IS INFLATION TARGETING A VIABLE OPTION FOR A DEVELOPING COUNTRY? THE CASE OF MALAWI

A thesis submitted in partial fulfilment of the requirements of the degree of

MASTERS IN COMMERCE (FINANCIAL MARKETS)

of

RHODES UNIVERSITY

by

DUMISANI MACDONALD HOMPASHE

December 2007

ABSTRACT

The distinctive features of inflation targeting include the publishing of the formal (official) target band or point target for the rate of inflation at one or more time horizon/s and the explicit confirmation that low and steady inflation is the long-run objective of monetary policy. There are four main preconditions of inflation targeting:

1) an independent central bank that is free from fiscal and political pressures;
2) a central bank that has both the ability to forecast inflation and the capability to model inflation data;
3) the presence of fully deregulated prices and an economy that is affected by changes of commodity prices, as well as exchange rates; and
4) the presence of sound banking system and well developed capital markets.

In most developing countries, the use of seigniorage revenues as a source of financing government debts, the lack of commitment by monetary authorities to low inflation as a primary goal, the absence of the central bank's functional independence, and of powerful models to make domestic inflation forecasts, prevent the satisfaction of these preconditions.

This dissertation investigates the extent to which Malawi meets the preconditions for inflation targeting by comparing the situation in that country to other developing countries, which have already adopted the framework. Malawi is committed to the central bank's functional independence as well as the pursuit of prudent fiscal policy measures for the attainment of low inflation. Despite the failure to meet all the preconditions, this study recommends that Malawi should adopt an inflation targeting framework due to the strength of commitment of the monetary authorities in satisfying these preconditions.

ACKNOWLEDGEMENTS

I am deeply grateful to Professor AP (Pierre) Faure for his patience and unwavering support in assisting me to complete this dissertation. I am deeply grateful to Misheck Esau and Steven Musa of Continental Discount House (CDH) in Malawi who willingly gave their time and expertise to assist me with data during my research.

Special thanks are due to my colleagues and family who supported me throughout this process. The financial assistance of Canon Collins Trust towards this research is hereby acknowledged.

IS INFLATION TARGETING A VIABLE OPTION FOR A DEVELOPING COUNTRY? THE CASE OF MALAWI

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND AND RATIONALE FOR RESEARCH

The distinctive features of inflation targeting include the publishing of the formal (official) target band or point target for the rate of inflation at one or more time horizon/s and the explicit confirmation that low and steady inflation is the long-run objective of monetary policy (Bernanke and Mishkin, 1997: 97; Svensson, 2002: 776 and Mukherjee and Singer, 2006: 7). Accompanying the target is a commitment by the authorities to price stability as the main objective of monetary policy, and a promise to hold central bankers accountable should they fail to meet the inflation target. According to a study by IMF the implementation of inflation targeting monetary framework encompasses:

> adjusting monetary policy instruments in response to new information in order to bring inflation back toward the target in a manner that takes into account the implications for the real side of the economy, as well as the need to enhance or maintain policy credibility (IMF, 2006: 4).

The majority of inflation targeting studies agree that the "prerequisites" of inflation targeting framework are categorised into four classes: 1) the central bank ought to be legally autonomous and not be influenced by government, since this would cause a disagreement with the inflation objective[1]; 2) the central bank ought to have the ability to forecast inflation and the capability to model the inflation data; 3) prices should be free from direct controls, the economy should not be excessively influenced by commodity prices and exchange rates, and there

[1] There is broad agreement that instrument independence is desirable for monetary policy, but goal independence appears to be less important (Amato and Gerlach, 2002: 783).

should be minimum dollarisation; and 4) there should be the presence of a healthy banking system and well-developed capital markets, so as to minimise possible disagreements with the objectives of financial stabilisation (Batini and Laxton, 2005: 486-7; Carare *et al.*, 2002: 4 and IMF, 2006: 18).

Several studies point to the absence of both the independence of central banks and their econometric proficiency in the majority of emerging market countries. Such countries cannot improve their monetary and inflation performance through the adoption of inflation targeting, but "would be better off sticking with 'conventional' policy framework such as an exchange rate peg or money growth targeting" (Masson *et al*., 1997: 37; and Simwaka, 2004: 48). According to Eichengreen (2002: 39), the policy of inflation targeting is far more complicated for emerging market countries. The author cites three main reasons for such difficulty:

1) the economies of emerging market countries are more open;
2) the debts of these countries are denominated in foreign currencies; and
3) the policy makers of these countries are not credible.

However, more recent studies have taken a more neutral perspective due to the successful adoption of inflation targeting monetary policy framework by several developing countries such as Brazil, Chile, Colombia, Israel, the Czech Republic and Poland (Batini and Laxton, 2005: 493; Carare *et al.*, 2002: 5; IMF, 2006: 17 and Mishkin, 2000: 105). It is not indispensable for developing countries to satisfy a strict set of preconditions before they can adopt inflation targeting successfully. "Instead, the feasibility and success of targeting appears to depend more on the authorities' commitment, and ability to plan and drive institutional change after introducing targeting" (Batini and Laxton, 2005: 493-5).

Echoing a similar sentiment, Mishkin (2004: 10) states, "although fiscal and financial stability are necessary conditions for inflation control, I think that the

view that these reforms are prerequisites for attempting an inflation targeting regime in emerging market countries is too strong". The preconditions for inflation targeting apply well to any type of monetary policy framework. For instance, the precondition of instrument independence is required under a policy of fixed exchange rate as well as that of monetary targeting. The problems of foreign exchange rate that have been experienced by countries like Thailand, Malaysia and South Korea in Asia in 1997-1998 bear testimony to the notion that weak management of public finances, poor banking practices and systems, together with huge liabilities denominated in foreign currency damage the credibility of fixed exchange rate regimes. Furthermore, "large public deficits and foreign borrowing are also problematic under monetary targeting in that they limit the central bank's ability to contain credit growth" (Amato and Gerlach, 2002: 784-785).

A study of the feasibility of inflation targeting in Malawi was conducted by Simwaka (2004), in which he assessed the applicability of inflation targeting to the Malawian economy by analysing the satisfaction of the preconditions. The argument advanced in that study was that an inflation targeting regime is unsuitable for a country that does not meet the preconditions of inflation targeting. The study then concluded that Malawi had not yet met the preconditions that would satisfy the adoption of inflation targeting, because the direct linkages between monetary policy instruments and inflation did not appear to be strong and predictable (Simwaka, 2004: 48).

Simwaka`s argument is taken as a starting point for further investigation in this dissertation. The hypothesis that is pursued here is that it is desirable, but not necessary, for a developing country such as Malawi to meet a stringent set of preconditions before adopting an inflation targeting framework. The lack of a strong and expected connection between monetary policy instruments and inflation may be due to the monetary-targeting framework that is currently in place in that country. In a monetary-targeting framework the link between money

supply and inflation is not a well-drawn conclusion. In his view of transmission mechanism for an open economy, Svensson (1999: 610) states, “in the short and medium run, monetary aggregates have little or no predictive power over other determinants of inflation”. Most countries, such as Switzerland and South Africa, abandoned monetary targeting in favour of inflation targeting because of the absence of a link between money supply and inflation.

Malawi presents a special case to discuss the adoption of inflation targeting. During the period leading to the end of 1980s, the Malawian government pursued a highly repressive monetary policy regime that was characterised by harsh measures such as direct credit controls[2], interest rate ceilings, and tight foreign exchange controls on the free movement of investment capital across borders. From the middle of 1988, with the assistance of the International Monetary Fund (IMF), the Malawian government adopted a structural adjustment programme. The programme included liberalisation of the financial sector, as well as the elimination of direct controls, which dictated that the strategy of monetary policy should move away from direct to indirect methods. This new approach ensured that the manner in which the authorities conducted monetary policy was such that it was in tandem with the broader objective of economic growth, healthy balance of payments, as well as stable prices. The task of the central bank is to bring to scrutiny all indicators that affect the development of prices (Consumer Price Index (CPI) inflation), growth in gross domestic product (GDP), monetary growth and expansion of credit. The Reserve Bank of Malawi (RBM) pursues a monetary-targeting regime, whereby the authorities aim at regulating the money stock (broad money - M2), to a position where the link between price level and production can be maintained (Simwaka, 2006: 4-5 and Sato, 2001: 7).

[2] Direct credit controls are part of non-market policy instruments of the central bank, where banks are instructed not to exceed a certain amount of lending to domestic private sector borrowers over a specified period.

Due to the liberalisation of the macroeconomic policy, average inflation in Malawi moderated from 30 percent to 20 percent[3] in 2000 and 2001 respectively. In the latter year, inflation was affected by higher food prices that resulted from a maize harvest shortfall. In 2002 inflation moderated further owing to continued tight monetary policy, improvement in fiscal discipline and lower maize prices. Inflation went down to 11.5 percent at the end of 2002, its lowest level since 1997 (Simwaka, 2004: 26-7). Despite a slight increase in 2004 and 2005, the trend of the inflation rate seems to be declining. For instance, according to the Reserve Bank of Malawi the average rate of inflation for 2006 was 13,9 percent, a 1,5 percentage point decrease from the 2005 figure. However, recently monetary targeting in Malawi has been facing some problems such as the apparent missing of targets on a more frequent basis. Excessive government expenditures have been associated with monetisation of the budget deficit, crowding-out of credit to the private sector, as well as increasing inflation. “Associated with fiscal overruns, have been massive increases in banking system credit, especially in the context of donors curtailing support because of concerns about governance” (Simwaka, 2006: 8-9).

1.2 GOALS OF THE RESEARCH

The objective of the study is:

to investigate the extent to which Malawi meets the preconditions for inflation targeting, by comparing the situation in that country to other developing countries in a similar situation, which have already adopted the inflation targeting framework.

[3] The actual average rate of inflation in 2001 was 27, 5 percent according to the Reserve Bank of Malawi.

1. 3 METHODOLOGY

This dissertation discusses theoretical and conceptual issues in relation to the preconditions for the adoption of inflation targeting by a developing country. This is followed by case studies of the following developing countries that have already adopted inflation targeting: Brazil and South Africa. The economic environments of these developing countries, before they adopted inflation targeting, are analysed. In particular, the economic analysis focuses on the strength of the financial market fundamentals, the stability of the macroeconomic environment and the independence of the central banks in those countries.

Against the theoretical background and that of the case studies, the current economic environment of Malawi is assessed in order to evaluate whether it is feasible for the country to adopt inflation targeting. Descriptive statistics (graphs and tables) are provided so as to enhance and consolidate the analysis.

The economic variables that are investigated are the rate of inflation (as measured by consumer price index), the revenues from seigniorage and the fiscal balance. The latter two variables assist in gauging and comparing the extent of central bank independence in these countries. As in Masson *et al.* (1997: 41), revenues from seigniorage are calculated as the yearly change in the monetary base divided by nominal GDP. The annual rate of inflation is defined as the percentage change in the average CPI from one year to the next. The annual estimate of the fiscal balance is measured by the government debt to GDP ratio, as in Carare and Stone (2006: 1306). Finally, the following indicators of the degree of financial deepening are analysed in each country: the average ratio of broad money to GDP, the level of GDP per capita and the real interest rate on bank deposits.

Data for Malawi cover the period from 1992 to 2006, whilst those of Brazil and South Africa cover the periods from 1994 to 1999 and 1994 to 2000 respectively. Quarterly data are used. For Malawi the data have been sourced from a discount house, the *Continental Discount House Limited (CDH)*, and the Reserve Bank of Malawi while that for Brazil and South Africa have been sourced from the International Financial Statistics (online) of the International Monetary Fund (IMF).

1. 4 STRUCTURE OF THE DISSERTATION

Chapter 2 contains a discussion about the definition and theory of inflation targeting, a brief account of monetary regimes, as well as the advantages and disadvantages of inflation targeting as a monetary policy framework.

Chapter 3 provides a brief account of the characteristics of industrial countries' experiences with inflation targeting. This is accompanied by a discussion of some operational requirements that have to be satisfied for the effectiveness of an inflation targeting framework.

Chapter 4 examines the feasibility and applicability of inflation targeting in developing countries. More specifically, the Chapter looks at the preconditions of inflation targeting monetary framework, such as the scope for central bank in conducting an independent monetary policy, the primacy of the inflation objective, the scope for inflation forecasting and modelling capabilities of the central bank and the economic structure of developing countries.

Chapter 5 provides evidence concerning the feasibility of inflation targeting for Malawi. In this Chapter, an account of the liberalisation of selected aspects of the Malawian economy, such as the financial sector, interest rates and exchange rates, and fiscal reforms, is presented. Furthermore, the Chapter explores the impact of economic reforms on the Malawian economic indicators, like the gross

domestic product (GDP), inflation and money supply, interest rates, and the fiscal balance.

Chapter 6 provides the conclusion of the study. Here it is concluded that not all preconditions of inflation targeting are satisfied in Malawi. However, the independence of the Reserve Bank of Malawi, its commitment to the superiority of price stability, as well as the commitment of the government of Malawi to sound and prudent fiscal policy, are adequate signals that the economic environment in that country is conducive for the adoption of inflation targeting. It is against this background that this study recommends that the Malawian monetary authorities should introduce an inflation targeting monetary framework in that country.

CHAPTER 2

INFLATON TARGETING AS A MONETARY POLICY FRAMEWORK

2. 1 INTRODUCTION

Since the early 1990s, a number of countries including New Zealand, Canada, United Kingdom, Brazil and South Africa, adopted inflation targeting as their monetary policy strategy. As the monetary strategy of inflation targeting gained its popularity, it became clear that its predecessors, exchange rate targeting and monetary targeting, were failing to be predictable anchors of monetary policy. For instance, with regard to exchange rate targeting, Mishkin and Posen (1997: 4) argue that when a country pegs its exchange rate to that of another country, this implies that it loses control of its domestic monetary policy. According to Mishkin (1998: 4), in exchange rate targeting, “shocks to the anchor country are directly transmitted to the targeting country because changes in interest rates in the anchor country lead to a corresponding change in interest rates in the targeting country”. In the case of monetary targeting, Rudebusch and Svensson (2002: 419) conclude that the dynamics of money’s relationship to the rest of the economy make money growth a poor predictor of future inflation.

In this chapter the definition and theory of inflation targeting are discussed. This is followed by a brief account of monetary regimes. Subsequent to this is an elaboration on the benefits and shortcomings of inflation targeting. The conclusion is presented in the final section.

2. 2 DEFINITION OF INFLATION TARGETING

There are divergent views in the literature with regard to the definition of inflation targeting. One polar extreme characterises inflation targeting as "…a policy framework, whose major advantage is increased transparency and coherence of policy, and in which fairly flexible, even 'discretionary' monetary policy action can be accommodated" (Bernanke and Mishkin, 1997: 98). The other extreme models inflation targeting as implying that the purpose of the central bank is to select a sequence of monetary policy instruments that would minimise the expected sum of discounted squared future deviations of inflation from the target (Svensson, 1997: 1116).

Moreover, in Svensson (2002: 776 and 1999a: 624) inflation targeting is broadly defined by emphasising three characteristics:

1) Inflation targeting involves a numerical target, which is a point target or alternatively a target band. This numerical inflation target refers to a specific price index[4]. The main objective of monetary policy is the realisation of the inflation target, with other economic objectives (such as employment) being of a secondary nature. Most importantly this monetary framework does not rely on other nominal anchors such as a money growth target or an exchange rate target.
2) Inflation targeting may also be referred to as 'inflation-forecast targeting', since the role of inflation targeting of the central bank is more profound. In addition to this, the instrument of inflation targeting is designed in such a way that the inflation forecast is in line with the target.
3) The monetary framework is widely known for its high standard of being transparent and accountable. The transparency of the central bank is evident when it presents publicly its monetary-policy reports, and

[4] According to Svensson (1999a: 358), in an open economy there is a choice between targeting inflation in domestic prices only (the GDP deflator) or a consumer price index where imports enter.

accountability is realised when reasons are provided to the public for any deviations from the announced inflation target.

2. 3 SOME OPERATIONAL ASPECTS OF INFLATION TARGETING

In the 1990`s several developed countries started adopting inflation targeting as their framework for the conduct of monetary policy. In the majority of instances the movement towards this monetary framework was borne out of some practical problems these countries experienced with exchange rate or monetary targeting. The increased popularity of the inflation targeting approach can be traced from advancements in macroeconomic theory. These developments in macroeconomic theory are clearly spelt out in Bernanke and Mishkin (1997: 8-9) as follows:

> The familiar developments included reduced confidence in activist, countercyclical monetary policy; the widespread acceptance of the view that there is no long-run trade-off between output (or unemployment) and inflation, so that monetary policy affects only prices in the long run; theoretical arguments for the value of pre-commitment and credibility in monetary policy (Kydland and Prescott (1977), Calvo (1978), and Barro and Gordon (1983); and an increasing acceptance of the proposition that low inflation promotes long-run economic growth and efficiency.

The underlying argument for the inflation targeting framework is that the main goal of monetary policy should be the achievement and maintenance of low inflation (Masson *et al.*, 1997: 4-5).

In Svensson (1999b: 338) two types of inflation targeting are distinguished, and these are ‘strict’ inflation targeting and ‘flexible’ inflation targeting. On the one hand, under ‘strict’ inflation targeting, with low and steady rate of inflation being the only objective for monetary policy, the central bank should adjust its

instrument such that the inflation forecast for the control lag equals the inflation target. On the other hand, under 'flexible' inflation targeting, with a positive weight on output stabilisation, the conditional inflation forecast should instead be adjusted gradually towards the inflation target.

Having agreed that the main goal of monetary policy is to control inflation, however, inflation targeting central banks in most occasions do allow for the pursuit of other short-run stabilisation goals, specifically with regard "to output and exchange rates" (Bernanke and Mishkin,1997: 99). Bernanke and Mishkin (1997: 99) note three ways that are used to realise the other economic goals:

> First, the price index on which the official inflation-targets are based is often defined to exclude or down-weight the effects of "supply shocks"; for example, the officially targeted price index may exclude some combination of food or energy prices, indirect tax changes, terms-of-trade shocks, and the direct effects of interest rate changes on the index (e.g., through imputed rental costs).
>
> Second, as already noted, inflation targets are typically specified as a range; the use of ranges generally reflect not only uncertainty about the link between policy levers and inflation outcomes but is also intended to allow the central bank some flexibility in the short run.
>
> Third, short-term inflation targets can and have been adjusted to accommodate supply shocks or other "exogenous" changes in the inflation rates outside the central bank's control.

2. 4 OTHER MONETARY POLICY REGIMES

According to Mishkin and Posen (1997: 12) when an independent central bank has decided to pursue price stability as the objective in its conduct of monetary policy, there are a number of methods to be used to achieve the objective. It is without saying that a particular central bank will choose an approach that is

consistent with the country's traditions and economic conditions. In addition to this, any approach that may be chosen uses long-term time horizon as a focal point, and also provides an open standard for the assessment of policy.

In a recent paper, investigating the existence of political opportunism in the choice of nominal anchor to stabilise inflation, Aisen (2007: 386) identifies "…two possible anchors available for policymakers to stabilise inflation: the exchange rate and a monetary aggregate."[5] According to Aisen (2007) the difference between the two frameworks is found in the choice of the "…nominal anchor to bring inflation down to normal rates." In the case of exchange rate-based stabilisation framework (ERBS) the exchange rate is chosen as the nominal anchor, while the money-based stabilisation framework (MBS) selects a particular monetary aggregate (Aisen, 2007: 388).

Exchange rate 'pegs' come in two different types: 'soft' pegs and 'hard' pegs. On the one hand, 'soft' pegs exist when the commitment to the peg is not institutionalised, in other words, the exchange rate is implicitly targeted through interest rate adjustments. 'Hard' pegs, on the other hand, occur when the commitment is institutionalised, for example, in the form of a currency board[6] or dollarisation. Currency boards choose their anchor currency for its expected stability as well as its international acceptability. For the majority of currency boards, the anchor currency that has mostly been used is the British pound or the United States dollar. However, the anchor currency, for some of the recent currency board-like systems, is the euro (Mishkin, 2001: 2).

The acceptance of exchange rate targeting became more widespread with the emergence of the European Monetary System (EMS). An exchange rate rule

[5] Inflation targeting is not considered as an option to anchor inflation expectations in countries with high and chronic inflation. This is because most inflation targeting countries have introduced inflation targeting at times when inflation was already low or falling.

[6] A currency board is a monetary authority that issues notes and coins convertible into a foreign anchor currency or commodity (also called the reserve currency) at a fully fixed rate and on demand.

involves either fixing the exchange rate to that of another country, or adopting a crawling peg rule where the path of the exchange rate against another country is predetermined. The central bank commits itself to pegging its exchange rate to that of a low inflation currency (or basket of currencies) and is forced to adopt the monetary policy of that country. Pegging an exchange rate effectively means that the central bank has given up its monetary independence.

Some advantages of exchange rate targeting are presented quite explicitly by Mishkin (1998: 2-3) as follows:

> First, the nominal anchor of an exchange rate target fixes the inflation rate for internationally traded goods, and thus directly contributes to keeping inflation under control.
> Second, if the exchange rate target is credible, it anchors inflation expectations to the inflation rate in the anchor country to whose currency it is pegged.
> Third, an exchange rate target provides an automatic rule for the conduct of monetary policy that avoids the time-inconsistency problem. It forces a tightening of monetary policy when there is a tendency for the domestic currency to depreciate or a loosening of policy when there is a tendency for the domestic currency to appreciate. Monetary policy no longer has the discretion that can result in the pursuit of expansionary policy to obtain employment gains which lead to time-inconsistency.
> Fourth, an exchange rate target has the advantage of simplicity and clarity, which makes it easily understood by the public.

The time-inconsistency problem usually arises when a central bank is tempted to use expansionary policies due to the short-run stabilisation policies, such as employment creation and economic growth, which it may wish to pursue. Mishkin (1998: 1) notes as follows:

Expansionary monetary policy will produce higher growth and employment in the short-run and so policymakers will be tempted to pursue this policy even though it will not produce higher growth and employment in the long-run because economic agents adjust their wage and price expectations upward to reflect the expansionary policy. Unfortunately, however, the expansionary monetary policy will lead to higher inflation in the long-run, with its negative consequences for the economy.

In some occasions the time-inconsistency problem may prevail when the central bank receives pressure from politicians to follow loose monetary policy. Even in such instances higher inflation will be the ultimate winner.

Notwithstanding the positive role played by exchange rate targeting in reducing the inflation rate in some developed countries such as France and the United Kingdom, "…international experience display that it has also some problems" (Kadioğlu *et al.*, 2000: 5). In the case of developing countries, as Kadioğlu *et al.* argue, "…the depreciation of the domestic currencies often results in the deterioration of the balance sheets and an increase in inflation expectations due to their long inflation history".

The following are some of the disadvantages of exchange rate targeting:

1) It prevents central banks from conducting independent monetary policy. A country that selects to peg its exchange rate loses control of its domestic monetary policy;
2) Under a system of exchange rate targeting it is highly probable that there would be financial weaknesses in the developing countries (Kadioğlu *et al.,* 2000: 6). Most non-financial firms, banks and the government usually find it easier to borrow in terms of the foreign currency, due to uncertainty about the future value of the domestic currency. Once the domestic currency depreciates, the liabilities of the domestic firms increase

tremendously thereby leading to a decline in firms' balance sheets as well as a reduction of the their net worth; and

3) In circumstances where there is an existence of open, global markets, there is a tendency for countries with fixed exchange rates to be subjected to quick speculative attacks. This usually occurs when the financial markets perceive a divergence between domestic needs and commitments (Kadioğlu *et al*., 2000: 5-6 and Mishkin and Posen, 1997: 12).

The other important anchor of monetary policy is the monetary aggregates. The strategy of monetary targeting is characterised by the dependence on the state of money supply, which is accompanied by the public communication of such information in order to influence inflation expectations. Furthermore, monetary targeting also requires a certain degree of accountability so as to prevent large deviations from the targets. Some of the benefits of monetary targeting need a brief elaboration. "In the case of monetary targeting, authorities are able to respond to shocks to the domestic economy, which is not possible in the exchange rate targeting case…" (Kadioğlu *et al.,* 2000: 7-8). Therefore, as Mishkin (1998: 12) contends, the central bank has the ability to adapt its conduct of monetary policy to be in line with domestic circumstances. Another advantage of monetary targeting according to Mishkin (1998: 12) is that it "…provides a nominal anchor that is fairly easily understood by the public and is easily communicated to the public". Lastly, Mishkin (1998: 12) notes that the strategy of monetary targeting encourages a system of accountability where low inflation is the underlying goal of monetary policy. This prevents the monetary authorities "from falling into time inconsistency trap" (Kadioğlu *et al.,* 2000: 8).

According to Svensson (1999a: 636) monetary targeting is efficient in achieving the target of inflation in situations where money supply *alone*[7] can predict future inflation. Svensson (1999a) goes on further to point out that "for money growth to

[7] My emphasis

be the ideal intermediate target, the monetary policy instrument should affect the future price level only via its effect on money." This analysis appears to be in contrast to that of Mishkin (1998: 13) who attributes the weak relationship between the monetary aggregate and the goal variable to velocity instability in the money demand.

According to Mishkin (1998: 13) for monetary targeting to work "…the monetary aggregate must be well controlled by the central bank." In terms of this school of thought, any failure on the part of the central bank in controlling money supply will result in the inability of the monetary target to provide clear signals about the intentions of the monetary authorities. The basic premise of Mishkin's thinking can be found in the classical quantity theory as espoused by Gowland (1991: 29) as follows:

> The quantity theory postulates a proportionate relationship between money and income so that an x per cent increase in the supply of money will necessarily cause an x per cent increase in nominal income.

Unfortunately, as Svensson (1999a: 636) notes, this is not the case since it is apparent that there is a very little role that is played by money[8]. This is illustrated in the following as stated by the author:

> For instance, many models, including central bank models such as the Bank of Canada's QPM, Reserve Bank of New Zealand's Forecasting and Policy System and Federal Reserve Board's FRB/US model, do not even specify a demand function for money, although such a demand function is easily introduced. The central bank simply supplies whatever quantity of money that is demanded at the preferred level of the short interest rate. Money becomes an endogenous variable, and, consistent with empirical

[8] For a detailed elaboration on the transmission mechanism of monetary policy, see Svensson (1999a: 609-611).

findings, a high long-run correlation between the price level and money supply arises. Moreover, in the short and medium run, monetary aggregates have little or no predictive power over other determinants[9] of inflation (Svensson, 1999a: 611).

In an empirical paper that evaluates the relative performance of monetary targeting and inflation targeting, Rudebusch and Svensson (2002: 419) observed that monetary targeting is rather not efficient, in the sense of inducing more variable inflation and output, than inflation targeting. Furthermore, the study shows that monetary targeting is inefficient even if money demand is stable and controllable. According to the authors this reflects that the dynamics of money's relationship to the rest of the economy make money growth a poor predictor of future inflation, in the sense that the correlation between the growth of money and inflation forecasts is quite low.

2. 5 BENEFITS OF INFLATION TARGETING

Mishkin (2000b: 105-106) identifies several advantages of pursuing an inflation targeting monetary framework. Firstly, unlike exchange rate targeting, inflation targeting causes "monetary policy to focus on domestic considerations and to respond to shocks to the domestic economy" (Mishkin, 2000b: 106). It focuses monetary policy directly on achieving the goal of low and steady rate of inflation. Furthermore, Svensson (1997: 1112) notes that having its declared target, inflation target "…provides an ex post measurement of monetary policy performance, namely, realised inflation relative to the inflation target". Secondly, as opposed to monetary targeting, the strategy of inflation targeting does not depend only on a stable relationship between money and inflation. According to

[9] Other determinants of inflation include the short nominal rate (Repo rate), the resulting short and longer real rate, the exchange rate, and the effects on expectations, aggregate demand, domestic inflation and CPI inflation (Svensson, 1999a: 611 and Taylor, 1995: 14).

Mishkin (2000b:106), inflation targeting utilises whatever information is available in order to determine how best to set the monetary policy instruments.

Furthermore, the inflation targeting strategy is regarded as less complex and thus easy for the public to understand it. Most inflation targeting central banks employ various communication strategies to make monetary policy clear, simple and understandable to the general public. Mishkin (1998: 21) points out that the majority of central banks always communicate with their governments either due to their mandate as per the law or to a response to informal questions and concerns from politicians. Communication with the government and members of the public takes the form of public speeches in both print and broadcast media as well as publications such as the *Inflation Report* document of the Bank of England. According to Mishkin (1998: 22) the communication strategies explained above contribute in improving "…private-sector planning by reducing uncertainty about monetary policy, interest rates and inflation".

Since an open inflation target enables the accountability of the monetary authority, "…inflation targeting has the potential to reduce the likelihood that the central bank will fall into the time-inconsistency trap" (Mishkin, 2000b:106). According to Svensson (1999a: 634), an inflation targeting regime handles time-inconsistency issues by creating mechanisms for commitment to a stable loss function. In instances where there is exerted pressure on the monetary authorities to pursue other economic objectives, inflation targeting as noted below comes to the rescue:

> Moreover, since the source of time-inconsistency is often found in political pressures on the central bank to undertake overly expansionary monetary policy, inflation targeting has the advantage of focusing the political debate on what a central bank can do in the long run (i.e. control inflation) rather than what it cannot do (raise output growth, lower unemployment,

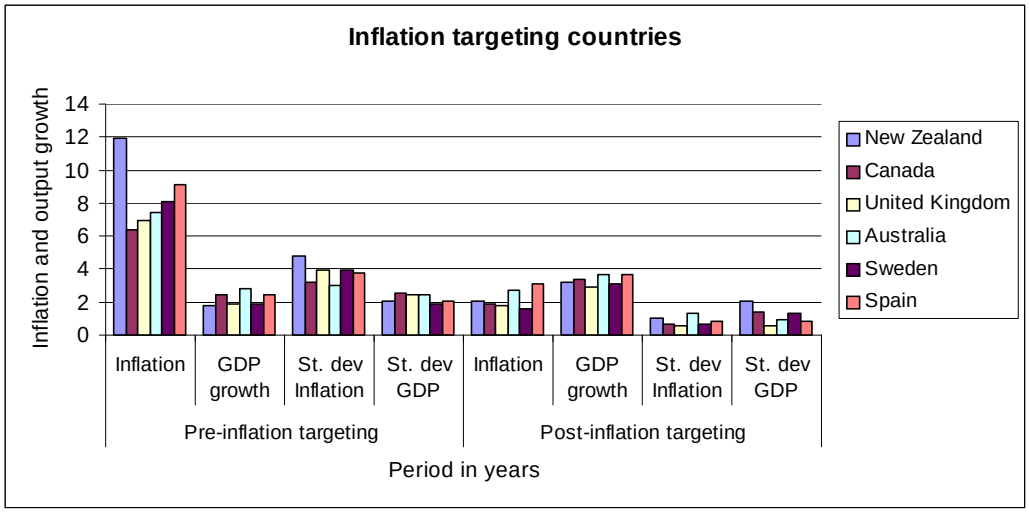
increase external competitiveness) through monetary policy (Mishkin, 2000b: 106).

The source of the growing popularity of inflation targeting is its effectiveness in ensuring macroeconomic stability. Firstly, according to Mishkin (1998: 24), inflation targeting has proved effective in delivering price stability. In those countries that are targeting inflation, the rate of inflation as well as inflation expectations appear to have been reduced considerably (Mishkin, 1998: 24). Despite continued scepticism towards the success of inflation targeting in lowering inflation, empirical evidence suggests that it has contributed significantly to lowering inflation and its variability, especially in emerging markets. Secondly, empirical evidence suggests that inflation targeting has also improved macroeconomic variables, such as lower output sacrifice ratio, decreased influence of price shocks and output shocks on inflation. Røisland and Torvik (2004: 266) argue that output stability is one of the important elements in the evaluation of different monetary policy regimes. The authors, further point out that fluctuation in production can be costly through increased risk, variations in unemployment, adjustment costs and more difficult planning. Thirdly, it has facilitated stabilisation of long-term inflation expectations, thus reducing the cost of maintaining low inflation (Rybiński, 2006: 2).

In an empirical investigation, where inflation targeting countries were compared to non-inflation targeting countries, Dotsey (2006: 14) also found that inflation, as well as inflation and output volatility declined in both inflation targeting and non-inflation targeting countries. However, the decline was more pronounced in inflation targeting countries than those which did not target inflation. Moreover, it was found in that study that output in inflation targeting countries increased after targeting, while for non-targeting countries the output actually declined. Following the methodology employed by Dotsey (2006), this study found similar results. Six inflation targeting countries (New Zealand, Canada, United Kingdom, Australia, Spain and Sweden) are compared to six non-inflation targeting countries (United

States, Germany, Japan, France, Italy and Netherlands). The following graphs illustrate the performance of inflation targeting countries both before and after the adoption of inflation targeting, as well as that of non-inflation targeting countries in two sets of years (1982-1992 and 1994 -2006).

Figure 1: Inflation targeting countries

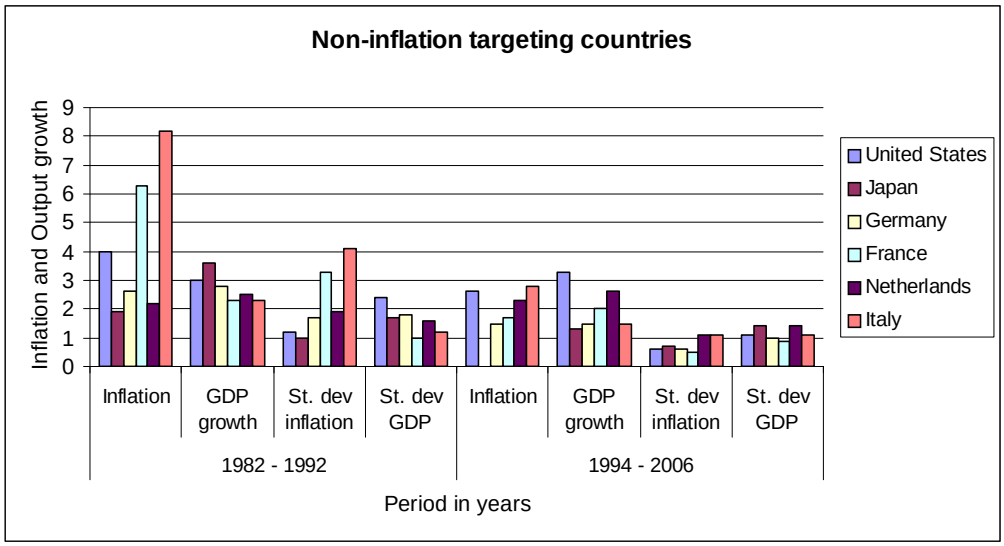


Data source: World Economic Outlook database

As can be discerned from Figure 1, inflation volatility as measured by the standard deviation of annualised growth rates in headline consumer price index (CPI), decreased on average by 2.9 percentage points from a 3.8 percent average before inflation targeting to a 0.9 percent average after targeting[10].

[10] Tables and numerical values for both figures 1 and 2 are provided in the appendix.

Figure 2: Non-inflation targeting countries



Data source: World Economic Outlook database

On the other hand, Figure 2 shows that on average, inflation volatility decreased by only 1.4 percentage point from a 2.2 percent from 1982 to 1992, to a 1.4 percent from 1994 to 2006 for the non-inflation targeting countries.

Output variability as measured by the standard deviation of annualised growth rates in gross domestic product (constant prices), decreased on average by 1 percentage point from a 2.2 percent average before inflation targeting to a 1.2 percent average after the adoption of inflation targeting for the inflation targeting countries. In the case of non-inflation targeting countries, output variability decreased on average by 0.4 percentage point from a 1.6 percent average to a 1.2 percent average. Furthermore, it can be observed in both figures 1 and 2 that there is a large decline in average inflation for inflation targeting countries (6.1 average percent decline) from pre-targeting to post-targeting than for non-inflation targeting countries. Finally, for the inflation targeting countries output

growth shows an increase between the two periods, while for non-inflation targeting countries output growth actually declined between the two time periods.

2. 6 POTENTIAL PROBLEMS WITH INFLATION TARGETING

Despite the popularity that the inflation targeting monetary strategy appears to be enjoying, there are important shortcomings that need to be mentioned for the strategy. One important disadvantage is that it is rather difficult to control inflation as a result of long periods between the implementation of the instruments of monetary policy and the inflation results. Current inflation is essentially predetermined by previous decisions and contracts, which means that central banks can only affect future inflation (Mishkin, 2000b: 106 and Svensson, 1997: 1113).

In Mishkin (2000b: 106) it is emphasised that:

> The difficulty of controlling inflation creates a particularly severe problem for emerging market countries when inflation is being brought down from relatively high levels. In such circumstances, inflation forecast errors are likely to be large, inflation targets will tend to be missed, and it will be difficult for the central bank to gain credibility from an inflation targeting strategy.

This appears to suggest that for inflation targeting to be successful it would be ideal if it is introduced on condition that there has been some initial successful reduction in inflation.

According to Svensson (1997: 1113) the imperfect control over inflation often results in the public not being able to monitor and evaluate monetary policy. For instance, with a control lag of 1.5 – 2 years, it appears that current monetary policy cannot be evaluated until realised inflation has been observed 1.5 – 2

years later. However, that observed inflation might be the result of several other factors besides monetary policy, specifically disturbances that monetary policy cannot respond to due to the control lags. Therefore, it is possible for a central bank to claim that the reason it did not meet its announced inflation target is as a result of exogenous factors, and thus the miss of the target cannot be attributed to it.

The other disadvantage that is relevant for the emerging market economies is that inflation targeting cannot avoid fiscal dominance. According to Mishkin (2000b: 107) some governments can implement imprudent fiscal policy while at the same time pursuing an inflation targeting strategy. Eventually, in such governments, larger budget deficits will result in the complete failure of the strategy of inflation targeting. The importance of the absence of fiscal dominance as a precondition of inflation targeting is noted below:

> Absence of outright fiscal dominance is therefore a key prerequisite for inflation targeting, and the setting up of institutions that help keep fiscal policy in check are crucial to the success of the strategy (Masson *et al.*, 1997 in Mishkin, 2000b: 107).

Furthermore, the flexibility of the exchange rate that is needed by the strategy of inflation targeting might pose a risk of financial instability (Mishkin, 2000b: 106). As stated by Calvo (1999) in Mishkin (2000b: 107) "…in many emerging market countries, the balance sheets of firms, households, and banks are substantially dollarised, on both sides, and the bulk of long-term debt is denominated in dollars". In cases where there are severe and sudden declines in the value of the emerging country's currency the burden of debt that is denominated in foreign currency will increase. Such a scenario will result in serious decline of balance sheets, as well as an increase in the probability of a financial crisis (Mishkin, 2000b: 107). Consequently, developing countries cannot afford the luxury of ignoring the exchange rate in their conduct of monetary policy under an inflation

targeting strategy. Needless to say, the role of exchange rate should be clearly defined as subordinate to that of inflation control.

2. 7 CONCLUSION

There are differing definitions of inflation targeting. On the one hand, Bernanke and Mishkin (1997) define inflation targeting as a policy framework, while Svensson (1997), on the other hand, defines the strategy as implying the objective function of the central bank is to minimise the expected sum of squared future deviations of inflation from the inflation target. A broader definition of inflation targeting provides room for secondary objectives, besides the primary objective of inflation control. Svensson (1999b:338) distinguishes between 'strict' inflation targeting, where inflation control is the only goal of monetary policy, and 'flexible' inflation targeting, where there is a more consideration on the stabilisation of the economy. Aisen (2007: 386) identifies two strategies that can be used by monetary authorities to fight inflation: exchange rate targeting and monetary targeting.

Despite some benefits of both exchange rate targeting and monetary targeting strategies, it appears as if they have failed to provide a reliable predictor of future inflation. The advantages of inflation targeting, especially, its transparency and the ease with which it is understood by the general public, seem to offer a more reliable alternative to the two strategies.

In order to realise the objective of the current study it would be instructive to explore the experiences of the advanced countries that have implemented the strategy of inflation targeting so as to draw important lessons for Malawi. The following section discusses the inflation targeting strategy of monetary policy in developed countries.

CHAPTER 3

INFLATION TARGETING IN ADVANCED COUNTRIES

3. 1 INTRODUCTION

Since monetary targeting was introduced as a monetary policy framework in the mid-1970s by industrial countries such as the United Kingdom and Canada, it failed to provide a reliable guide to the ultimate objective of monetary policy in those countries. As stated in Mishkin (2000a: 8), in most cases there is instability in the link between money supply as well as inflation. A clear evidence of such instability between money supply and inflation is provided for Canada and New Zealand from 1981 to 2006 in section 3.2 below.

As a result of its inefficiency, monetary targeting was superseded by an inflation targeting monetary policy framework in the beginning of 1990s in several industrial countries. Due to the increased discretion that central banks are permitted to utilise in an inflation targeting regime, this new monetary strategy has several operational requirements (such as the target rate – price level or inflation rate, and time horizon; the relevant price index; the decision making process i.e. who sets the target; transparency and flexibility) that are considered in this chapter. Furthermore, an account of the characteristics of the industrial countries' experiences with inflation targeting is also discussed in this chapter. Finally, the chapter ends by providing some key lessons to be learnt from the inflation targeting experience.

3. 2 PROBLEMS OF MONETARY TARGETING THAT LED TO INFLATION TARGETING

According to Croce and Khan (2000: 49), subsequent to the Bretton Woods era, industrial countries have always preferred the route of flexible exchange rates,

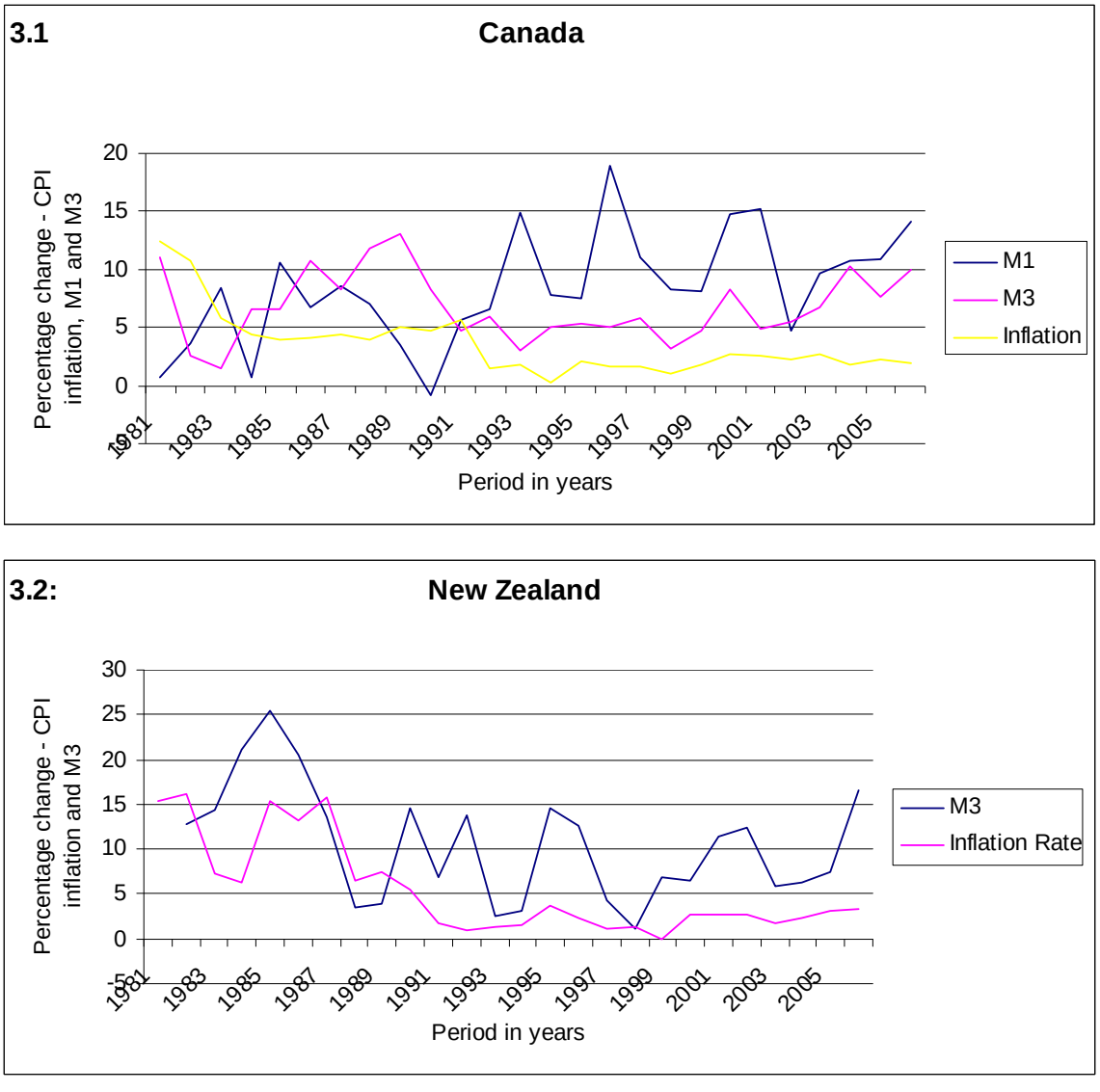
with most of them selecting some form of monetary targeting. As financial innovation developed in these countries, the instability in the money demand accelerated further. It was then clear that although eventually money and inflation were highly related, there was not enough relationship between these two variables in the short run. Consequently, by the beginning of 1990s, several countries belonging to the Organisation for Economic Cooperation and Development (OECD) – first New Zealand, then Canada, Israel, the United Kingdom, Australia, Finland, Spain and Sweden – started adopting open inflation targeting as their strategy to conduct monetary policy.

The argument advanced by proponents of monetary targeting was that if the government announced a monetary target of a specific percentage point, private sector agents, particularly trade unions, would lower their inflationary expectations so that they were in line with the target. Consequently, the aggregate supply curve would shift outwards to the right such that inflation would be eliminated with little or no unemployment cost (Gowland, 1991: 272). This line of argument was based on the assumption that the supply of money does not matter in the long run. However, the new Keynesian school of thought maintains that money is not neutral and that real market imperfections in the economy are crucial for understanding economic fluctuations. Non-neutrality arises from sticky prices, and market imperfections explain this behaviour of prices. The nominal wages of workers are temporarily rigid as a result of contracts negotiated in the previous period (Mankiw, 1999: 168).

Since the introduction of monetary targeting in the mid-1970s in the United Kingdom and Canada, the central banks of these countries had great difficulties in meeting the monetary aggregate targets. In the case of the United Kingdom, despite the fall of inflation following the oil price shock in 1973, in 1978 the rate of inflation started to accelerate again, reaching almost 20 percent by 1980. Moreover, although the Bank of England deemphasised M3 in favour of a narrower aggregate M0 after 1983, between 1987 and 1990 the growth of M0

accelerated since the monetary authorities had the intention of halting the pound from appreciating. Three years following the adoption of monetary targeting, in 1978, the Bank of Canada also began to abandon the monetary-targeting framework due to concern in the movement of the exchange rate as well as uncertainty regarding M1 as a reliable anchor to monetary policy (Gowland, 1991: 272 and Mishkin, 2000a: 3).

Figure 3: Relationship between inflation and monetary aggregates



Data source: International Financial Statistics Online and WEO database[11]

[11] The description of variables in Figure 3 is provided in the Appendix.

It can be clearly seen in Figure 3 that monetary aggregates do not provide a proper guide to the ultimate objective of monetary policy. Despite lower growth in inflation after 1991 in both Canada and New Zealand, the growth of M1 in the former country and M3 in the latter continued to be volatile. Even in recent years the broad money aggregate, M3, in the case of Canada, had begun to be inefficient in providing a proper guide to monetary policy.

In countries like the United Kingdom, Canada and Switzerland, where monetary targeting was practised, there was always instability in the correlation between money supply and goal variables such as inflation. Consequent to this, some countries (the United Kingdom and Canada) had either deemphasised monetary targeting or completely stopped pursuing it. In other countries (such as Switzerland) the strategy of monetary targeting resulted in grave policy errors in situations where it was followed too strictly (Mishkin, 2000a: 8). Rudebusch and Svensson (2002: 419) observed that monetary targeting was inefficient even if money demand was stable and controllable. This result reflects that the dynamics of money's relationship to the rest of the economy make money growth a poor predictor of future inflation, since the correlation between money growth and inflation forecasts is quite low.

Contrary to monetary targeting or exchange rate targeting, inflation targeting uses all relevant information for predicting future inflation. This information may include some measure of the money stock, but normally also other macro variables, such as short-term interest rate, other real interest rates and wages of workers. Money growth and exchange rate depreciation are not sufficient statistics for future inflation, as other information has additional predictive value. Therefore, money-growth targeting or exchange rate targeting is inefficient and leads to a worse outcome than inflation targeting (Svensson, 1997: 1127).

3. 3 OPERATIONAL FRAMEWORK OF INFLATION TARGETING

Masson *et al.* (1997: 14) describe several decisions concerning the specification of the inflation target as comprising of:

1) choosing which price index is to be used to define the target;
2) choosing whether to set the target using the price level or the rate of inflation;
3) choosing a numerical value for the target, its horizon and its time path (e.g. one period or multi-period, a declining path or that path);
4) defining the target as a point estimate with or without a band ("tolerance band"); and
5) if the option of a band is selected, choosing the width of the band, as well as deciding whether and how to specify "escape clauses" or exemptions to the inflation target in certain circumstances.

According to Bernanke and Mishkin (1997: 109) and Masson *et al.* (1997: 15) one of the crucial aspects in designing an inflation targeting strategy is to clearly define the price index to be used in the inflation target. Such an index has to be considered accurately, in time and should be easily understood by the public. All advanced countries that pursue inflation targeting have selected some kind of the consumer price index (CPI) as their target index.

Artis *et al.* (1998: 1812) describe some criteria that make a target index more or less desirable. Firstly, the price index should as far as possible not exclude components that are likely to form a large share of the typical consumer's expenditure basket. This means that the index should represent accurately the general rise in prices of a representative basket of goods of an average consumer. Secondly, the index should not react perversely to changes in the monetary policy instrument. Finally, the index should not be too volatile since this is likely to induce volatility in the instrument of monetary policy and create greater uncertainty in financial markets.

It should be noted that the second criterion may be in conflict with the first one since in the United Kingdom, for example, where a large proportion of the housing stock is owner occupied, variable mortgage interest payments form a large part of a typical consumer's expenditure basket. A solution to the last criterion might be to delete components of the index that are particularly volatile. This might imply that the target should exclude items such as, food, which has strong seasonal price variations, and energy prices, which have jumps corresponding to supply shocks, or interest costs, which cause perverse movements in inflation when there are changes to the monetary policy instrument (Artis *et al.*, 1998: 1813).

Price-level targeting can be defined as a monetary policy strategy where the ultimate goal is to stabilise the price level, while inflation targeting is a strategy whose goal is to lower and stabilise the inflation rate. The advantage of price-level targeting is decreased volatility of the price level in the long term. Such a low variability in the price level would be useful to nominal contracts of a long-term nature. However, that would be countered by the acceleration in the short-term volatility of inflation and output.

With price level targeting, overshoots must be corrected for in subsequent periods by deflation, whilst in inflation targets an overshoot can be overlooked by allowing for 'base drift',[12] since it is the change in the price series year-on-year (i.e. annual percentage change in CPI inflation) that matters, not the level of the price index. The consequence of this is a significant increased variability in inflation than in inflation targeting, because in the case of the latter, average inflation has to succeed higher-than-average inflation (Artis *et al.*, 1998: 1812 and Svensson, 1999b: 278). Masson *et al.* (1997: 15) also note that there might

[12] Base drift in the price level implies that the price level becomes non-trend stationary, and the variance of the future price-level increases without bounds with the forecast horizon (Svensson, 1999b: 277).

be some growing consensus on the benefits of specifying the inflation target using the rate of inflation rather than the price level.

In a paper by Carare *et al.* (2002: 28-29), a discussion of the decisions concerning the target horizon, the target range or point and escape clauses of an inflation target, is clearly elaborated. The target horizon is explained as the period over which the central bank agrees to realise the inflation target. It is suggested in the paper that for countries with inflation above the long-run inflation target rate, short-target horizons can accelerate the pace of disinflation. However, when the inflation rate is at the desired long-run objective, the length of the policy horizon often reflects policy transmission lags and a desire to avoid excessive variations in monetary instruments and consequently output. For Australia, New Zealand, Sweden and the United Kingdom, the horizon is more that one year. Long-term horizons have the advantage of giving the central bank more scope to respond to shocks and help establish inflationary expectations. Contrary, short target horizons may generate instrument instability, especially with respect to exchange rate, if the horizon is short in relation to policy lags.

A target range instead of a point can provide the central bank with more flexibility to respond to shocks and allow a range of discretion in the context of other objectives. Moreover, the width of the range signals in advance how much tolerance the central bank has for fluctuations in inflation around the mid-point, recognising that a point will not be hit exactly (Carare *et al.*, 2002: 28). Svensson (1997: 1135) also argues in favour of a range, pointing out that in order to maximise the probability that inflation stays in the range, the policy makers should aim at the midpoint of the range. The trade-off between a narrow and a wide range is determined by the frequency and severity of shocks that hit the economy and the central bank's credibility.

To provide clear guidance for inflation expectations, most central banks in advanced countries have set either a point target or narrow target ranges of two

percentage points or less. However, important exceptions include New Zealand, which has opted for a wider range to compensate for its targeted price index which includes a number of volatile items that are beyond the influence of the central bank (Carare *et al.*, 2002: 28).

Lastly, escape clauses are used to set the conditions under which the inflation-target breaches might be tolerated as well as indicate the time frame over which the central bank would attempt to return to the inflation-target path or communicate a new target path. The choice of design of escape clauses involves trading off flexibility and credibility. Canada, New Zealand and Sweden have introduced escape clauses in their inflation targeting frameworks. The disadvantage of escape clauses is that attempting to use them in situations that are not clearly spelt out would undermine the accountability and credibility of the inflation targeting framework (Carare *et al.*, 2002: 29).

3. 4 MONETARY POLICY UNDER INFLATION TARGETING

As pointed out in chapter 2 above, in the early 1990s several developed countries adopted an inflation targeting framework in order to guide their monetary policy. Masson *et al.* (1997: 18) isolate several common characteristics of the experiences of industrial countries with inflation targets:

Firstly, in these countries, the adoption of inflation targeting was associated with a high degree of exchange rate flexibility. In countries such as the United Kingdom, Sweden and Finland, the inflation targeting strategy was adopted after the exchange rate failed to be the main anchor of monetary policy.

Secondly, all the inflation targeting countries had a measure of central bank independence, with regard to:

(i) the links between the central bank's actions and the financing of the government deficit (i.e. the degree of fiscal dominance); and

(ii) the central bank's ability to operate freely their monetary policy instruments (i.e. the degree of instrument independence) (Masson *et al.*, 1997: 20).

Debelle (2001: 67) argues that in several countries with an inflation targeting monetary framework, the approach has been associated with the central bank having goal dependence, but instrument independence. The case where the central bank has goal dependence ensures that ownership of the ultimate objective of monetary policy resides with the government. Moreover, the situation where the inflation target is determined both by the central bank and government, increases the latter's commitment to the inflation target, thus ensuring more credibility of the inflation targeting strategy.

However, while acknowledging the absence of goal independence and the importance thereof in most inflation targeting countries, Debelle (2001: 68) points out the importance of the central bank in having instrument independence. The main limitation with regard to instrument independence is the obligation on the part of the central bank to finance the government deficit. One of the important prerequisites of inflation targeting is the absence of fiscal dominance. Two main manifestations of fiscal dominance can be distinguished. On the one hand, the fiscal dominance can be direct, where the budget deficit is funded on the balance sheet of the central bank. On the other hand, it can take an indirect form, such as when there is political pressure on the monetary authority to decrease interest rates in order to lower the cost at which the public debt is serviced (Debelle, 2001: 68).

Thirdly, the inflation targets were forward-looking, since they represented an undertaking to compensate for the predictable effect of shocks on future inflation over a horizon of between one and two years. Moreover, in all cases the inflation

target was defined as a target range rather than as a point estimate (Masson *et al.*, 1997: 20).

Fourthly, inflation targeting was used as an instrument to build the credibility of these countries' macroeconomic frameworks. This task was made easier by ensuring that the inflation targets are set mutually by the fiscal and monetary authorities, thus tending to reduce the public's perception of conflicting objectives regarding economic policy. Moreover, inflation targeting has been used to educate the public about the effects of monetary policy, through the release of the inflation reports (Masson *et al.*, 1997:20).

Finally, inflation targeting was introduced in situations where the inflation rate was fairly low (less than 10 percent in all the countries). This characteristic seems to have brought about the initial degree of credibility in the inflation targeting strategy (Masson *et al.*, 1997: 20).

3. 5 KEY LESSONS FROM INFLATION TARGETING EXPERIENCE

According to Mishkin (2000b: 20), among the main aspects of inflation targeting is that it has been generally successful in controlling inflation. In most inflation targeting countries the rates of inflation have been reduced significantly from relatively high rates before the adoption of the strategy. Moreover, it has been noticed that after reducing inflation to levels that are in keeping with price stability, it remained relatively low. The impact of the reduction of inflation in most inflation targeting countries is clearly spelt out below:

> Although inflation reduction has been associated with below-normal output during disinflationary phases in inflation targeting regimes, once low inflation levels were achieved, output and employment returned to levels

> as high as they were previously and output fluctuations are no higher. (Mishkin, 2000a: 21).

Given also the evidence of the current study, a case can be made that in addition to controlling inflation and its variability, inflation targeting promotes real economic growth. Mishkin (2001: 5), however, argues that despite inflation targeting successes, this monetary policy strategy "requires that basic institutional infrastructure with regard to fiscal policy and the soundness of financial institutions be addressed and improved in order to attain and preserve low and stable inflation."

The other aspect of inflation targeting countries is that they put great emphasis on the principle of transparency and communication. One example of transparency and communication can be found in the *Inflation Report* document that is published by the Bank of England, as well as similar documents published by various other inflation targeting central banks. As a supplement to the above, other forms of communication are often used in order to enhance and increase transparency. These include among others:

> testimony to national parliaments, release of minutes of the meetings of the monetary policy committees who decide on monetary policy, release of central bank forecasts of inflation and output, and numerous articles in official central bank publications and elsewhere to explain the conduct of monetary policy (Mishkin, 2000a: 22).

One important spin-off of increased communication and transparency of monetary policy is that the accountability of the central bank becomes more pronounced, thereby helping in reducing the possibility of the central bank from falling "…into the time-inconsistency trap in which it tries to expand output and employment in the short-run by pursuing overly expansionary monetary policy" (Mishkin, 2000a: 23).

Mishkin (1999: 20-21) points out that one other aspect of an inflation targeting regime is that it does not ignore stabilisation goals. To this effect the majority of central bankers in inflation targeting countries are always concerned about the variability in output and employment, and thus the short-run stabilisation goals are to some extent often accommodated to build into inflation targeting regimes. All countries that have adopted inflation targeting have tended to reduce inflation slowly with the purpose of lessening the declines in output.

3. 6 CONCLUSION

In view of the inefficiency of monetary targeting and exchange rate targeting, and learning from inflation targeting experience from some industrial countries, it becomes necessary to highlight some important lessons for countries, particularly developing countries that are still considering inflation targeting as an alternative policy framework. Most importantly, it is crucial that a central bank is free from political interference to pursue financial stability. While the target should be set jointly by the government and the central bank, the latter should be at liberty to use any monetary policy instrument at its disposal to achieve the ultimate objective once the target has been determined. Moreover, it is apparent that for any inflation targeting framework to be successful, particular attention should be paid to the development of a country's institutional infrastructure such as fiscal policy and soundness of financial institutions.

Mishkin (2004: 6) maintains that stability in government expenditure is a basic essential requirement for the control of inflation and, hence inflation targeting. He further states that in situations where fiscal imbalances are huge "monetary policy eventually becomes subservient to fiscal considerations (so-called fiscal dominance) and an inflation target would have to be abandoned or seriously modified" (Mishkin, (2004: 6). In the same paper, Mishkin (2004) points out that "…a safe and sound financial system is also a necessary condition for the

success of an inflation targeting regime". These conditions appear to be lacking in most of the developing countries.

The following chapter discusses the experiences of emerging markets and developing countries with inflation targeting.

CHAPTER 4

INFLATION TARGETING IN EMERGING MARKETS AND DEVELOPING COUNTRIES

4. 1 INTRODUCTION

As in Masson *et al.* (1997: 21), this chapter examines the feasibility and applicability of inflation targeting in developing countries. This is approached from the general perspective of the preconditions for an effective inflation targeting framework, namely, the scope of the central bank in conducting an independent monetary policy, the primacy of the inflation objective, the scope for inflation forecasting and modelling capabilities of the central banks and the economic structure of developing countries. Moreover, this chapter also discusses issues related to the specification of the inflation target which are of particular relevance for developing countries. Finally, the chapter ends with case studies of selected developing countries that have adopted the inflation targeting monetary policy framework.

The economic environments of these developing countries, before they adopted inflation targeting, are analysed. In particular the economic analysis focuses on the strength of the financial market fundamentals, the stability of the macroeconomic environment and the independence of the central banks in those countries.

4. 2 DEVELOPING COUNTRIES AND PRECONDITIONS FOR INFLATION TARGETING

4.2.1 Introduction

In Chapter 1 the four broad categories of preconditions for an inflation targeting framework were clearly described as follows:

1) the central bank must have full legal autonomy and not be restricted to the fiscal and political pressure that enables disagreements with the inflation objective;
2) the central bank ought to have the ability to forecast inflation and the capability to model the inflation data;
3) prices should be free from direct controls, the economy should not be excessively influenced by commodity prices and exchange rates, and there should be minimum dollarisation; and
4) there should be the presence of a healthy banking system and well-developed capital markets, so as to minimise possible disagreements with the objectives of financial stabilisation

4.2.2 Scope for independent monetary policy

The first and the last preconditions above together constitute the scope for independent monetary policy. As in Masson *et al.* (1997: 21-22) the main determinants of the scope for independent monetary policy are described as:

1) the extent of fiscal dominance, and
2) the lack of firm commitments by the authorities to target other nominal variables that might be in conflict with the inflation objective.

However, for the purpose of this study the analysis of the scope for autonomous monetary policy in developing countries is restricted to the former determinant, that is, the degree of fiscal dominance.

Central banks in developing countries confront environments that are in stark contrast to those faced by their counterparts in advanced countries. The scope for pursuing an autonomous monetary policy in these economies tends to be constrained by the existence of three related factors: heavy reliance on seigniorage, shallow capital markets, and weak banking systems (Masson *et al.*, 1997: 23). The same factors are also noted by Mishkin (2004: 2-3) and Fraga *et al.* (2003: 24-25) when describing weak fiscal policy and weak financial institutions as some of the fundamental institutional features that should be considered to derive sound theory and policy for emerging market countries. Below, a brief discussion of reliance on seigniorage and weak financial institutions is presented.

(i) Reliance on seigniorage

Masson *et al.* (1997: 23) describe the reliance on seigniorage as the common manifestation of fiscal dominance. In developing countries, the correlation between the government's ability to raise revenue from traditional sources and its recourse to revenue from seigniorage and the inflation tax is typically much stronger, and hence the reliance on seigniorage much heavier, than in advanced economies. This is as a result of several structural aspects such as concentrated and unstable sources of tax revenue, poor methods of tax collection, skew-ness in income distributions and political instability; as well as the tendency of these countries to abuse the sources of revenue, instead of issuing debt or cutting government expenditure during times of crisis.

Carare *et al.* (2002: 11) also argue against fiscal dominance as they point out that when monetisation of a large fiscal deficit is minimised, a strong fiscal position helps to reinforce the credibility of the inflation targeting framework. However, although developing countries had been characterised by problems of chronic budget deficits, there has been significant progress in consolidating fiscal institutions and reducing budget deficits. According to Fraga *et al.* (2003: 2), by

the time most developing countries adopted inflation targeting, fiscal balance was lower.

(ii) Weak financial institutions

Fraga *et al.* (2003: 25) maintain that "…a problem for the conduct of monetary policy can arise when there is fear that a tightening may lead to a financial crisis". According to Fraga *et al.* (2003), this may come as a result of a poor financial system, and this may create the expectation that the goal of monetary policy is not to defend the nominal anchor of the economy. Weak banking sector and poor financial systems contributed a great deal to the Asian crisis of 1997. In cases where the existence of state-owned banks is predominant, this kind of weakness in the financial system may be detrimental. This may be because the banks may have weaknesses or the state may use them unwisely in pursuing its funding objectives.

Weak banking systems are regarded as resulting from periods of prolonged repression. However, it is only subsequent to the financial sector reforms that they impart an autonomous influence on the conduct of monetary policy in developing countries (Masson *et al.*, 1997: 24).

4.2.3 Inflation forecasting and modelling capabilities of central banks

According to Amato and Gerlach (2002: 784) in most cases it is maintained that since inflation targeting "…is a forward-looking monetary policy strategy, there is a need for econometric models of the inflation process and the transmission mechanism". It is argued that central bankers can only understand the level of interest rate that must be used if they use the appropriate econometric models. Mboweni (1999: 405) appears to concur with this argument as he contends that an inflation targeting framework is a complex strategy to conduct since it

depends on forecasts in an uncertain environment. Mboweni (1999: 405) further states that this is particularly true of many emerging market countries which are vulnerable to exogenous shocks outside the control of monetary policy.

Mishkin (2000a: 5) also points out that the issue of inflation forecasting is an issue that can be particularly problematic for emerging market countries that attempt to reduce inflation from high levels. Under such circumstances mistakes in forecasting are in all likelihood going to be large and inflation targets are also likely to be missed, leading to credibility problems. Similarly, if inaccurate forecasts are published, this could damage the central bank's credibility. This suggests that inflation targeting seems to be more successful if it is introduced only after there has been some success in the reduction of inflation.

However, Amato and Gerlach (2002: 785) seem to be sceptical to the notion that econometric models are critical to inflation targeting. They argue that this assertion appears to be difficult to reconcile with country experiences. The authors substantiate their argument by citing most European central banks that adopted inflation targeting in 1992 – 1993 without having econometric models to rely on.

4.2.4 Primacy of the inflation objective

The other precondition, as stated in Chapter 1, is that the sensitivity of the economy to commodity prices and exchange rates should not be excessive and dollarisation should be at a minimum. The implication of this precondition is that before a country can adopt inflation targeting the monetary authority should not be obliged to use as a target the path of any variable, like wages or the nominal exchange rate (Masson *et al.*, 1997: 8).

The most important feature of emerging markets and developing countries that may affect their ability to target inflation is liability dollarisation. In many of these

countries due to the lack of large domestic capital markets the obligation (debt) of banks, corporations and governments are denominated in various foreign currencies, although the bulk of their incomes are denominated in local currency. Consequently, while foreign competitiveness of the countries' goods improves, the balance sheet positions of banks, firms, households and governments in these countries deteriorate when the exchange rate depreciates, leading to depressed consumption and investment (Eichengreen, 2002a: 18-19 and Mishkin, 2004: 22).

Mishkin (2004: 4) attests to the presence of liability dollarisation in emerging markets by pointing out that in these countries a "…sharp real currency depreciation raises the value of liabilities in local currency, thus causing the net worth of corporations and individuals to fall…." An increase in asymmetric information problems in credit markets would follow due to the serious negative shock to corporations' and individuals' net worth, resulting in the deterioration in credit extension and ultimately to the slowdown in the economy.

The theoretical underpinnings of this analysis are due to the "financial accelerator" theory of the monetary policy transmission mechanism that has been propagated by scholars, such as Bernanke and Gertler (1995) amongst others. According to the "financial accelerator" model the "…balance sheet channel is based on theoretical prediction that the external finance premium[13] facing the borrower should depend on a borrower's financial position" (Bernanke and Gertler, 1995: 35). Fluctuations in the borrowers' balance sheets have an effect on their investment and spending decisions due to asymmetric information problems in credit markets (Bernanke and Gertler, 1995: 35).

According to the exchange rate channel of monetary policy transmission mechanism changes in the domestic interest rates relative to foreign interest

[13] External finance premium refers to a wedge between the costs of funds raised externally (debt) and the opportunity costs of internal funds (equity) (Bernanke and Gertler, 1995: 35).

rates have a direct influence on the exchange rate. A rise in foreign interest rates, for instance, would result in the outflow of capital from the domestic economy and consequently the exchange rate would depreciate. The depreciation of the exchange rate would raise the prices of imports and decrease the prices of exports in foreign currencies. In such a situation the increase in the prices of imports and the resulting higher input costs would be passed through into inflation, and the decrease in the prices of exports would be passed through into a stronger aggregate demand. A policy response in this case would be straight-forward for the central bank – raise interest rates.

This scenario depicts a world where the terms of trade are fair to everyone and the demand for export by foreigners remains constant. As Eichengreen (2002: 17-18) puts it, when the terms of trade are not in the developing country's favour or the demand for exports has declined, depreciation would occur. Such depreciation would not be caused by capital outflows, but by decreased export revenues due to weaker terms of trade or less demand of the developing country's exports. This scenario offers two contradictory effects on inflation. On the one hand, higher prices of imports would be passed through into inflation, while; on the other hand, weaker aggregate demand resulting from less export revenues would lead to deflation. A policy response by the central bank would depend on whether it attaches more weight to output variability or to deviations of inflation from the target. If the central bank attaches more weight to the former it would cut interest rates, but if its interest is to the latter the central bank would be concerned about the pass-through of import prices into inflation and would thus raise interest rates.

Central banks in advanced countries using inflation targeting tend to point out that it is advisable to react to exchange rate movements only if the attainment of the inflation objective is threatened. In contrast, several central banks in emerging market countries have been implementing the type of inflation targeting that for some period of time have been accompanied by crawling exchange rate

bands. Emerging market economies attach a greater weight to exchange rate due to a number of reasons, some of which have been identified in the preceding discussion. Amato and Gerlach (2002: 786) highlight the following reasons:

> Firstly, the neglect of exchange rates by these countries might lead to excessive exchange rate volatility due to relatively lean foreign markets, pronounced shock as well as large capital flows that these countries are exposed to;
> Secondly, these countries` central banks are well known for their monetary instability; therefore, the exchange rate plays a role in focussing on inflation expectations; and
> Finally, due to the liability dollarisation described above a big change in the exchange rate might result in bankruptcies in the business sector, which would in turn decrease the value of bank assets.

Seemingly, the notion that a central bank should not target any nominal variable such as an exchange rate before adopting inflation targeting is rejected by some scholars, especially for developing countries. The argument advanced by Mishkin (2004: 26), for instance, is that, “after a sustained period of low inflation engineered by an inflation targeting regime, the affect of the exchange rate on the expectations-formation process and price setting practices of households and firms in the economy is likely to fall”. Therefore, the adoption of inflation targeting by emerging market countries and developing countries would assist in ameliorating the “…pass-through from exchange rates to inflation…” (Mishkin, 2004: 26).

Amato and Gerlach (2002: 787) are also of the view that “…a crawling exchange rate band may be helpful during the transition to a low-inflation inflation targeting regime”. However, the authors appear to agree with the notion that when several nominal objectives coexist conflict might arise, but they point out that this is unlikely in situations where policymakers can rank objectives according to their

relative importance. Nonetheless, according to Mishkin (2000b: 109), emerging market countries had been involved in preventing exchange rate flexibility for quite some time. These countries had done this through frequent intervention in the foreign-exchange market as well as through the explicit use of exchange rate bands. Relying on exchange rate bands and frequent intervention in the foreign exchange market poses a threat of changing the exchange rate into a nominal anchor for monetary policy, thereby taking a more pronounced role over the inflation target.

4. 3 OPERATIONAL ASPECTS OF INFLATION TARGETING FOR DEVELOPING COUNTRIES

There are several aspects which distinguish the operation of inflation targeting in emerging market countries and developing countries. According to Debelle (2004: 71), compared to developed countries, the consumer prices in emerging market countries are more volatile. The volatility of inflation in these countries has a potential of constraining the central bank's capability in fighting inflation. One of the reasons of the volatility of consumer prices can be ascribed to food items, whose prices are subject to *inter alia* changes in weather patterns. Food items have a tendency to weigh more in the consumer price baskets of developing countries.

Due to the volatility of consumer prices, choosing the price index on which to base the inflation target appears to be a problem in developing countries. Masson *et al.* (1997: 34) argue that due to the fact that these countries are always subject to numerous and variable supply shocks, some volatile items such as food and energy prices should be removed from the inflation rate to establish a "core" (headline) inflation rate (which could be the target). Nevertheless, the same authors also argue in favour of defining the inflation target in terms of the index that is most widely used by the public in order to monitor price developments and form inflation expectations. Such an index would

assist to enhance the credibility and transparency of the monetary policy. Amato and Gerlach (2002: 787) also show concern about the use of CPI basket as a measure of inflation in developing countries, since food forms a larger part of the basket. However, the authors caution against the use of a measure of core inflation that downplays the significance of food prices since such a move would reflect the actual cost of living poorly and might lead to credibility problems.

According to Debelle (2004: 72), "another factor that affects the nature of the inflation process which can complicate the central bank's task is the number of prices regulated by the government". In developing countries, "…administered prices tend to be more affected by the demands of the government's budget constraint" (Debelle, 2004: 72). In such cases, there is a greater need for a proper working together between monetary and fiscal authorities than in situations where the large majority of prices are market-determined (Debelle, 2004: 72; Masson *et al.*, 1997: 34).

4. 4 CASE STUDIES: BRAZIL AND SOUTH AFRICA

An inflation targeting regime was introduced in Brazil in June 1999 after the failure of the stabilisation policy which was characterised by a fixed or crawling exchanged-rate peg. The stabilisation policies in Brazil, and more generally in Latin American countries in 1990s, were based on some form of exchange rate anchor. Although the programmes were successful in ending the history of chronic high inflation, local currency appreciation as a result of favourable differentials between domestic and foreign prices, led to balance of payments disequilibria. There was thus a need by monetary authorities to use high interest rates to attract foreign capital. This increased public internal debt, which deteriorated economic performance and fiscal balances. As a result of the global mobility of financial and productive capital, the successful application of internal stabilisation policy led to a process of deteriorating economic conditions. This left these countries, including Brazil, vulnerable to speculative attacks on their

currencies. The currency crises in Mexico (1994 – 95), in Brazil (1998 – 95, and 2002), and in Argentina (2001 – 02) are good examples of this process (Arestis *et al.*, 2006: 5).

The unhappy experience of Brazil with its pegged exchange rate regime, and the associated period of deep financial crisis in the late 1990s, resulted in a search for an alternative nominal anchor. It was against this background that on 21 June 1999, the Brazilian President ordered for the establishment of an inflation targeting framework. It is important to note that in Brazil there were no prior changes in fiscal and monetary policies in preparation for the adoption of inflation targeting.

Mishkin (2004: 17) attributes the breakdown of Brazilian *real* in 1999 to the "inability of the Brazilian government to put its fiscal house in order", since the currency crisis was stimulated by non-payment of debt obligations at the beginning of January 1999. At the same time, Brazil had been well endowed with a resilient banking system since it had been organised differently subsequent to the banking problem of 1994 – 96. However, there was no certainty to the autonomy of Brazil's central bank as well as its commitment to price stability. There was no formal commitment to legislation; it was just a matter of a presidential order and confidence to the sterling work of a central bank president (Mishkin, 2004: 17-18).

Table 1 Brazil – inflation targets and headline consumer price index (IPCA)

Year	*Inflation target*	*Tolerance interval +/-*	*IPCA*
	%	%	%
1999	8.0	2.0	8.94
2000	6.0	2.0	5.97
2001	4.0	2.0	7.67
2002	3.5	2.0	12.53
2003	4.0	2.5	9.30
2004	5.5	2.5	7.60
2005	4.5	2.5	5.69

Source: Central Bank of Brazil (2006), www.bcb.gov.br (data obtained in October 2007)

As illustrated in Table 1 and in line with Mishkin (2004: 18) the initial targets were as follows: 8 percent - 1999; 6 percent - 2000; and 4 percent - 2007. The tolerance range was ± 2 percent. In 1999 the inflation rate reached 8.9 percent, which exceeded the 8 percent inflation target for the year but was entirely well within the tolerance range of 2 percent. Throughout 2000, the rate of inflation continued to decline, and by the end of the year it was at the 6 percent mid-point target that was set by the monetary authorities in mid-1999. Surprisingly in 2001, the rate of inflation was far above the 4 percent target and ended up at 7.7 percent.

According to Mishkin (2004: 18), due to the deterioration of confidence in the newly elected President, the Brazilian real depreciated tremendously and this led to an increase of inflation to 12.5 percent, which was way above the target of 3.5 percent. In subsequent years, inflation and interest rates were declining rather rapidly. For instance, from the 2002 level of 12.5 percent, the rate of inflation decreased to 9.3 percent towards the end of 2003, which was, according to Mishkin (2004: 20), "…within the central bank's tolerance range for the adjusted inflation target of 8.5 percent".

In the case of South Africa, in February 2000, the Minister of Finance pronounced in parliament that the system of formal inflation targeting would be adopted as the monetary policy framework. Prior to that, monetary policy in South Africa underwent significant changes. The South Africa Reserve Bank (SARB) adopted different monetary frameworks throughout the years. In the 1960s and 1970s a system of credit ceilings and direct credit controls were used, while from the mid-1980s money supply growth targets were implemented. From the beginning of 1990s the central bank made use of money supply growth guidelines and by the middle of 1990s an eclectic system of monetary policy was in place. This was followed by the implementation of inflation targeting since 2000 (Mboweni, 2003a).

According to Stals (1999) the formal money supply targets, introduced in 1985, contributed significantly in reducing inflation from the double-digit of between 12 and 20 percent from 1972 to 1992 to an average of below 10 percent from 1994 to 1999. The use of these targets was based on the assumption that a stable relationship existed between changes in money supply and inflation. Thus, monetary policy was aimed at controlling the rate of increase in total money supply as an intermediate objective with ultimate objective of protecting the value of the currency. However, the liberalisation of financial markets, increase in the volume of financial market transactions and a more open economy led to the inability of the money supply to be an anchor of monetary policy (Stals, 1999).

After the failure of the money supply targets as the sole anchor for monetary policy, according to Casteleijn (1999: 64), the SARB resorted to using a group of economic indicators to make monetary policy decisions in an eclectic approach. In this approach bank credit extension, the yield curve, interest rates, changes in gold and foreign exchange reserves, movement in the exchange rate of the rand and actual and expected movements in inflation were considered. In a sense the eclectic approach recognised that the SARB had to combat inflation (Mboweni, 2001). With this recognition, the SARB entered a phase of “informal inflation

targeting" that was so named because of the emphasis on lowering inflation without specifying the time period over which it would be achieved (Mboweni, 2001).

It has to be acknowledged that informal inflation targeting was indeed very effective in reducing inflation. Van der Merwe (2004: 1) also attest to this as he notes that after the consumer price index had moved around 15 percent at the commencement of 1990s, "…it moved to below double digits in 1993 and declined to an average annual rate of 5.2 percent in 1999".

Table 2: South Africa – average annual rate of inflation

Years	*M3 Annual percentage growth rate*	*Average annual rate of inflation*
	%	%
1990	14.4	14.3
1991	14.4	15.6
1992	8.3	13.7
1993	5.2	9.9
1994	14.3	8.8
1995	15.3	8.7
1996	14.7	7.3
1997	15.5	8.6
1998	16.5	6.9
1999	8.5	5.2

Source: IMF, WEO Database, September 2006 and IFS Online

According to Smal and De Jager (2001: 2), in 1992, growth in M3 was well within the target range but in the following year it was below the target. In subsequent years money supply exceeded the target range tremendously and it was only in February 1999 that it moved back to within the target range.

When South Africa formally adopted inflation targeting in 2000, in certain respects the environment was conducive to the adoption of such a monetary policy framework. The fact that a new governor, Mboweni, had taken office at the

SARB in 1999 was most beneficial. Mboweni was a former labour minister in the post-apartheid South African government and had political credibility. With such credentials Mboweni possibly could convince the economic role players, especially labour unions and government, of the SARB's commitment to inflation targeting and obtain their support and co-operation (Dykes, 2004: 92). In addition to this, inflation had already fallen to relatively low levels and fiscal policy had remained disciplined since 1994.

However, a potentially problematic factor was government's reluctance to privatise and deregulate the economy. This had left administered prices at a high level (Dykes, 2004: 92). Another concern was the SARB's credibility in forecasting and controlling inflation. According to Dykes (2004: 92) that was understandable, given the complexities of forecasting in a small open economy undergoing enormous structural changes resulting from tariff reform, globalisation, as well as social and political transformation. It is against this background that South Africa's early experience with inflation targeting was problematic. Apart from the rapidly depreciating rand in 2001, high food and oil prices, persistent high wage settlements and consistent high inflation in administered prices complicated the task.

Table 3: **South Africa's experience under inflation targeting**

Year	*Target (CPIX)*	*CPIX*	*CPI (YoY)*	*Shocks*
	%	%	%	
2000		7.8	5.3	
2001	3 – 6	6.6	5.7	
2002	3 – 6	9.3	9.2	Rand collapse
2003	3 – 6	6.8	5.9	Oil and food price surge
2004	3 – 5 (Subsequently changed to 3 – 6)	4.3	1.4	
2005	3 – 6	3.9	3.4	
2006	3 – 6	4.6	4.6	

Source: South African Reserve Bank

It was only in the last three years (2004 to 2006) that the year-on-year CPIX inflation has remained soundly within the inflation target range of between 3 and 6 percent. Notwithstanding steep increases in international crude oil prices, rising food price inflation and sustained strong consumer demand, the inflation targets were met.

South Africa adopted the inflation targeting framework a decade after the pioneering country, New Zealand, introduced the strategy. Inflation was already on a downward trend and South Africa met the preconditions for adopting the framework with the existence of well developed financial markets and the SARB having the necessary formal independence, skills and resources.

South Africa's inflation targeting framework generally conforms to internationally accepted practices with regard to framework design and the institutional arrangements necessary to implement such a framework. For instance, the

SARB established a Monetary Policy Committee (MPC) which makes monetary decisions. Furthermore, the SARB publishes a semi-annual inflation report (the *Monetary Policy Review*) and the Governor reports quarterly to parliament. In adopting an inflation targeting framework, the SARB made great strides in transforming itself into being a much more transparent central bank.

4. 5 CONCLUSION

This chapter has examined the applicability of inflation targeting in two developing countries: Brazil and South Africa. This examination has taken the form of looking at whether these developing countries conformed to the preconditions of inflation targeting before they adopted the monetary policy strategy. The general finding is that the selected developing countries did not satisfy all the preconditions before they adopted inflation targeting. For instance, with regard to the central bank independence, Brazil's fiscal balance was in deficit during the years they adopted inflation targeting, signalling that the precondition of sound government finances was not adhered to.

The other factor that has been explored in this chapter is the operation of inflation targeting in developing countries. The major problem concerning the operation of inflation targeting is the volatility of consumer prices, due to fluctuation in food prices. Consequently it would be difficult for these countries to choose the price index that can be a basis of their inflation target.

The other factor that makes the task of the central bank to be complex is the extent of government-controlled prices. The administered prices tend to be at high levels, thereby, leading to target misses by the central banks. The only solution to this is better co-ordination between the monetary policy and fiscal policy, as well as commitment by governments of developing countries towards privatisation and deregulation of certain sectors of their economies.

CHAPTER 5

EMPIRICAL EVIDENCE: THE CASE FOR INFLATION TARGETING IN MALAWI

5. 1 INTRODUCTION

Since the introduction of the IMF-supported structural adjustment programme in Malawi, there have been pronounced improvements in the major economic indicators of that country. In particular, the implementation of indirect policy instruments rather than direct ones in the conduct of monetary policy contributed a great deal to a gradual reduction in prices and improved growth in GDP.

In this chapter, an overall analysis of the Malawian economy, in its transition from repressive monetary procedures to the current liberalised ones, is given. In section 2, an account of the liberalisation of the economy of Malawi is presented. Specifically, this section looks at the liberalisation of the financial sector, the liberalisation of interest rates and exchange rates, as well as the fiscal reforms. Section 3 explores the impact of these economic reforms on the Malawian economic indicators, such as GDP, inflation and money supply, interest rates, and the fiscal balance. The last section concludes.

5. 2 LIBERALISATON OF MALAWIAN ECONOMY

5.2.1 Introduction

As has been stated in Chapter 1, during the period leading to the late 1980s the Malawian monetary policy had repressive characteristics like direct credit controls and tight foreign exchange controls on the free movement of investment

capital across borders. At the start of the second semester of 1988, the Malawian government, assisted by the International Monetary Fund (IMF), began to implement a structural adjustment programme. The programme included the liberalisation of the financial sector, the liberalisation of interest rates and exchange rates, as well as fiscal policy reforms. All these reforms were instrumental in ensuring that monetary policy was consistent with the macroeconomic objective of sustainable economic growth, a viable balance of payments and stable prices.

5.2.2 Liberalisation of the financial sector

According to the Government of Malawi (2002: 11), in 1998-99 two sets of financial sector Acts - the Reserve Bank of Malawi (RBM) and Banking Acts - were reviewed. The purpose of the revision was to ensure that new banking institutions could enter easily into the financial sector as well as to allow the central bank to have greater autonomy in the conduct of monetary policy. Moreover, this also enhanced the powers of the central bank to supervise the banking industry. The reform "…of the financial sector also meant that monetary policy had to shift from direct to indirect instruments of monetary policy" (Government of Malawi, 202: 11).

Gidlow (1998) in Faure (2005: 126-127) distinguishes between the indirect and direct instruments of monetary policy, and defines these as follows:

> Indirect policy (market oriented) measures are actions taken by the central bank whereby it achieves its monetary policy aims by encouraging market participants to take particular actions as regards their lending and borrowing behaviour as a result of price and interest rate incentives or disincentives brought about in the financial markets. More particularly these incentives or disincentives arise out of technical intervention by the Central Bank in the various financial markets involving the buying and

selling of specified financial claims such as government stock, Treasury bills, bankers' acceptances and foreign exchange in order to influence prices and therefore interest rates and exchange rates. In South Africa the best-known examples of indirect (market oriented) policy instruments include the accommodation policy of the central bank, open market operations, and the buying and selling operations of the Reserve Bank in the spot and forward foreign-exchange markets.

Direct (non-market oriented) policy instruments are measures taken by the central bank that seek to attain the aims of monetary policy by means of certain rules prescribing the behavioural pattern of banks and possibly other financial institutions. These instruments are usually associated with a suspension of market forces, involving either rigid behaviour rules or the fixing of certain variables. If the relevant market participant do not adhere to these prescriptive rules, they may be liable to prosecution or at least certain penalties. Examples include instructions sent to banks under which the latter are requested not to exceed a certain amount of lending to domestic private sector borrowers over a specified period, and instructions that banks must not quote interest rates above or below a certain maximum or minimum level on their various credit and deposit facilities made available to customers. Exchange control regulations also form part of the group of direct monetary policy instruments.

According to Sato (2001: 7) the liberalisation of the financial sector "…facilitated the conduct of monetary policy in line with macroeconomic objectives of maintaining sustainable growth, viable balance of payments position and stable prices". In terms of the Reserve Bank Act 1989 of Malawi, the central bank possesses a certain degree of autonomy in the manner in which it conducts monetary policy. Moreover, the Reserve Bank of Malawi has a mandate in ensuring that there is price stability and overall monetary stability in the economy. Finally the Reserve Bank of Malawi follows an eclectic approach in considering

every indicator that has a potential to affect developments in prices. Such indicators include the following: the consumer price index (CPI), growth in gross domestic product, monetary growth and expansion of bank credit.

Sato (2001: 8) describes the conduct of monetary policy in Malawi as follows:

> In trying to attain its goal of price stability, the Reserve Bank of Malawi establishes an annual inflation-rate target, announced by the Minister of Finance in his Budget Statement to Parliament, and uses control over monetary aggregates as an intermediate variable. In order to achieve the price objective, the Bank exerts stricter controls over reserve money, employing for this purpose quarterly growth targets (usually agreed with the Fund under the supported programme). While more emphasis was initially put on growth in the M2 aggregate, recent developments have indicated that M2 can better be influenced by monitoring growth in reserve money aggregate because the central bank has better control over the latter than M2 money stock.
>
> In order to influence growth in the money stock, the central bank increases or decreases the amount of reserve money by managing both the domestic and foreign sources of reserve money (credit from the central bank, and acquisition of foreign exchange by the Bank that has impact on local money creation). The central bank's daily monetary management involves making estimates of banking system's liquidity situations. Based on the outcome, the central bank decides how to intervene, i.e. inject or withdraw liquidity from the system.

Since the introduction of the structural adjustment programme, the Reserve Bank of Malawi had introduced several monetary policy instruments in order to reform monetary policy. Below is a brief exposition of these instruments:

5.2.2.1 Liquidity reserve requirement (LRR)

The liquidity reserve requirement, which is also known as the cash reserve requirement, is the proportion of private sector banks' total deposit liabilities that they should hold with the country's central bank. According to Nel (2000: 63), it has been a practice for private sector banks in various countries to keep their surplus cash with their central banks. As development in central banking progressed, such a practice was in keeping with the latter's function of being settlement banks, "…that is the settlement of the clearance difference between banks". (Nel, 2000: 63). Nel (2000: 63) presents the role of central banks as custodians of cash reserves of private sector banks as follows:

> Central banks originally became the custodians of bank's cash reserves partly for prudential reasons, in other words, to protect the liquidity, solvency and safety of banks, and partly to safeguard their own financial position. The money-creating capacity of banks is also materially influenced by the amount of reserve balances that the banks keep with the central bank. Consequently, adjustments in the minimum required reserve balances of banks have been widely used as an instrument of monetary policy. Nevertheless, as countries placed more emphasis on market-related instruments of monetary policy during the 1980s, minimum reserve requirements did diminish in importance as a monetary-policy instrument. Since the 1980s there has, however, been a general tendency towards simplifying the calculation of reserve requirements and lowering reserve ratios.

In the Malawian case, after the revision of the country's Banking Act and Reserve Bank Act in 1989, the liquidity reserve requirement was introduced for the first

time. Through these Acts, the Reserve Bank of Malawi prescribes to the banks the minimum required cash reserves that they must keep with the Bank (Sato, 2001: 8).

However, in line with the developments in other countries, the importance of cash reserve requirements in Malawi also diminished in recent years. Hence in the early 1990s, emphasis changed towards the utilisation of market-oriented instruments, such as open market operations.

5.2.2.2 Open market operations (OMO)

The majority of central banks implement open market operations with the main purpose of ensuring that commercial banks are always indebted to them. Open market operations involve the buying and selling of securities (such as treasury bills) in the financial markets. Any sale of a security by a central bank will lead to an indebtedness of the private sector banks to it and ultimately to a drain in liquidity. Conversely, a purchase of a security by a central bank will result in the addition of liquidity into the banking sector. The ways in which open market operations can be undertaken include the sale and purchase of securities, issue and repurchase of own securities, purchase and sale of foreign exchange swaps as well as the sale of securities under repurchase agreement.

In 1992 the Reserve Bank of Malawi introduced the sale and purchase of treasury bills (TBs) as its main monetary-policy instrument in its effort to pursue open market operations. In August 2000, the RBM started to issue its own bill (the RBM bill) to supplement and replace the existing Treasury bills (Sato, 2001: 10).

5.2.3 Liberalisation of interest rates and exchange rates

The process of the liberalisation of interest rates in Malawi started in 1987 when interest rate ceiling were removed from private-sector bank lending rates. In 1988 it was the turn of deposit interest rates to be deregulated. It was in May 1990 that the liberalisation of all interest rates was fully completed. Since the completion of the launch of interest rate liberalisation, the Bank rate has played a more important role in the financial system. The role of the Bank rate has been enhanced by the development of the money market and the frequent utilisation of open market operations as a market-related instrument of monetary policy. The Reserve Bank of Malawi uses the Bank rate as an indicator of the stance of monetary policy. In many occasions, the adjustment of the Bank rate has led to the adjustment of the interest rates in the financial system (Reserve Bank of Malawi, 2000: 8).

However, complete liberalisation of interest rates has not brought the desired effect. As mentioned above, the Bank rate is used as an indicator of where the Reserve Bank wishes the interest rates to move. Consequently, when the Bank rate is adjusted downwards, the banks follow suit by adjusting their lending and deposit rates likewise. The problem, however, is that until recently, the major banks used to collude and reduce the rates by identical magnitudes, reflecting structural rigidities. This could perhaps be ascribed to the domination of the market by only two major banks; hence competition would not be expected to emerge from deregulation in the short-run. The solution would be to introduce more players into the market to stimulate more competition.

One other remarkable policy reform that was undertaken by the Reserve Bank of Malawi was the liberalisation of the exchange rate system with the aim of promoting the country's competitiveness in international trade. In February 1994, the Malawian Kwacha was floated (Reserve Bank of Malawi, 2000: 5; Government of Malawi, 2002: 11). The Reserve Bank of Malawi (2000: 6) points

out that the purpose of the change from fixed regime to the floating one was the following:

1) to improve competitiveness of the country's exports;
2) to provide an efficient foreign exchange allocation mechanism;
3) to soften speculative attacks on the kwacha; and
4) to restore investor and donor confidence.

Unfortunately, in 1995 and 1996, inflation in Malawi accelerated to very high levels. The increased government expenditure in the post-1994 general election period was the cause of the rapid increase in inflation in those years. The main focus of the policy of exchange rate during this period was on lowering increases on prices. Despite the success of the authorities in reducing inflationary pressures in the latter half of 1996, it became clear that the real exchange rate of kwacha was appreciating. This was not in line with the best interest of the country's long-term growth prospects. In spite of these developments, there was stability in the nominal value of the kwacha for the rest of 1996 and the beginning half of 1997 (Reserve Bank of Malawi, 2000: 7).

The overvaluation, as well as pressures on the currency as a result of budget deficit in the last half of 1997, resulted in the devaluation of the kwacha in July 1997. This exchange rate action resulted in the real appreciation of the kwacha against the Zimbabwean dollar and the South African rand. These two countries contribute a substantial amount of the Malawian trade and it was precisely for this reason that the weakening of both the South African rand and the Zimbabwean dollar in 1997 and 1998 led to the kwacha being uncompetitive. According to the Reserve Bank of Malawi (2000: 7) by the end of August 1998, the Malawian currency was "…allowed to be market determined again and intervention by the Reserve Bank of Malawi was only guided by preset reserve targets".

5.2.4 Fiscal policy reforms

According to the Government of Malawi (2002: 95), the presence of high budget deficit is caused mainly by considerable government borrowing. When the tax revenue is less than government expenditure, the government is compelled to borrow from the private sector in order to finance its expenditure. The financing of the budget deficit through private-sector borrowing has a tendency to result in high interest rates as well as the crowding out of the private sector. The private investors find it hard to invest into the country since the cost of borrowing has increased, as a result economic growth is retarded, and the poor are the hardest hit as they are unable to raise credit in order to increase agricultural production.

The Medium Term Expenditure Framework (MTEF), which has been introduced by the Malawian government in the mid-1990s, has continued to be the central instrument for the management of public expenditure. The overriding purpose of the MTEF is to consolidate the prioritisation of expenditure and to raise allocation to critical departments of education and health. The MTEF objective is to maintain fiscal discipline while balancing government expenditure between productive and social sectors of the economy. It is also envisaged that the underlying fiscal deficit will average 0.2 percent from 2007 to 2011 (Government of Malawi, 2002: 12; and 2006: 11).

5.3 ECONOMIC PERFORMANCE DURING ADJUSTMENT

5.3.1 Introduction

This sub-section explores the economic performance of Malawi during the period of the structural adjustment programme. Evidence reveals that from 1964 to 1975, the Malawian economy recorded remarkable growth. The growth of real gross domestic product (GDP), which was mainly stimulated by the agricultural production, recorded an average of 6.7 percent during this period. On the other

hand, huge fluctuations in the annual rate of inflation between 1990 and 2000 were recorded. However, between 2001 and 2006 there was a dramatic reduction in the rate of inflation. Unfortunately, due to the existence of high budget deficit the pressure on interest rates continued to be exerted mainly as a result of government borrowing. In spite of the above, there are indeed signs that the budget deficit is declining as a consequent to prudent fiscal measures that have been implemented since the start of the programme of economic reform.

5.3.2 Gross domestic product

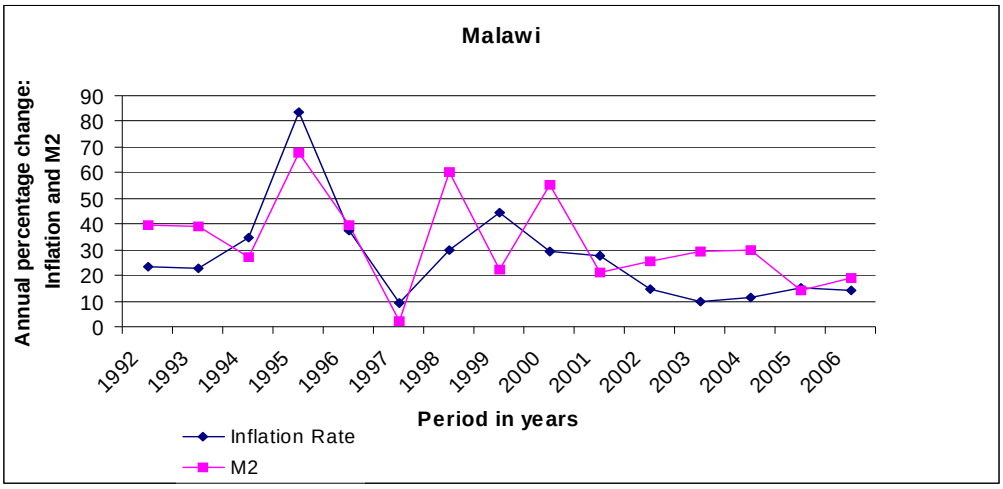
Subsequent to a second round of IMF-sponsored structural adjustment programme, the Malawian economy began to experience a relatively impressive growth in the late 1980s and the beginning of the 1990s. The Malawian economy recorded an increase in the real GDP growth from 3.3 percent in 1988 to 7.8 percent in 1991. However, largely as a result of exogenous shocks such as droughts and the reduction of donor financial support between 1992 and 1994 the benefits of that growth were short-lived as it fluctuated through the 1990s. For instance, the economy recorded negative growth of -7.9 percent and -11.6 percent in 1994 and 1992 respectively, before recovering to a growth rate of 12.0 percent in 1996. The average economic growth was 2.6 percent and 2.9 percent from 1997 to 2000 and from 2001 to 2006 respectively.

According to the Malawian Economic Review (2003: 37), during 2003 the national economy improved from the performance of 2002. The improvement was mainly as a result of improvements in the agricultural sector, which recorded an increase of 6.8 percent as compared to a mere 2.4 percent in 2002. This positive growth in output continued to be buoyant even in subsequent years as reflected by 5.1 percent and 8.5 percent real GDP growth in the years 2004 and 2006 respectively (Malawian Economic Reviews: January 2005: 21 and Mid-year 2007: 7). The increase in the real GDP in these years was higher than the increase of 3.9 percent that was registered for the year 2003.

5.3.3 Inflation and money supply

During the period between 1980 and 1990, the rate of inflation, as expressed by the Consumer Price Index (CPI), was relatively stable at an average of 16.6 percent. Between 1990 and 2000, there was a marked variability in the annual rate of inflation. Inflation rose from 11.9 percent in 1990 to 34.6 percent in 1994, and 83.3 percent in 1995. The main contributors to this skyrocketing inflation were fiscal slippages and external shocks. The high rate of inflation in Malawi had been attributed to high money supply, which has been influenced primarily by excessive government borrowing. Usually, increases in the rate of inflation have been preceded by increases in the growth of money supply. Prudent fiscal policies that were introduced in 1995 were successful in the reduction of the inflation rate to 37.6 percent in 1996 and 9.2 percent in 1997. However, the weakening of the kwacha in August 1998 led to imported inflationary pressures, which led to the annual inflation rates of 29.8 percent and 44.7 percent in 1998 and 1999 respectively. The continued commitment of the authorities to sound fiscal policy measures caused the inflation rate to average 15.5 percent for the period from 2001 to 2006, which was a dramatic reduction from an average rate of inflation of 30.1 percent for the period from 1996 to 2000.

Figure 4: Relationship between inflation and M2



Source: Reserve Bank of Malawi

As can be depicted from Figure 4, during 2003 the inflation rate averaged 9.6 percent, which was lower than the average 14.8 percent in 2002. This slowdown emanated from the low food prices, particularly maize (Malawian Economic Review, 2003: 37). However, this low rate of inflation was short-lived as the average annualised rate of inflation accelerated to 11.5 percent and 15.4 percent in 2004 and 2005 respectively. The rise of inflation in the above mentioned years was mainly on account of continued rise in food prices, especially cereal and cereal products, which was caused by drought which began in the last quarter of 2004 (Malawian Economic Review, January 2005: 19).

From 2003 to 2006 monetary developments were mainly influenced by fiscal operations. The broad measure of money supply (M2) increased by 29.3 percent, 29.8 percent and 18.8 percent in the years 2003, 2004 and 2006 respectively. The remarkable rise in money supply during these years can largely be attributed to the continued increased demand for credit, mainly by the Malawian government as the donor community continued to withhold some of the budgeted financial support. The other reason for the increased money supply emanated from seasonal upswing in economic activity (Malawian Economic Reviews, 2003: 1; Mid-year 2006: 1).

5.3.4 Interest rates

As has been noted somewhere above, during the period of structural adjustment, a high fiscal deficit contributed to excessive government borrowing, which in turn resulted to high interest rates. According to the Government of Malawi (2002: 15) bank lending rates increased "…from 17 percent in 1980 to 29.5 percent in 1993". From 1994 to 2001, the rates increased further from 31.0 percent to 52 percent respectively. This has contributed substantially to the crowding-out of the private sector and a decline in investment as the cost of borrowing increased.

5.3.5 Fiscal balance

Table 4: Fiscal deficit after grants

Years	*Deficit/GDP - after grants (% unless otherwise indicated)*
1996	-4
1997	-5.8
1998	-0.2
1999	-3.1
2000	-3.2
2001	-1.5
2002	-3.3
2003	-8.2
2004	-4.2
2005	-1.1
2006	-0.002

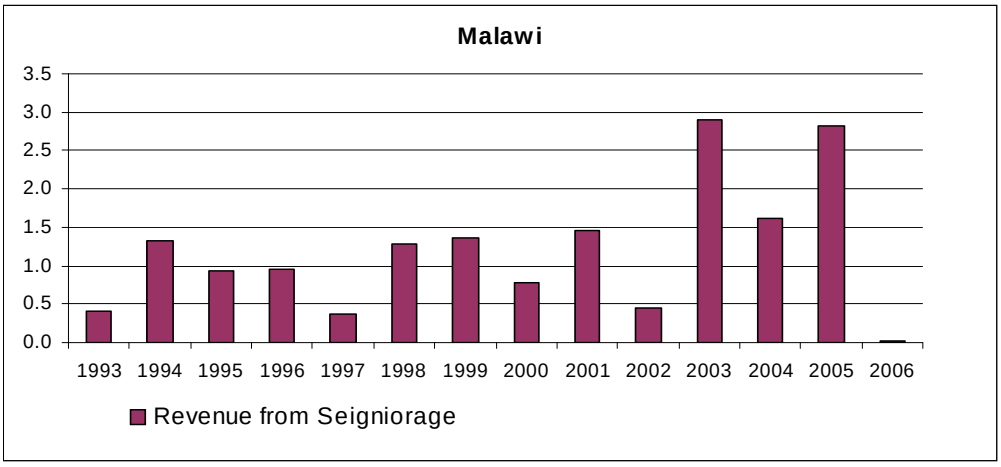
Source: Reserve Bank of Malawi

The prudent fiscal policy measures that the Government of Malawi had practised since the beginning of the structural adjustment programme seem to be starting

to bear fruit. Although throughout the ten-year-period from 1996 to 2006 there were some fiscal slippages, it is evident that the government is committed to the reduction of expenditure as illustrated by highly decreased deficit/GDP figures of 2005 and 2006.

According to the Malawian Economic Review (2003: 44), the year 2003 was characterised by deterioration in the performance of central government budget operations as depicted by the wide budget deficit (excluding grants) of 8.2 percent of GDP. This indicates that measures set out to contain expenditures were not fully adhered to as depicted by a significant increase in government expenditure in 2003. However, despite the deficit in the government balance, the government revenues increased significantly in 2003 due to strides taken by the Malawi Revenue Authority (MRA) to improve compliance.

Figure 5: Revenue from Seigniorage[14]



Source: Reserve Bank of Malawi

The average domestic revenue as a ratio of nominal GDP in the period from 2001 to 2006 was 1.5, which is higher than the ratio for the previous six-year

[14] This has been calculated by dividing the annual percentage growth in domestic revenue by annual percentage growth in nominal GDP.

period from 1995 to 2000, which was 0.9. As can be deduced from Figure 5, in recent years there has been an increasing trend in the amount of domestic revenue received by the government. For example, the domestic revenue/nominal GDP ratio for 2004 and 2005 was 1.6 and 2.8 respectively, while the ratio for 1998 and 1999 was only 1.3 and 1.4 respectively. The rising trend in domestic revenues seems to emanate from measures taken by the MRA to curb tax evasion and improvement in the collection of domestic revenue in recent years.

During the six-year period from 1995 to 2000, the average total expenditure as a percentage of gross domestic product was 43.4 percent which decreased to 29.2 percent during the subsequent six-year period from 2001 to 2006. Most of this decline seems to emanate from the drop in recurrent expenditure items such as wages and salaries of public servants as well as reimbursements and commissions to commercial banks. The average recurrent expenditure for the periods from 1995 to 2000 and from 2001 to 2006 was 41.4 percent and 27.2 percent respectively, while the average development expenditure for both periods recorded 58.1 percent and 60.9 percent respectively.

5.4 CONCLUSION

The IMF-sponsored structural adjustment programme has made inroads in improving the macroeconomic framework in Malawi in as far as the GDP and inflation is concerned. The only impediment with regard to the growth in real GDP was the existence of exogenous shocks such as the droughts of 2004 and 2005 which resulted in the contraction of the mainly agricultural Malawian economy. Concerning the rate of inflation the Malawi authorities have done well in reducing inflation from an average rate of 30.1 percent to 15.5 percent in the periods from 1992 to 2000 and from 2001 to 2006 respectively.

Furthermore, with regard to the fiscal balance, the government of Malawi through its agency, the MRA, had done well in curbing tax evasion and the collection of domestic revenue. Moreover, despite some slippages in government expenditure the trend with regard to recurrent expenditure suggests that the government is committed to sound and efficient management of public finances.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6. 1 CONCLUSION

The purpose of this dissertation was to investigate the extent to which Malawi is able to meet the preconditions for the adoption of an inflation targeting monetary framework. This was done by comparing the economic situation of that country to other developing countries in a similar situation, which have already adopted inflation targeting. The preconditions of inflation targeting as outlined in Chapter 1 above were as follows:

1) the central bank must have full legal autonomy and be free from fiscal and political pressures that create conflicts with the inflation objective;
2) the central bank must have inflation forecasting and modelling capabilities and the data needed to implement them;
3) prices must be fully deregulated, the economy should not be overly sensitive to commodity prices and exchange rates, and dollarisation should be minimal; and
4) the banking system should be sound and capital markets be well developed, in order to minimise potential conflicts with financial stabilisation objectives and guarantee monetary policy transmission.

In many developing countries not all the prerequisites for inflation targeting were satisfied before the adoption of inflation targeting framework. For instance, the fiscal balances of most developing countries were in deficit during the years they adopted inflation targeting. This signalled that there was an absence of sound management of government finances, which is a key element to the prerequisite of central bank independence. Moreover, some authors have argued that developing countries could adopt inflation targeting without having econometric models to rely on, as happened in most European central banks that adopted

inflation targeting in 1992 – 1993. In addition to this, the pursuance of low inflation as the sole target of monetary policy has been identified as problematic for developing countries due to the issue of liability dollarisation. Consequently, some of these countries also target the exchange rate in addition to low inflation in order to ameliorate this problem.

In order to assess the applicability of inflation targeting for the Malawian economy, theoretical and conceptual issues concerning the preconditions for the adoption of inflation targeting by developing countries were analysed. This was followed by case studies of Brazil and South Africa, two of the developing countries that have already adopted inflation targeting. Finally, the current economic environment of Malawi was assessed in order to evaluate whether it is feasible for the country to adopt inflation targeting.

In the case of Brazil, it has been noted that the adoption of inflation targeting was not preceded by prior development of all fiscal, financial and monetary reforms. The independence of Brazil's central bank and the commitment to price stability were not guaranteed since they were based on a presidential decree and confidence in the excellent work of the central bank president. On the other hand, when South Africa introduced inflation targeting in February 2000 the environment was conducive for such a monetary strategy. However, one of the main concerns was the SARB's credibility in forecasting and controlling inflation, given the complexities of forecasting in a small open economy.

Concerning the current economic conditions in Malawi, the dissertation analysed the impact of economic reforms on economic indicators such as GDP, inflation and money supply, interest rates as well as the fiscal balance. The study found that real GDP growth increased as a result of certain economic reforms. Furthermore, the prudent fiscal policy measures that were introduced in 1995 were successful in lowering the rate of inflation from an average of 30.1 percent between 1996 and 2000 to an average of 15.5 percent between 2001 and 2006.

Moreover, the average total expenditure as a percentage of GDP decreased from 43.4 percent between 1999 and 2000 to 29.2 percent between 2001 and 2006.

All this indicates that the economic environment in Malawi appears to have satisfied some of the preconditions of inflation targeting monetary framework. For instance, in terms of central bank independence the Reserve Bank Act of 1989 provides such independence to the RBM in the conduct of monetary policy and exchange rate management. The RBM also has a Monetary Policy Committee which makes monetary policy decisions, and publishes monthly, semi-annual and annual inflation reports (the *Economic Reviews*). The other positive aspects regarding central bank independence is that the Malawian government is committed to the pursuit of prudent fiscal policy measures, and further developments in recent years indicate that the government's budget deficit as a proportion of GDP has decreased substantially.

However, in terms of other preconditions such as full deregulation of prices, sound banking system and well developed capital markets, much more progress is still required. As has been pointed out before, despite the complete deregulation of interest rates, there is still some structural rigidity in the market, as there is less competition in the banking sector. The underdeveloped capital markets appear to be a major hindrance to the Malawian government's commitment to sound fiscal policy measures. Since there are few alternative capital market players who can offer debt to the government, the fiscal authorities are then compelled to utilise the state revenue to fund its programmes.

6. 2 RECOMMENDATIONS

It has already been highlighted that most of the developing countries adopted inflation targeting without having satisfied all the preconditions of inflation targeting framework. Similar to other developing countries, Malawi does not satisfy all the preconditions for inflation targeting. However, the RBM continues to

ensure that all its other objectives are subservient to price stability, and the Malawian government is also committed to prudent fiscal policy. Given the above scenario it would be in the best interest of the country to adopt inflation targeting framework. Once the RBM targets inflation directly, that would send a strong message to all stakeholders that the authorities are serious about low inflation.

6. 3 LIMITATIONS TO THE RESEARCH

The principal limitation of this study has been the difficulty in the precise and direct comparison of countries. The economic development, infrastructural development and socio-political features of individual countries differ widely, hence the difficulty. For instance, unlike Brazil, a country like South Africa has highly developed financial markets as well as progressive legislation that guarantee the independence of the central bank. This is corroborated by Fraga *et al*. (2003: 5-6) in their comparison of two country groups, developed and developing, who observe that not all developing countries are alike.

APPENDIX

Table 5 Inflation and output performance in inflation targeting countries

	Pre-inflation targeting[15]				Post-inflation targeting[16]			
	Inflation	**GDP growth**	**St. dev Inflation**	**St. dev GDP**	**Inflation**	**GDP growth**	**St. dev Inflation**	**St. dev GDP**
New Zealand	11.9	1.8	4.8	2.1	2.1	3.2	1	2.1
Canada	6.4	2.4	3.2	2.5	1.9	3.4	0.7	1.4
United Kingdom	7	1.9	3.9	2.4	1.8	2.9	0.6	0.6
Australia	7.4	2.8	3	2.4	2.7	3.7	1.3	0.9
Sweden	8.1	1.9	3.9	1.9	1.6	3.1	0.7	1.3
Spain	9.1	2.4	3.8	2.1	3.1	3.7	0.8	0.8
Mean	8.3	2.2	3.8	2.2	2.2	3.3	0.9	1.2

Data source: World Economic Outlook database

Table 6 Inflation and output performance in non-inflation targeting countries

	1982 – 1992				1994 – 2006			
	Inflation	**GDP growth**	**St. dev inflation**	**St. dev GDP**	**Inflation**	**GDP growth**	**St. dev inflation**	**St. dev GDP**
United States	4	3	1.2	2.4	2.6	3.3	0.6	1.1
Japan	1.9	3.6	1	1.7	0	1.3	0.7	1.4
Germany	2.6	2.8	1.7	1.8	1.5	1.5	0.6	1
France	6.3	2.3	3.3	1	1.7	2	0.5	0.9
Netherlands	2.2	2.5	1.9	1.6	2.3	2.6	1.1	1.4
Italy	8.2	2.3	4.1	1.2	2.8	1.5	1.1	1.1
Mean	4.2	2.8	2.2	1.6	1.8	2.0	0.8	1.2

Data source: World Economic Outlook database

[15] This is defined as the number of years from 1980 to a year before each country adopted the inflation targeting framework.
[16] This is defined as the number of years from a year after each country adopted inflation targeting to 2006.

Figure 3

Description of variables

(a) CPI inflation is defined as the percentage change in the average CPI from one year to the next.

(b) Monetary growth refers to the percentage change in the average M1 or M3 from one year to the next.

REFERENCES

AISEN, A., 2007. Money-based vs. exchange rate-based stabilisation: Is there room for political opportunism? **IMF Staff Papers.** 54, 2: 385-417. [Online] Available: http://www.imf.org. [Accessed: 14 July 2007].

AMATO, J.D., and GERLACH. S., 2002. Inflation targeting in emerging market and transition economies: Lessons after a decade. **European Economic Review.** 46, 4: 781-790. [Online]. Available: http://elsevier.com/locate/econbase. [Accessed: 30 July 2007].

ARESTIS, P., DE PAULA, F.L. and FILHO, F.F., 2006. **Inflation targeting in emerging countries: The case of Brazil.** [Online]. Available: http://www.anpec.org. [Accessed: 30 June 2007].

ARTIS, M. et al., 1998. Inflation targeting: What can the ECB learn from the recent experience of the Bank of England? **The Economic Journal.** 108, 451: 1810-1825. [Online] Available: http://www.jstor.org. [Accessed: 17 August 2007].

BERNANKE, B.S., and GERTLER, M., 1995. Inside the black box: The credit channel of monetary policy transmission. **Journal of Economic Perspectives.** 9, 4: 27-48.

BERNANKE, B.S., and MISHKIN, F.S., 1997. Inflation targeting: A new framework for monetary policy? **Journal of Economic Perspectives.** 11, 2: 97 – 116. [Online]. Available: http://www.jstor.org. [Accessed: 30 July 2007].

BATINI, N. and LAXTON, D., 2005. **Under what conditions can inflation targeting be adopted? The experience of emerging markets.** [Online]. Available: http://www.bcentral.cl/eng/studies/central-banking/pdf/v11/467-506.pdf. [Accessed: 19 May 2007].

CARARE, A. and STONE, M., 2006. Inflation targeting regimes. **European Economic Review.** 50: 1297-1315. [Online]. Available: http://www.elsevier.com/locate/eer. [Accessed: 31 July 2007].

CARARE, A., SCHAECHTER, A., STONE, M. and ZELMER, M., 2002. Establishing initial conditions in support of inflation targeting. **IMF Working Paper 02/102.** [Online]. Available: http://www.mafhoum,com/press3/105e14.pdf. [Accessed: 19 May 2007].

CASTELEIJN, A.J.H., 1999. The viability of implementing an inflation targeting monetary policy framework in South Africa. **South Africa Reserve Bank Quarterly Bulletin**, June: 63 – 73. Pretoria: South African Reserve Bank.

CROCE, E. and KHAN, M.S., 2000. Monetary regimes and inflation targeting. **Finance and Development.** 37, 3. [Online]. Available: http://www.imf.org. [Accessed: 31 July 2007].

DEBELLE, G., 2001. The case of inflation targeting in East Asian countries. [Online]. Available: http://www.rba.gov.au/PublicationsAndResearch/Conferences/2001/debelle.pdf. [Accessed: 4 August 2007].

DOTSEY, M., 2006. A review of inflation targeting in developed countries. **Business Review** (Federal Reserve Bank of Philadelphia). Third Quarter. 10-20. [Online] Available: http://www.philadelphiafed.org. [Accessed: 11 July 2007].

DU PLESSIS, S.P.J., *et al*., 1996. **International economics.** Johannesburg. Heinemann. Second edition.

DU TOIT, D., 2005. Introduction to the forex market – A South African perspective. South African Institute of Financial Markets.

DYKES, D., 2004. **Targeting inflation.** In Parsons, R (Ed.) Manuel, Markets and Money: Essays in appraisal. Cape Town: Double Storey Books.

EICHENGREEN, B., 2002. Can Emerging Markets float? Should they inflation target? Central Bank of Brazil. Working Paper No: 36. [Online]. Available: http://www.bcb.gov.br. [Accessed: 30 July 2007].

FAURE, AP., 2005. Money, interest and monetary policy. Quoin Institute (Pty) Limited.

FRAGA, A., GOLDFAJN, I. and MINELLA, A., 2003. Inflation targeting in emerging market economies. **National Bureau of Economic Research.** Working Paper 10019. [Online]. Available: http://www.nber.org/papers/w10019. [Accessed: 4 August 2007].

GOVERNMENT OF MALAWI. 2002. **Malawi Poverty Reduction Strategy Paper.** [Online]. Available: http://povlibrary.worldbank.org/files/Malawi_PRSP.pdf. [Accessed: 3 November 2007].

GOVERNMENT OF MALAWI. 2006. **Malawi Growth and Development Strategy: From poverty to prosperity 2006 – 2011.** [Online]. Available: http://siteresources.worldbank.org/MALAWIEXTN/Resources/MGDS_2006_Final.pdf. [Accessed: 3 November 2007].

GOWLAND, D., 1991. **Money, inflation and unemployment: The role o money in the economy.** New York. Harvestor Wheatsheaf. Second edition.

International Monetary Fund., 2006. **Inflation targeting and the IMF.** [Online]. Available: http://www.imf.org/external/np/pp/eng/2006/031606.pdf. [Accessed: 16 March 2007].

International Monetary Fund., 2007. **International Financial Statistics.** [Online]. Available: http://wwwimf.org. [Accessed: 20 September 2007].

International Monetary Fund., 2007. **World Economic Outlook Database.** September. [Online]. Available: http://wwwimf.org. [Accessed: 20 September 2007].

KADIOĞLU, F., *et al*., 2000. **Inflation targeting in developing countries.** The Central Bank of the Republic of Turkey. Research Department. Discussion Paper.

KHALID, A.M., 2006. Is inflation targeting the best policy choice for emerging economies? A survey of emerging market experiences and lessons for Pakistan. **SBP – Research Bulletin.** 2, 1: 145 - 165. [Online]. Available:

http://jobfunctions.bnet.com/whitepaper.aspr?ducid=165625. [Accessed: 19 May 2007].

MANKIW, G.N., 1999. Chapter 7: **Macroeconomics.** New York. Worth Publishers. 167 – 168.

MASSON, P.R., SAVASTANO, M.A. and SHARMA, S., 1997. The scope for inflation targeting in developing countries. **IMF Working Paper 97/130.** [Online]. Available: http://www.imf.org/external/pubs/ft/wp/wp97130.pdf. [Accessed: 30 March 2007].

MBOWENI, T.T., 1999. Inflation targeting in South Africa. **South African Journal of Economics.** 67, 4: 400-409.

MBOWENI, T.T., 2001. Transparency and the public understanding of monetary policy. Address at the annual banquet of the Institute of Bankers. Johannesburg. 7 March.

MBOWENI, T.T., 2003. Speech at the BIS/SARB management seminar dinner, Pretoria. 2 September.

MISHKIN, F.S., 1998. International experience with different monetary policy regimes. **National Bureau of Economic Research.** Working paper 6965. [Online] Available: http://www.nber.org/papers/w6965. [Accessed: 2 September 2007].

MISHKIN, F.S., 2000a. From monetary targeting to inflation targeting: Lessons from industrialized countries. **National Bureau of Economic Research.**

MISHKIN, F.S., 2000b. Inflation targeting in emerging market countries. **American Economic Review.** 90, 2: 105-109.

MISHKIN, F.S., 2001. Inflation targeting. **National Bureau of Economic Research.**

MISHKIN, F.S., 2004. Can inflation targeting work in emerging market countries? **National Bureau of Economic Research.** [Online]. Available:

http://www.imf.org/external/np/res/seminars/2004/calvo/pdf/mishkin.pdf. [Accessed: 19 May 2007].

MISHKIN, F.S. and POSEN, A., 1997. Inflation targeting: Lesson from four countries. Federal Reserve Bank of New York. **Economic Policy Review.** 3: 9-110.

MUKHERJEE, B. and SINGER, D.A., 2006. **Monetary institutions, partisanship, and inflation targeting.** [Online]. Available: http://web.mit.edu/dasinger/www/I0662_final.pdf. [Accessed: 19 May 2007].

MUSA, S., 2007. Economist. Continental Discount House Limited. Personal communication. 12 April.

NEL, H.F., 2000. Minimum reserve requirements. South African Reserve Bank. **Quarterly Bulletin.** Article 218: 63-72. [Online]. Available: http:www.reservebank.co.za. [Accessed: 18 June 2008].

RESERVE BANK OF MALAWI., 2006. **Quarterly Financial and Economic Review.** [Online]. Available: http://www.rbm.mw. [Accessed: 14 April 2007].

RØISLAND, Ø. and TORVIK, R., 2004. Exchange rate versus inflation targeting: A theory of output fluctuations in traded and non-traded sectors. **Journal of International Trade and Economic Development.** 13, 3:265-285. [Online] Available: http://www.jstor.org. [Accessed: 31 July 2007].

RUDERBUSCH, G.D. and SVENSSON, L.E.O., 2002. European monetary targeting: Lesson from U.S. data. **European Economic Review.** 46: 417-442. [Online]. Available: http://www.elsevier.com/locate/econbase. [Accessed: 31 July 2007].

RYBINSKI, K., 2006. **Inflation targeting and the challenges ahead.** Paper presented at the Third Joint NBP and SNB Seminar on Monetary Policy.

SATO, L.J., 2001. **Monetary policy frameworks in Africa: The case of Malawi.** South African Reserve Bank. [Online]. Available: http://www.reservebank.co.za. [Accessed: 19 May 2007].

SIMWAKA, K., 2006. **The effectiveness of official intervention in foreign exchange market in Malawi.** [Online]. Available: http://mpra.ub.uni-muenchen.de/1123/ [Accessed: 31March 2007].

SIMWAKA, K., 2004. **The feasibility of adopting inflation targeting in Malawi: An empirical exploration.** Research Department, Reserve Bank of Malawi. [Online]. Available: http://129.3.20.41/eps/mac/papers/0407/0407015.pdf. [Accessed: 16 May 2007].

SMAL, M.M. and DE JAGER, S., 2001. **The monetary transmission mechanism in South Africa.** South African Reserve Bank. Occasional Paper, Number 16.

STALS, C., 1999. Inflation targeting as an anchor for monetary policy in South Africa. Address at the Johannesburg branch of the Institute of Bankers, Johannesburg.17 September.

SVENSSON, L.E.O., 1997. Inflation forecast targeting: Implementing and monitoring inflation targets. **European Economic Review.** 41: 1111-1146. [Online]. Available: http://www.jstor.org. [Available: 31 July 2007].

SVENSSON, L.E.O,. 1999a. Inflation targeting as monetary policy rule. **Journal of Monetary Economics.** 43: 607-654. [Online] Available: http://www.elsevier.nl/locate/econbase. [Accessed: 6 August 2007].

SVENSSON, L.E.O,. 1999b. Inflation targeting: Some extensions. **Scandinavian Journal of Economics.** 101, 3: 337-361. [Online] Available: http://www.jstor.org. [Accessed: 11 July 2007].

SVENSSON, L.E.O,. 2002. Inflation targeting: Should it be modelled as an instrument rule or a targeting rule? **European Economic Review.** 46, : 771-780. [Online] Available: http://www.elsevier.com/locate/econbase. [Accessed: 30 July 2007].

TAYLOR, J.B., 1995. The monetary transmission mechanism: An empirical framework. **Journal of Economic Perspectives.** 9, 4:11-26.

VAN DER MERWE, E.J., 2004. Inflation targeting in South Africa. South African Reserve Bank. Occasional Paper, Number 19.