THE APPROPRIATENESS OF INTERMEDIATE MONETARY TARGETS ADOPTED BY CARIBBEAN ECONOMIES

by

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Abstract

The question of the monetary policy strategy that Caribbean economies should adopt has recently gained prominence. Perspective on this issue stems mainly from the move towards the formation of a single market and economy and the performance of inflation under the current regimes. This paper reviews the intermediate monetary targets currently adopted by Caribbean economies, and assesses their suitability to regional integration. The study focuses on Jamaica, Guyana and Trinidad & Tobago, the three fully liberalized Caribbean economies, and concludes that the common intermediate target adopted by these economies is inappropriate and complicates monetary policy operations. An explicit inflation target is proposed as an alternative regime for these economies.

Keywords: intermediate targets, *inflation, inflation-targeting, monetary policy*

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1. INTRODUCTION

It has become widely accepted in the theoretical literature that the overriding objective of monetary policy is the achievement of price stability. In pursuance of this objective, the choice of an appropriate intermediate target is paramount, since an inappropriate choice can undermine the effectiveness of a monetary policy framework.

An intermediate target is a nominal variable that links the monetary instrument to the final objective of monetary policy, and in so doing serves as an operational guide to policy makers. A credible intermediate target is expected to have, among other things, a predictable relationship with the ultimate objective of monetary policy, and the ability to clearly communicate the long- run policy objective of monetary policy to the general public.

Prior to the end of the 1980s, the exchange rate and various monetary aggregates, such as narrow money (M1), broad money (M2) and the long term and short term interest rates, were the only intermediate targets policymakers had to their disposal to anchor inflation. Beginning in the early 1990s, many developed and developing countries, starting with New Zealand, have adopted an explicit inflation target as an alternative intermediate target in their attempt to address the difficulties that developed with the use of traditional intermediate targets.

Further, the choice of an intermediate target depends on the monetary instrument employed in the conduct of monetary policy. Generally, central banks can administer direct monetary instruments aimed at controlling money creation by commercial banks through administrative measures that set limits on the price and quantity of bank borrowing and lending

operations (Laurens 2005). Alternatively, indirect monetary instruments that attempts to regulate liquidity conditions by influencing the demand and supply of reserve money[2] can be applied.

For small economies, with underdeveloped financial systems, direct instruments may be the only option for the monetary authority. Direct control however, has a number of potential disadvantages, as is discussed in Tovar (2007). First, heavy reliance on direct controls may lead to liquidity overhang, financial repression and disintermediation. Excess liquidity[3] builds up because of the limits imposed on bank lending while deposit growth is fuelled by an expansion of reserve money. Financial repression occurs because interest rates are kept artificially low, resulting in the unproductive use of savings. These developments create financial disintermediation, or a switch to other forms of indirect financial investment.

Similar findings were obtained by Khan (2003), and Alexander Thomas and Charles (1995), who postulated, that in conducting monetary policy the use of direct instruments become ineffective as money and financial markets develop. Recent evidence reported by Laurens (2005), also showed that there are significant economic benefits to be derived from market-based or indirect monetary instruments, particularly, in an environment that advances towards global integration of financial markets.

In Caribbean economies, with the attainment of political independence in the 1960s, and the establishment of individual central banks, monetary policy was dictated mainly by the Bretton Woods System of Exchange. Following the demise of this system in the mid 1970s, the dominant trend in these economies was the adoption of direct monetary instruments with the

[2] Reserve money consists of domestic currency in circulation plus commercial bank deposits held at the central bank.

[3] Defined as total reserves of commercial banks plus other forms of liquid assets holdings, minus statutory required reserves held at the Central Bank.

exchange rate as the intermediate target. Beginning in the mid 1980s, an evolutionary process of monetary policy practices commenced in the Caribbean, largely in response to economic, political and financial developments in these economies. The overarching feature of this transition has been the adoption of monetary policy strategies anchored on intermediate monetary targets accompanied by indirect monetary instruments.

Table 1
Intermediate Monetary Targets used in Selected Caribbean Economies

Country	Exchange Rate Anchors		Monetary Aggregates	IMF Support/ other Monetary Program
	Currency Board	Fixed Pegs		
Antigua & Barbuda	*			
Bahamas		*		
Barbados		*		
Dominica	*			
Grenada	*			
Guyana			*	
Jamaica			*	
St Kitts & Nevis	*			
St Lucia	*			
St Vincent & the Grenadines	*			
Trinidad & Tobago				*

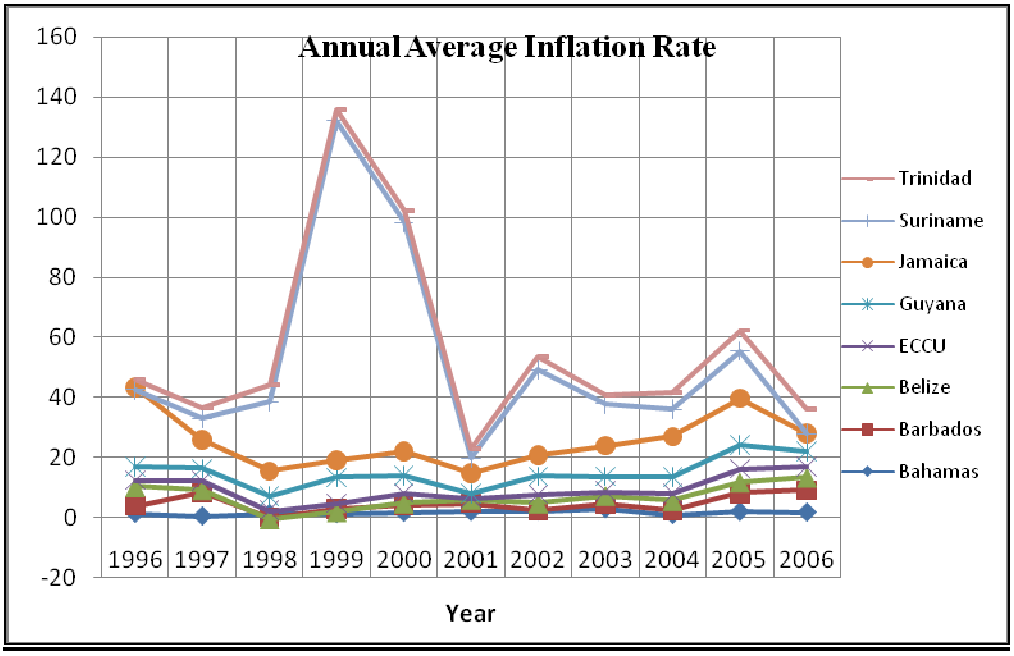
Source: Tovar (2007)

To date, in spite of the variation in the monetary policy strategies employed in Caribbean economies, as is reflected in table 1, high inflation persists in some jurisdictions, with rates significantly above the conventional definition of price stability[4], and far in excess of the inflation convergence criterion[5] endorsed by Caribbean Central Bank Governors in 1992.

[4] Stanley Fischer (1996) suggests, the long run goal of monetary policy should be defined as inflation of about 2 percent on average with a range of 1– 3 percent per year.

[5]Convergence criteria are designed to achieve economic and financial stability by all of the member states before the complete launch of a single market and economy. The five convergence criteria agreed on by the regional Central Bank Governors are; with respect to inflation control, exchange rate stability, debt service limits, import cover, and

Chart 1



Source: CARICOM Secretariat Statistical Unit

In light of the aforementioned, this paper examines the performance of inflation in Caribbean economies focusing on Guyana, Jamaica and Trinidad & Tobago, the three fully liberalized Caribbean economies[6] that employ monetary policy strategies influenced by the International Monetary Fund (IMF), with monetary aggregates as the intermediate monetary target.

In particular, the paper critically examines the IMF monetary model and assesses its suitability for these economies. This approach was adopted because Protocol 11 of the Revised

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fiscal deficit minimization. The inflation convergence criterion stipulates that the inflation rate in member economies should not exceed the average rate for the three countries with the lowest, but positive rates of inflation, plus 1.5 percent.

[6] All of the Caribbean economies have liberalized current account transactions, while these three economies have also removed all restrictions on the capital account.

Treaty of Chaguaramas[7] makes financial liberalization a critical element of regional integration, and these three economies are already in full compliance. Moreover, given the Mundell–Flemming theory of the "Impossible Trinity"[8], despite strong arguments in support of exchange rate targeting by some Caribbean economies, this policy initiative will not be a viable option with regional integration.

It has also become quite evident in the theoretical literature that a prerequisite for an optimum currency area (OCA)[9] is a high degree of convergence in inflation behavior among member countries.[10] In the Caribbean however, the monetary targeting economies, which are also ranked among the more developed countries (MDCs)[11] in the region have consistently

[7]The Treaty of Chaguaramas was signed by heads of Caribbean states on July 4, 1973 established the Caribbean Community. To facilitate the establishment of a Single Market & Economy, the Treaty was amended by nine protocols on July 5, 2001, and thereafter referred to as The Revised Treaty of Chaguaramas. Protocol II of the Revised Treaty of Chaguaramas makes provision for the right of establishment, provision of services and free movement of capital, and free movement of selected categories of skilled workers among all member states.

[8] The theory states that it is impossible for a country to achieve a combination of an independent monetary policy, a high degree of capital mobility and a fixed exchange rate simultaneously. In this regard, since the Revised Treaty of Chaguramas makes provision for the free movement of capital among member states, and a pre- requisite for a successful monetary union is an independent monetary policy, targeting the exchange is not possible. It is important to note however, that with the adoption of a monetary union and a common Caribbean dollar, a special type of fixed exchange rate policy can be put in place, with all of the member states relinquishing their individual currencies and making the Caribbean dollar legal tender.

[9] An OCA is defined as the optimal geographical domain of a single currency or of several currencies whose exchange rates are irrevocably pegged and might be unified.

[10] See Mongelli (April 2002)

[11] Measured by Gross Domestic Product (GDP) Per Capita at Purchasing Power Parity (PPP) value. The United Nations (UN) Human Development Report (2005), classified The Bahamas, Barbados, Guyana, Jamaica, Suriname and Trinidad & Tobago as the MDCs within CARICOM.

recorded high inflation relative to their counterparts. In fact, as is reflected in table 11, between 2001 and 2006, except for one year that Guyana successfully achieved the CARICOM[12] inflation criterion; these three economies have consistently recorded inflation rates far in excess of the set convergence target.

Against this background, this paper concludes that the current intermediate targets employed in Caribbean economies are inappropriate, and complicate monetary policy operations. In light of this finding, inflation targeting is proposed as an alternative monetary policy rule for Caribbean economies. This proposal gains credence, given the current efforts towards the formation of a Single Economy, and the need for a sustained commitment about inflation.

The reminder of the paper is organized as follows. Section two examines the evolution of monetary policy strategies in Caribbean economies, focusing on the post world war 11 era to present. Section three reviews the experience of the monetary targeting[13] Caribbean economies, highlighting the deficiencies in the current framework. Section four makes a critical evaluation of the IMF Monetary Model, which is the framework that dictates monetary policy practices in the monetary targeting Caribbean economies. Section five discusses the effectiveness of the current monetary policy strategies in the monetary targeting economies. The sixth section looks at the CARICOM Single Market & Economy (CSME) and the choice of an appropriate nominal

[12] CARICOM comprise of a group of fifteen member states, namely, Antigua, Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St Vincent and the Grenadines, Suriname and Trinidad & Tobago, and five associate member countries, namely Anguilla, Bermuda, British Virgin Islands, Cayman Islands and Turks & Caicos Islands.

[13] Monetary targeting involves setting a target for the growth in a specific monetary aggregate over a stipulated time horizon. The theory assumes that the money multiplier and money velocity are stable or predictable, establishing a stable long run relationship between monetary aggregates and inflation.

anchor for the conduct of monetary policy. The final section makes a conclusion and presents a case for an inflation targeting framework to be employed in Caribbean economy.

2. THE EVOLUTION OF MONETARY POLICY STRATEGIES IN THE CARIBBEAN

In the aftermath of World War II, fundamental changes occurred in the formulation and implementation of monetary policy in Caribbean economies. These changes were largely in response to global developments that impacted on the infrastructure of these economies, and economic, financial and political that occurred in these economies.

First the British Caribbean Currency Board (BCCB) was established in 1951, with its headquarters in Trinidad & Tobago. The major function of this institution was to issue British Caribbean notes and coins to its member countries;[14] hence price stability was not a major concern. Following the achievement of political independence, and the establishment of individual central banks, Guyana and Trinidad & Tobago withdrew their membership from the BCCB in 1965, and began issuing their sovereign countries notes and coins. The central bank of Barbados was established in 1974 and the country pursued the same action.

Following the withdrawal of these three independent states, the countries that maintained their membership of the BCCB established what became known as the East Caribbean Currency Authority (ECCA), and the subsequent formation of the Organization of Eastern Caribbean States. In line with this development, the modality of conducting monetary policy changed to an exchange rate target, with the Eastern Caribbean dollar (EC$) being the common currency and the US dollar the anchor currency.

[14] At the time of its establishment, the member countries were, Barbados, British Guiana (renamed Guyana after political independence), The Leeward Islands, The Windward Islands and Trinidad & Tobago.

With the establishment of individual central banks in the Caribbean, monetary policy strategies were dominated by the Bretton Woods System, making the monetary policy framework of IMF member countries largely in line with the IMF Articles of Association. Under this arrangement, these countries were expected to maintain fixed exchange rates against the United States (US) dollar, within a band. Most of these countries also imposed exchange controls on their capital accounts to protect their economies from international inflation.

Also in the 1970s, culminating with the collapse of the Bretton Wood System and the global recession that emanated from the oil crises, some Caribbean economies experienced severe macroeconomic imbalances. To restore stability, Guyana, Jamaica and Trinidad & Tobago embarked on IMF- Support Stabilization Programs at different periods. The conditionality attached to this form of assistance included, among other things, a system of financial sector reform, notably the disbandment of fixed exchange rate systems and the adoption of floating exchange rates, liberalization of the domestic and external financial system and the transition from the use of direct monetary instrument to indirect monetary instrument, namely open market operations (OMO).[15] Since then, monetary policy in these three economies have been dictated by the IMF monetary model, with monetary aggregates as the intermediate target.

Another major development that occurred in the 1970s was the emergence of the United States as the dominant global trading centre. In line with this change was a re-direction of international trade conducted in the Caribbean from the United Kingdom (UK) to the USA. The US$ also became the vehicle currency, determining the exchange rate strategy of many countries

[15] A situation in which the central bank buys and sells monetary instruments to influence the level of reserves in the banking system. OMO can be either active or passive. The former targets a given quantity of reserves and allows the interest rate to fluctuate, while the latter set targets for the interest rate and allows the quantity of reserves to fluctuate.

and the currency used globally for the conduct of trade. During this period Belize, The Bahamas and Barbados adopted fixed exchange rate regimes with the US dollar as the anchor currency. To date exchange rate continues to be the indicator of monetary policy transmission in these economies.

3. THE EXPERIENCES OF MONETARY TARGETING ECONOMIES

3.1 Guyana

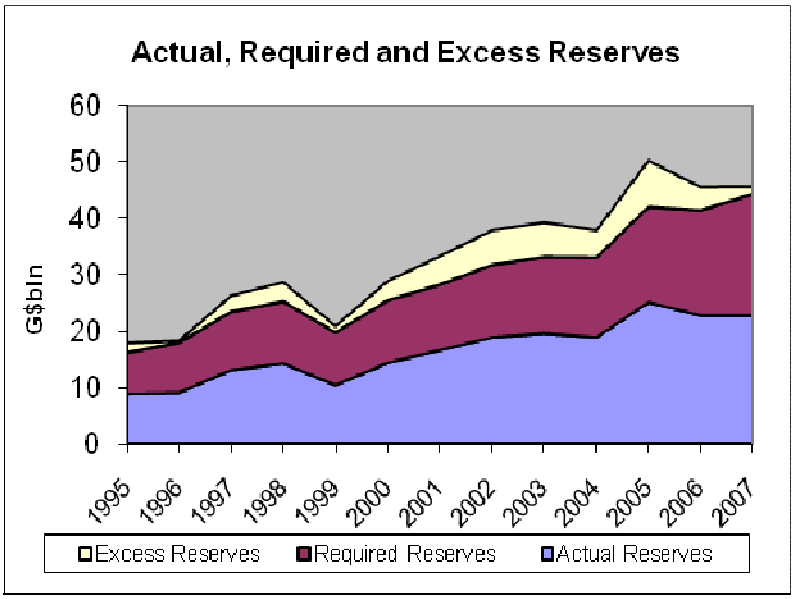
Since the mid 1970s the conduct of monetary policy in Guyana was primarily rule- based, with heavy reliance on administrative control and quantitative restrictions. Ceiling on interest rates, credit restrictions, credit direction and a fixed exchange rate were features that characterized this regime. Liquid asset requirements and reserve requirement were supplementary instruments used for liquidity management.

Between 1975 and 1986, the monetary policy stance was accommodative, providing financing for government deficit through money creation (Danns, 1990 pp 103).This expansionary measure increased the monetary base significantly, and contributed to the unsustainable rise in inflation and its effects on other macroeconomic indicators. During this period a foreign exchange crisis also emerged that depleted the level of official international reserves held at the central bank.

In an effort to address the macroeconomic imbalances, the government embarked on a structural adjustment program under the tutelage of the IMF in 1989, which resulted in significant structural and institutional changes in the economy. The overarching feature of this program was the liberalization of the domestic and external financial system, the adoption of a managed floating exchange rate regime and the adoption of indirect monetary instruments. To accommodates the new modality of monetary policy practice the sale of 91 days government

treasury bills commenced in June 1991, as a strategy for liquidity management. The frequency increased to biweekly in June 1994 and to weekly in February 1996. The 182 days and 364 days bills were also introduced in April 1993 (Egoume- Bossogo etal, 2003). A reserve money program, to estimate monetary aggregates was also established as the forecasting framework to inform the central bank on liquidity conditions[16]. Ever since, an Open Market – Type Operation[17] has been the dominant tool of monetary policy in Guyana, with broad money (M2) as the intermediate target, and reserve money as the operating target. Statutory reserves requirement and liquid assets requirements[18] are supplementary tools used to conduct monetary policy.

Chart II



Source: Central Bank of Guyana Website

[16] See Singh (1996) for a detailed description of this framework.

[17] A market–based monetary operation based on auction techniques. It involves only primary market issuance of government of Guyana treasury- bills. This is different to a full fledge OMO where primary and secondary market trading takes place.

[18] Minimum required reserves of the commercial banks represent 12 percent of demand deposit liabilities that must be deposited at the Central Bank. The legally required level of liquid assets to be held by the Commercial banks against their deposit liabilities are 25 percent of demand liabilities and 20 percent of time liabilities.

It is important to note however, that in spite of the switch to an indirect monetary instrument and the adoption of broad money as the intermediate target to conduct monetary policy, the monetary policy strategy is still somewhat inefficient and costly.

More specifically, a major challenge the country faces is the lack of distinction between liquidity management and government domestic financing needs, since short-term instruments are issued to meet government fiscal needs. This action is in part responsible for the high level of excess liquidity in the domestic financial system reflected in chart11, and the rising domestic debt that stems from liquidity sterilization activities. Excess liquidity in the financial system also stems from over-performance of monetary targets.

3.2 Trinidad & Tobago

Since the establishment of the central bank of Trinidad & Tobago in 1964, and the commencement of monetary management in 1966, the objective of monetary policy has been to maintain low and stable inflation, an orderly foreign exchange market, exchange rate stability and adequate levels of foreign exchange reserves (Central Bank of Trinidad & Tobago Website).

During the inaugural phase, a fixed exchange rate regime was in place, with the pound sterling as the anchor currency. This system was disbanded in 1970, and reserve requirement emerged as the dominant instrument used in conducting monetary policy.

The year 1975 marked the beginning of a boom cycle for the country that stemmed from favorable oil prices. This development translated into rapid economic growth, higher foreign reserves and higher government revenue. To retain macro economic stability, the government embarked on a financial sector reform program, which entailed additional restrictive measures such as, credit controls, amendments to the statutory reserves of domestic currency to the US

dollar. Strict exchange control measures were also put in place in 1983, in response to a foreign exchange crisis. In 1986 severe macroeconomic imbalances that were triggered by declining oil price erupted in the economy.

In spite of these unfavorable developments, monetary policy continued to be accommodative, providing financing for large fiscal deficit. With elements of the macroeconomic imbalance still lingering in the economy, an IMF Stand - By Arrangement was initiated in 1989, making IMF conditionality the determinant of the country's monetary policy stance.

Another episode of financial reform commenced in 1993, which included new policy measures, such as financial liberalization, and the adoption of a floating exchange rate regime. Accordingly, the monetary authority made the transition from the use of direct monetary instruments to indirect monetary instruments, namely an OMO in 1996, and the repurchase agreement (repo) rate[19] was introduced in May 2002 as a supplementary measure. To date the reserve requirement[20], OMO, and the repo rate are still the monetary instruments used to influence monetary management in Trinidad & Tobago.

Like other monetary targeting economies, financial innovation and deregulation have altered the stability of broad money velocity and the money multiplier, and reduced the predictability of money demand, making the current monetary policy strategy ineffective. The financial system is also characterized by high levels of structural liquidity generated by the monetization of oil receipts to finance government deficits.

[19] The rate at which the central bank provides overnight financing to solvent commercial banks with temporary liquidity problems.

[20] All licensed financial institutions are required to maintain 11 percent of total deposits at the central bank.

3.3 Jamaica

The objective of monetary policy in Jamaica as outlined in the (BOJ) Act (1960) is to influence the volume and conditions of the supply of credit so as to promote the fullest expansion in production, trade and employment, consistent with the maintenance of monetary stability, and the external value of the currency.[21] During its inaugural years the Bank of Jamaica relied heavily on the use of moral suasion to restrict the growth in consumer credit (Bank of Jamaica, 2004).

The emergence of a foreign exchange crisis in the 1970s led to an amendment to the prevailing exchange control legislation in 1974 to discourage the outflow of foreign currency and remained in force until the early 1990s.Throughout this period, the monetary authority played an accommodative role, providing financing for large government budget deficit that amounted to 6 percent of GDP in 1975.

The year 1984 was a challenging year for monetary policy management. The continued deterioration in the Balance of Payments led to the floating exchange rate regime under the newly adopted foreign exchange auction (Bank of Jamaica, 2004, pp 109)

A financial sector reform program was initiated in 1985, with one of the primary features being the switch from direct monetary instruments to indirect monetary instruments (IADB 2003). In this regard, the BOJ commenced OMO using the sale of certificate of deposits (CDs) in November 1985. Base money management targeting also commenced in 1985.Auctioning CDs was abolished in May 1986 and a fixed rate was offered at each sale. The removal of exchange controls was implemented in 1991, reclassifying the economy as a fully liberalized one. The

[21] See Bank of Jamaica's website.

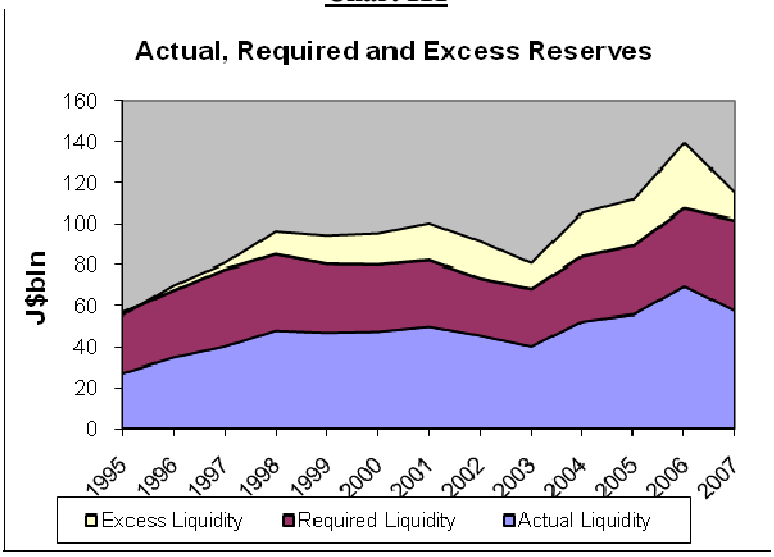
following year the rate of inflation peaked at 100 percent, but reduced gradually during the remainder of the 1990s, reaching single digets in 2000.

It is important to note however, that the transition to market oriented monetary management did not achieve the desired results, hence a BOJ publication noted:

> In spite of open market operations, the monetary base grew rapidly. This relative ineffectiveness in managing the monetary base could be attributed to the expanded role of monetary management through market instruments and the continued expansionary nature of fiscal operations. For these reasons monetary policy management was ineffective in containing money supply in the initial switch to indirect instruments. (Bank of Jamaica 2004)

With the lingering effects of the foreign exchange crisis, the country embarked on an exchange rate- based stabilization program in 1996, in an effort to combat consistently high inflation. According to Yan Sun (2005), this stabilization program was highly successful except for the latter part of 2002 and early 2003. Notwithstanding this level of success, there are some major challenges that the economy still faces, for example, the financial system is plague with significant levels of excess liquidity emanating mainly from the monetization of large fiscal deficits. This development puts pressure on inflation and undermines the exchange rate.

Chart I11



Source: Central Bank of Jamaica Website

OMO is still the main channel used to management liquidity in the financial system, supplemented by reserve requirement and repos. This framework has not been very effective in its liquidity management strategy; hence the rate of inflation continues to be among the highest in the Caribbean. Implementation of monetary policy has also become complicated with the new financial instruments and markets that have evolved.

To reinforce the ineffectiveness of the current monetary policy strategy that is being pursued in the country, Allen and Robinson (2004) in their study found that inflation in Jamaica, particularly since the 1990s has been driven primarily by shocks to the exchange rate relative to demand- pull factors associated with the credit channel, which is advocated by the IMF Monetary Model.

4. THE IMF MONETARY MODEL

The IMF Monetary Model is a major component of the IMF Financial Programming Model that was developed in the 1950s. At the time of its implementation, the unavailability of vital macroeconomic data from many of its member countries caused the model to focus mainly on trade and banking statistics data that was readily available (Polak, 1997). Although little changes were made to the core of the model, it continues to be the basis for the conditionalties applied to IMF lending and surveillance to member countries. The model is presented in six identities below.

$$\Delta MO = k\Delta Y \quad (1)$$

where MO represents money supply, k is the inverse of the velocity of money and Y represents income. This equation is derived from the famous monetarist identity.

$$M = mY \quad (2)$$

where M represents imports, Y, income and m is the marginal propensity to import.

$$\Delta MO = \Delta R + \Delta D \quad (3)$$

where MO represents money supply, R, international reserves and D represents credit to the banking system.

$$\Delta R = X - M + K \quad (4)$$

where R represents international reserves, X represents exports, M represents imports and K represents the net capital inflows of the non- bank sector.

$$\Delta H = \Delta R + \Delta DCB \quad (5)$$

where H represents reserve money[22] and DCB, domestic credit of the central bank.

$$\Delta MO = q\Delta H \quad (6)$$

where q denotes the money multiplier (which is assumed to be constant). Therefore, a change in money supply is equal to an equivalent change in reserve money.

Shortcomings of the Model

Although this model is generally used as a guide for IMF conditionalities to grant financial and technical support to its member countries, there are major discrepancies in its identities.

First, money targeting which is based on the assumption that there is a strong relationship between monetary aggregates and inflation is the foundation of this model, a view that is refuted by many analysts, for example, Anderson (1985). In fact, for this assumption to be true the money multiplier and the velocity of money must be predictable or at least stable. In practice however, this does not hold, as is evident in many money targeting countries. It is this unpredictability of the velocity of money that has caused many developed and emerging economies to relinquish monetary aggregates as intermediate targets to conduct monetary policy,

[22] Consists of currency in circulation plus the reserves of the commercial banks.

and have adopt a more forward- looking intermediate target, namely, a specified inflation rate. Ironically, this view was reiterated in a recent IMF publication, which states that:

> Money targets are based on the assumption that Central Bank has full control of the nominal money stock- that is, the money multiplier is predictable- and that money velocity is predictable – that is the long run relationship between money growth and nominal income growth (and therefore inflation for given trend real growth) is stable. In practice, money targets were often missed, leading people to question their usefulness as an intermediate target. The only countries that still target money today are developing countries, although even there, neither the money multiplier nor the velocity of money appears stable over time (World Economic Outlook Sept 2005)

Another fundamental flaw in the model is the assumption that domestic credit of the banking system will have a significant impact on money supply and ultimately inflationary pressures in an economy. In light of this notion, the IMF in making projections for borrowing countries emphasizes the need to curtail private sector credit, while some amount of leverage is given to the level of international reserves. From this perspective, a common situation in many developing countries is to have inflationary pressures present in an economy although the program targets are achieved. This arises if international reserves improved by more than is expected leading to a monetary expansion with inflationary consequences. If this outturn is not accompanied by a similar increase in money demand the excess money supply must be absorbed through open- market operations which can be very costly. In fact, Polak 1997, noted.

> A study of the IMF financial arrangement with 36 countries over the period 1988 to 1992 showed that targets for broad money growth were overshot by wide margins in about two thirds of the program years, in most countries this reflected mainly larger- than- expected foreign assets.

In the case of the monetary targeting Caribbean economies, the OMO procedure is designed to target the reserves held by Financial Institutions and sterilize same to avoid excessive lending to the private sector. Indeed this strategy does not auger well for long run growth in these economies and creates a growing domestic debt that has to be monetized, triggering excess liquidity in the financial systems. This action also contradicts the empirical evidence which suggests that private sector credit is a very effective mechanism to promote growth and eliminate excess liquidity in an economy.

The omission of domestic interest rate and exchange rate movements is another shortcoming of the model. In fact, given the economic fundamentals in many developing countries, with respect to fiscal dominance, the weight given to imported goods in the computation of the consumer price index (CPI), and exchange rate movement stemming from inflation expectations, these variables are vital to inform monetary policy decision. For this reason, there is the recent trend for economies with floating exchange rates and a system of capital mobility to compute and utilize monetary conditions indices (MCI). [23]

From a regional perspective, Claney (1997) constructed a MCI for Jamaica, and found that the phenomenon is applicable to that country since the deregulation and liberalization of the financial sector in 1991. There is no documented evidence of other Caribbean adopting this strategy, but anecdotal evidence suggests that given the nature of these economies, this communication device might also be relevant to them.

Against this background, the inappropriateness of the IMF monetary model is echoed by Agenor and Montiel (1999) who in their Development Macro Economics text noted:

[23] A MCI reflects the transmission mechanism of monetary policy through an index number calculated from combined financial variable that are relevant to monetary policy. The concept was developed in Canada in the early 1990s in response to the need for alternative intermediate and operating monetary policy targets that are easily communicated to the public.

> Although all of the World Bank and IMF models to be examined have been applied frequently in policy formulation in developing nations, we shall argue that all of them are subject to limitations that constrain the usefulness for both policy guidance and analytical work as medium- term models.

Additionally, within the context of CSME, Polak (1997), stated:

> For countries that form a monetary or economic union, the current model used by the IMF has lost most or all of its applicability, since under this regime, there is no country by country currency in circulation and consequently a national money supply.

5. INFLATION TARGETING: A BRIEF PRIMER

Inflation targeting is a monetary policy rule in which the Central Bank makes a commitment to use monetary policy primarily to achieve a publicly announced inflation target within a specified time horizon.[24] This framework was first adopted by industrial countries at the beginning of the 1990s, in response to difficulties they encountered in conducting monetary policy using the exchange rate or monetary aggregates as the intermediate target in the conduct of monetary policy (Masson, Savastono and Sharma, 1998).

The success that these countries have achieved in controlling inflation and improved credibility was so remarkable that Allen, Baumgartner and Rajan, (2006), reported that approximately 50 percent of all developing countries and 95 percent of developed countries have so far adopted varying versions of an inflation targeting regime. Moreover, a recent IMF publication noted the increasing number of countries that are seeking technical assistance from

[24] The inflation target may be a point estimate, for example 2 percent, or within a range, for example, 1 to 3 percent. The theoretical literature however suggests that a target range rather than a point can provide the central bank with the flexibility it requires to respond to shocks, and enhance confidence and accountability.

the IMF to implement inflation targeting frameworks (World Economic Outlook, September 2005).

Notwithstanding the disadvantages of an inflation targeting framework which will not be discussed in depth in this paper, there are three major advantages to be derived from an inflation targeting strategy when compared to other monetary policy strategies. First, an inflation targeting framework has the potential to building credibility for a central bank and anchor inflation expectation faster than the alternative strategies. In fact, inflation targeting involves greater transparency, and is relatively easy to follow; hence the public can make better judgement about the monetary policy stance and the performance of inflation, reducing speculation.

Moreover, Mishkin (2002), in his study also discussed the benefits of adopting an inflation targeting regime. He postulated that inflation targeting can be an instrument used to increase accountability, and by so doing can help to ameliorate the time- inconsistency problem, through increased communication and transparency. By the same token, Jonsson (1999), posits that concentration on an explicit inflation target may serve as a better focus for price setters than in the case of monetary and exchange rate targeting which will ultimately lead to positive economic growth.

Another advantage of an inflation targeting regime relative to other monetary policy strategies is: the transparency and the announcement of a specified target over a time horizon that is incorporated in this framework will not cause a deviation from the anticipated objective to be interpreted as an ultimate failure.

And finally, in light of the proven track record of the favourable performance of inflation under inflation targeting regimes, as is recorded by Jonsson (1999) and Mishkin (2000), the

economic cost of a monetary policy failure under an inflation targeting strategy is lower than under any other modality of conducting monetary policy. Under this regime the only cost to the society and the central bank is a higher than expected inflation rate which can quickly be corrected using domestic policy measures such as interest rate. On the contrary a failure under an exchange rate regime can result in a loss of international reserves, higher inflation and possibly public debt default. Under a system of monetary targeting, the interest cost of sterilization or mopping up excess liquidity can be high and further complicate monetary policy

Proponents of inflation targeting, for example, Carare, etal (2002) argue that the framework can be beneficial to both developed and emerging economies. They reiterated however, that in order for this strategy to be successful in lowering inflation, specific pre-conditions must be met.

First, the central bank must have as its primary objective the mandate to pursue the inflation target, and sufficient discretion and autonomy in pursuing this objective. Additionally, public accountability of the central bank for achieving the inflation goal, and clearly communicating to the public the main aspects of the central bank's monetary policy design and implementation is also of vital importance

Another important condition that must be met is that inflation forecast must be the main intermediate target of monetary policy, and the achievement of the inflation target should not be subordinated to other objectives. In this regard, monetary policy should not be constrained by fiscal or political considerations,[25] and the external position should be strong enough to enable monetary policy to pursue the inflation target as its primary goal.

[25] This will require the government to have a broad revenue base and reduce its dependence on seignorage revenue. It will also necessitate an effectively manage public debt, so that monetary policy is not influenced in any way by fiscal developments.

There is also the need for a sufficiently stable and developed financial system in order to minimize potential conflicts with financial stabilization objectives and guarantee effective monetary policy transmission. The banking system should also be sound and a well developed capital market will be an asset.

And finally the Central bank needs to have a clear understanding of the link between inflation target and other policy objective of the country, since other macroeconomic considerations, such as the exchange rate objectives, fiscal policy and debt management activities should be coordinated in support of the inflation target.

6. CSME AND THE CHOICE OF A NOMINAL ANCHOR FOR MONETARY POLICY

The choice of an appropriate monetary anchor is one of the most fundamental policy issues that CARICOM must address in the move towards the formation of a Single Market & Economy. Generally, the degree of latitude that policymakers have in their choice of a nominal anchor is largely dependent on the exchange rate regime in place. In this regard, the theoretical literature categorically states that for a country with a fixed exchange rate regime the nominal anchor should be the exchange rate. Alternatively, for countries with floating exchange rate regimes the two possible choices of a nominal anchor are monetary aggregates and inflation targeting.

In the case of an exchange rate anchor, although there are some advantages in pursuing this strategy, for example, inflation expectations move towards the inflation rate of the country whose currency it is pegged to, and the visibility of the nominal anchor to the public, a fixed exchange rate deny countries of the privilege of using monetary policy to respond to domestic and external shocks. Additionally domestic interest rate will automatically be determined by the rate in the anchor country, and the country is exposed to speculative attacks. More importantly,

by retaining monetary independence, a country also retains seigniorage revenue[26] as well as a lender-of-last-resort function.

Regarding monetary target, financial liberalization has weakens the relationship between monetary aggregates and inflation. More specifically, the use of monetary aggregates as a useful nominal anchor requires predictable estimates for money supply. Given the history of high inflation in Caribbean economies and the financial innovation that is taking place in many of these economies, predicting the quantity of money demanded has become difficult, hence it is not an efficient method to achieve a given inflation objective.

In light of the foregoing, and given the evidence of the level of success experienced by countries that have adopted an inflation targeting framework, it would seem fitting for CARICOM to adopt this monetary policy rule

Moreover, Laurens (2005) identified some benefits of a successful monetary policy implementation in a monetary union. He opined that for small countries, participating in a monetary union an inflation targeting regime can help to foster fiscal discipline, and assist in the coordination of monetary and fiscal policy. More specifically, the establishment of a monetary union with a single currency and a regional central bank will put in place several of the underlying conditions that are necessary for the successful operation of such a monetary policy regime. With the implementation of a single economy and the unification of macroeconomic policies, the regional central bank cannot conduct monetary policy in a discretionary manner, instead as Khan (2003) pivot, some the absence of guideline or rule in the conduct of monetary

[26] Seigniorage is the net revenue derived from the issuing of currency. In the case of coins, it is the difference between the face value of a currency and the cost of production, distributing and retiring it from circulation. For bank notes, it is the difference between the interest earned on securities acquired in exchange for bank notes and the cost of producing and distributing those banknotes.

policy can have adverse consequences for a central Bank. It is expected that regional integration will have captured all of these imperfections and the unification of macro policies will make the transition smooth for the adoption of inflation targeting in the Caribbean.

7. CONCLUSION AND RECOMMENDATIONS

The main objective of this paper was to evaluate the effectiveness of monetary policy in Caribbean economies under the current intermediate targets. The anomalous situation whereby the fully liberalised economies, classified as MDCs realize inflation rates that far exceed that of the smaller economies with fixed exchange rates is noteworthy. More specifically, the experience of the fully liberalized economies reiterates the notion that financial liberalization weakens the relationship between monetary aggregates and inflation. It follows therefore that since the foundation of monetary targeting is the predictability of velocity and money demand, monetary targets are incapable of being useful signals in the conduct of monetary policy, and therefore the need for more forward looking indicators, such as a forecasted inflation rate.

Several reservations may exist in respect of the proposition for an inflation targeting framework, particularly in countries such as Barbados, The Bahamas and the OECS. For these countries, the United States is the major trading partner, hence a fixed exchange rate with the US$ as the anchor currency seem quite appropriate. It is important to note however that when the single economy is fully implemented and the common Caribbean Dollar which is proposed to be pegged to the US$ is implemented this issue will be readily resolved.

More importantly, it became more evident since the Asian crisis that central banks globally are rapidly moving away from monetary policy strategies that are based on the management of intermediate targets such as monetary aggregates and exchange rate, and toward

frameworks that are more forwarding looking. Against this background, this paper concludes that in order to curb the inflationary spiral in the monetary targeting economies, and to re-establish public confidence in the respective countries an inflation targeting rule should be implemented.

To solidify the notion proposed in this paper, it must be noted, that there are a number of previous studies that have examined whether an inflation targeting regime is suitable for some Caribbean economies. For example, Rambarran (2001) in his study of Trinidad & Tobago found that the use of base money as a nominal anchor has not been very effective. He noted that the monetary authority has pursued multiple and conflicting monetary objectives, resulting in the ineffectiveness of monetary policy and the inability of the monetary authorities to achieve the desired monetary objective. Against this background, he posited that an inflation targeting rule is a more viable option for Trinidad & Tobago. Zahler (2003), in his study of the Jamaican economy found that the adoption of an inflation targeting regime can reduce the exchange rate pass- through. More recently, Yan Sun (2005), also reviewed the Jamaican economy and proposed an inflation targeting lite framework,[27] for the country in the absence of some of the preconditions for a full- fledge inflation targeting regime.

Regarding the time of implementation of this framework, as is stated in Carare etal (2002), the list of initial conditions for the successful implementation of an inflation targeting regime is not meant to constitute strict prerequisites. That is, the absence of some of these conditions should not stand in the way of the adoption of inflation targeting, especially when policies are being introduced to establish them in the short and medium term. In this regard, a

[27] Stone (2003) in his writing used the term "inflation Targeting Lite(ITL)", to describe a situation in which an emerging market economy is using an inflation target to define its monetary policy framework, but is unable to maintain the inflation target as the foremost policy objective. Yan Sun (2005) recommended this as a monetary policy rule for Jamaica.

fundamental step towards the transition to a full– fledge inflation targeting regime in the Caribbean is for these economies to adopt a more eclectic approach to the conduct of monetary policy, while the logistics for the full implementation of a single economy is being worked out..

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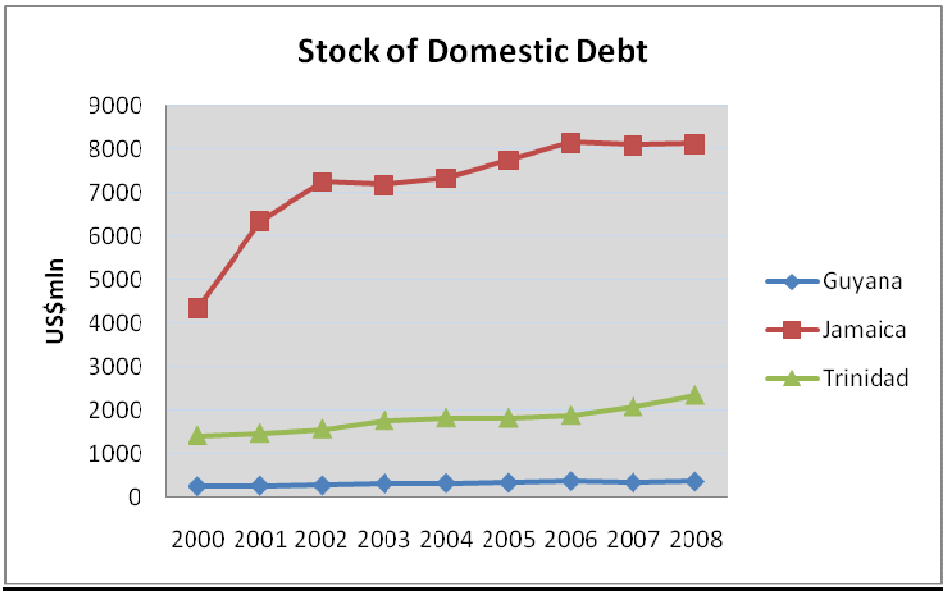
Chart II



Source: Source: CARICOM Secretariat Statistical Unit

Table II

No of times the inflation criterion was not met(2001 – 2006)

Territory	*Number of times*
The Bahamas	*0*
Barbados	*2*
Belize	*1*
ECCU	*1*
Guyana	*5*
Jamaica	*6*
Suriname	*6*
Trinidad & Tobago	*6*

Source: CCMS Report on Economic Performance and Convergence and CARICOM Secretariat Statistical Unit