Monetary Policy Management in Jamaica

by

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ISBN 976 8044 09 8

FOREWORD

The Bank of Jamaica has undertaken to publish a series of pamphlets on topics that are integral to the policies and operations of the Bank.

The pamphlets are designed to enhance the public's understanding of key Central Banking issues. In this regard, the pamphlets will present important economic and financial information in a manner that will benefit a wide cross-section of users. In particular, it is anticipated that the material presented will assist journalists, investors, students and other members of the public who frequently request relevant documentation and/or explanations from officers of the Bank.

The Bank and its staff in continuing to serve the Jamaican public are pleased to add these pamphlets to existing publications as we strive to inform and educate.

We take this opportunity to extend our gratitude to all who have supported the process and would like to invite suggestions and comments from all our readers.

Myrtle Halsall (Mrs.)
Division Chief & Head of the Editing Committee
Research & Economic Programming Division

Bank of Jamaica
October 2000

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PREFACE

Discussions on economic policy in Jamaica often focus on interest rates and the exchange rate because changes in these prices play a critical role in the decisions that people make about saving and investing. Money and credit conditions also influence inflation and therefore, are important determinants of the quality of life of Jamaicans. Bank of Jamaica is the institution that manages these conditions with the objective of keeping inflation low and stable. The specific targets that the Bank sets and the actions that it takes towards meeting these targets are described as monetary policy.

This pamphlet provides information on how monetary policy is determined and managed in Jamaica. It examines the issues and illustrates how monetary policy affects the Jamaican economy. Explanations are also provided for the technical terms frequently used in relation to monetary policy.

THE AIM OF MONETARY POLICY

What is Monetary Policy?

Monetary Policy refers to actions taken by the central bank to influence the amount of money and credit in the economy. In doing so, the central bank can determine the level of consumption or investment spending, and hence influence the rate at which domestic prices grow, and the level of growth in the economy. Monetary policy operates through the financial system – mainly commercial banks, which will transact their business, influenced by the signals sent by central bank actions. In controlling the amount of ***money*** (deposits, notes and coins in circulation), or the amount of ***credit*** (amounts that banks and other finance houses can lend), the central bank will influence the level of activity within the economy.

The role of monetary policy in the macroeconomy

What contributions can the central bank make to the economy?

The role and functions of the central bank are defined in the law that governs the institution. While there are substantial differences in the structure of central banks worldwide, their operations have conformed to the primary objectives of monetary and price stability, with extensions to financial system stability. The role of the central bank is therefore divided between two aspects: (a) monetary and price stability, the broader macro function and (b) financial system stability, which includes a focus on operations of financial institutions at the micro level.

Monetary and price stability is an objective that relates central bank operations to overall conditions in the economy. The main objective of this function is to maintain the internal and external value of the domestic currency. On the other hand, the function of financial system stability requires that the central bank oversees the practices of its supervised financial institutions to ensure the maintenance of a sound financial system in which people are confident to save.

Under the Bank of Jamaica Act (1960) the macroeconomic objective is to influence the volume and conditions of supply of credit so as to promote the fullest expansion in production, trade and employment, consistent with the maintenance of monetary stability in Jamaica and the external value of the currency. From this broader focus, the Bank of Jamaica has since evolved into an institution that has adapted its macroeconomic objectives to reflect the new standards for central bank management worldwide. The policy focus since 1996 has been the alignment of domestic inflation with that of Jamaica's major trading partners to ensure relative ***exchange rate*** stability aimed at providing an anchor for long-term monetary stability. The Bank's mission statement, defined in 1996 outlines the objective as *formulating and implementing monetary and regulatory policies to safeguard the value of the domestic currency, and to ensure the soundness and development of the financial system.* The Bank's monetary policy actions are therefore aimed at affecting monetary and financial conditions to achieve ***price stability***, and facilitating sustainable growth in real output and generating employment – the latter two perceived as subsidiaries of attaining price stability.

MONEY AND INFLATION

What is meant by price stability?

Having stable prices in an economy means experiencing changes in the price of goods and services that are so low and predictable that they hardly affect the plans and welfare of firms and individuals. The change in the price of goods and services is termed ***inflation*** and the Bank's monetary management aims at keeping inflation low and steady (*see Pamphlet No. 2 in this series for detailed discussion on inflation*). Central banks worldwide have recognized that low and predictable inflation reduces the level of uncertainty within the economy, as compared to an inflationary economy where there are rapid and variable increases in the price level. In this context, central bankers try to prevent inflation as the costs of inflation can harm economic progress. High and variable inflation affect:

- *People such as pensioners and fixed income earners whose incomes do not rise as rapidly as prices. Therefore the same amount of money will purchase less goods and services.*

- *People who save or lend at an interest rate that is lower than the inflation rate, therefore suffering a loss of purchasing power over time.*

- *The certainty of the environment for business planning. For example, a businessman finds it hard to decide whether he should invest now, or delay the purchase of a new machine when he faces the possibility of prices rising sharply and unpredictably. Further, he has difficulty in defining the time path of the cost of inputs and the price at which he should sell the final good/service he produces.*

- *Inflation feeding on itself – where one set of price increases leads to expectations of another set of price increases, and anticipatory defensive price adjustments (e.g. wages and prices being set in anticipation of future wage and price increases). This situation develops into what is called an* ***inflation spiral*** *where inflation literally feeds on itself and becomes self-perpetuating.*

With the uncertainties that inflation creates, it can discourage investment and inhibit growth. Inflation if left unchecked, could result in ***hyperinflation***, which is the price level increasing at an extremely rapid rate, and a general loss of confidence in holding the domestic currency.

Money and Prices in the Domestic Economy

At this juncture it becomes important to examine the link between money and domestic prices to answer the questions: '*How is money linked to inflation?*' and '*How will the use of monetary policy create an environment for stable pri*ces?'

Simply put, monetary policy affects inflation through the ***transmission mechanism***. The transmission mechanism of monetary policy traces the various channels through which monetary policy changes will affect the domestic price level. The Bank uses two simple frameworks that examine the relationships between money supply and the price level.

Relationship 1: It is suggested by economic theory that over the long run, the rate of growth in money will equate to the rate of growth of the domestic prices. Algebraically, the long-run *equilibrium condition* is that:

$$\Delta MS = \Delta P$$

This means that in the long run, the change in money supply will equate to the change in domestic prices.

Relationship 2: This second theoretical relationship outlines that the balance between changes in money supply and money demand be such that domestic prices remain stable. Therefore, to meet the objective of relatively stable domestic price changes, the Bank of Jamaica, through monetary policy, has to ensure that the money that is within the economy (money supply) is the amount that people want to hold to transact real activity (money demand). The algebraic expression for this *equilibrium condition* specified as:

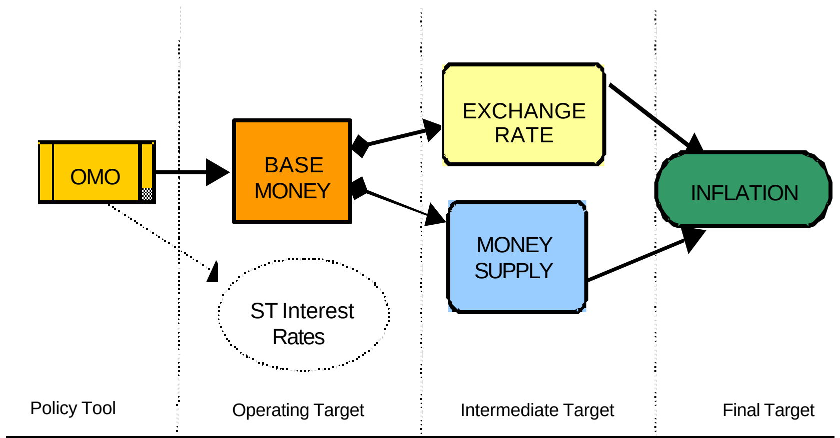
$$\Delta MS = \Delta MD \Rightarrow \Delta P \leq 0$$

i.e. the change in money supply is equal to the change in money demand, which implies that the change in the domestic price level (inflation) is less than or equal to zero.

Where: *MS = money supply*
MD = money demand
P = domestic price level.

Given these two economic relationships, the Bank of Jamaica has studied and traced its monetary policy changes through the Jamaican economy. The diagram in Box 1 depicts the transmission process for the Jamaican economy, highlighting the various economic variables that are affected by the Central Bank's monetary policy operations.

BOX 1: Schematic Flow of the transmission of Monetary Policy in Jamaica



Within the transmission process of monetary policy in the Jamaican economy, monetary policy actions will first affect the monetary base. The effects of monetary base changes will transmit to domestic prices either through money supply, or it is observed through changes in the exchange rates. Therefore, relying on these theoretical constructs and based on our practical experience, it is clear that explicit management of the monetary base is critical to the process of managing Jamaica's inflation.

In light of this, the Central Bank adheres to the strict monitoring of the monetary base to influence money supply expansion at a rate that is consistent with achieving stable domestic prices.

The question of *the rate at which money and credit should grow without creating excessive price increases within the domestic economy comes to the fore.*

The appropriate use of monetary policy tools by the Central Bank will allow money and credit to grow at a pace that allows economic activity to expand at a sustainable rate without creating excessive price increases. Simply put, both aggregates need to expand sufficiently to allow people to get the loans they need to buy equipment, machinery and new houses without fueling increases in the prices of assets, goods or services within the economy.

Jamaica's experience of inflation and money growth trends shows distinct cycles in our macroeconomic history. Table 1 presents the data on the behaviour of inflation and ***money supply*** growth over the period 1986 to 1999. During the period 1986 to 1989, the average annual inflation rate was 11.1% and corresponded with average growth rates in money supply of 21.6%. For the period 1990-1995, the average annual inflation rate of 38.8% coincided with rapid growth in the money stock. The period saw the average annual growth in the money stock at 41%, and contributed significantly to inflation reaching its peak of 80.2 % during 1991. However, between 1996-1999 inflation has remained below 10%, with the latest achievement of 6.8% increase in prices for the 12 months to December 1999. Consistent with the 9.9% average inflation out-turn during this period, the average annual money supply growth has remained relatively low, declining to 17.1% for the period.

Table 1: Comparative Inflation and Money Supply (M2) Growth

Years	Average Inflation %	Avg. M2 growth	Inflation Ranges (%)
1986-1989	11.1	21.6	**8.4** *(1987)* – **17.2** *(1989)*
1990-1995	38.8	40.7	**25.5** *(1995)* **– 80.2** *(1991))*
1996-1999	9.9	17.1	**6.8** *(1999)* **– 15.8** *(1996)*

Data Source: Statistical Digest, Bank of Jamaica

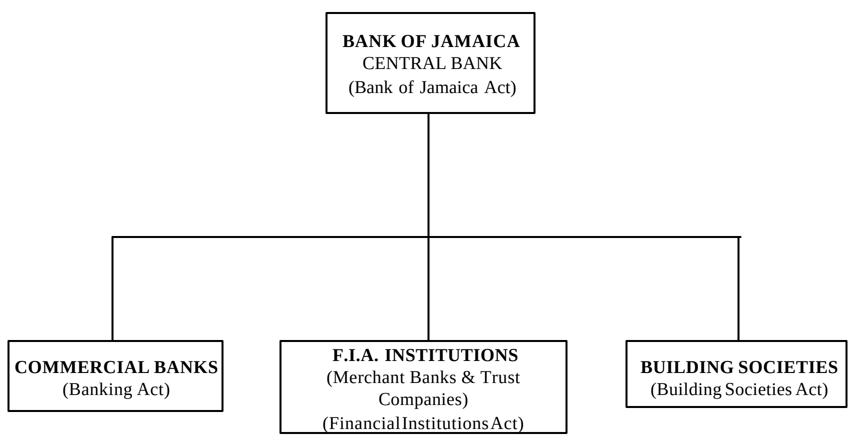
Question: How is Monetary Policy Conducted?

For the Central Bank to conduct and implement monetary policy actions effectively there are two important elements of the process. The first element of monetary operations is that of targeting the balance sheets of the institutions over which it has supervisory responsibility – i.e. those institutions encompassed within the legal institutional mandate. Additionally, the Bank has its monetary policy framework that it studies and uses to determine policy parameters and the appropriate shifts in its policy variables.

Institutional arrangements

Monetary policy in Jamaica is administered by the Bank of Jamaica, which was established by the Bank of Jamaica Act (1960). With the establishment of the Bank of Jamaica, legislation was also put in place for the Bank to regulate institutions of Jamaica's banking industry. The institutions that the Central Bank supervises, and through which monetary policy is conducted are presented in Box 1. At present, the institutions include commercial banks, building societies and institutions licensed under the Financial Institutions Act (F.I.A.).

BOX 2: Jamaica's Financial System



These are the main institutions of the Jamaican banking system, with their respective regulatory Acts. As at December 1999, there were six (6) commercial banks, fourteen (14) Institution licensed under the Financial Institutions Act, and five (5) building societies.

POLICY FORMULATION AND REVIEW

How does the Bank of Jamaica conduct monetary policy?

Following the transmission process outlined previously, the ***monetary policy framework*** used by Bank of Jamaica to implement and analyze its policy decisions is depicted in Box 3. Four stages of policy design and monitoring are identified, with a set of monitoring variables associated with each stage. The components of the policy framework are:

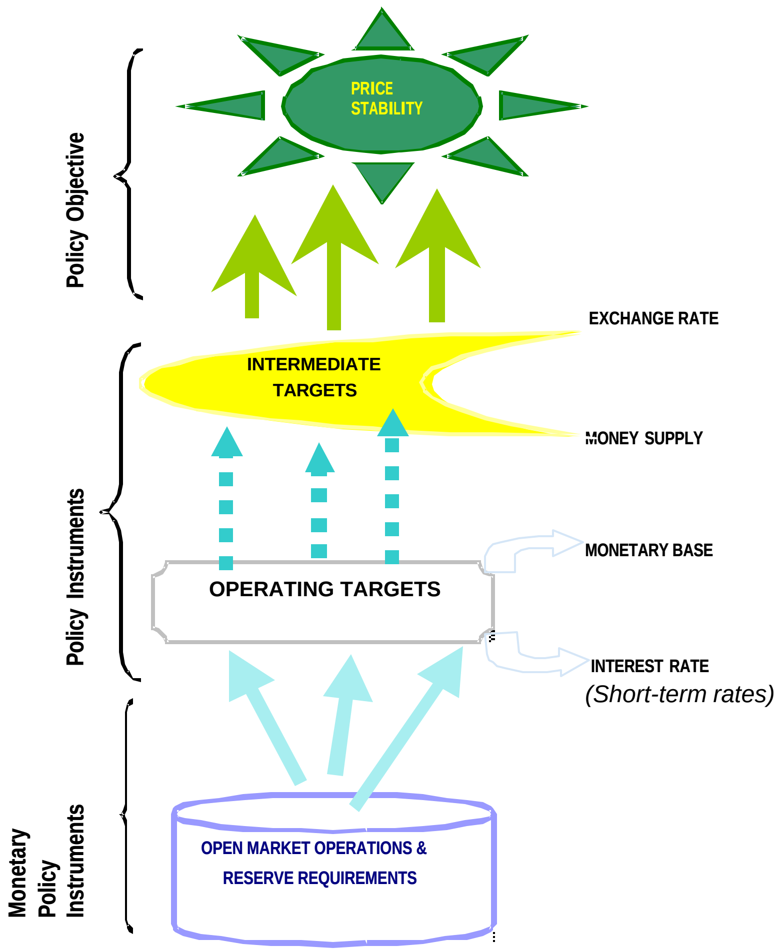
(a) *The definition of the objective of monetary policy*: price stability (discussed previously)

(b) *Setting Intermediate Targets*: exchange rates and money supply

(c) *Setting Operating Targets*: monetary base and interest rates

(d) *Manipulation of Monetary Policy Instruments*: open market operations

BOX 3: The Monetary Policy Framework of the Bank of Jamaica



The monetary policy framework simply defines the process of transmission for policy actions taken and the impact on the final objective. The flow from policy changes to final target does not have distinct stages. By assessing the response to changes in policy variables overtime, the Central Bank is able to predict the expected outcome on the objective variable, and adjust its instruments appropriately.

The process of policy formulation commences at the stage of the ***Financial Programme*** that outlines and defines the main economic variables – including inflation, money supply and ***base money***[1] expansion that would be consistent with these parameters. The target for inflation is approved by the Minister of Finance and is incorporated into the budget process and sectoral plans. Analysis of the Financial Programme is broken down from annual to quarterly, monthly, weekly and daily monitoring of some of the variables – particularly the monetary base, since this aggregate is at the heart of the transmission process. With this in mind, the Central Bank's balance sheet is generated daily and is analyzed thoroughly in the process of base money management. Box 4 outlines the components of the BOJ Balance Sheet and describes the effects of movements in its components on the monetary base.

BOX 4: Bank of Jamaica Balance Sheet & the Monetary Base

Having outlined that the process to control changes in domestic prices begins with what the central bank does to change money supply, it is important to examine the monetary base and its components that can either increase or decrease it. This process is critical since movement in the monetary base is the main driving force behind changes in the money supply. In this regard, we examine the Bank of Jamaica's balance sheet to identify the components that will add to the monetary base or subtract from the base depending on the movement in the specific item.

Components of the Central Bank Balance Sheet

Assets	Liabilities
Securities: GOJ LRS, T-bills, Debentures	Open Market Instruments
Cash	Deposits for Government & related entities
Deposits with the US Central Bank	Foreign Liabilities
Advances to financial institutions	Bank deposits
Repurchases	Currency Outstanding
Other Assets	Other Liabilities

[1] *The monetary base is defined as the sum of notes and coins issued by the Central Bank and commercial bank reserves.*

Assets

Securities: These include the BOJ's holdings of GOJ securities including LRS, Debentures and Treasury Bills. The amount of securities held is controlled by the Central Bank's secondary market trading and less dominantly, by the Bank's participation in primary offers of the Government.

Cash: This is a very small item on the balance sheet, and it includes currency held by the Central Bank to conduct day-to-day banking operations.

Deposits with the US Central Bank: Deposits with the US Central Bank form a part of the Bank's gross International Reserves, and are held primarily as short-term placements or in 'AAA' grade US Treasury bonds.

Advances to financial institutions: Under the BOJ Act, the Central Bank acts as a lender of last resort. This function makes provisions for commercial banks experiencing temporary liquidity shortfalls to access funds from the BOJ through the inter-bank clearing system. Of course, very high interest rates are levied to act as deterrent for institutions using this facility.

Repurchase Agreements: Short-term loan facility provided to commercial banks that need additional liquidity for a short period. This loan is secured only by risk-free GOJ securities.

Other Assets: This includes other items on the balance sheet such as physical goods – buildings owned by the Bank, computer equipment, and other items not classified under the other groups of assets.

Liabilities

Deposits of Government & Public Sector entities: These comprise deposits balances held by the Government at the Bank of Jamaica to facilitate debt payments on their behalf.

Foreign Liabilities: These represent claims that international institutions have on the Central Bank. It will include amounts owing to the IMF, or other mutli-lateral agencies.

Currency Outstanding: This comprises all notes and coins issued by the Bank of Jamaica.

Bank deposits: This group comprises deposit balances banks kept at the Central Bank. These balances are called reserves.

Open Market Instruments: These comprise the instruments issued specifically for Central Bank open market operations.

The Monetary Base

Recall that the monetary base comprises monetary liabilities – currency issue [C] plus bank reserves [R]:

$$MB = C + R$$

The items on the RHS of the equation indicate how the base is used. Unfortunately, the equation as defined does not tell us the sources of the base. However, the conventional accounting principles define the accounting identity that 'Total Assets • Total Liabilities'. In this regard, the balance sheet presented above allows us to specify the sources of the monetary base as follows:

$$\underbrace{C + R}_{MoneyBase} = \underbrace{ForeignAssets - ForeignLiabilities}_{NIR} + \underbrace{DomesticAssets - DomesticLiabilities}_{NDA}$$

Therefore, the factors affecting the monetary base are summarized in Table 2.

Table 2: Factors affecting the Monetary Base (Summary: End of March 2000)

Factor	Stock as at March 31, 2000	Change in Factor	Change in Monetary Base
1. Net International Reserves(NIR)	**22,388.9**	↑	↑
1a. Foreign Assets	26,954.6	↑	↑
1b. Foreign Liabilities	-4,565.7	↑	↓
2. Net Domestic Assets (NDA)	**8,615.1**	↑	↑
2a. GOJ Securities	53,331.8	↑	↑
2b. GOJ Deposits	-19,407.5	↑	↓
2c. Other Public Sector Items (net)	6,090.3	↑	↑
2d. Advances to Financial Institutions	1,870.8	↑	↑
2e. Deposits of Commercial Banks	-6,074.9	↑	↓
2f. Reverse Repurchases & CB Deposits	-38,073.8	↑	↓
2g. Repurchases	0.0	↑	↑
2h. Other Private Sector Items (net)	10,878.4	↑	↑
3. Monetary Base (NIR + NDA)	**31,004.0**		
3a. Currency Issue	13,913.1		
3b. Bank Reserves	17,090.9		

Source: Bank of Jamaica

For the Central Bank to act in a timely manner in response to changes in economic variables, monetary policy operations are reviewed and discussed on a regular basis. An Operating Targets Committee meets each day by 8:30 a.m. to review financial flows, especially those that affect the monetary base. The Committee comprises the Deputy Governor in charge of monetary stability and senior officers in the areas of economic research (policy design) and market operations (policy implementation). The head of the Committee specifically designated by the Central Bank Governor will advise the Governor of the discussions and the recommendations for action taken.

How are the policy decisions made?

Discussions of the Committee adopt three elements: review of the previous day's developments, preview of expected developments all discussed within the context of the available macroeconomic information on fiscal expenditure and debt raising, external sector trends and other relevant market information. Since monetary policy is primarily concerned about the flows of money and credit denominated in Jamaica dollars, critical attention is paid to how the components of the monetary base moves, identifying the sources of liquidity and the counter movements of other components that offset the liquidity impetus. Review of the previous day's trading in the foreign exchange market is included in the daily analysis aimed at being fully aware of developments in the foreign exchange market and the early detection of the signs of foreign exchange market pressure. Having reviewed all the information – expected Jamaica dollar liquidity movements, and expectations for foreign exchange market trading - the decision is taken as to the level of open market operations that would be required to leave commercial banks' free reserves at a minimum.

Typical discussions in the Operating Targets meeting will cover the movements in base money components during the previous day, and the impact these movements had on the monetary base. Next, the meeting reviews the details of the Central Bank's Net International Reserves as a part of the whole aspect of reserve management that is included in the Central Bank's mandate. Detailed discussions on money and foreign exchange markets ensue, where subscriptions to Central Bank ***open market instruments*** are outlined, and the foreign exchange market-trading summary discussed. During the process, all relevant information on GOJ debt raising, and expected expenditure (specifically use of deposits from the Central Bank) are discussed extensively. At the end of this process, the meeting is informed of expected liquidity flows and the requisite volume of open market instruments that will leave the banking system with free reserves sufficient to conduct its daily operations.

In other instances where the foreign exchange market shows signs of pressure the same information is discussed, however, market information is analyzed at greater depth. Market intelligence plays a critical role in this process as the meeting assesses whether the developments are short-lived or will exist over a protracted period. In this regard, in addition to defining the volume of open market contracts required to minimize the free balances, decisions are also made on the level of foreign exchange market intervention that will be pursued.

Within this context therefore, the Central Bank's base money management activities – open market operations conducted in the money market and the sale of foreign currency – encompass liquidity control effected through the NIR and through the NDA. Operations in these markets therefore represent avenues that are equally important in controlling domestic inflation.

Depending on the circumstances, the Central Bank will take actions to affect the monetary base either through adjusting the interest rates it offers on securities or through adjusting the volume of money market instruments that it trades. The Bank also acts through trading on the foreign exchange market. In some instances, the review of the main economic variables would suggest a single shift in policy, graduated movements, or a combination of movements required to influence the operating target.

The main channel for liquidity control, however, is through the domestic money market, where short-term debt instruments are used to smooth the level of money and credit in the system. Operations of this type that are conducted through the money market are called ***indirect monetary tools***, and are so called because they affect the monetary variables by working through other variables. Alternatively, there are ***direct policy tools*** for monetary control that will affect the amount of money or credit available in the system immediately.

Monetary Policy Tools

What are the tools of monetary policy?

Monetary policy tools are classified as either indirect or direct instruments. These instruments aim at reducing the amount of money in the economy, and the amount of credit that financial institutions can give. Currently, the Bank of Jamaica uses the following monetary policy tools:

Indirect Policy Tools:	Open market operations
Direct Policy Tools:	Reserve requirements

Indirect Monetary Policy Tools

What are open market operations?

Open market operations describe trading on the secondary market between the Central Bank and specifically designated authorised dealers. Trading is conducted through a combination of channels. In the first instance, the Bank of Jamaica uses risk-free securities such as Government of Jamaica securities – either being sold directly to authorised dealers or being used as collateral for short-term loans. The latter form of money market arrangement are usually from several days to six months, and are negotiated at an agreed interest rate, which in the case of the Bank of Jamaica is the ***reverse repurchase rate***. These instruments are called 'open market' because they are available for purchase by all authorised traders in the money. In the case of Jamaica the group of specifically designated authorised traders are called ***Primary Dealers***.

The Bank of Jamaica uses ***reverse repurchase*** transactions as the dominant facet to conduct open market operations. This type of open market transaction includes negotiations between the Bank and authorised traders to temporarily sell shares of a GOJ instrument, at an agreed interest rate, for an agreed duration. At the end of the specified time period, the traders present the shares or claims on the Central Bank for the payment of principal along with the agreed interest earned. Currently, the Central Bank offers open market contracts for 30-days to 180-days inclusive. To determine the interest rate on the various tenors, the Bank independently sets its 30-day reverse repurchase rate which is then used as a benchmark rate for all other open market contracts negotiated by the Central Bank in the money market. To the extent that an authorised trader buys reverse repurchases this will affect the level of money and the credit in the banking system in the short-term. The simplest form of open market transaction is the direct sale or purchase of securities on the market, and is used less frequently by the Central Bank in managing liquidity, or where the Bank has specific liquidity management objectives. For example, if the Central Bank wants to reduce the amount of money and credit in the economy, it sells to the market a portion of the stock of Government securities it holds, and accepts from the Primary Dealer, the amount in Jamaica dollars. Having sold securities, the Central Bank would have reduced the money and credit in the financial system. Box 5 explains in more detail how this type of open market action by the Central Bank will affect the balance sheet of commercial banks and hence the amount of money and credit within the financial system at any point in time.

Open-market operations can also be conducted without the use of Government securities. In this case the Central Bank issues its own instrument (a deposit), which is backed by the Central Bank's guarantee to repay the amounts deposited at the agreed time of maturity. In terms of liquidity management, using deposits have a similar effect as using reverse repurchase transactions. These instruments offer one advantage over reverse repurchase transactions in that interest rates governing these arrangements will vary without necessarily signaling a shift in the Bank's monetary policy stance.

Repurchase agreements represent the opposite money market transaction to reverse repurchases that are brokered between authorised dealers and the Bank of Jamaica. Repurchase agreements (repos) are used by banking institutions when they are faced with temporary liquidity shortages. The authorised dealer may approach the central bank with Government security, which they use to secure a short-term loan from the central bank. These arrangements are usually very short-term, as they often do not last longer than a day.

BOX 5: Assessing How Open Market Transactions Affect Credit

Bank of Jamaica
Balance Sheet as at March 31, 2000

Assets ($Jmn.)		**Liabilities ($Jmn.)**	
GOJ Securities	1 000.00	Deposits:	1 000.00
		o/w: ABC Bank	500.00
		Other Deposits	500.00
Total as at March 31, 2000	1 000.00		1 000.00

Balance Sheet as at April 30, 2000

Action: Sell $400 million from the Stock of Government Security

Assets ($Jmn.)		**Liabilities ($Jmn.)**	
GOJ Securities	600.00	Deposits:	600.00
		o/w: ABC Bank	100.00
		Other Deposits	500.00
Total as at April 30, 2000	600.00		600.00

Commercial Bank ABC
Balance Sheet as at March 31, 2000

Assets		**Liabilities**	
Balance at the BOJ	500.00	Deposits:	
Loans	800.00	o/w: Private Sector	800.00
GOJ Securities	1 000.00	Public Sector	1 500.00
Total as at March 31, 2000	2 300.00		2 300.00

Action: Buy $400 million worth of securities from the Central Bank

Balance Sheet as at April 30, 2000

Assets ($Jmn.)		**Liabilities ($Jmn.)**	
Balance at the BOJ	100.00	Deposits:	800.00
Loans	800.00	o/w: Private Sector	1 500.00
GOJ Securities	1 400.00	Public Sector	
Total as at April 30, 2000	2 300.00		2 300.00

Bank ABC has reduced its free balances held at the Central Bank having purchased $400 million of the securities that were offered to the market. At the beginning of April, Bank ABC could have on its Balance Sheet total loans of $1200 million (existing loans of $800 million + $400 million taken from Central Bank balances). Instead, Bank ABC has bought $400 million in securities, increasing their stock of GOJ instruments to $1400 million. For the Central Bank, they have reduced the amount of funds that Bank ABC has to lend by the security sold - $400 million. As a result, Bank ABC has only $100 million to lend at the end of April relative to the $500 million that it could have lent at the beginning of the month. The outcome of the Central Bank's open market operation is an overall reduction in the amounts available for lending.

Direct Tools of Monetary Policy

There are numerous forms of direct controls that may be imposed on a financial system. However, with financial liberalization and the introduction of money market prices based on demand and supply conditions, the Bank of Jamaica does not frequently use direct instruments within the operational framework. Currently, the Bank of Jamaica has its only direct policy tool ***reserve requirements***, which are being gradually phased from its operating framework. Reserve requirements are the portion of deposits that financial institutions have to keep on hand or hold on deposit at the Bank of Jamaica. Reserve requirements therefore put a limit on the amount of credit that a financial institution can extend.

The reserve ratio includes a cash component and a non-cash component. The ***cash reserve requirement*** stipulates that a certain proportion of the deposits of the institution is held on deposit at the Central Bank in the form of cash. The rate as at March 2000 is 15 percent for commercial banks and F.I.A. Institutions and 1 percent for building societies[2]. The non-cash portion of the requirement stipulates that a percentage of the deposit liabilities should be held as risk-free ***liquid assets*** in the form of Government of Jamaica securities of maturities of up to one year. This requirement as at March 2000 is 18 percent for commercial banks and F.I.A. Institutions and 4 percent for building societies. Box 6 gives an illustration of how reserve requirements can be used by the monetary authorities to influence credit and the amount of money in the financial system.

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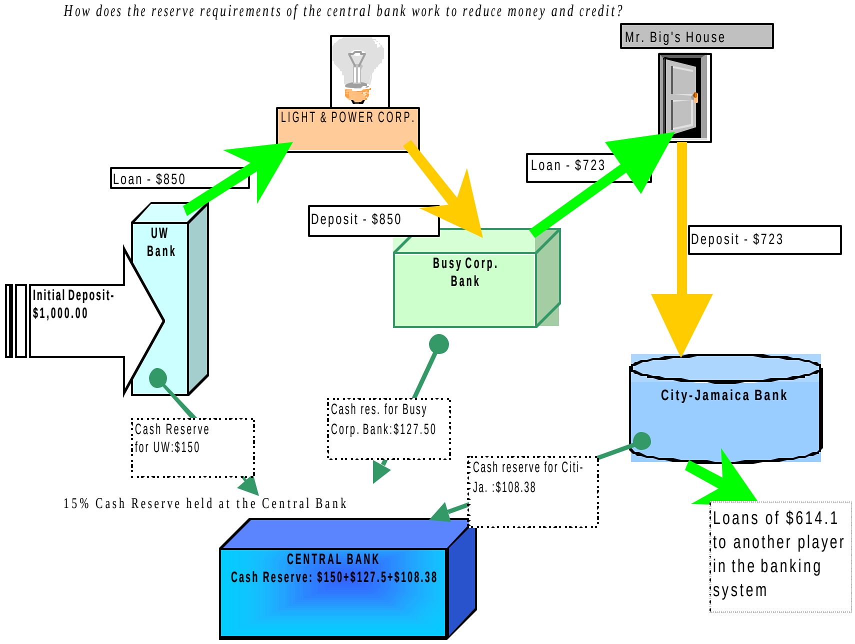
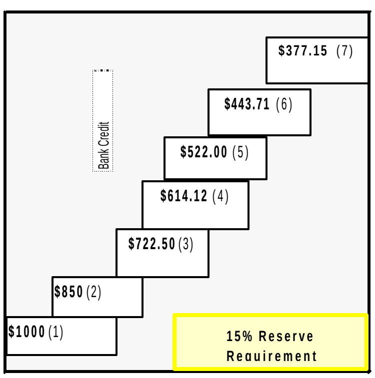
[2] *The reverse requirements for building societies vary according to the proportion of residential mortgages to the savings fund. The reserve ratios quoted above apply to those holding 40% of the savings fund in residential mortgages. In cases where the institutions hold less than the stipulated ratio, the applicable ratios are identical to the statutory ratios for F.I.A. Institutions.*

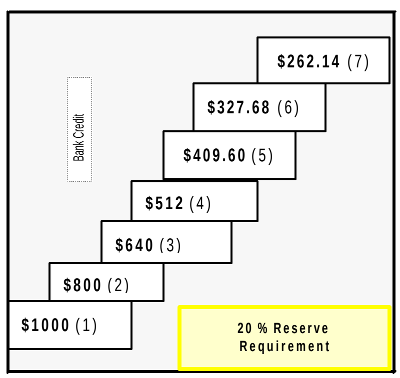
BOX 6: USING RESERVE REQUIREMENTS IN MONETARY POLICY.

How does the reserve requirements of the central bank work to reduce money and credit?



Through this process the banking system will create money, and the level of reserve requirement influences how much credit each deposit-taking institution can extend. The higher the reserve requirement, the greater the restraint on bank lending. For example, if the reserve requirement is increased to 20%, UW Bank could only lend $800 instead of the $850 when the reserve requirement was 15%. The process continues for all deposit-taking institutions (Banks #1 to #7) as depicted below:





What are the results of monetary management to date?

The operational framework for monetary management described in the pamphlet has been in effect since 1996. During that four-year period 1996 - 1999, the results of monetary policy have been reflected in:

1. the marked reduction in the monthly and annual inflation rates (illustrated in chart 2, Appendix)

2. relative exchange rate stability (chart 1, Appendix)

3. the steady gain in credibility of the Central Bank as it relates to defining and implementing monetary policy actions

All three aspects have contributed to stability in the Jamaican economy and fostering a more friendly investment climate in support of increased growth over the long-term.

APPENDIX

Chart 1: Monthly Exchange Rates

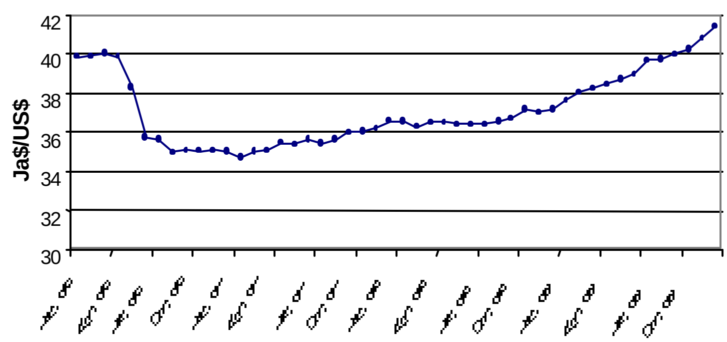
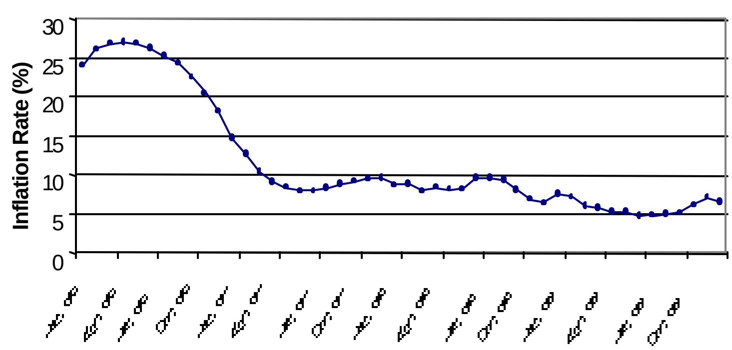


Chart 2: Annual Inflation 1996 - 1999 (Point-to-Point)



GLOSSARY OF FREQUENTLY USED TERMS

Base Money: The sum of notes and coins held by the public and the cash reserves of commercial banks (including both their holding of cash and their deposits at the central bank). The monetary base is the operating target used in the BOJ monetary policy framework and can be controlled through open market operations.

Cash Reserve Requirement: The requirement by law that a percentage of deposit liabilities of deposit-taking institutions must be held as interest free deposits at the Central Bank.

Credit: This refers to the amounts that financial institutions such as banks, building societies and other financial institutions lend.

Direct Monetary Policy Instruments: A directive that stipulates the types of assets that are to be held and/or the amounts that financial institutions can lend. Changes in the requirement/regulation influences the level of money and credit in the system immediately. (Examples of direct monetary policy instruments are reserve ***requirements and credit controls***)

Exchange Rate: The number of units of one currency offered in exchange for a unit of another. For example, US$1:JA$42.2 is referred to as the nominal exchange rate.

Financial Programme: refers to an integrated system of macroeconomic accounts and behavioural relationships defining the set of monetary, fiscal and exchange rate policy measures designed to achieve specified macroeconomic targets.

Government Securities: Debt instruments issued by the Ministry of Finance either to bridge timing gaps between revenue and expenditure or to cover any excess of expenditure over revenue. These securities include short-term instruments such as Treasury Bills and more long term ones like Local Registered Stock, or Debentures.

Hyperinflation: This refers to an increase in the cost of goods and services at a very rapid rate. This is sometimes termed “runaway inflation”.

Indirect Monetary Policy Tools: refers to the use of short-term debt instruments by the Central Bank to influence the levels of money and credit in the financial system through the domestic money market. (e.g. Open market-type operations)

Inflation Spiral: This situation occurs in instances where one round of price increases results in succeeding and continuing rounds of price increases.

Inflation: refers to the change in the general price level. In Jamaica, this is derived as the change in the Consumer Price Index (CPI) calculated and published by the Statistical Institute of Jamaica.

Intermediate Target: An intermediate target of policy. e.g. the money supply or the exchange rate, has three main characteristics.

- It is not directly determined by the Central Bank ,
- It responds, however, to a stimulus that the Central Bank can vary, and
- Its behaviour is expected to be closely related to the ultimate target-inflation.

Liquid Asset: An asset either in the form of currency or one that can be easily converted into currency. The liquid assets of commercial banks include notes and coins, short-term deposits at the Bank of Jamaica and any designated GOJ security.

Monetary Policy Framework: This defines the transmission process for policy actions taken by the Central Bank, and the impact on the final target - inflation. The components of a monetary policy framework are policy instruments, operating targets, intermediate targets, and the ultimate goal/objective.

Monetary Policy Instrument: These instruments, which include open market operations and the reserve requirement ratio, are used by the Central Bank to influence the money supply and credit. These are classified as direct or indirect.

Money Supply: This is usually defined to include the stock of notes and coins in circulation plus private sector deposits in commercial banks. There are several measures of money supply. In Jamaica, the measurements of money that are calculated and published are:

M1: Notes and coins in circulation + Demand Deposits
M2: M1+ Time and savings deposits

Money: Anything that is generally accepted in exchange for goods and services and for the payment of debt. (e.g. example, notes and coins.). Hence money is said to be a medium of exchange. Money also serves as a means of storing wealth as well as a standard of and unit of accounting for financial values and flows.

Open Market Operations (OMO): Money market trading between the Bank of Jamaica and authorised dealers with the intention of influencing money and credit in the financial system. OMO involves outright sale or purchase of GOJ securities from the stock of securities held by BOJ, and/or repurchase and reverse repurchase transactions.

Operating Target: An operating target of policy e.g. the monetary base and interest rates, is influenced directly by the Central Bank and can also be varied by the BOJ in order to bring about the desired impact on the policy objective.

Price Stability: Changes in the price of goods and services that are so low and predictable, that they hardly affect business plans and decisions.

Primary Dealer (PD): The set of intermediaries through which BOJ conducts open market operations. In developed country markets, PD's underwrite government issues as well as participate in block transactions with the central bank.

Repurchase Agreement: The purchase of a security from a primary dealer who agrees to buy back same at a specified rate at an agreed future date.

Reserve Requirement: refers to the portion of deposit liabilities that financial institutions may not lend and have to retain either as liquid assets or on deposit at the Bank of Jamaica.

Reverse Repurchase Agreements: Where the Central Bank sells a security that it owns and agrees to buy back same at a specified rate at an agreed future date.

Reverse Repurchase rate: the specified interest rate used for Bank of Jamaica money market or open market trades. The 30-day reverse repurchase rate serves as a bench-mark rate for pricing all open market instruments negotiated between the BOJ and any Primary Dealer.

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