

A CRITICAL REVIEW OF ALTERNATIVE MONETARY POLICIES TO THE INFLATION-TARGETING POLICY

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Abstract

The purpose of this paper is to examine alternative monetary-policy frameworks from a theoretical perspective. The current global financial crisis and a debate on the appropriateness of inflation targeting as a monetary policy-framework have made it worthwhile to revisit the debate of alternative monetary-policy frameworks. As a result, different monetary-policy frameworks have been examined and reasons for and against the adoption of each policy framework were highlighted in this paper. This paper finds that there are several frameworks in which monetary policy can be conducted and none of these frameworks is perfect. Consequently, central banks over time, have experimented with various policy frameworks ranging from exchange-rate targeting to monetary-aggregate targeting. However, not all monetary-policy frameworks have been tested in practice. This paper is of the view that the adoption of a monetary-policy framework should be guided by merits and economic circumstances.

Keywords: Monetary Policy, Alternative Monetary-Policy Frameworks, Inflation-Targeting Policy and Economic Growth

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1. Introduction

Monetary policy procedures have undergone significant modifications in reaction to changes in economic and financial conditions. In fact, the history of monetary policy has been characterised by the search of methods to conduct monetary policy. Moreover, a certain theoretical framework may be *en vogue* for central banks around the world in one era, and out of favour in the next. A good example of this was the rise and fall of monetarisms in the 1980s. In the 1970s, monetary targeting was a popular monetary-policy framework adopted by several countries such as the United States, Canada and the United Kingdom. However, this framework was not successful in controlling inflation in these countries. By the early 1980s, it was very clear that the relationship between monetary aggregates, and inflation and nominal income had broken down and all three countries formally abandoned monetary targeting. While policy procedures have changed, the formal long-run goals have not. Inflation remains the primary concerns of monetary policy, and the interest rate the main monetary-policy instrument, perhaps this led to von Hagen (1999:682) to question whether

monetary-policy strategies used to achieve low and sustainable inflation do matter after all. The main difference among monetary-policy frameworks is whether the monetary policy is aimed directly at its final target of price stability or at an intermediate target. Nevertheless, studies by Cecchetti *et al.* (2006) and Thornton (2007) emphasise the need for lower inflation and price stability as the primary concern of monetary policy in our modern society. However, Bruno and Easterly (1998), and Bruno (1995) argue otherwise and question the logic of lowering inflation. According to these authors, lowering inflation comes at a cost of declining economic growth. As a result, some rate of inflation is actually good for economic growth or inflation does not harm economic growth. However, they fail to advice on the rate of inflation which will be beneficial to economic growth.

The quest for an appropriate monetary-policy framework has, however, persistently drawn the attention of economists and politicians alike. Mishkin (1999) highlights various factors that can influence the choice of a monetary-policy strategy, including, but not limited to: i) the form of the government system; ii) economic and legal systems; iii) the level of expertise in monetary policy matters that exist both

inside and outside the central bank; iv) the policy history of a country; v) the analytical capacities of a central bank; and vi) institutional arrangements and structure of the financial sector.

This paper seeks to highlight different monetary-policy frameworks and examine the advantages and disadvantages of each monetary-policy framework. The evaluation of different monetary-policy frameworks presented in this paper will guide policy-makers or politicians in the adoption of an optimal or appropriate policy framework.

2. Alternative monetary-policy frameworks

A monetary-policy framework is the roadmap or approach used to achieve monetary policy objectives. Practical experience shows that central banks choose the most appropriate or suitable monetary-policy framework to fulfil their monetary-policy role from the various available options. In its most basic form, monetary-policy framework can be based on rules or on discretion (Bordo & Schwartz 1997; Tuma 2000).

The basic monetary-policy frameworks include: exchange-rate targeting; monetary-aggregate targeting; interest-rate targeting, discretionary monetary policy; nominal-income targeting; and inflation targeting (Mishkin 2007; Bernanke *et al.* 1999a). Each of these frameworks is now discussed separately.

2.1.1 Exchange-rate targeting

The first strategy with a long history used by central banks to achieve price stability is exchange-rate targeting. Calvo *et al.* (1995) define an exchange-rate targeting framework as a monetary-policy framework that places its primary focus on the level of the exchange rate. Such a framework aims to control the level of the exchange rate, and movements in the level of the exchange rate determine the stance of the monetary policy, that is, exchange rate is at the centre of macroeconomic policy. It is usually practised in small, yet relatively open economies following the stabilisation of inflation when credibility is rather low (Wagner 2000). An exchange-rate targeting regime can, however, be practised following different arrangements and can take many forms (Strašek 1998:69). Calvo (2001) and Macfarlane (1999) highlight different types or the best known forms (arrangements) of exchange-rate targeting frameworks that include the following: i) fixed arrangements such as currency unions, currency boards and a fixed exchange rate; ii) intermediate arrangements such as an adjustable peg, a crawling peg, and a basket peg' and iii) target-zone or band and floats arrangements such as managed and free floats.

In recent years, however, an exchange-rate targeting policy implies the fixing or linking of the exchange rate of one country to another currency or

basket of currencies of a neighbouring or major trading partner that is large, enjoys low inflation or is committed to price stability, and provided that its currency is relatively stable (Wagner 2000). Therefore, any country that follows this form of an exchange-rate targeting policy is implicitly following another policy, that is, policy followed by the country in respect of which the exchange rate is targeted. An exchange-rate targeting framework is based on the belief that it will import credibility of the anchored country, that is, if the exchange-rate target is credible or expected to be adhered to, it anchors inflation expectations to the inflation rate in the anchor country to which currency it is fixed (Grenville 2000; Erol & van Wijnbergen 1997).

Mishkin (1999), Houben (2000:90) and Bernanke *et al.* (1999a) highlight several advantages of an exchange-rate targeting framework. First, the nominal anchor of an exchange-rate target directly fixes the inflation rate for internationally traded goods, and thus directly contributes to keeping inflation under control by containing the imported inflation of an open economy. Thus, the benefits of low inflation enjoyed by the anchor country are expected to spill over or be transmitted to the exchange-rate targeting country. As a result, the exchange-rate targeting framework is more helpful in controlling inflation in open economies that largely depend on imports of goods than in relatively closed economies (Ratti 2002).

Second, the exchange-rate targeting framework anchors inflation expectations to the inflation rate in the anchor country to which currency it is pegged, particularly when the exchange-rate target is credible. This is the case mostly if there are restrictions to capital movements (Mishkin 1998:83). Third, an exchange-rate target provides an automatic rule for the conduct of monetary policy that helps mitigate the time-inconsistency problem where there are incentives for policy-makers to try to exploit the short-run trade-off between employment and inflation to pursue short-run employment objectives using an expansionary monetary policy (Mishkin & Westelius 2008). This is argued to be the case as central banks automatically respond to exchange-rate appreciation or depreciation without wasting time, thereby facilitating the achievement and maintenance of low inflation, and the public easily predicts their actions.

Fourth, an exchange-rate target has the advantage of simplicity and clarity that makes it easily understood by the 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 much media coverage. Moreover, the features of simplicity and clarity enhance the exchange-rate regime's chances of getting public support for a strong national currency because the public knows the basic principles behind an exchange-rate targeting

framework and would like to reap the benefits of a strong national currency (Mishkin 1999).

Fifth, an exchange-rate target is argued to help economic and political integration as in the case of the Exchange Rate Mechanism (ERM), which was in place in the EMU states prior to the introduction of the euro (Mishkin 1999). Sixth, the exchange-rate targeting framework enhances co-operation between the government and the central bank. This is due to the exchange-rate target that is set by the monetary authorities, which include 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 in jeopardy its achievements.

Despite the seemingly inherent advantages of exchange-rate targeting, it has serious drawbacks. International experience with an exchange-rate targeting framework has shown that serious problems can be caused by or linked to this framework. Houben (2000:93), Obstfeld and Rogoff (1995), and Mishkin (1999) excellently articulate several serious criticisms and weaknesses of an exchange-rate targeting framework, which include the following:

First, an exchange-rate targeting framework leads to the loss of an independent monetary policy, or weakens the autonomy of the monetary policy. Since the exchange-rate targeting ties the domestic currency to the currency of another country, the domestic country has to do what the partner country does, thereby restricting the ability of the central bank to respond to both domestic and external shocks. Thus, a monetary policy does not respond to domestic economic conditions and is indifferent to output growth and employment (Ratti 2002:679; Kahveci & Sayilgan 2006). However, the severity of this disadvantage depends on the extent to which economic developments and preferences differ with those in anchor country.

Second, exchange-rate targeting is suitable for small, open economies where the exchange rate is a significant determinant of domestic price developments. The exchange rate is relatively good as a nominal anchor in the case of capital flow regulation. The reduction in capital flow decreases the risk of exchange-rate speculation and allows some other schemes of exchange autonomous monetary-policy regulation to be applied. Third, 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 (Croce & Khan 2000; Stockman 1999).

Fourth, Mishkin (1999:582), and Kahveci and Sayilgan (2006) argue that an exchange-rate targeting framework removes the signal provided on a daily basis by the foreign-exchange market regarding the stance of monetary policy, that is, it postpones the identification of economic problems within the

country in question. As a result, it does not give central banks the necessary flexibility to adapt to the changing financial markets. Furthermore, the lack of an exchange-rate signal is considered to weaken the accountability of the central banks, particularly in emerging-market countries, which makes it difficult to measure policy actions of the central banks.

Fifth, an exchange-rate targeting framework leaves countries open to speculative attacks on their currencies 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 (Jadresic *et al.* 2001 & Mishkin 1998:98). Therefore, exchange-rate targeting promotes financial fragility and possibly a full-fledged financial crisis that can be destructive to an economy.

Sixth, theory and evidence indicate that exchange-rate targeting tends to create increasingly undesirable effects in emerging-market economies as transition goes on (Begg 1996). During the later stages of transition, productivity growth and emerging investment opportunities render adherence to the exchange-rate target not only inappropriate, but also unsuitable. Thus, a powerful argument against the credibility and sustainability of an exchange-rate target is that structural changes in the economy require real exchange-rate changes. In other words, robust regimes require more exchange-rate flexibility (Wagner 2000).

With the increasing liberalisation of capital flows and the globalisation of financial markets, the world has been moving away from exchange-rate targeting in recent years. Moreover, the dissatisfaction with an exchange-rate targeting framework has led to a search for another nominal anchor. One of the alternatives is monetary-aggregate targeting.

2.2.2 Monetary-aggregate targeting

The principle of a monetary-aggregate targeting framework is targeting the growth rate of the money supply for controlling inflation. Thus, if the rate of growth of the money supply is controlled effectively over time, so will inflation be controlled or, to put it differently, stabilising the growth of the money supply would lead to stable prices (Lai *et al.* 2005; Moore 1988). Hence, monetary policy under such a regime focuses on ensuring an appropriate growth rate of the chosen monetary aggregate, or the monetary policy is directed towards controlling the rate of expansion in the total money supply (Croce & Khan 2000). According to Goodfriend (2007), this principle is based on the following arguments: i) the assertion that the cure for inflation is a monetary one; ii) the theoretical finding that, in the long run, price growth is affected by money-supply growth; iii) the argument that a central bank could exercise sufficient control of money to control inflation through its monopoly on currency and bank reserves; and iv) the argument that

a stable relationship should exist between nominal expenditure and the quantity of money.

Moreover, this monetary-policy strategy is based on the quantity theory of money, where $MV = PQ$, with M = money supply, V = velocity, P = prices, and Q = quantity (de Grauwe & Polan 2005:240). The quantity theory of money is the theory that money supply has a direct, positive relationship with the price level. The quantity theory of money states that changes in money supply-growth are followed by an equal change in the rate of inflation through nominal interest rates (de Grauwe & Polan 2005:240). If V remains stable in this equation, any change in M will impact on nominal PQ , implying that control over the rate of growth will also ensure control over a nominal GDP, where $GDP = PQ$ and, therefore, also control price changes (de Long 2000; Davidson 2006).

Just like any other regime, monetary-aggregate targeting has its advantages and disadvantages. The advantages of monetary targeting highlighted by Mishkin (1999), Houben (2000:78), and Mishkin and Savastano (2001:424), include the following: First, unlike the exchange-rate targeting framework, money targeting enables central banks to adjust monetary policy to cope with domestic considerations, that is, central banks are not treated as unified actors (von Hagen 1998). Thus, monetary-aggregate targeting takes into account that monetary-policy decisions involve many different individuals with diverse preferences and dissimilar views of the economy.

Second, central banks have a large degree of independence in the conduct of monetary policy under the monetary-targeting framework. The independence of the central banks enables them to defend themselves against domestic shocks; to choose inflation goals that may be different from those of other countries; and accommodate other monetary policy goals. Therefore, no monetary-targeting central bank adheres to strict, ironclad rules for monetary growth, that is, some flexibility is allowed in this regime (Bernanke & Mishkin 1992; Mishkin 1999).

The third advantage of a monetary-targeting framework is that it has the potential of relative controllability and its tight control prevents the monetisation of government debt. This is argued to be the case particularly when the central bank is targeting a narrow monetary aggregate. The reasoning is that the central bank can be reasonably confident of its ability to achieve a narrow monetary target (Mishkin 1999). Fourth, the announcement of a monetary-aggregate target is a self-imposed commitment by central banks and an enhanced verifiability of their performances. The reason is that it is easy to monitor or determine whether or not the central bank is meeting its monetary targets as data are usually available without any major time lag or are published frequently (Schmid 1999:4).

Fifth, monetary-aggregate targeting has the advantage of being transparent. This is because the calculation of target ranges has become a public

exercise, and the intentions of policy-makers to control inflation are clear to both the public and the markets. Thus, the public and the markets are fully aware of the exact monetary policy goals of the central banks. Furthermore, the public and the markets can compare the targeted monetary aggregate and actual monetary aggregate level, and target misses require a detailed justification by the central banks (Mishkin & Posen 1997).

Sixth, monetary-aggregate targeting promotes an almost immediate accountability for monetary policy and to help constrain monetary policy-makers from falling into the time-inconsistency problem or trap. In this case the central banks are liable to meet the announced monetary-aggregate target, and it is believed that under this monetary-policy strategy, the pressure on a central bank to pursue other monetary-policy objectives is minimised due to transparency of this monetary-policy framework (Schmid 1999; Mishkin 1999).

The disadvantages of monetary-aggregate targeting have been well documented. These disadvantages have been cited as reasons for abandoning this monetary-policy strategy. They include the following: First, accurate control of the monetary stock is simply not feasible or will require undesirable movements in the policy instrument. As a result, the central bank may not be able to manage the selected monetary aggregate with sufficient precision (Cagan & Dewald 1985). Critics of monetary-aggregate targeting argue that the set target can only be achieved through tight monetary policy that leads to extreme volatility of interest rates. Moreover, frequent target misses may also lead to instrument instability (McCallum 1985).

Second, monetary-aggregate targeting relies heavily on a stable money-inflation relationship that produces poor outcomes (Fontana & Palacio-Vera 2004; Taylor 1995). In an environment of financial innovation, improvements in transaction technology, market computation and globalisation, their relationship is ever more volatile and therefore more difficult to predict, resulting in the erosion of the benefits of monetary-aggregate targeting (Arestis & Howels 1992; Clarida *et al.* 1999). Third, there is a weak relationship between the monetary aggregates and goal variable. This relationship challenges the transparency and accountability of the central bank to both the public and the markets, and questions the ability of monetary targeting to serve as a communications device. Hence, the credibility of the central bank is hindered (Wagner 2000).

Fourth, the monetary-targeting framework only reacts to overshooting the target with lags between monetary aggregates and nominal income, and is therefore not a proactive monetary policy. To influence future inflation, it is argued that the central bank must act well in advance to the possibility of overshooting the monetary targets (Bryant 1982). Fifth, monetary-aggregate targeting focuses attention

on or targets an intermediate goal, that is, it focuses attention on the achievement of a target path for some variable that is itself neither an ultimate goal nor a directly controllable instrument. The interference of an intermediate variable can only be detrimental to the achievement of the actual goal, or lead to policy mistakes (Bryant 1982).

Sixth, the monetary-aggregate targeting framework subordinates other macroeconomic goals to monetary-aggregate targeting. DeBelle *et al.* (1998) argues that little is achieved if the central bank successfully meets its monetary target but inflation and output growth are not close to their desired rates. Seventh, the extent in which the government views an explicit monetary target as the central bank target might be problematic. The government might pursue policies that are not supportive of the target achievement (Fontana & Palacio-Vera 2004).

2.2.3 Interest-rate targeting

Interest-rate targeting is a monetary-policy strategy that target a given level of interest rate with which the central bank seeks to influence short-term interest rates. Moreover, an interest-rate targeting framework is characterised by a floating exchange rate which avoids the difficulty of targeting two things by the monetary authority of large or open economy due to the fact that a small open economy cannot affect its real interest rate (Balduzzi *et al.* 1998).

Moreover, the use of this policy implies that the central bank sets interest rates at some predetermined, real margin above the rate of inflation. This policy framework presumes that all other interest rates move in tandem with the interest-rate target. A nominal interest rate is targeted to stabilise inflation and economic growth, that is, monetary policy operates through interest rates that will influence aggregate demand and, thereby, inflation. Thus, a central bank chooses to keep the policy rate at a prescribed level to achieve its objective of price stability, or it tries to bring down the inflation rate by committing itself to achieving a low interest rate. The preferred level of the target rate of the central bank at each point in time takes into account all relevant factors, except any costs of changing the target rate itself. Thus, the central bank ties down the market interest rate by choosing the level of the target rate. In certain cases, the target is normally adjusted in relatively small steps by the central bank at irregular intervals, and only after sufficient information has been accumulated to trigger a target change (Goodfriend 2007; Carlstrom & Fuerst 1995). For example, a central bank changes the interest rate whenever the deviation between its preferred rate and the current target rate reaches critical level. Moreover, a central bank can also change the target range when economic or market conditions require it. However, practical experience demonstrates that the market rate deviates from the target at times owing to transitory liquidity

shocks (Guthrie & Wright 2004; Kobayashi 2004). Interest-rate targeting is considered to have advantages and disadvantages. Advantages cited by, among others, Houben (2000:87), Quiggin (1997:179 & 180), Teruyoshi (2004), and Carlstrom and Fuerst (1996) include the following:

First, interest-rate targeting has the advantage of offsetting real shocks, that is, interest rates can be lowered in difficult times. Second, interest-rate targeting is regarded to have the advantage of eliminating the distortion caused by sluggish portfolios. That is, an interest-rate targeting allows labour, and thus output and consumption, to respond optimally to economic shocks. Third, the interest-rate targeting rule is regarded as simple, easy to understand and monitorable by the public. This is because interest rates data are available without any lag and risk of statistical revisions. As a result, interest-rate targeting can help establish a policy rule to which the central bank can be held directly and precisely accountable. Fourth, interest-rate targeting leads the central bank to make smaller interventions, which limits the scope of uncertain preferences of the central bank to impact on the economy. Fifth, it is relatively ease to communicate the interest-rate targeting framework. This is because interest rates are arguably the most visible elements of monetary policy. This makes interest-rate targeting well-suited to communicating policy intentions. Sixth, variations in the inflation rate translate directly into variations in the interest rate. The objective of stabilising real interest rates is equivalent to the objective of eliminating unanticipated inflation. Seventh, since interest rates are at the beginning of the monetary transmission process, adherence to interest-rate targets is conducive for building credibility of the monetary authority. This happens long before the policy outcomes in terms of inflation and output are known. Eighth, interest rate developments are highly visible and tightly controllable, thereby strengthening transparency and accountability of monetary policy-making. Last, successful targeting of the interest rate can ensure interest-rate stability, particularly once the public accepts the credibility of such a policy.

Despite the above-mentioned advantages of the interest-rate targeting framework, it has attracted a number of criticisms included in various texts in literature, such as Balduzzi *et al.* (1998) and Houben (2000:88). First, interest rates must rise excessively above the inflation level for inflation to be cured. This is the case, even in difficult times that deepen economic problems particularly by choking economic growth. Thus, there is absence of a mechanism to pin down the price level. Second, an interest-rate targeting framework requires substantial fiscal slack. This means that interest-rate targeting does not solve the fiscal temptation to inflate the interest rate in an attempt to boost the economy. Third, under interest-rate targeting, the economy loses its nominal anchor and the rate of monetary growth passively

accommodates inflation. This is because there is no long-run value of the inflation rate (i.e., nominal anchor) to guide the inflation rate to a specific value. Fourth, under the interest-rate targeting framework, there is lack of predictability of the short-term rates as inflation rates vary over time. This is because variations in the rate of inflation translate directly into variations in the nominal interest rate (Quiggin 1997:180). In the absence of a stable and predictable short-term interest rates, the market has no benchmark to set up interest rate. Hence, most central banks and academics emphasise the predictability of interest rate as an important ingredient in the successful and effective conduct of monetary policy. Fifth, interest-rate targeting requires some additional mechanisms to pin down the levels of nominal variables. In practice, difficulties with interest-rate targeting are most likely to arise in periods when inflation and inflation expectations change and become subject to pronounced shifts. Sixth, under interest-rate targeting, there is no predetermined relationship between the interest rate level and the end objective of monetary policy, that is, inflation and output. Since the equilibrium level of interest rate is unknown and constantly fluctuates as a result of economic adjustments, interest-rate targeting risks feeding into an inflationary or deflationary spiral. If interest rate is set above its equilibrium level, the economy will be placed on a deflationary spiral and vice versa. Therefore, interest-rate targeting does not provide a nominal anchor for price level. Seven, an increase in indirect taxes can be problematic under interest-rate targeting as such an increase will trigger an increase in interest rates. Increase in indirect taxes 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. Eighth, monetary policy is made more susceptible to outside pressures. This is because there is no objective measure of establishing whether a specific interest-rate target is inflationary or deflationary which renders monetary policy vulnerable to pressures to adopt expansionary policy stance. With no clear-cut way of telling whether monetary policy is loose or tight, short term considerations are more likely to prevail and any pre-emptive policy adjustments will be more difficult to carry through. Ninth, interest-rate targets by themselves do not anchor the inflation rate and thus do not provide reliable guidance on whether monetary policy is on course to achieve objectives. Last, the government can regard interest-rate target as the target of the central bank, therefore not giving it the necessary policy support. This is because the target is not set by the government in conjunction with the central bank but by the central bank alone. In this view, targeting interest rates is either impossible or undesirable (Barro 1989).

2.2.4 Discretionary monetary policy

A discretionary or combined monetary-policy framework is also known as the “just trust us” or “just do it” approach or monetary policy with an implicit but no explicit nominal anchor (Bernanke *et al.* 1999b). The term “just do it” was coined by Mishkin in 1997. It is defined as a framework with an implicit nominal anchor, and targets certain nominal variables not announced explicitly but adopted only internally within the central bank without a specific parameters or criterion being declared, that is, no specific objectives for monetary policy are laid down or in practice, this strategy does not explicitly prioritise one target above the other (Bernanke 2003; Houben 2000). Other policy objectives such as price stability and full employment may be specified under this framework, but may not offer clear articulation of what they mean operationally and how conflict between objectives are to be resolved (Debelle *et al.* 1998). Moreover, a discretionary monetary-policy approach monitors many variables such as inflation, unemployment, and economic growth, and identifies sources of monetary disturbances instead of simply one indicator to guide monetary policy. Consequently, this monetary-policy strategy is less transparent and economic agents do not always know the nominal anchor for monetary policy or the targeted variable. Advocates of this approach have firmly rejected the use of strict rules for policy and have suggested that central bankers be left free to change monetary policy as they see fit, based on their best judgment and the use of all relevant information. Thus, the discretionary monetary-policy approach applies discretion when adjusting policy. Moreover, proponents of this framework believe that the discretion of policy-makers is constrained by a strong commitment to keeping inflation low and stable. Bernanke (2003) defines “constrained discretion” as a monetary-policy framework that allows monetary policy-makers considerable flexibility in responding to economic shocks, financial disturbances, and other unforeseen developments.

Some of the advantages of a discretionary monetary-policy framework include the following: First, it has a history of success. Discretionary monetary-policy strategy has worked well in the past and the success of the USA with this framework is a prime example. The rate of inflation in the USA was reduced from double digit levels to the 3,0% levels by the early 1990s. Since then, the rate of inflation has been stable at this level or below it (Bernanke *et al.* 2004; Mishkin 1999). Second, a discretionary monetary-policy framework has the potential to solve the time-inconsistency problem by engaging in “forward-looking behaviour” (Mishkin 1999). The third advantage of a discretionary monetary-policy approach hovers around the argument, “If it ain’t broke, why fix it?” (Mishkin 1999). Proponents of this policy approach argue that there is no need to

replace it as it is working well, particularly in our modern dynamic world where monetary policy is continuously tested by different challenges (Bernanke *et al.* 2004). Fourth, by employing two or more targets, discretionary monetary-policy approach alleviates the loss of credibility as a result of missing a specific target (Houben 2000:115). Fifth, discretionary monetary policy enhances the autonomy of the central bank. This is particularly the case when target variables are fully within the domain of the central bank (Houben 2000).

However, a discretionary monetary-policy framework also has some shortcomings. The main disadvantages of this strategy, as indicated by Mishkin (1999) and Houben (2000), include the following: First, the discretionary monetary-policy approach has been criticised for its lack of an explicit nominal anchor. Critics of this approach argue that due to a lack of an explicit nominal anchor, the performance of a central bank cannot be measured under this monetary-policy strategy. Moreover, political problems may also arise in the absence of an explicit nominal anchor. This is argued to be the case as the public does not understand the reasons for a rise in interest rates, which results in criticism of such a policy move. The absence of a nominal anchor may be problematic in that it renders this approach ineffective in dealing with supply or other shock problems, and locks in low inflation. Second, the independence of the central banks can easily be sacrificed under the discretionary monetary-policy strategy as a result of political influence on monetary-policy decision-making (DeBelle *et al.* 1998). Third, discretionary monetary-policy strategy suffers from a lack of transparency as a result of the absence of a nominal anchor. Since there is no official nominal anchor, it makes it difficult for the public and the markets to know the intentions of the central bank, resulting in their having to rely on their guesswork, thereby creating confusion in the market place. Moreover, the possibility of changing the priorities of the central bank on a continuous basis exists, which is likely to undermine the confidence of the public in the central bank (DeBelle *et al.* 1998). The closed-mouth approach adopted under a discretionary monetary-policy strategy creates uncertainty among the general public and volatility in the financial markets. As a result, the economic and financial uncertainty drives the economy to function less efficiently. Fourth, an opaque policy-making process impairs accountability to government and the public by the central bank. A lack of accountability by the central bank is more likely to lead to a time-inconsistency problem whereby it may pursue short-term objectives at the expense of long-term ones. The result then is poor long-run outcomes, and higher inflation, with no benefit to the output front (Mishkin & Westelius 2008). Fifth, using a set of indicators such as the rate of inflation and exchange rate also runs the danger of inducing central banks to procrastinate and do not

take action, especially when the chosen indicators move in different directions, even though action on the monetary policy is required (Mishkin & Westelius 2008). Sixth, discretionary monetary-policy strategy has also been criticised for its heavy dependence on the preference, trustworthiness and skills of individuals in the central bank, that is, for personalising monetary policy. As Bernanke *et al.* (1999b) eloquently put it, the “just trust us” approach may work in a period when the Chair and Board of Governors command widespread support and confidence. In the USA, the success of the Chair of the Federal Reserve, Mr Alan Greenspan, and other federal officials, provides a typical example. However, the fact is that leadership inevitably changes, which may jeopardise the working relationship between the Federal Reserve Bank and its executive branches. Therefore, such a good working relationship may not necessarily continue. This may put pressure on the Federal Reserve Bank to apply an over-expansionary policy in future that will boost inflation in the process. Seventh, conflict during implementation may arise under the discretionary monetary-policy framework by employing two or more policy targets (Houben 2000). Eighth, regardless of what the central bank might proclaim, the different targets under a discretionary policy strategy will never be of equal standing in practice (Houben 2000). Last, a discretionary monetary policy can mean that the relevant central bank faces a credibility problem in the financial markets. Economic agents cannot easily assess either the objectives of the monetary policy or the likely reactions to different forms of economic disturbance. Economic agents are not sure whether the central bank will weaken or abandon its commitment to any stated or unstated policy goals (Mishkin & Westelius 2008).

2.2.5 Nominal GDP targeting

The targeting of nominal GDP was first proposed by Tobin (Parkin 1999:805). Other economists who proposed to target nominal income include Orphanides (2003), and Frisch and Staudinger (2003). “Nominal-income targeting” can be defined as a monetary-policy strategy that a central bank seeks to achieve price stability by steering the expansion of a nominal income at the same rate as that of the potential output (Houben 2000). Proponents of nominal GDP targeting assume rational expectations on the part of economic agents. Moreover, advocates of nominal GDP targeting have emphasised its operability, robustness and dependants only on variables known to policy-makers (Dennis 2001). This is because the GDP is a well known measure of economic activity among policy-makers and non-policy-makers. However, it should be mentioned that no country or central bank has seriously considered the introduction of nominal GDP target (Bernanke *et al.* 1999a:307).

Under nominal-income targeting, any change in inflation is known to be due to supply shocks. The monetary authority set targets for a nominal income that are in line with the goals of monetary policy, and try to keep a nominal income close to its target (Domac and Kandil 2002). This implies that a nominal-income target puts some weight on output as well as on prices in the implementation of monetary policy. Moreover, the monetary authority publicly announces an estimate of potential, nominal and real income growth as it serves as the basis for targeting a nominal level of income. The central bank increases interest rates when the nominal income increases above the target growth rate, and adjusts rates downward if the nominal income declines below the targeted rate (Jansen & Kim 1993; Bernanke *et al.* 1999a:306).

Domac and Kandil (2002) highlight two major approaches that have been suggested in the literature on nominal GDP targeting by Hall and Mankiw (1994). The first approach employs nominal income in conjunction with other economic or financial variables. For example, policy-makers use nominal-income targets to determine appropriate targets for monetary aggregates. Nominal income is, therefore, the ultimate target. The second approach suggested by Hall and Mankiw (1994) uses targets for nominal income by themselves. In contrast to the first approach, a nominal income is the intermediate target of this approach. That is, nominal income is the sole target of monetary policy.

Similar to other monetary-policy frameworks that have been discussed in this paper, a nominal GDP targeting offers some benefits and costs to the economy. The benefits associated with nominal GDP targeting include the following: First, the main advantage of nominal GDP targeting is that it does not rely on knowledge of the output gap. Second, it obliges the policy-making process to put some weight on output and prices. The movement of output and prices determines the monetary policy stance under the nominal GDP targeting framework. For example, declining output growth will imply an increase in the inflation target of the central bank that will tend to stabilise shocks because it will automatically lead to an easier monetary policy (Bernanke *et al.* 1999a:306; Mishkin 1999).

Third, it reduces volatility in the price level and the inflation rate (Hall & Mankiw 1994). Monetary policy under nominal GDP targeting also provides a flexible monetary policy that easily adjusts to offset disturbances to aggregate demand. Clark (1994) further argues that nominal GDP targeting assists policy-makers to balance the goals of stable growth and inflation by responding to aggregate-supply disturbances. Fourth, the government is forced to make public its estimate of the potential real GDP target to the nominal GDP target included in this approach (Bernanke *et al.* 1999a; Mishkin 1999). Fifth, there is an inherent logic to targeting nominal

income since it brings together the two principal macroeconomic objectives that are directly influenced, at least in the short run to medium term, by monetary policy, namely low inflation and high, real output (Houben 2000). Sixth, nominal-income targeting has the advantage of communicating the basic goals of monetary policy to the outside world (Houben 2000). Seventh, next to providing a clear link to the relevant policy goals, nominal-income targets have the attraction of ensuring comparability between inflation and growth objectives such that one objective cannot be pursued at the expense of the other. In this case, nominal-income targeting addresses the root of the inflation bias stemming from the short-run trade-off between inflation and output (Houben 2000). Eighth, nominal-income targeting has stability properties. In particular, it insulates the economy in the face of shocks to money velocity, which the central bank would undertake to accommodate, that is, nominal-income targeting effectively minimises the destabilising effects of shock disturbances. Ninth, nominal-income targeting provides explicit guidance to policy-makers on how to balance the division of the adjustment burden between a change in the price level and an opposite change in real income. By specifically placing equal weight on achieving both the growth and inflation objective, this approach ensures that policy response duly takes both goals into account (Houben 2000). Last, the government shares responsibility for the achievement of the target as both authorities, the government and the central bank, have to publicly announce the estimates of potential, real and nominal income for targeting purposes. As a result, government will not follow policies that are not conducive to the achievement of the target (Mishkin 1999).

Nominal GDP targeting has also been subjected to criticism and objections from economists such as Houben (2000), Axilrod (1985) and Poole (1985). The following are, among them, notable: First, it is often argued that central banks have only a limited ability to influence short-run movements in nominal income. As a result, governments or central banks do not like to announce nominal-income targets because it cannot be controlled, and errors will entail a loss of credibility. Second, national income statistics are not produced often or quickly enough, and are significantly revised after their first release. It might therefore be difficult to ascertain the policy stance or consider timely adjustments to the policy to ensure achievement of the target. Third, the concept of a nominal GDP is not better understood by the public than the CPI, and is easily confused with the real GDP. As a result, communication to the public and the accountability of the central bank are not better served under this strategy (Bernanke *et al.* 1999a). Fourth, estimates of potential real GDP growth can also be problematic as such estimates are far from precise, even in retrospect. Thus, imprecise estimates of a potential nominal income would feed into

imprecise targets for nominal-income 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. Fifth, nominal GDP targeting is less transparent because of greater problems concerning the measurement of target quantities (Tuma 2000). Sixth, the definition of the target may be problematic under nominal-income targeting. The reason is because there are several proposals that include the Gross National Product (GNP); gross domestic expenditure; and final sales targets, with the first two alternatives receiving the most attention (Argy 1991). Seventh, a conceptual problem is that nominal-income targets are situated right at the end of the process of monetary transmission and are not, by themselves, appropriate leading indicators for future nominal income. Thus, it makes a poor guide for short-term monetary-policy decisions, leading either to policy instability or to inaction. Eighth, it is difficult to project nominal income precisely and reliably. In this respect, nominal-income targeting can be considered a relatively demanding strategy in terms of information requirements. Thus, to be effective, substantial knowledge is needed of current and prospective output and prices, and of how developments in these variables are influenced by monetary-policy changes. Ninth, a further issue is the equal weight placed by nominal-income targeting on achieving inflation and output objectives since it is doubtful whether this parity accurately reflects the preferences of society. If, for instance, the public were to attach more importance to output stability than to price stability, adhering to nominal-income targets will lead to excessive output stability. Tenth, a strategy of nominal-income targeting makes it difficult to hold central bank accountable for the outcome of its decisions. This is because the central bank can not be responsible for an aggregate that is dependant on the policy developments, notably fiscal policy that is far outside its direct control. As a result, the central bank runs the risk of losing credibility if it adopts this strategy. Last, problems may also arise due to political involvement in setting nominal income targets. This is because it is more likely in practice that nominal income targets will be set by politicians and central bank due to the importance of policy mix in achieving the set targets and target's inclusion of real income objectives. As a result, there is a risk of growth projections to be set too high, thereby loosening monetary policy's anchor.

3. Conclusions

This paper sought to discuss and scrutinise alternative monetary-policy strategies to inflation targeting. It was established in this paper that finding a monetary-policy regime that can deliver some form of price stability as well as satisfactory economic performance has always been explained more convincingly in

theory than in practice. Consequently, central banks over time, have experimented with policies ranging from exchange-rate targeting to monetary-aggregate targeting. However, exchange-rate targets have been shown to be dangerous to economic prosperity; monetary targets have been revealed to be unreliable; and monetary-policy frameworks that involve multiple objectives (such as discretionary monetary-policy regimes) do not offer much guidance for policy-makers or to the general public; and other monetary-policy regimes remain untested. Thus, alternative monetary-policy frameworks have not provided the flexibility required to withstand different types of shocks and, in fact, have made it harder to maintain price stability while avoiding unnecessary volatility in the wider economy. The latest regime in monetary-policy formulation, however, is a renewed interest in inflation targeting. Based on merits, this policy has attracted the attention of policy-makers and the public alike (Siklos 1999). Many central banks adopted an inflation-targeting framework as a pragmatic response to the failure of indirect approaches or other monetary-policy regimes to yield acceptable results and the lack of policy alternatives rather than in response to new economic thinking or just sticking to inflation targeting (Walsh 2009; Hammond 2009). Moreover, monetary authorities also acknowledged that having no framework for a monetary policy or a framework with little or nothing to contribute to the overall economic performance, does not enhance their credibility. The case for targeting inflation is bolstered by the following two reasons, namely the convergence around the world in both goals and methods used to conduct monetary policy since the 1990s; and the overriding requirement for monetary policy to provide a nominal anchor to control inflation, and inflationary expectations directly (Allsop & Vines 2000; Roger & Stone 2005).

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