CHAPTER 4

THEORETICAL AND CONCEPTUAL FRAMEWORK: USING ANCHORS FOR MONETARY POLICY

4.1 Introduction

Countries generally adopt a measurement methodology for inflation commensurate with their particular needs and requirements, implying that inflation rates cannot be compared internationally without the necessary circumspection. However, despite the differences in measurement methodology, published inflation figures are used to ascertain and even compare the success of monetary policy between countries.

As highlighted in Chapter 2, macroeconomic and monetary policies can either be based on rules or discretion. This chapter deals with the theoretical debate over the use of rules (or anchors) to achieve the monetary policy objective of lower inflation. One such approach could be to make the central bank "… more independent from government and to charge it with the single responsibility of achieving and maintaining the price level" (Parkin, 1999: 809; see also Mishkin, 2004: 352 to 354). Arnone et al. state that central bank autonomy " … has indeed helped to keep inflation low. On average, a move from no autonomy to full autonomy increases the likelihood of maintaining low inflation by about 50 per cent" (2007: 21). De Wet confirms this view, stating that "… the more independent the central bank is … [from the government] … , the lower the inflation rate will be", citing a number of studies that had all confirmed that "… independence and inflation are highly negatively correlated" (2003: 799).

The use of the term *price stability*, implying relative price stability[39], rather than price level

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[39] Relative price stability as used in this study has the meaning of prices increasing at a low average rate, e.g. average annual price increases of between zero and two per cent or in accordance with an inflation target. It is not used to imply that the relative prices of goods and services in relation to one another should not change. Even in an environment of price stability, changes of the latter nature are still necessary to ensure the reflection of changes in relative scarcity. This matter is also discussed in section 2.2.

stability, is today used in stating the objectives of central banks. This approach was preceded by the use of the terminology *financial stability* as an aim for the central bank in many countries. In this regard South Africa serves as a case in point. Between 2000 and 2004, the Bank's mission statement described its primary goal in the South African economic system as *the achievement and maintenance of financial stability*. From 2005 it was changed to read *the achievement and maintenance of price stability*. One of the main problems with financial stability as a mission statement is " … the absence of an adequate operational definition of financial stability … " (Central Banking, 2006a: 1). In this study the terminology *relative price stability* is accordingly used to encompass also *price stability*[40] as used today by central bankers.

In the debate about central bank independence, Maxwell's question is "[w]hy would government politicians give up control over the economy (in terms of central bank independence), especially when economic performance influences political popularity?" (1997: 3). The conclusion is that " … politicians use central bank independence to try to signal their nation's creditworthiness to potential investors" (Maxwell, 1997: 4). Maxwell states that "[t]he main argument for central bank independence is improved economic performance" (1997: 12), while Epstein (2002) is of the view that the South African authorities have adopted policies such as the gradual relaxation of exchange control, financial liberalisation and control over public expenditure as attempts to improve the confidence of foreign investors in the country and to attract more foreign investment. To this end, he argues, the SA Reserve Bank and the Ministry of Finance conduct policies aimed at attracting foreign investment (Epstein, 2002).

In terms of conducting monetary policy based on rules, the ultimate policy aim is the achievement of *low inflation* or *relative price stability*, although Maxwell (1997) would probably argue that politicians would support these objectives only in as much as they improve the international creditworthiness of countries. Moreover, Maxwell (1997) reaches the conclusion that these policies by and large achieve their stated objectives in developing economies, whereas

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[40] *Price stability* should not be confused with the goal of price level stability, which implies no movement in the level of prices over time.

Epstein (2002) reaches the conclusion that the policies adopted by South Africa did not succeed in employment creation or enhanced investment.

For purposes of this study, *low inflation* and *relative price stability* are taken to have the same meaning, not to be confused with an aim of *price stability* as an anchor for monetary policy*, explained later in this chapter. Countries with a clear commitment to low inflation or relative price stability tend to use as intermediate targets one of a number of anchors, i.e. " … a nominal variable that monetary policymakers use to tie down the price level … " (Mishkin, 2004: 487). Mishkin (2004: 489) identifies as alternative anchors exchange rate targeting, monetary targeting and inflation targeting and targeting changes in the nominal gross domestic product (GDP). As far back as 1968, Friedman stated that "[o]f the various alternative magnitudes that it … [i.e. the monetary authority] … can control, the most appealing guides for policy are exchange rates, the price level as defined by some index, and the quantity of a monetary total" (1968: 15). However, as explained in this chapter, other anchors (or targets) are also available for use by central banks. These are often described in the literature as *nominal* anchors, but as shown in this chapter, a *real* variable can also serve the purpose of an anchor for monetary policy.

This chapter analyses the use of rules-based monetary policy underpinned by an anchor for monetary policy and assesses the available anchors, as well as the monetary policy approach used in the United States, which Mishkin (2004: 510) refers to as a "just-do-it" policy. The approach followed by the Fed reminds somewhat of the eclectic monetary policy followed by the SA Reserve Bank in the late 1990s, discussed in a later chapter.

Section 4.2 deals with the advantages of an anchor for monetary policy. Sections 4.3 to 4.10 highlight the advantages and disadvantages of eight different nominal and real anchors for monetary policy[41]. The current monetary policy approach of the United States is explained in Section 4.11, as the largest economy in the world does not use any of the monetary policy

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[41] As all the anchors considered in this chapter have as a central aim low inflation, the possible use of an employment growth target as a monetary policy anchor, proposed by Epstein (2002), is not considered.

anchors discussed in this chapter. The implications of monetary policy anchors for developing economies are explained in Section 4.12. The conclusions follow in Section 4.13.

4.2 Advantages of an anchor for monetary policy[42]

The preference for an inflation objective entrusted to an independent central bank, overriding any discretion in policy decisions, is supported by an analysis of time consistency (also referred to as time inconsistency) in monetary policy decision-making, thereby enhancing the credibility of the central bank. In this regard Walsh states that " … the three most important ingredients to a successful monetary policy are credibility, credibility, and credibility" (2003: 11). He adds that " … the empirical evidence supports the proposition that there are no quick and easy ways to gain credibility. Instead, it must be earned. Announcements not supported by consistent policy actions are not credible" (Walsh, 2003: 11). In advocating the use of controlling the quantity of a monetary total as an anchor for monetary policy, Friedman stated that " … it matters less which particular total is chosen than that one be chosen" (1968: 15), therefore clearly favouring monetary policy rules over policy discretion.

For a better explanation of the trade-off between rules and discretion in containing inflation, the Lucas supply curve could be considered. It is essentially the same as the expectations-augmented Phillips curve, with core inflation replaced by expected inflation (Romer, 2001: 272). In this model, output (y) is modeled as a function of the full employment level of output together with a weighted value of the difference between actual inflation and expected inflation (inflation gap):

$$y_t = y_{ft} + a(\Pi_t - \Pi^*_{t-1})$$

Where y_t = output

y_{ft} = full employment output

Π_t = inflation rate

Π^*_{t-1} = expectations at t-1 of inflation rate at t.

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[42] Except where stated otherwise, this section draws on Rossouw and Joubert, 2005b.

Conversely, the central bank's preference function, with utility being a function of actual output and inflation, can be written as:

$$z_t = y_t - b \prod_t^2$$

Where z_t = the utility of the central bank.

This implies that the central bank's utility can be increased by either increasing output (y_t), or decreasing inflation ($\prod_t^2$). In considering the two equations, there clearly exists an inherent tension for the central bank with regard to monetary policy implementation. For example, accelerating inflation will cause actual inflation to be higher than expected inflation and therfore increase output over the short run. However, owing to the negative relationship of inflation and utility, the central bank's utility might decrease at the same time.

This leads to the rule-versus-discretion debate in the implementation of monetary policy. This debate, which remains unsettled in literature and is still the source of some controversy, stems from the claim that policy will be dynamically consistent if determined by rules. A central bank (or government) without monetary policy discretion may, under rational expectations, be expected to make short-run optimal decisions every time it can. It therefore has nothing to gain from its opportunism, thereby producing (on average) better outcomes than a central bank with monetary policy discretion or a government with the ability to abandon temporarily its inflation target, as will be the case in New Zealand if its government ever elects to abandon temporarily the Policy Target Agreement (PTA) (Fischer, 1990: 1170; Reserve Bank of New Zealand, 2004; Mishkin, 2004: 488).

If the central bank is bound by policy rules within a framework of a singular goal (e.g. an inflation target of between 3 and 6 per cent in the case of South Africa), it is assumed that the public is aware of this framework and no change in output is expected as a result of a change in inflation. From the central bank's utility function it is concluded that the inflation rate preferred by the central bank will be equal to zero (or as close to zero as possible) or within the target range in a policy framework of inflation targeting, to make sure that no utility is lost. When the central

bank is left to act on its own discretion rather than to be entrusted with a singular goal, the resultant game theory (and particularly non-zero-sum games), based on the theory developed by Nash (Motta, 2004: 543 and 544; Parkin, 1999: 296; Shubik, 1955: 310), between the central bank and private economic agents shows that the two players would permanently be trying to outsmart each other with respect to what inflation levels are expected to be in the future.

To estimate actual inflation levels under a policy of discretion, it is necessary to consider simultaneously the Lucas supply curve and the preference function of the central bank. This implies that the central bank aims at maximising its utility, $z_t = y_t - b\prod_t^2$, subject to the Lucas supply curve $y_t = y_{ft} + a(\prod_t - \prod_{t-1}^*)$. Therefore by substituting y_t:

$$z_t = y_{ft} + a(\prod_t - \prod_{t-1}^*) - b\prod_t^2$$

From here the first order conditions (FOC):

$$\frac{\sigma Z_t}{\sigma \prod_t} = a - 2b\prod_t = 0$$

therefore $\prod_t = \dfrac{a}{2b}$, with

a = marginal benefit (MB)

b = marginal cost (MC).

This means that if the benefit of creating inflation is high, inflation will be high and, on the contrary, if the cost of creating inflation is high, inflation will be low. In South Africa's case, the marginal cost of inflation is higher than the marginal benefit, implying that b will be higher and the SA Reserve Bank will therefore prefer inflation to be lower.

Kydland and Prescott (1977) observe that if expected inflation is low, so that the marginal cost of additional inflation is low, policymakers will pursue expansionary policies to push output temporarily above its normal level. However, if the public has knowledge that policymakers have this incentive, low inflation will in fact not be expected (De Wet, 2003: 796). The end

result is that policymakers' ability to pursue discretionary policy results in inflation without any increase in output (Romer, 2001: 479). Depending on the actions of the central bank and the expectations of private economic agents, the possible outcomes of game theory highlighted in Table 4.1 can evolve.

Table 4.1   Possible outcomes of game theory between a central bank and private economic agents

		Private economic agents	Private economic agents
		$\Pi^{*}_{t-1} = 0$	$\Pi^{*}_{t-1} = \dfrac{a}{2b}$
Central bank	$\Pi_{t} = 0$	$y_{t} = y_{ft}$ (good; no Δ in y_{t})	$y_{t} < y_{ft}$ (can lead to recession)
Central bank	$\Pi_{t} = \dfrac{a}{2b}$	$y_{t} > y_{ft}$ (promotes ↑ inflation)	$y_{t} = y_{ft}$ (good; no Δ in y_{t})

Source: Based on De Wet, 2003 and Mishkin, 2004, and used in Rossouw and Joubert, 2005b

This table highlights the actions of the central bank in the horizontal rows, and the actions of private economic agents in the columns. If the central bank has discretion to select a target and announces that targeted inflation will be zero ($\Pi_{t} = 0$), the level of inflation (Π^{*}_{t-1}) that private economic agents will expect, depends on whether the announcement is credible or not. Private economic agents will, however, probably doubt the announcement because they know that under discretion the central bank will usually set a target higher than zero. Therefore private economic agents will set their expectations higher than zero ($\Pi^{*}_{t-1} = \dfrac{a}{2b}$).

From this the following will occur:

$$y_t = y_{ft} + a(\Pi_t - \Pi_{t-1}^*)$$

with $\Pi_t = 0$ and $\Pi_{t-1}^* = \dfrac{a}{2b}$,

$$\therefore y_t = y_{ft} + a(0 - \dfrac{a}{2b})$$

$$\therefore y_t = y_{ft} - \dfrac{a^2}{2b}$$

$$\therefore y_t \downarrow$$

which is likely to lead to a drop in output, growth lower than potential growth or even a recession in the economy.

The Barro-Gordon model (Barro and Gordon, 1983a; see also Barro and Gordon, 1983b) considers a similar analysis. This model considers monetary policy under conditions where private economic agents believe for a particular reason that the policy will not be implemented (Forder, 2004: 415). This model tests the credibility (in this context also referred to as reputation) of the central bank. The Barro-Gordon model focuses " … attention on what can be done outside the normal run of things in order to induce the private sector to believe that policy will be set to achieve price stability. If the private sector can be made to believe this, policy will be improved because, although unemployment will remain above its optimal level, inflation will not" (Forder, 2004: 416).

This situation can be avoided by scrapping discretionary policy and adopting an explicit target for monetary policy based on rules to be pursued by the central bank, which will ensure an optimal situation if the target is realistically achievable. This approach is preferred by Mishkin, who states that " … the Fed's policy regime … does not have a nominal anchor and is much less transparent … " (2004: 510). For this purpose any one of a number of explicit anchors for monetary policy can be targeted for policy purposes, as is explained in further sections of this chapter, although countries tend to choose a target most suited for their specific circumstances, as each target has advantages and disadvantages.

4. 3   Precious metal standard

The oldest example of an anchor for monetary policy is a precious metal standard, e.g. a gold standard[43] as used by South Africa until 1932. Such a policy requires that the value of the currency should be fixed in terms of a precious metal, e.g. gold, and also implies that banknotes can be exchanged for gold at the fixed price. The price of the precious metal should of course be fixed for this method of targeting to be successful. South Africa's experience with a gold standard, and particularly problems encountered in the period running up to its final abolition in 1932, is described in Chapter 5.

Advantages of a precious metal standard

The first advantage is a clear commitment to the maintenance of a constant price ratio between the currency of a country following this policy and the price of the selected precious metal. This approach leaves no room for any monetary policy discretion.

As the relevant government, rather than the central bank, normally sets the price ratio between the currency and the selected precious metal used as anchor for the system, it shares responsibility for its achievement. As the government is sharing the responsibility for its achievement, it should therefore adjust its own policies to conform to the achievement of the target.

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[43] McAleese states that the UK was the first country to introduce a gold standard in 1819 (2004: 590). To the contrary, Flandreau (2006: 9) states that the convertibility of banknotes for gold in Britain (the UK was formally established only by means of legislation in 1800) was merely suspended between 1797 and 1821. The suspension of the gold standard in 1797 " … had not been motivated by a credibility problem. The directors of the Bank … [of England] … had secured it as a preemptive measure in a period of military conflict with France" (Flandreau, 2006: 10).

Disadvantages of a precious metal standard

The main disadvantage of the use of any precious metal as monetary policy anchor is that it leaves no discretion in adjusting policy.

Secondly, precious metal prices are no longer fixed, as was the case when a gold standard enjoyed broad international support, i.e. until 1931 in the UK or 1932 in South Africa. No precious metal can therefore any longer be used as a nominal anchor for such a system.

Lastly, adherence to this policy approach under conditions of variable precious metal prices might create arbitrage opportunities, as was the case in South Africa in 1931 and 1932, before South Africa finally left the gold standard.

4.4   Exchange rate target

The targeting of an exchange rate can take many different forms, but in recent years such a policy implies the fixing of the exchange rate of one country to that of a large neighbouring or trading-partner country with a history of or commitment to low inflation or relative price stability.

One example of the application of such a policy is the Common Monetary Area (CMA), comprising the Republic of South Africa, Lesotho, Namibia and Swaziland (Metzger, 2004). Although member countries have their own currencies, these currencies are fixed at par to the South African rand and these countries also apply similar exchange controls, implying that capital flows freely between the CMA countries (Rossouw, 2006a: 249). The South African rand serves as anchor for the currencies of the CMA owing to the dominant role of the South African economy in the CMA. South Africa's GDP *per capita* is, for instance, 1,5 times that of Namibia and nearly six times larger than that of Lesotho (Masson and Pattillo, 2005: 67). In addition, South Africa's GDP comprised some 95 per cent of the GDP of the CMA by 2002 (ISS, [S.a.]).

Responsibility for monetary policy decisions in South Africa has been entrusted to the Monetary Policy Committee (MPC) of the SA Reserve Bank, chaired by the Governor and comprising officials of the Bank, but discussions on monetary policy take place between CMA member countries in as much as "[t]he Common Monetary Area Commission meets prior to the SARB's Monetary Policy Committee, which is responsible for … interest rates. Each member country sends a representative and advisors to the Common Monetary Area Commission, in which the different interests of the member countries in the formulation and implementation of monetary and foreign exchange policies are to be reconciled via a consultation mechanism" (Metzger, 2004; see also Bank for International Settlements, 2003: 136).

South Africa follows a policy of inflation targeting, announced for the first time in February 2000 by the South African Minister of Finance (South Africa, 2000). In terms of such a policy framework the central bank has the autonomy to adjust monetary policy, but does not have goal independence. As South Africa effectively sets monetary policy for the CMA and accepts the *de facto*, although not the *de jure*, role of central bank for the CMA, it implies in practice that Lesotho, Namibia and Swaziland indirectly follow an inflation targeting policy, with the concomitant advantages of such a policy. Inflation convergence between the CMA countries will therefore follow as a matter of course. Moreover, it implies that any country nominally following an exchange rate-targeting policy regime will implicitly be following another policy, i.e. that followed by the country in respect of which the exchange rate is targeted.

A recent example of very successful exchange rate targeting was applied by the Dutch central bank in the period leading to the introduction of a monetary union and a single currency in Europe on 1 January 2002. The Dutch guilder was pegged to the German mark and Dutch monetary policy was used to protect the peg between the two currencies. Given the high degree of international trade between the Netherlands and Germany, together with the German Bundesbank's reputation and track record in containing inflation at the time (see for instance Weber, 2006), the Dutch economy reaped considerable benefits in the form of low inflation and relative price stability that also prevailed in Germany. Exchange rate targeting has also been used successfully by emerging economies to contain inflation (Mishkin, 2004: 490).

Alternatives to exchange rate targeting are dollarisation and the use of currency boards. Dollarisation implies, in principle, adopting as a domestic currency the stable currency of another country, although it tends to be the US dollar in practice, hence the reference to *dollarisation* (Saville et al., 2005: 681). This is confirmed by Wessels, who defines dollarisation as " … national economic agents … [using] … a foreign currency as legal tender parallel to or instead of their local currency" (2004: 325). Wessels distinguishes between official dollarisation, implying that a country " … has relinquished its own independent monetary policy … " (2004: 326) and unofficial or *de facto* dollarisation, implying the widespread use of a second alternative currency without official sanctioning (Wessels, 2004: 327).

The use of a currency board implies an arrangement in terms of which the domestic currency issued by the issuing agency, known as a currency board, is backed fully by the holding of another (reserve) currency by the issuing agency, with the clear understanding that the domestic currency will be exchanged freely for the reserve currency. An example of such an arrangement is the currency board of St. Helena, an island in the Atlantic Ocean. This currency board, established in 1976, issues St. Helena pounds covered fully by its holding of British pounds. Hanke and Sekerke (2003: 80 and 81) reach the conclusion that the currency board serves the interests of St. Helena better than the use of foreign currency.

Responsibility for setting and adjusting the explicit exchange rate target to be achieved by the central bank through adjustments in monetary policy is normally shared between the government and the central bank (or currency board) of a country following such a policy.

Advantages of exchange rate targeting

The first advantage of exchange rate targeting is that it is easily understood by the media and the general public, owing to the basic nature of this approach: financial markets report regularly on the success of this policy as the prevailing level of the exchange rate receives regular media coverage.

A second advantage of a policy of exchange rate targeting is the direct contribution of " … keeping inflation under control by tying the inflation rate for internationally traded goods to that found in the anchor country" (Mishkin, 2004: 489).

Thirdly, as long as market participants regard the target as credible and expect the monetary authority to adhere to the target and set monetary policy accordingly, the expected rate of inflation in the targeting country will remain anchored in the inflation rate of the targeted currency, as is the case in the CMA region. This implies the removal of any time consistency problems in the conduct of monetary policy.

Lastly, an exchange rate target has the advantage that it is set by the monetary authority, which includes the government of a particular country. To this end the government shares joint responsibility for the achievement of the target and cannot conduct policies that will put into jeopardy its achievement. It also places accountability for the target and the concurrence of constituents with the target squarely in the political arena, whereas its achievement through the conduct of monetary policy by the central bank is outside the political arena.

Disadvantages of exchange rate targeting

As is unfortunately the case with most choices, a decision to use an exchange rate target as a nominal anchor for monetary policy does not come without possible disadvantages. A first problem is the increased risk of speculation against the currency by market participants taking a view that the central bank will not be able to buy or sell sufficient quantities of foreign exchange to protect the peg at the chosen level. The best-known example of such speculation is the initial participation of the UK in the European Monetary System (EMS). After joining the EMS in October 1990, speculative pressures built against the external value of the pound sterling in September 1992. On 16 September (also known as Black Wednesday) the Bank of England stopped intervening owing to mounting foreign exchange losses (Central Banking, 2002: 28) and abandoned the exchange rate target.

A second disadvantage of this policy is the loss of the benefits of exchange rate signalling owing to fixing the exchange rate. If a country pursues unsound monetary policy, one result might be an adjustment in the exchange rate owing to market forces. However, by its very nature this system will protect the targeting country (at least for an initial period) from such an adjustment. This leads to a related problem: the loss of flexibility or autonomy in adjusting monetary policy to take cognisance of domestic economic conditions. This can be described as losing monetary autonomy to another country, i.e. the one whose exchange rate is targeted (International Monetary Fund, 2005: 166).

This disadvantage is clear in respect of the CMA arrangements. Metzger mentions that "[i]n Namibia, criticisms have increasingly been raised against the dominance of South Africa in designing monetary policy for the whole … [CMA] … region. These voices charge that since independence, Namibia has never had the opportunity to influence South African monetary policy, and they call for the democratisation of the CMA via the establishment of a common central bank for the CMA" (2004). At the ordinary general meeting of shareholders of the SA Reserve Bank on 24 August 2005, the Governor stated that the Bank " … participated in a study outlining the costs and benefits of the creation of a common central bank for Lesotho, Namibia, Swaziland and South Africa. The decisions in this regard will be taken by the political leaders of these countries" (Mboweni, 2005a; see also Masson and Patillo, 2005: 73).

The next disadvantage of an exchange rate target is that " … the burden of achieving the proper real exchange rate falls entirely on the level of domestic prices, and this is particularly costly in terms of output when prices are sticky because then it is output that must adjust first" (International Monetary Fund, 2005: 166).
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In addition, an exchange rate target forces the central bank to use monetary policy to keep the exchange rate on or within the target range. With such a goal in mind, domestic economic considerations will take second place in the application of monetary policy. The result could be large swings in domestic economic conditions, albeit with a stable exchange rate. Friedman

refers to this shortcoming of an exchange rate target as "[i]t might be worth requiring the bulk of the economy to adjust to the tiny percentage consisting of foreign trade. If that would guarantee freedom from monetary irresponsibility … [rather] … let the market, through floating exchange rates, adjust to world conditions the 5 per cent or so of our resources devoted to international trade while reserving monetary policy to promote the effective use of the 95 per cent" (1968: 15).

A last possible problem of this approach is that the targeting country will not be able to conduct monetary policy independently when required (see for instance Saville et al., 2005), as explained above in respect of the CMA. Moreover, if the country in respect of which the exchange rate is targeted, adopts another monetary policy approach, this becomes the implicit policy approach of the targeting country.

A unique problem of dollarisation is that the central bank of a country adopting the US dollar as currency loses seigniorage[44] as a source of income (Saville et al., 2005: 682). The United States has not yet entered into any seigniorage sharing agreements with countries that have dollarised. The implication is that " … dollarisation … [by other countries] … represent a windfall gain for the United States" (Vernengo, 2006).

4.5   Direct control

Direct control is an alternative nominal anchor for monetary policy, using changes in monetary aggregates as intermediate target for monetary policy aiming at low inflation or relative price stability. The origins of the rationing of credit as a means of conducting monetary policy can be found as far back as the end of the eighteenth century, when limits on central bank credit were imposed for the first time by the Bank of England (De Kock, 1974: 237). However, such a policy requires for its effective use, in the words of De Kock, " … either a fully planned and regimented economy … or at least a very large measure of general economic control … " (1974: 241). A

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[44]   Seigniorage as a form of income arises because banknotes are worth more than their printing costs (see for instance Cohen, 2002; Saville et al., 2005; or Vernengo, 2006). As central banks pay less in printing costs for banknotes than their issue value, they earn interest (known as seigniorage) on the assets held as collateral for banknotes in circulation.

number of developed and developing countries (e.g. Mexico, New Zealand, The Netherlands, South Africa, Switzerland, UK and United States) adopted on occasion, particularly in the 1960s, direct quantitative controls over bank credit and/or ceilings on the extension of bank credit and/or related direct control measures (e.g. deposit rate control) as means of conducting monetary policy and in order to contain inflationary pressures in their economies (Board of Governors, 1974: 83 and 89; De Kock, 1974: 240 to 242).

The SA Reserve Bank used direct control measures in one from or another from 1965 to 1980 to control bank credit extension to the private sector (Republiek van Suid-Afrika, 1985: A5). This system of direct quantitative control was supported by a comprehensive system of exchange control (SA Reserve Bank, 2005a) over residents (and on occasion also over non-residents) adopted by South Africa in 1961. Residents were not allowed to invest capital abroad without permission of the exchange control authorities, and such permission was not readily granted (SA Reserve Bank, 2005a).

Exchange controls exposed residents to domestic inflation despite its eroding effect on the capital value of certain classes of domestic assets and investments, particularly bank deposits. Without exchange control the reaction of domestic investors to inflation would have been to revert to foreign investments with a concomitant demand for foreign currency. This outflow of capital would have left the SA Reserve Bank no choice but to contain domestic inflation to a level commensurable with the levels of inflation in industrialised countries by the implementation of sound monetary policy supported by real interest rates at appropriate levels. Exchange control, at least over residents, was therefore a precondition for direct controls in the midst of inappropriate monetary policy and sustained high inflation. This observation about exchange control can, however, be applied generally to any form of unsound monetary policy, and not only to a system of direct control.

To the extent that this comprehensive control system can successfully limit overall credit extension in the economy, it can, at least in theory, succeed in containing inflation. However, as

shown in a next chapter, in the case of South Africa the adoption of this policy did not achieve the goal of low inflation or relative price stability.

Advantages of direct control

The main advantage of a system of direct control is that it gives the central bank immediate and complete control of credit creation by registered banks in the domestic economy. To the extent that the central bank can apply effectively such powers, it can control monetary expansion and the demand for money in the economy.

The second advantage is that a system of direct control is underpinned by extensive reporting to the central bank by registered banks of all their credit extension and deposit-taking activities in the domestic economy. This ensures immediate access to information about money and capital-market activities of banks.

The third advantage of a policy of credit control is the notion that it can be used for credit rationing or directing credit extension for "good use" in the economy. In this respect De Kock (1974: 245) mentions powers of central banks under such a system to:

- determine the policy in relation to advances to be followed by banks;
- give directions to the purpose for which advances may or may not be made by banks; and
- ensure that all the credit resources available in the country are put to best use.

Direct control measures have a further advantage in that the government of a particular country shares joint responsibility for the achievement of the target and cannot conduct policies that will put into jeopardy its achievement.

The last advantage (albeit limited to those individuals or institutions successful in obtaining credit despite credit ceilings) is a generally lower structure of interest rates than would otherwise be prevailing in the economy.

Disadvantages of direct control

The main disadvantages of direct control measures, particularly in a South African context, were discussed in detail by the De Kock Commission (Republiek van Suid-Afrika, 1985). The first disadvantage is that the system results in disintermediation, and therefore fails to achieve its primary objective: a limitation of the demand for credit (Rossouw, 2005: 293).

The second disadvantage is that the system must be supported by general economic controls, e.g. exchange controls over foreign lending to prevent lending from abroad in instances where domestic lenders cannot raise capital owing to the system of domestic controls.

The third disadvantage of the system is that " … restrictions of bank credit have usually been applied only to the private sector, whereas it has frequently been the excessive spending and borrowing of the public sector that has been the main cause of the over-expansion and other maladjustments of the economy" (De Kock, 1974: 244). Whereas the government is nominally party to this agreement, it can in practice apply fiscal policy not aligned to a system of direct controls.

Lastly, the application of a system of direct control results in a classical insider/outsider situation. Individuals and private-sector enterprises that manage to borrow under this system pay lower rates than under a market-oriented system; those members of society who cannot raise finance cannot borrow even if they would have been prepared to pay a premium above market rates for borrowing.

4.6   Money supply targeting

A money-supply target uses changes in growth of one monetary aggregate as an intermediate target for monetary policy aiming at low inflation or relative price stability. In many developed economies the adoption of such targets co-incided with the demise of the Bretton Woods system of fixed but adjustable exchange rates. Friedman stated that "a monetary tool is the best currently

available immediate guide or criterion for monetary policy" (1968: 15). Monetary targeting is based on the quantity theory of money, $MV = PQ$, with M = money supply, V = velocity, P = prices and Q = quantity. If V remains stable in this equation, any change in M will impact on nominal PQ, implying that control over its rate of growth will also ensure control over nominal GDP, where GDP = PQ and, therefore, also control over price changes.

Responsibility for setting the explicit monetary target on an annual basis, to be achieved through adjustments in monetary policy, is normally entrusted to the central bank. In terms of such a policy, the central bank announces annually " … a target every year for the growth of a monetary aggregate on the assumption that controlling the growth of money gives control of inflation" (International Monetary Fund, 2005: 164). In this sense a monetary target tends to be viewed as "the central bank's target", with the government exonerating itself of responsibility for its achievement.

Advantages of monetary targeting

The first advantage of monetary targeting is that data on money and money supply growth for any period are usually available without any major time lag. This availability of data provides early information on the outlook for inflation (International Monetary Fund, 2005: 164).

The next advantage is that the nominal money supply may be more directly controllable by the central bank than inflation, and its tight control also prevents the monetisation of government debt (International Monetary Fund, 2005: 164).

The third advantage is that a policy based on monetary targets typically involves little analytical effort. The only requirements are " … yearly assumptions on trend real growth, trend money velocity and the money base multiplier" (International Monetary Fund, 2005: 164).

The last advantage is the flexibility of the central bank within this framework to adjust policy to take cognisance of domestic economic developments. Moreover, success in applying the policy can be ascertained on each occasion that monetary aggregates are published.

Disadvantages of monetary targeting

The main disadvantage of monetary targeting is that a stable relationship between any monetary aggregate used for targeting purposes and nominal GDP does not always exist in either the short or the long run. In particular, growing international financial integration weakened the required link, implying that the targeting of monetary aggregates has been abandoned increasingly since the late 1980s (Rossouw, 2005: 294). In addition, money targeting is related to the assumption that central banks have full control of the nominal money supply (International Monetary Fund, 2005: 164).

The second disadvantage of money targets is the difficulty of anchoring " … inflation expectations because money targets introduce a second numerical target to the ultimate target of policy, obscuring the task of the central bank and making it harder to monitor its performance" (International Monetary Fund, 2005: 164).

The last disadvantage has bearing on the responsibility for setting the target. To the extent in which the government might view an explicit monetary target as "the central bank's target", it might pursue policies not supportive of the achievement of the target. A monetary target has the disadvantage that it is mainly set by the central bank of a country. To this end the government has little responsibility for the achievement of the target and can attempt to conduct polices that will put into jeopardy its achievement. It also implies that the electorate cannot express its displeasure with the target, as the government can hardly be held accountable or responsible for a target it did not set in the first instance. This has particular relevance owing to the practice that central bank governors should have security of tenure once appointed, as security of tenure allows them the opportunity to conduct monetary policy without subjectivity in the interest of the whole country.

South Africa and the SA Reserve Bank serve as a case in point. The appointments of the Governor and deputy governors of the SA Reserve Bank are governed by Section 4 of the SA Reserve Bank Act, No 90 of 1989, as amended, and this Act does not make provision for their dismissal during their five-year periods of appointment. The implication is that the SA Reserve Bank Act would have to be changed if it is considered necessary to dismiss the Governor or any one of the deputy governors prior to the expiry date of an appointment (Rossouw, 2004: 1101), or such a continued appointment will have to be challenged in a court of law, therefore subjecting dismissal to public scrutiny. This was the case in Canada in the early 1960s, when an attempt was made to remove Coyne as Governor of the central bank before the expiry of his term of office. On 20 June 1961 the Canadian Minister of Finance introduced a bill in Parliament to declare vacant the position of the Governor of the central bank. The House of Commons passed the bill, but, after testimony by Coyne, the Senate defeated the bill. Only after the defeat of the bill did Coyne resign, thereby allowing public debate on his position (Bank of Canada, 1999).

The conclusion is that an anchor or target for monetary policy set by the central bank might result in a situation where the government attempts to limit central bank autonomy when it does not support monetary policy decisions aimed at achieving the target.

4.7   Price stability target

The targeting of price stability (sometimes also referred to as price level stability) involves setting as a target a specific level for a price index comprising a basket of goods and services, e.g. the CPI. This approach therefore differs from the targeting of the price of one good as was the case with gold or silver standards, used earlier as monetary standards (Joint Economic Committee, 2004: 2). Under a policy of targeting price stability, the central bank will try to create more or less money in such a way that the basket always retains a constant (or stable) price level close to the original level at which it was targeted. If the price of the basket rises owing to inflation, a price level target as anchor for monetary policy implies that the central bank commits

itself to reducing the price of the basket to its original level, which may involve deflation (Joint Economic Committee, 2004: 2; see also Gwartney et al., 2000: 12).

A price stability target can be set by either the central bank, by government, or jointly by the central bank and the government. If one of the latter two approaches are followed, it implies that the government is committed to the target and should set and adjust its policies accordingly.

Advantages of price stability targeting

The first advantage of a price stability target is that it serves as a clear commitment to stable prices and hence zero inflation. Secondly, it leaves no room for ambiguity about the future course of monetary policy or the application of such policy by the central bank, as it does not allow discretion in policy application.

Thirdly, to the extent that the government sets or participates in setting the price stability target, the government shares joint responsibility for its achievement, thereby obliging the government to adjust its policies in line with the achievement of the target.

Disadvantages of price stability targeting

The main disadvantage of price stability targeting is that the central bank has very little (if any) flexibility in setting monetary policy. This lack of flexibility may force the implementation of monetary policy measures on the central bank that will result in deflation after price level increases, as such an approach would be the only way of keeping prices stable over a period of time. However, such deflation " … might endanger the financial system and precipitate an economic contraction" (Bernanke et al., 1999: 289).

Once in deflation, the central bank might experience great difficulty reinflating the economy to such an extent that the price level returns to its original level, i.e. the level before the initial price

increases and the subsequent price declines. Targeting price stability might have as an unforeseen consequence continued deflation, i.e. continued declining prices.

4.8 Targeting nominal GDP

As with targeting price stability, targeting nominal GDP is close to inflation targeting as a monetary policy approach. The targeting of nominal GDP was first proposed by Tobin (Parkin, 1999: 805). Adopting such a target implies that the central bank should increase interest rates if nominal GDP increases above the target growth rate and should adjust rates downward if nominal GDP declines below the targeted rate.

A nominal GDP target implies that the authorities should announce publicly an estimate of potential, nominal and real GDP growth (Bernanke et al., 1999: 306), as it serves as the basis for targeting the nominal (i.e. the real GDP adjusted for inflation) level of the GDP. This implies that a GDP target puts some weight on output as well as on prices in the implementation of monetary policy. A decline in projected real GDP growth would require an easing of monetary policy, with the central bank introducing the necessary policy adjustment.

In the analysis of the advantages and disadvantages of the targeting of nominal GDP, it should be mentioned that no countries or central banks have considered seriously the introduction of a nominal GDP target (Bernanke et al., 1999: 307).

Advantages of a nominal GDP target

As the authorities, including the government, have to announce publicly their estimates of potential, real and nominal GDP for targeting purposes, the first advantage is that the government shares co-responsibility for the achievement of the target. The government can accordingly not follow policies that will not be conducive to the achievement of the target.

Secondly, this policy places emphasis on both output and prices in the implementation of monetary policy. A decline in the projected real output would imply an increase in inflation and therefore an easing of monetary policy, thereby requiring the central bank to reconsider its policy stance.

Disadvantages of targeting nominal GDP

The first disadvantage of a policy of targeting nominal GDP growth is that imprecise estimates of potential GDP growth would feed into imprecise targets for nominal GDP growth. Moreover, if the nominal target is set too high as a result of overestimating potential real growth, it might lead to the introduction of inflation into the economy.

Secondly, changes in nominal GDP are reported infrequently (typically quarterly) and are often the subject of *ex post* revisions. It might therefore be difficult to ascertain the policy stance or consider timely adjustments to the policy to ensure achievement of the target.

4.9   Targeting real interest rates

As in the case of targeting price stability, targeting real interest rates shows some links to the targeting of inflation. The use of this policy implies that the central bank sets interest rates at some predetermined real margin above the rate of inflation. For a closed economy, Smithin states that " … the most sensible policy advice to be given to central banks concerned with growth and unemployment outcomes is that they should aim at a cheap money policy in the sense of low (but still positive) real interest rates. They should follow a real interest rate rule, rather than a monetary growth rule or an inflation rate rule" (2002: 26 and 27).

A policy approach showing some elements of a real interest rate target was announced in Chile on 26 July 2001 and introduced from 9 August 2001 (Banco Central de Chile, 2001). In Chile's case this policy approach was introduced in addition to its inflation target (Végh, 2002: 152). When this approach was introduced, the Chilean central bank " … set the nominal annual interest

rate at 6,5 per cent, corresponding to the current monetary policy rate of UF[45] plus 3,5 per cent. This value was established on the grounds of a real interest rate target of 3,5 per cent and expected inflation of 3,0 per cent, which is at the centre of the inflationary target range" (Banco Central de Chile, 2001).

Advantages of a real interest rate target

The main advantage of a real interest rate target is the relative ease of communication that is required to support the policy regime. This study reconfirms the importance of communication to support a monetary policy based on anchors (see for instance also Woolford, 2006: 43 and 44 in this regard). In terms of a simple application of a real interest rate target, the public can merely be informed that rates will be kept at a predetermined margin above the rate of inflation.

The second advantage is that variations in the rate of inflation translate directly into variations in the nominal interest rate (see for instance Quiggin, 1997: 179 and 180). The implication, according to Quiggin, is that " … the objective of stabilising real interest rates is equivalent to the objective of eliminating unanticipated inflation" (1997: 180).

A third advantage is that the successful targeting of real interest rates can ensure periods of relative interest rate stability once the public accepts the credibility of such a policy. Quiggin states that "[d]uring periods of price stability and political stability in the nineteenth century, real interest rates of around 3 per cent prevailed for long periods" (1997: 185).

Disadvantages of targeting real interest rates

As is the case with other monetary policy anchors, a policy of real interest rate targets also brings with it certain disadvantages. The first disadvantage is that inflation rates vary over time. Quiggin states that "[t]he difficulty of determining the equilibrium real interest rate is

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[45] The UF (*Unidad de Fomento*) is a a monetary unit related to the CPI updated daily in relation to inflation, internal consumer prices, and currency fluctuations. Most long-term contracts, mortgages, insurance premiums, house prices, etc. are quoted in UF, while the actual payments are made in Chilean pesos at the rate of the day.

exacerbated by the difficulty of forecasting future inflation rates. Since the principal instrument of monetary policy is the nominal interest rate, an estimate of the future rate of inflation is an essential element of a policy of stabilising the real interest rate" (1997: 186).

A second disadvantage is the problem that a larger real interest rate margin is necessary at higher rates of inflation to ensure disinflation, than at a lower rate of inflation where merely containing inflation at the level of relative price stability is required. The real interest rate margin can hardly be kept constant at all times, irrespective of variations in the level of inflation, and still be regarded as a suitable monetary policy instrument.

The third disadvantage is the selection of the rate of inflation to use for calculation purposes. The natural inclination is to accept the historical rate of inflation measured in terms of the CPI for purposes of calculating the real rate. However, as real rates are used to contain future inflation (and not historic inflation), it would be more appropriate to use some measure of expected inflation. Agreement is necessary on the measurement of expected inflation and the calculation of the real interest rate. In addition, the expected rate of inflation might turn out to have been higher or lower than the actual rate of inflation, thereby implying that the real interest rate margin deviated from the target rate.

Fourthly, increases in indirect taxes (e.g. value-added tax) feed through statistically into the rate of inflation, albeit normally for one year only. The implication is that an increase in indirect taxes can trigger an increase in nominal interest rates for the feed-through period to protect the predetermined real interest rate margin.

Lastly, although practical examples of the use of a real interest rate target are limited, the Chilean example seems to suggest that the target is set by the central bank, rather than by the government in conjunction with the central bank. In the case of Chile the central bank stated, *inter alia,* that its board took the decision about the real interest rate target (Banco Central de Chile, 2001). This is a disadvantage as the government can regard a real interest rate target as the central bank's target, therefore not giving it the necessary policy support.

4.10   Inflation target

In this study inflation targeting as an anchor for monetary policy receives considerable attention, as this is the policy framework currently used in South Africa and, therefore, the framework within which the credibility of inflation in South Africa is considered. The IMF defines an inflation-targeting policy as an " … operational framework for monetary policy aimed at attaining price stability. In contrast to alternative strategies, notably money or exchange rate targeting … inflation targeting involves targeting inflation directly" (International Monetary Fund, 2005: 161).

In the targeting of inflation, the credibility of monetary policy is of the utmost importance. In this regard Goodfriend states that "[a] credible commitment to low inflation prevents inflation or deflation scares that are destabilising for both output and prices. Price stability is welfare maximising monetary policy because it anchors the markup at its profit maximising value and thereby prevents fluctuations in employment and output that would otherwise occur due to sticky prices" (2004: 42). Goodfriend and King state that public confidence about a permanent low inflation environment " … would be reinforced further by a legislative mandate making low inflation a priority for monetary policy" (1997: 44 and 45), particularly because "[a] central bank has an incentive to cheat[46] on its commitment to price stability in the NNS[47] model because a monetary policy action can reduce the markup distortion and increase employment" (Goodfriend and King, 1997: 45). The anchoring of expected future inflation by means of a credible anti-inflation policy " … strengthens the leverage that interest rate policy exerts over *current* aggregate demand. In so doing, credibility for low inflation helps monetary policy make aggregate demand conform to movements in potential output" (Goodfriend, 2004: 42).

Inflation targeting as a monetary policy framework was introduced for the first time in 1990 by

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[46]   Goodfriend and King state that the Fed is now widely held to be responsible for inflation, particularly as low inflation has shown the long-run benefits of price stability, implying that " … the temptation for the Fed to cheat on its low-inflation commitment is much weaker than in the past" (1997: 45).
[47]   Goodfriend and King use NNS as the abbreviation for new neoclassical synthesis.

New Zealand. By adopting this framework, New Zealand introduced a monetary policy approach which clearly states its ultimate objective: low inflation. According to Masson et al. (1998: 35), the prerequisites for adopting an inflation target as nominal anchor for monetary policy are a central bank with autonomy in conducting monetary policy, and the targeting of no nominal variable other than the rate of inflation (1998: 35). Long before the first adoption of inflation targeting as an anchor for monetary policy, Friedman stated in respect of the alternatives that the monetary authorities can control that " … the price level is clearly the most important in its own right. Other things being the same, it would be much the best of the alternatives … but other things are not the same … Perhaps, as our understanding of monetary phenomena advances, the situation will change" (1968: 15). It therefore seems that things have changed sufficiently in the period between 1968 and 1990 that New Zealand saw fit to adopt a policy of inflation targeting and other countries subsequently followed. When South Africa adopted an explicit inflation target in February 2000, it became " … the 15th country to formally adopt this framework" (Mohr and Fourie, 2004: 374) as a fully-fledged inflation-targeting country.

Mishkin (2001: 1) identifies five elements of an inflation-targeting policy. These elements are (Mishkin, 2001: 1):

- the public announcement of medium-term numerical targets for inflation;
- an institutional commitment to price stability as the primary goal of monetary policy, to which other goals are subordinated;
- an information-inclusive strategy in which many variables, and not just monetary aggregates or the exchange rate, are used for deciding the setting of policy instruments;
- increased transparency of the monetary policy strategy through communication with the public and markets about the plans, objectives, and decisions of the monetary authorities; and
- increased accountability of the central bank for attaining its inflation objectives.

In addition to fully-fledged inflation targeting, the literature also makes reference to eclectic inflation targeting and inflation targeting lite (Carare and Stone, 2003). According to Carare and Stone eclectic inflation-targeting countries " … have so much credibility that they can maintain

low and stable inflation without full transparency and accountability with respect to an inflation target. Their record of low and stable inflation and high degree of financial stability affords them the flexibility to pursue the objective of output stabilisation, as well as price stability" (2003: 3). In the case of inflation targeting lite, countries "announce a broad inflation objective, but owing to relatively low credibility are not able to maintain inflation as the foremost policy objective" (Carare and Stone, 2003: 3).

Countries are classified as fully-fledged inflation targeters when the target becomes an objective in its own right, rather than an instrument aimed at achieving general stability in the economy. Moreover, these countries do not use the inflation target in conjunction with any other monetary policy objective such as exchange rate or money-supply growth targets. Inflation targets assist the central bank in achieving price stability by providing a nominal anchor for monetary policy and inflation expectations; enhancing the credibility of the central bank in containing inflation; and improving the transparency and accountability of monetary policy. However, it is important to note " … the authorities' reluctance to adopt inflation targeting at a high inflation rate … [owing to] … the concern about their credibility. Fearing the loss of public credibility, the central bank is more likely to adopt inflation targeting when inflation rates are low, which makes the targeted inflation rate easier to achieve" (Hu, 2003: 26).

Countries adopting inflation targeting as an anchor for monetary policy have adopted either a target range or a specific numerical target point. A target range permits flexibility in the application of monetary policy, but might induce the central bank to keep inflation just below the upper range, rather than well within the range. However, in choosing targets for the rate of inflation when adopting a policy of inflation targeting, " … no country so far has chosen a zero midpoint for its inflation target range … " (Bernanke et al., 1999: 289) to avoid some of the disadvantages of price stability targeting. The specification of the rate of inflation to be used for targeting purposes, and particularly the question whether any prices should be excluded is a matter to be considered by a country accepting an inflation target, as no single international approach is used.

A survey of practices used by central banks in inflation-targeting countries shows that " … most inflation-targeting central banks use headline CPI for targeting purposes, with the central banks in Korea and Thailand … [as] … exceptions … [but] … a number of inflation targeters that have taken the leap of faith and adopted headline inflation targets, have sought wiggle room for this with a variety of finer institutional aspects. These include widening either of the target band or the tolerance range around a point target, providing escape clauses … [or] … lengthening the horizon over which the target is expected to be achieved … " (Rietveld, 2006: 49).

In terms of finding a definition for the classification of countries as inflation targeters, the IMF states that " … inflation targeting has two main characteristics that distinguish it from other monetary policy strategies" (2005: 161 and 162). The first is a commitment to " … a unique numerical target in the form of a level or a range for annual inflation. A single target for inflation emphasises the fact that price stabilisation is the primary focus of the strategy, and the numeric specification provides a guide to what the authorities intend as price stability" (International Monetary Fund, 2005: 161). The second is the forecasing of inflation over some time horizon as " … the *de facto* intermediate target of policy" (International Monetary Fund, 2005: 162). Based on these definitions, the IMF identified 21 countries as inflation targeters in 2005, and this number increased to 23 by 2006[48] (Allen et al., 2006: 5). These countries are highlighted in Table 4.2. This table does not include "indirect" inflation targeters, for instance the CMA partner countries of South Africa, who peg their exchange rates to that of a country that targets inflation. It can naturally be argued that the table should also include such countries, but no support for such an approach could be found in literature.

Table 4.2 shows that three inflation targeters use a single-point target with no range, while eleven countries use a single-point target with a range around the single point. The remaining nine

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[48] The IMF does not include the Fed and the ECB as inflation targeters because " … the former lacks a numerical specification for its price stability objective, while the latter has traditionally given a special status to a reference value for the growth of the euro area M3 broad money aggregate" (International Monetary Fund, 2005: 162). The Swiss National Bank objects to its classification as an inflation targeter, although its monetary policy framework has many features of inflation targeting (Allen et al., 2006: 5). Other than countries that joined the European Union and therefore relinquished monetary policy responsibility to the ECB, to date no country has abandoned inflation targeting as a monetary policy framework.

countries use a target range. The implication is a clear preference for some room within a target, rather than the use of a single point as target.

Table 4.2   Countries targeting inflation in 2006

Country	Date of adoption	Current target (%)*	Current inflation rate (%)**
Australia	1993	2 – 3	4,0 (2nd quarter 2006)
Brazil	1999	4,5 (+/- 2,5)	3,8 (July 2006)
Canada	1991	1 – 3	2,4 (July 2006)
Chile	1999	2 – 4	3,8 (July 2006)
Colombia	1999	5 (+/- 0,5)	4,7 (July 2006)
Czech Republic	1998	3 (+/- 1)	2,9 (July 2006)
Hungary	2001	3,5 (+/- 1)	3,0 (July 2006)
Iceland	2001	2,5	8,6 (July 2006)
Indonesia	2005	5,5 (+/- 1)	15,2 (August 2006)
Israel	1997	1 – 3	2,4 (July 2006)
Mexico	2001	3 (+/- 1)	3,5 (August 2006)
New Zealand	1990	1 – 3	4,0 (June 2006)
Norway	2001	2,5	0,6 (July 2006)
Peru	2002	2,5 (+/- 1)	1,9 (August 2006)
Phillippines	2002	5 – 6	6,9 (2nd quarter 2006)
Poland	1999	2,5 (+/- 1)	0,8 (2nd quarter 2006)
Romania	2005	7,5 (+/- 1)	6,2 (August 2006)
Slovak Republic	2005	3,5 (+/- 1)	5,0 (July 2006)
South Africa	2000	3 – 6	4,9 (July 2006)
South Korea	1998	2,5 – 3,5	2,2 (August 2006)
Sweden	1993	2 (+/- 1)	1,7 (July 2006)
Thailand	2000	0 – 3,5	2,8 (2nd quarter 2006)
United Kingdom	1992	2	2,4 (August 2006)

*   The current target is either a fixed percentage point or level (e.g. Iceland), a fixed percentage point or level with a range around it (e.g. Brazil), or a target range (e.g. Canada).

**   Most recent figures available in the third quarter of 2006.

Sources: Adapted from Allen et al., 2006; Gonçalves and Salles, 2005; International Monetary Fund, 2005; Rezessy, 2006; author's adjustments

Table 4.2 also shows that 12 of the inflation-targeting countries were achieving their targets by the third quarter of 2006. Of the remaining 11 countries, four had inflation rates lower than their targets and seven had rates above their targets.

Table 4.3   Inflation targets in 2006

Table 4.3a   Countries that adopted inflation targets up to 1999 (before South Africa)

Country	Specification of inflation rate used for targeting purposes*	Current target (%)
Australia	Average of quarterly weighted median CPI and trimmed mean CPI, which excludes mortgage interest costs	2 – 3
Brazil	Extended headline inflation (a.k.a. IPCA), which excludes mortgage interest costs	4,5 (+/- 2,5)
Canada	CPI excluding eight volatile components (e.g. energy prices) and the effect of changes in indirect taxes and subsidies on the remaining components	1 – 3
Chile	Headline inflation (related to the *Unidad de Fomento*)	2 – 4
Colombia	Headline inflation excluding food	5 (+/- 0,5)
Czech Republic	Headline inflation excluding regulated prices and indirect taxes	3 (+/- 1)
Israel	Headline inflation	1 – 3
New Zealand	CPI excluding impact of goods and services tax and credit services, which exclude mortgage interest costs	1 – 3
Poland	Headline inflation measured quarterly, which excludes all owner-occupied housing (e.g. mortgage interest cost), food prices and fuel prices	2,5 (+/- 1)
South Korea	Headline inflation, excluding petroleum and agricultural products other than grain (a.k.a. core inflation)	2,5 – 3,5
Sweden	CPI excluding household mortgage interest expenditure and the effects of changes in indirect taxes and subsidies	2 (+/- 1)
United Kingdom	CPI excluding energy, food and tobacco, and CPI excludes cost of owner-occupied housing (e.g. mortgage interest costs)	2

Table 4.3b   Countries that have adopted inflation targets since 2000

Hungary	Headline inflation, which excludes owner-occupied housing and mortgage interest costs	3,5 (+/- 1)
Iceland	Headline inflation, which excludes housing interest costs	2,5
Indonesia	Headline inflation, which excludes mortgage interest costs	5,5 (+/- 1)
Mexico	Headline inflation, which excludes mortgage interest costs	3 (+/- 1)
Norway	CPI adjusted for tax and interest changes and excluding energy products and excise duties (a.k.a. CPI-ATE)	2,5
Peru	Headline inflation	2,5 (+/- 1)
Phillippines	Headline inflation measured quarterly	5 – 6
Romania	Headline inflation	5** (+/- 1)
Slovak Republic	Headline inflation	3,5 (+/- 1)
South Africa	CPI in metropolitan and other urban areas excluding mortgage interest costs (but including certain other costs of owner-occupied housing)	3 – 6
Thailand	Core CPI measured quarterly, excluding raw food and fuel, while CPI also excludes mortgage interest costs and owner-occupied housing	0 – 3,5

*   Information about the specification of the target by the different countries is not readily available for purposes of this comparison, particularly because no single international specification for the CPI used to measure inflation has been developed. The result is therefore that two countries using "headline CPI" show differences in the items included in or excluded from headline inflation, as explained in Chapter 3. Of particular importance is the treatment of owner-occupied housing, as Weideman states that " … there is no consensus … whether to include or not to include owner-occupied housing in official CPI statistics" (2006: 11). Inflation is measured monthly by these countries except where specified otherwise.

**   According to Roger and Stone (2005: 9) the target is 7,5 per cent, but it is stated as 5 per cent by the National Bank of Romania (2006: 9). On closer inspection it transpired that Romania is using a declining target range, i.e. a target of 7,5 per cent for 2005, 5 per cent for 2006 and 4 per cent for 2007.

Sources: Adapted from Bank for International Settlements, 2006: 76; OECD, 2002; Roger, 2006; Roger and Stone, 2005: 9, 46 and 47; Weideman, 2006; central bank and government websites; research by SA Reserve Bank; author's research; e-mails and faxes to and from selected central banks.

The specification of the inflation rates used for targeting purposes is highlighted in Table 4.3. This table shows hardly any correlation between the specification of any of the targets and the inflation rates used for targeting purposes, with large differences in the inflation rate specifications. In view of these differences, comments on the choice of a target point or range should be made only once all the relevant facts have been considered. From the perspective of South Africa, it is noteworthy that Rietveld states that " … there appears to be consensus that mortgage interest charges should be excluded from headline indices for targeting purposes because, in contrast to general prices, these charges typically move – with a very short lag – in the same direction as policy rates. To include them could therefore give a perverse signal for policymakers" (Rietveld, 2006: 49). Since the adoption of inflation targeting, South Africa has achieved considerable success in containing inflation, as is evident in Table 4.4.

Table 4.4   Average inflation rates of South Africa, 1961 – 1970 to 2001 – 2006

Period	Inflation rate
1961 – 1970	2,7 per cent
1971 – 1980	10,7 per cent
1981 – 1990	14,7 per cent
1991 – 2000	9,0 per cent
2001 – 2006	5,0 per cent

Source: SA Reserve Bank *Website*; author's calculations

Inflation targets in countries using such a policy are by and large set by their respective governments (see for instance South Africa, 2000). This approach is preferred because the government is subject to public scrutiny, at least with every general election, whereas the central bank is not. Once the target has been set, central banks focus on its achievement and regularly report on the success or otherwise in its achievement. This implies that central banks in inflation-targeting countries do not have goal independence, but have operational independence.

Governments tend to remain silent after the target announcement, with only occasional reference to the target in the annual budget speech of the Minister of Finance. This approach would not pose a problem if the relevant government takes cognisance of the target in setting its other policy actions. If the target is, however, disregarded in policy decisions of the respective government, e.g. if the announcement of the target is followed by adjustments of administrative prices well in excess of the target, the achievement of the target will be put in jeopardy if administrative prices are included in the rate of inflation specified for targeting purposes.

Owing to the forward-looking nature of an inflation-targeting regime, central banks in inflation-targeting countries have generally adopted three important support measures for their policy frameworks (Rossouw, 2002; Rossouw, 2005: 295): inflation forecasting, explanation or escape clauses and measuring inflationary expectations (opinion polls on inflation). In addition, certain central banks have also introduced communication strategies to enhance the general understanding of monetary policy decision-making (see for instance Rossouw and Powers, 2005).

The first two of these support measures are broadly within the sphere of control of the central bank and/or the government. Under an inflation-targeting policy regime, the central bank has the operational autonomy to employ the necessary human and other resources to develop and maintain forecasting capacity. The explanation or escape clause and its use are subject to agreement between the government, responsible for setting the inflation target, and the central bank, responsible for achieving the target and for explaining any deviations from the target (Woglom, 2003:401), and is therefore also within their sphere of control.

South Africa uses an explanation clause in support of its inflation target. If the target is not achieved, the SA Reserve Bank has to explain to Parliament and other stakeholders the reasons why it is not achieved and the measures instituted to ensure its achievement within a reasonable time. On the contrary, New Zealand serves as a case in point for the use of an escape clause measure in a different fashion.

In the case of New Zealand the Minister of Finance and the Governor of the central bank have to

agree on and publish a Policy Target Agreement (PTA), which sets out specific inflation targets (Reserve Bank of New Zealand, 2004). However, " … the Government has the power to override the PTA … by directing the Reserve Bank to use monetary policy for a different economic objective … [i.e. other than the achievement of price stability] … altogether for a 12 month period, although it must make the instruction public" (Reserve Bank of New Zealand, 2004). This option has not been exercised to date by the New Zealand government.

The third measure (inflation expectations) is not within the immediate sphere of control of the authorities (Mishkin, 2004: 419), although they can monitor inflation expectations. Inflation expectations are informed over time by the policy actions of the authorities and are measured by means of inflation opinion surveys. The most obvious way of sampling inflation expectations is by means of opinion polls; an approach that has been followed in South Africa since 1999[49] (Kershoff and Smit, 2002: 445). Central banks use inflation expectation surveys mainly " … to forecast inflation and evaluate the credibility of their inflation fighting policies" (Kershoff and Smit, 2002: 445 and 446). However, inflation expectation surveys tend to focus on the first, rather than the second, objective.

Central banks using inflation targets measure their performance against the actual inflation rate and assess inflation expectations, but do not generally measure (albeit with a few exceptions as is explained in Chapter 2) whether the general public believes and generally accepts the published inflation figures as an accurate reflection of price increases in the economy. Any distrust of the published rate will be reflected in inflation expectations in the long run, which does not support the notion that "[i]nflation would be eliminated at once with no loss of output if the policy is credible" (Mishkin, 2004: 673).

Although the clear final objective of monetary policy, i.e. low inflation, which is "… readily understood by the public and thus highly transparent" (Mishkin, 2004:504), is one of the advantages of an inflation target, this transparency increases considerably the obligation of central banks in inflation-targeting countries to communicate clearly and unambiguously with all

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[49] The sampling of inflation expectations in South Africa is discussed in Chapter 7.

their stakeholders. Moreover, under an inflation-targeting regime a central bank with responsibility for achieving the target, also has responsibility for explaining any deviations from the target (Woglom, 2003:401), as highlighted above.

If the inflation target is not achieved in the case of South Africa, the SA Reserve Bank has an obligation to explain to Parliament and other stakeholders the reasons for its non-achievement and the measures instituted to ensure its achievement within a reasonable time. This responsibility implies, however, that the SA Reserve Bank cannot limit its communication to periods of problems with achieving the inflation target only, and has therefore embarked on a programme of improving its communication with all stakeholders since the introduction of an inflation-targeting monetary policy regime, as explained in Chapter 5.

Fracasso et al. state that since the effectiveness of monetary policy "… crucially depends on market perceptions, it is now increasingly recognised that transparency is of the essence" (2003: xvii). This implies that communication is a central challenge facing a central bank with an inflation-targeting framework. This view is also supported by Kohn, who states that "[a] basic tenet of economics is that markets work better … with more information. Because central banks are key players in financial markets, a better public understanding of central bank behaviour should improve pricing in those markets" (2005). Despite agreement about the importance of communication, it should be noted that " … there is no consensus among central banks about the best way to communicate policy … Communication policy differences go beyond simply deciding whether or when to issue information after policymaking meetings" (Moskow, 2003). Blinder et al. note that "… the fact that communications policy differs considerably from one central bank to another – and yet seems to work – serves as a reminder that the outsiders care little for the details, no matter how important these details may look to the insiders … we might say that a central bank is communicating well and is transparent enough when it is so predictable that the public does not care about who runs it and how" ([S.a.]).

The benchmarking of communication strategies of central banks is problematic. The ECB states that central banks have " … to choose an appropriate communication strategy" (European Central

Bank, 2007: 65). Ehrmann and Fratzcher assessed the effectiveness of the communication strategies of the Fed, the Bank of England and the ECB in terms of " … the content, timing and consistency of statements by the policy committees and its individual members, as well as the voting behaviour … " (2004). Their conclusion is that these three central banks follow different communication strategies, " … with the Federal Reserve pursuing an approach that stresses the individual accountability of FOMC … [Federal Open Market Committee] … members, whereas the European Central Bank has been pursuing a more collegiate, and the Bank of England an intermediate approach[50]" (Ehrmann and Fratzcher, 2004). The Governor of the Bank of England stated that " … the Bank was failing to explain to markets how it was likely to respond to economic data" (Gilles and Daneshku, 2007: 1) in response to a Reuters poll indicating a perception that " … in the past year the Bank had become less effective in communicating policy" (Gilles and Daneshku, 2007: 1). The Dutch central bank (De Nederlandsche Bank) considered the transparency of monetary policy decisions of central banks in view of their communication strategies and states that "[s]leutel voor een succesvol monetair beleid … is niet zozeer transparantie als wel geloofwaardigheid" [the key for successful monetary policy is not tranparency but credibility[51]] (*DNB Magazine*, 2007: 18).

In summary a " … central finding is that the predictability of policy decisions and the responsiveness of financial markets are equally good for the Fed and the ECB, though there are important differences in the type of communication that financial markets react to. This suggests that there may not be a single best approach to central bank communication, and that the most effective way of communication depends on the circumstances and the environment a central bank operates in" (Ehrmann and Fratzcher, 2004).

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[50] The approach of the ECB is sometimes referred to as " … the *single voice* principle adopted by the Governing Council" (European Central Bank, 2007: 71).
[51] Author's translation.

Table 4.5   Experience with containing inflation in selected inflation-targeting and non-targeting countries over different periods*

	Inflation rates	
	1980 to 1991 (pre-targets)	1992 to 1995 (post-targets)
Inflation rates in 21 advanced economies	7,2	3,3
Inflation rates in 7 advanced economies targeting inflation from 1990 or later	8,0	2,7

Comparison of inflation rates for periods 1985 to the year before adopting an inflation target, and the year from adopting inflation target to 2000**

	Pre-targets	Post-targets
Australia	6,3	2,3
Canada	4,4	2,0
Chile	21,3	9,6
Finland	4,7	1,3
New Zealand	11,3	2,3
Spain	6,2	3,0
Sweden	6,3	1,5
United Kingdom	5,7	2,6

Sources: *   Adopted from Masson et al., 1998
            **   Adopted from Hu, 2003

In its analysis of inflation targeting, the IMF reached the conclusion that "[i]nflation targeting appears to have been associated with lower inflation, lower inflation expectations, and lower inflation volatility relative to countries that have not adopted it. There have been no visible

adverse effects on output, and performance along other dimensions – such as the volatility of interest rates, exchange rates, and international reserves – has also been favourable" (International Monetary Fund, 2005: 179). In comparing the data of countries following an inflation target, Hu states that " … the inflation rate of the inflation targeters moves from a level higher than that of non-targeters to a level lower than that of non-targeters … " (2003: 18) and concludes that " … inflation targeting does play a significant role in lowering inflation … [and] … also significantly improves GDP growth and lowers GDP growth variability" (2003: 25). This conclusion is also supported by Masson et al. (1998), and is highlighted in Table 4.5.

Advantages of inflation targeting

The advantages of an inflation target have received considerable public attention (see for instance Casteleijn, 2001; De Wet, 2003; Du Plessis, 2003; or Mishkin, 2004). The most obvious advantage of an inflation target is the clear final objective of monetary policy, i.e. relative price stability, which is "… readily understood by the public and thus highly transparent" (Mishkin, 2004: 504). Moreover, "[i]nflation targeting is said to impose discipline on reserve banks … and foster the credibility of the reserve bank. This serves to anchor expectations of future inflation, and can help to resolve the time inconsistency problems associated with monetary policy" (Saunders, 2003: 419). In their analysis of monetary policy, Goodfriend and King (1997: 3) reached the conclusion that an inflation target is the most suitable anchor for monetary policy.

Secondly, an inflation target confirms the autonomy and independence of the central bank in selecting or adjusting policy instruments in its endeavours to achieve the target. As the policy framework is relatively easy to understand, it also enhances the transparency of policy decisions.

Thirdly, there can be no ambiguity about the conduct of monetary policy. Without a clear single goal, a central bank can be entrusted with seemingly conflicting goals to achieve. A case in point is the Fed in the United States, which has responsibility for more goals than only price stability, although it is argued that the Fed uses price stability to achieve its other goals, as is explained in Section 4.11 below.

Fourthly, an inflation target increases the credibility of the central bank, provided that the public remains convinced of its commitment to the target. An inflation target is usually specified as a medium-range target, which gives the central bank flexibility in the application of monetary policy. This approach, as well as the use of an escape or explanation clause that allows the central bank to miss the target in the case of an unexpected shock, increases the flexibility in the application of an inflation-targeting policy.

The fifth advantage is that the adoption of an inflation target leads to improved communication about monetary policy, as such a policy enhances accountability and transparency in policy implementation.

Lastly, the adoption of an inflation target imposes considerable discipline on the government. Whereas other policy approaches might result in an unfortunate situation where the government distances itself from the goals, objectives or aims of monetary policy, arguing that their achievement is the sole responsibility of the central bank, a policy of inflation targeting removes any such ambiguity, as the government typically sets the inflation target – South Africa serves as a case in point, with the government setting the target and the Minister of Finance announcing it. This implies that the government shares responsibility for implementing sound broad macroeconomic and fiscal policies that support the achievement of the target. This places accountability for the choice of the target and the concurrence of constituents with the target squarely in the political arena, whereas its achievement through the conduct of monetary policy by the central bank is outside of the political area.

Disadvantages of inflation targeting

Inflation targeting as a monetary policy framework is not without disadvantages or criticism. The disadvantages of such a policy can be summarised as delayed signalling about the stance of monetary policy; too much of a rigid rule imposed on policymakers; the potential for output fluctuations; sustained low economic growth; reliance on economic forecasts; and factors outside

the control of the central bank can influence inflation (see for instance Mishkin, 2004: 506; or Mohr and Fourie, 2004: 557).

The first disadvantage is that the rate of inflation cannot be controlled easily by the central bank owing to the lagging effect of changes in monetary policy. The result is that inflation outcomes of policy are noticeable only after a considerable period of time. The signalling of the monetary policy stance to the market can therefore be delayed, which may increase the cost of containing inflation.

Secondly, an inflation-targeting policy raises questions about the appropriate rate of inflation to target. As is explained in an earlier chapter, changes in any one of a number of indices could be used for the measurement of inflation. It is therefore necessary to identify the most suitable measure for targeting purposes under such a regime. Although this problem is not limited to an inflation-targeting regime only, it is more pronounced under such an approach owing to the increased public focus on the inflation rate. Owing to international differences in the composition of the CPI, an approach followed in one country cannot be readily applied for use in any other country.

Thirdly, the hopes of some countries " … that the costs of disinflation would decline as a result of inflation targeting were not fulfilled … " (Bernanke et al., 1999: 282 and 283), although this disadvantage is not limited only to inflation targeting as a monetary policy anchor. Credibility in applying monetary policy is not achieved immediately by the central bank upon the announcement of an inflation-targeting monetary policy regime (Bernanke et al., 1999: 308).

Fourthly, the adoption of an inflation target requires co-operation in respect of the setting of administered prices. If administered prices are set persistently above the target range, it might not only put the credibility of the target in jeopardy, but could contribute to price increases moving outside the target range, even if such prices are excluded from the index used for targeting purposes. Co-operation in respect of aligning adjustments in administered prices with the target range is therefore important and any misalignment might put the target in jeopardy.

Fifthly, as an inflation target entrusts a single goal (i.e. relative price stability) to central bankers, this goal should be pursued to the exclusion of all other objectives. This implies, however, that the discretion or ability of central bankers to react to unforeseen circumstances in or shocks to the economy will be limited, particularly in respect of the possible development of asset price bubbles in an economy (Roach, 2006a; Roach, 2006b: 56 and 57).

In the sixth place a policy of inflation targeting prescribes flexible interest rate adjustments in order to contain rising inflation. If a rise in inflation coincides with a decline in economic activity or if stagflation (i.e. a period of inflation associated with a recession) occurs, the policy reaction of the central bank should be to adjust nominal interest rates upwards. This adjustment would prolong the period of subdued output, as underlying economic activity would dictate lower, rather than increased, interest rates. The policy might result in a limitation of employment creation and economic growth in as much as real interest rates are kept at a level higher than the level required simply to contain inflation. This disadvantage will depend to a large extent on the question whether the policy announcement of inflation reduction is credible or not (see for instance Parkin, 1999: 809).

The next disadvantage is that inflation targeting can increase exchange rate volatility as it could imply that central banks in inflation-targeting regimes have to neglect the exchange rate – such central banks cannot target the inflation and exchange rates at the same time. This was indeed the case in South Africa in 2001, when the country experienced large instability in its exchange rate (SA Reserve Bank, 2002).

In the eighth place, the IMF states that "[i]nflation targeting cannot work in countries that do not meet a stringent set of preconditions, making the framework unsuitable for the majority of emerging market economies. Preconditions often considered essential include, for example, the technical capability of the central bank in implementing inflation targeting, absence of fiscal dominance, financial market soundness, and an efficient institutional setup to support and motivate the commitment to low inflation" (International Monetary Fund, 2005: 166 and 167).

Lastly, one of the measures supporting inflation targets is the ability of the central bank to employ the necessary resources to support its inflation forecasting capacity. As forecasting remains at best an uncertain business despite a central bank's best efforts, a disadvantage of a policy of inflation targeting is the heavy reliance on econometric models in an uncertain environment, implying that the target could be missed. Indeed, if the target is repeatedly missed owing, *inter alia*, to underdeveloped forecasting capacity, the central bank's credibility in the conduct of monetary policy could be put in jeopardy.

The next section deals with the monetary policy approach of the United States, as that country does not use any of the policy anchors discussed so far in this chapter.

4.11   Current monetary policy approach used in the United States

During the 1970s inflationary pressures developed in the United States owing to a combination of factors such as an expansionary monetary policy, the collapse of the Bretton Woods system and the oil price shock of 1973. In October 1979 the Fed assumed implicit responsibility for containing inflation by emphasising the role played by money growth in the inflation process (Goodfriend and King, 1997: 45). At the same time the Fed also announced a change in operating procedures to control money growth (Goodfriend and King, 1997: 45). Subsequent research by Collard and Dellas (2004: 18), using the tools of the new neoclassical synthesis, has shown that inflation in the United States during the 1970s was caused to a large extent by excessively loose monetary policy. The conclusion is that the policy mistake was the result of imperfect information, rather than tolerance of inflation, as a large decrease in actual output following a persistent downward shift in potential output was interpreted by the Fed as a decrease in the output gap, rather than lower potential output growth (Collard and Dellas, 2004: 18).

The Fed has no explicit anchor for its monetary policy, but rather uses an implicit target for controlling inflation in the United States in the long run, referred to by Mishkin as a "just-do-it approach" (2004: 509 and 510; see also Bernanke et al., 1999: 307). Although this approach has

advantages as is evident in practice by the achievement of the desired objective of low inflation, some of the possible disadvantages of this approach are a lack of transparency, a strong reliance on the skills of staff at the Fed and entrusting considerable autonomy to a non-elected body (see for instance Mishkin, 2004; Parkin, 1999; or Samuelson and Nordhaus, 2001).

Whereas central banks in countries following monetary policy anchored in an explicit nominal target have one objective with monetary policy, i.e. achieving the target, it is noteworthy that the Fed has been entrusted with multiple objectives that could be in conflict with one another during economic hardship or a period of stagflation. Samuelson and Nordhaus (2001: 544) describe these objectives as a responsibility for economic growth, a high level of employment, stability in the purchasing power of the currency and moderate long-term interest rates. Lacker points out that "[i]f you go back and look at the direction Congress gave us — it appears in Section 2A of the Federal Reserve Act and was most recently revised in 1977 — you find that they actually gave us three mandates: maximum employment, stable prices, and moderate long-term interest rates. Nobody mentions the third mandate, moderate long-term interest rates, and for good reason. It is widely understood that the best contribution monetary policy can make to keeping long-term interest rates low is by keeping expected inflation low, because this minimizes the inflation premium built into nominal long-term rates" (2005). Stable prices therefore foster maximum employment and interest rate moderation (Pianalto, 2005). Against this background, views supporting and opposing the adoption of inflation targeting as an explicit anchor for monetary policy in the United States have recently been raised.

Santomero is of the opinion that "[i]ncreasing the degree of central bank transparency is one reason I and some of my colleagues have spoken in favour of an explicit inflation-targeting program. I believe we have reached a point where institutionalising inflation targeting simply makes good sense from an economic perspective" (2005). Lacker states that "… the Federal Reserve has made low inflation and the stabilisation of inflation expectations a priority as never before in our history. My reading of the recent monetary history … leads me to favor the adoption of an inflation target" (2005). The case for an independent Fed entrusted with a single goal, is also supported by Parkin, who states that "[a] radical suggestion for strengthening the

Fed's reputation as the guardian of price stability is making the Fed more independent of government and to charge it with the single responsibility of achieving and maintaining price level stability" (1999: 809).

To the contrary, Frank[52] has stated that the adoption of an inflation target by the Fed would be a mistake (Guha, 2007: 4). Frank states that the Fed has been entrusted the responsibility of achieving low inflation and low unemployment, and one of these objectives should not be afforded higher priority by means of adopting an inflation target (Guha, 2007: 4).

This debate continues after the succession of Greenspan as Chairman of the Fed by Bernanke early in 2006, as Bernanke has expressed support not only for an explicit target for monetary policy, but supported in particular the adoption of an inflation target as monetary policy anchor, and the appointment in July 2006 of Mishkin to the Board of the Fed, as " … Mishkin … is one of the most high-profile advocates of inflation targeting" (Central Banking, 2006b: 3).

4.12   Implications of monetary policy anchors for developing economies

This chapter leaves little doubt about the benefits to be reaped in the form of consistent low inflation by countries adopting a monetary policy anchor. This is arguably not only true for developed economies, but also for developing countries.

The selection of a suitable anchor is more of a challenge for a developing economy than for a developed country. The use of an inflation target serves as a case in point. A developing economy without the necessary technical skills and expertise required to support an inflation-targeting framework, cannot adopt such a target for purposes of monetary policy, despite certain advantages.

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[52] Frank is a Democratic member of the US Congress chairing one of two house committees with responsibility for oversight of the Fed.

The approach followed by South Africa's partners in the CMA can serve as a useful example for some developing countries, although due cognisance should be taken of the disadvantages of a policy of exchange rate targeting highlighted earlier in this chapter. In terms of containing inflation, South Africa's CMA partners currently reap the benefits of South Africa's successful implementation of an inflation-targeting monetary policy, without overcoming the technical challenges underpinning such a policy.

This gives rise to the question whether SADC countries outside the CMA should consider adopting the same exchange rate regime as CMA countries in the interest of containing inflation. Maintaining a nominal exchange rate as an anchor for monetary policy has brought considerable advantages for South Africa's partner countries in the CMA (see for instance Rossouw, 2006a). South Africa already has a seigniorage sharing agreement in place with its CMA partner countries (see for instance Bank for International Settlements, 2003; Glick, 2006; Guillaume and Stasavage, 1999; or Republic of South Africa, 2005), implying that the adoption of such an arrangement by the SADC countries will not expose themselves to any loss of seigniorage income. The adoption of an exchange rate target with the South African currency by SADC countries can introduce indirectly the use of an inflation target as an anchor for monetary policy in these countries.

The first step for developing countries in containing inflation, however, is to recognise the time inconsistency problem and remain committed to low inflation, even in the wake of adverse developments. Once such a commitment has been made, the search for a suitable anchor can follow. On the contrary, the announcement of a suitable anchor for monetary policy, but without a clear and consistent commitment to contain inflation, will hardly achieve any success owing to the time consistency problem. Once the commitment has been made, the final choice of a suitable anchor depends to a large degree on a country's particular circumstances, skills and expertise.

4.13   Conclusions

An explicit anchor for the conduct of monetary policy is preferred as it prevents any time inconsistency problems. A central bank without a clear anchor requires strong leadership (e.g. the Fed under Volcker or Greenspan) to convince the public of its commitment to low inflation. To this end a policy such as inflation targeting with an anchor for monetary policy serves the best interests of central banks and the public in countries committed to low inflation, but without a long history of success in containing inflation.

The most important disadvantage of anchoring monetary policy, as is the case with most other sound economic policy approaches, is that it cannot be applied without any cost to the economy. At best the cost of application can be limited, which might happen if the announcement of the introduction of a policy framework based on rules using an explicit anchor is a credible one. Any time lag between the announcement of such a policy and the achievement of its goals will be characterised by real interest rates at levels higher than would otherwise be required. This would imply a delay of investment decisions, with concomitant lower economic growth and employment creation. As it will never be possible to predict the length of this lag for any economy, the true cost of implementation of a policy based on an anchors will therefore differ on a case-by-case basis.

The advantages of such a policy can simply be summarised as a scrapping of discretionary policy, which forces the central bank to follow a consistent monetary policy approach. This will ensure an optimal situation if the target is realistically achievable. In the selection of a policy regime for use as an anchor, targets set by government for achievement by the central bank have a clear and permanent advantage. This ensures the commitment of the government to the target, and also subjects the target to public scrutiny, as it is one of the policy measures put to the public for scrutiny and reconsideration at the time of a general election. This is confirmed by Casteleijn, who states that the main disadvantage of policies with a target anchor not set by the government, is that government "… could not be expected to elicit the same commitment to policy co-ordination that would follow if the government had formally endorsed or set the target" (2001: 6).

Based on this last criterion, it leaves inflation, exchange rate, nominal GDP and price stability targets, as well as a precious metal standard and direct control as available options for a target. In choosing between these six options, it is necessary to consider their potential disadvantages. A precious metal standard can no longer be applied, as precious metal prices are no longer fixed for long periods of time. Disintermediation and international financial integration have ended the usefulness of direct control. The loss of independent monetary policy and the possibility of speculative attacks on the currency are the main disadvantages of an explicit exchange rate target. The main disadvantage of a price stability target is that price increases in any period might force an economy into deflation in any subsequent period to ensure its achievement. Projections of potential and nominal GDP can be imprecise, while nominal GDP figures are often subject to *ex post* revisions. The main disadvantage of an inflation target is delayed signalling about its achievement and larger output fluctuations if the target is a rigid rule and the sole focus is on inflation only. The potential difficulties of inflation targeting can, however, be overcome with more ease than the potential disadvantages of the other available alternatives.

South Africa's choice of an inflation target as explicit anchor for monetary policy is accordingly to be welcomed. The South African Government retains responsibility for setting the target to be achieved by the SA Reserve Bank, implying that the target remains squarely subject to political accountability to the electorate at the time of general elections. This implies that the SA Reserve Bank does not have goal independence, but has the autonomy to adjust monetary policy to achieve the inflation target.

The remaining issue to consider is the forum where macroeconomic policy choices, e.g. the specification of the target, should be considered between the central bank and the government. In this regard Padayachee favours " … the establishment of institutionalised state/bank consultations over the setting and monitoring of inflation targets or similar approaches to monetary policy" (2000: 499). The conclusion is that this proposal of Padayachee deserves serious consideration in those countries where such fora are not in place, as it ensures easier co-ordination in the implementation of policies conducive to sustained low inflation.

Differences in the specifications of the CPI used for targeting purposes by countries using an inflation-targeting policy confirm that comments on the choice of a single target point, a target point with a range around it or a target range for purposes of the application of an inflation-targeting policy should be made with caution only, and only once all the relevant facts have been considered. Targets differ considerably between the different countries using this policy model. Inflation rates set for targeting purposes and used to monitor achievement of the target (and hence the success or otherwise of the policy), also differ considerably.