments of policy.

With increasing globalization of world trade, the scope of monetary policy is widened and there may need to be the coordination of monetary and exchange rate policies. This may entail the use of other indicators (apart from interest rates) to guide policy formation. Balance of payments indicators and the exchange rate are indicators of economic activity that can be considered. Alternative transmission mechanisms must be explored if the framework is widened as additional channels of monetary policy are opened up. Good estimation of the timing (through lag effects) of monetary policy is important in the wider framework if policy actions are to be effective.

It is therefore imperative for more empirical work to be conducted so as to identify the appropriate instruments and channels of monetary policy in a changing financial system and economic environment. This is an area of exploration for the monetary authorities in Jamaica.

SUMMARY CONCLUSION

Jamaica's liberalized financial system reflects the decline in government control in the allocation of financial resources, and the elimination of some policy tools that restricted bank behaviour and investor freedom in the money and capital markets.

Liberalization has created a competitive environment and has challenged the regulators of the system. Commercial banks have increased their off-balance-sheet activity in a bid to increase income through more fee-based activity. Also, banks have adapted global technological innovation to enhance their services as they compete for customers. The decline in traditional banking and the increase in innovation has forced regulators to adapt quickly to the new financial environment that is emerging so as to maintain soundness in the financial system. This is especially important as stabilization of the economy will put institutions which are fed by inflation increasingly at risk.

Financial innovation has brought many new challenges for the monetary authorities as well. The reform process may have altered traditional relationships between money, income and interest rates, complicating the interpretation of developments in the monetary aggregates. The challenge is for empirical work to inform the re-adjustment of monetary policy in a changing economic environment.

REFERENCES

1.	Bank of Jamaica	Statistical Digest
2.	Brekk, Odd Per and Johnston, R. Barry	Monetary Control Procedures and Financial Reform: Approaches, Issues and Recent Experience in Developing Countries. IMF (1989)
3.	Edwards, Franklin R and Mishkin, Frederic S.	The Decline of Traditional Banking: Implications for Financial Stability and Regulatory Policy. Federal Reserve Bank of New York (1995)
4.	Hayle, Elaine	Financial Innovations in Commercial Banking in Jamaica since 1985 (1994)
5.	International Bank for Reconstruction & Development	Project Performance Audit Report Jamaica: Trade and Financial Sector Adjustment Loan (1991).
6.	Kitchen, Richard L.	Finance for the Developing Countries
7.	Lue-Lim, Gail	Jamaica's Financial System: Its Historical Development (1991).
8.	Mishkin, Frederic S.	The Economics of Money Banking and Financial Markets (1992).
9.	Smith, Paul F.	Economics of Financial Institutions and Markets.

The Financial System

Regulatory Authority: THE CENTRAL BANK

Financial Institution	Commercial Banks	Merchant Banks	Trust Companies	Finance Houses	Building Societies	Credit Unions	Life Insurance Cos.	Development Banks
1986								
# of Institutions	10	8	9	8	4	91	10	3
# of Branches	155							
Assets/Liabilities(J$mn)	8240.2	636.4	682.5	123.1	1046.8	n/a	2026.8	n/a
Deposits/Savings(J$mn)	6203.5	484.0	452.4	62.5	977.3	379.1	n/a	n/a
Loans(J$mn)	3821.9	275.6	375.4	61.5	582.6	353.9	n/a	n/a
1990								
# of Institutions	11	21	3	5	6	80	10	3
# of Branches	170							
Assets/Liabilities(J$mn)	17327.5	4526.9	109.1	265.8	3058.1	n/a	2072.3*	n/a
Deposits/Savings(J$mn)	12097.5	2842.6	86.4	156.6	2666.8	684.0	450.7	n/a
Loans(J$mn)	8997.2	2862.6	74.8	167.6	1596.1	642.6	n/a	n/a
June 1995								
# of Institutions	11	26	0	3	20	87	8**	3
# of Branches	205							
Assets/Liabilities(J$mn)	106769.9	15498.9	0.0	729.9	31229.1	n/a	17081.6	n/a
Deposits/Savings(J$mn)	75194.3	7310.3	0.0	366.7	26475.0	2820.3	5033.4	n/a
Loans(J$mn)	39950.6	5649.9	0.0	197.6	9339.8	2272.8	n/a	n/a

Note :
* - As at December 1988
** - Data as at Dec 1992

Source : Bank of Jamaica