



# Towards An Inflation Targeting Regime in Zambia

Caesar Cheelo & Thulani Banda  
Working Paper No. 23

June 2017



<b>Abstract</b>	<b>ii</b>
<b>Executive Summary</b>	<b>iii</b>
<b>1 Background</b>	<b>1</b>
<b>2 What is monetary policy and how is it conducted?</b>	<b>3</b>
<b>3 Why the shift to inflation targeting?</b>	<b>5</b>
<b>4 Pre-conditions for successful inflation targeting</b>	<b>7</b>
<b>4.1 On central bank independence</b>	<b>7</b>
<b>4.2 Commitment to price stability</b>	<b>9</b>
<b>5 Some outstanding issues</b>	<b>13</b>
<b>6 Conclusion and recommendations</b>	<b>14</b>
<b>7 References</b>	<b>15</b>

# ABSTRACT

In this paper, I seek to discuss the conduct of monetary policy in an inflation targeting framework. The objective is to understand structural and institutional nuances in settings where this framework is successful in controlling inflation and challenges that emerge in the implementation of inflation targeting. I deal with the question: which institutional conditions should exist to support the successful implementation of inflation targeting in countries that use it? I find several institutional and legal elements which are common and can potentially explain much of the success in the implementation of inflation targeting among their monetary authorities. I benchmark these elements with the concepts of transparency and accountability of the central bank which are central tenets in the discussion of inflation targeting. I note that central bank credibility is a key outstanding element in explaining the success of inflation targeting. Components such as central bank independence and commitment to low stable inflation as the overriding objective of monetary policy represent critical preconditions for inflation targeting and can sustain the credibility of monetary policy.

# EXECUTIVE SUMMARY

In the year 2008, the Bank of Zambia announced its intention to change its monetary approach from a monetary aggregates targeting framework to that of inflation targeting. The big step towards this change was made in April, 2012 when the Bank of Zambia introduced the benchmark Bank of Zambia policy rate. This meant that the central bank would shift from its reliance on money supply as the main policy lever to interest rates and an increased focus on managing inflation before any other objective. The objective of this paper was to highlight the pre-requisites for the successful implementation of an inflation targeting monetary policy regime and explain why the Bank made the decision to switch regimes. In addition, the paper has pointed out some debates about the implications of inflation targeting and its limitations.

In accordance with the classification by Mishkin (2002), the paper discusses four (4) main types of monetary policy regimes: (i) exchange rate targeting (ii) monetary targeting (iii) monetary policy with an explicit goal, but not an explicit nominal anchor (iv), inflation targeting. By monetary policy regime or framework is meant the institutional arrangements under which monetary policy is made and the constraints under which monetary policy makers operate.

The paper finds that inflation targeting has several advantages over the other three policy frameworks. We find that the inability to conduct independent monetary policy under exchange rate targeting, the breakdown in the relationship between money and inflation under the monetary aggregates targeting regime and the lack of a nominal anchor under the third framework have made inflation targeting appear to be a better alternative. Moreover, inflation targeting is argued to have a lesser inflation-output trade-off which means that inflation targeting is also more consistent with output stabilization.

However, the major direct contribution of inflation targeting is in enhancing the credibility of monetary policy. Monetary policy has credibility if the propositions and assumptions under which the central bank operates are believable and it has the capacity to achieve policy objectives. Credibility is proxied by comparing actual outturn of inflation to the target (capacity to achieve) and the market's perception (ratings) of government domestic securities (believability). It is in possessing credibility that the central bank can effectively anchor expectations and consequently, control inflation.

Inflation targeting aims to achieve credibility by imposing the following pre-conditions:

- i. The central bank must conduct independent monetary policy
- ii. The central bank should fully commit to inflation targeting as the major objective of monetary policy The following are the ways in which the two conditions are met under inflation targeting:
  - i. a public announcement of a medium-term numerical target for inflation;
  - ii. an institutional commitment to price stability as the primary goal of monetary policy, to which other goals are subordinated;
  - iii. 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 (multiple indicators approach);
  - iv. increased transparency of the monetary policy strategy through communication with the public and the markets about the plans, objectives, and decisions of the monetary authorities; and
- v. Accountability of the central bank for attaining its inflation objectives.

In addition, the paper observes that the legal framework defining central bank governance and the central bank's relationship with the government have implications on the degree of independence and commitment to inflation targeting.

The paper finds that Zambia does not exactly meet the pre-conditions for full-fledged inflation targeting. In sum, Zambia's commitment to price stability is threatened by: (i) the ability of the government to legally impose opposing objectives if it so wished and (ii), lack of specificity as to what exactly is meant by price stability vis-à-vis the absence of a critical level of inflation. Further, the Bank of Zambia Act does not set price stability as the overriding monetary policy objective.

Independence of the central bank is undermined by the presence of fiscal dominance which manifests itself in two ways, namely: (i) through fiscal policy's direct impact on aggregate demand thereby influencing inflation and (ii), through its effects on the monetary policy transmission channels such as interest and exchange rates. Furthermore, the lack of policy target agreements (PTAs) between the Governor and the government leaves a lot of discretion on the part of the government whereby there is no clear dismissal rule which compromises the security of tenure. Also, no escape clauses are provided for when monetary policy is unable to achieve their target which makes policy inflexible with respect to competing economic objectives.

Consequently, the paper makes the following recommendations:

- i. The law should provide for a policy target agreement which should be published in the Government Gazette. The PTA will among other things, outline the dismissal rule, define escape clauses and establish the critical inflation level.
- ii. Fiscal and monetary policy should be better co-ordinated to ensure that there is no case of fiscal dominance
- iii. The law should provide for the separate creation of the monetary policy committee

In addition to the above recommendations, some outstanding issues with regard to the design of inflation targeting and its efficacy (or limitations thereof) must be taken into consideration as Zambia attempts to implement inflation targeting. These include, but are not limited to:

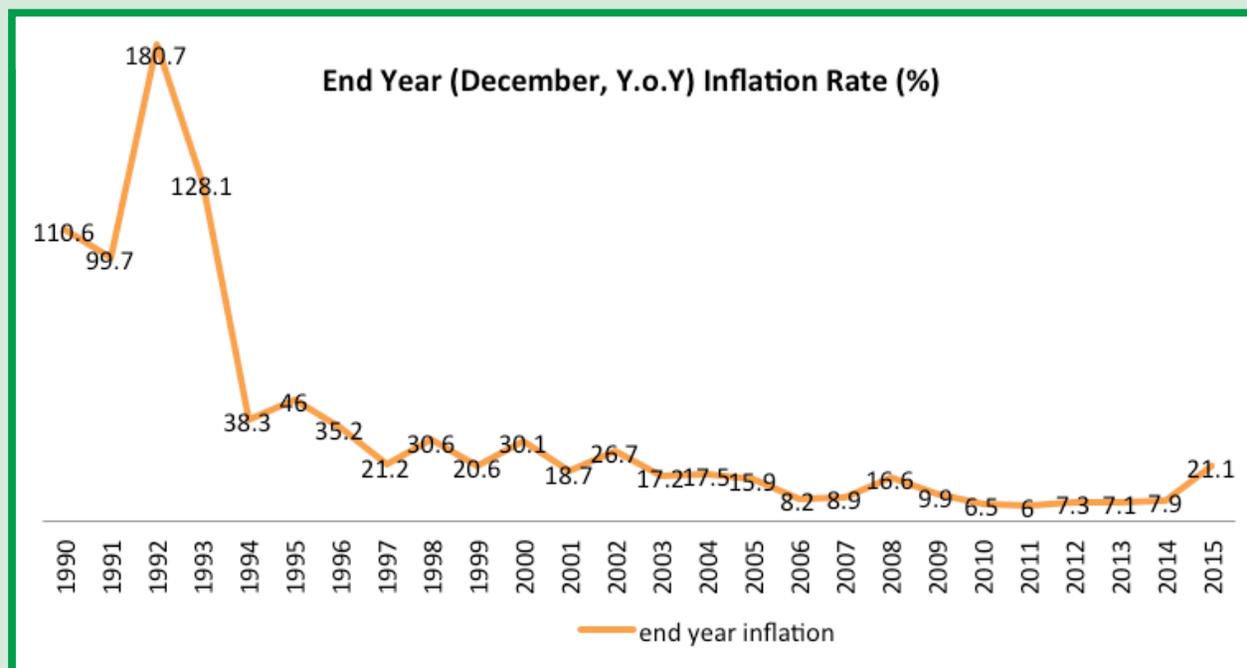
- i. The choice of an appropriate measure of inflation: headline or core inflation?
- ii. Whether to do away with the price stability objective when inflation is high and economic growth is stagnating or to pursue a dual mandate.

# 1. Background

Zambia started to grapple with macroeconomic instability as far back as the seventies. Both internal and external factors interacted and deteriorated the economic environment. Domestically, government policy shifted from private sector participation to nationalisation and heavy government-directed development path. This translated into fixed exchange rate regime, lowering interest rates via money supply expansion and rising budget deficits as the state increased its presence in economic activity. External shocks that involved low copper prices and a rise in oil prices due to OPEC oil embargoes put further stress on the already weakening economy. A rapid increase in inflation is one of the most destructive outcomes in this period. Inflation destabilised the financial system, caused capital flight and eventually led to the shunning of assets denominated in kwacha. The high inflation also translated into high and unaffordable cost of living beyond what the average person could afford. Attempts directed at improving wages merely led to the emergence of a wage-price spiral which further exacerbated inflation. The legacy of the 1970s mirrors the experiences witnessed in the 1980s and early 1990s prior to a massive economic liberalisation programme that started in 1992.

The World Bank and International Monetary Fund under the structural adjustment programme supported extensive economic reforms in the early 1990s. The strict government fiscal management and broad economic liberalisation which saw interest and exchange rates floated, influenced some achievement of macroeconomic stability including a moderation in the upward trend in inflation.

Figure 1: Zambia inflation trends 1990-2015



Source: adapted from Central Statistical Office, Monthly Bulletin, January 2015

Figure 1 shows the gains achieved in reducing inflation over a 26 year period from 1990 to 2015. Inflation declined from triple-digit levels at the start of the 1990s to double digits and further into single digits by the mid-2000s. Much of the decline is linked to improved fiscal management that cut fiscal deficits to low levels and alignment of money supply to real output growth (Hill & McPherson, 2004).

In 2008, Zambia's central bank--the Bank of Zambia (BOZ)--indicated its intentions to transition towards inflation targeting as its main framework for guiding monetary policy.

This was in an effort by the Bank to improve the conduct of monetary policy so as to maintain the economy's good macroeconomic performance. The desire for reform also draws on the realisation that while the successes made in reducing inflation were encouraging, further monetary reform was necessary in order to avoid the mistakes made in past decades in which misalignment of monetary policy underpinned high inflation rates. Specific reform of the monetary policy framework included the introduction of the monetary policy rate in April 2012 as a key policy instrument (BOZ, 2012).

Given the decision to adopt inflation targeting, this paper aims to review the inflation targeting monetary policy framework in relation to macroeconomic performance. In particular, the focus shall be on determining the extent to which Zambia fulfils the pre-conditions for successful implementation of inflation targeting.

The paper aims at the following:

- i. Enhance understanding of monetary policy in Zambia by explaining the frame within which monetary policy is implemented. This is important because for inflation targeting to work, public support and related political processes are essential but these cannot be co-opted if the monetary policy framework is not understood.
- ii. Outline the pre-requisites for successful implementation of inflation targeting. These range from specific policy objectives to institutional and structural conditions.
- iii. Discuss outstanding issues going forward as Zambia implements inflation targeting as its policy framework for guiding monetary policy.

Analysis in relation to the above-stated objectives is largely extensive literature review. No primary or secondary data analysis and modelling are carried out. Therefore, the paper acknowledges that other works--present or future--could provide better insights into important aspects of monetary policy. For example, this paper does not investigate the nature of monetary policy transmission mechanisms which are essential in gauging the effectiveness of policy instruments such as the policy rate. The focus is on revealing the critical success factors of monetary policy under an inflation targeting framework--an area that has received limited attention. The rest of this paper is organised as follows: Section 2 gives a primer on the conduct of monetary policy and explains the use of nominal anchors and how the choice of a nominal anchor is pivotal in defining a monetary policy framework. In Section 3, I zero-in on the monetary policy framework of inflation targeting and explain its merits and de-merits compared to other frameworks introduced in Section 2 using theoretical arguments and central bank experiences and in Section 4, the 'conditions' under which inflation targeting operates are explained and I discuss what the practical implications are for an inflation targeting central bank. The section will zero-in on the concepts of independence and accountability of the central bank. Finally, Section 5 concludes.

## 2. What is monetary policy and how is it conducted?

Monetary policy is the manipulation of a central bank's control over the supply of money to achieve a broad set of economic objectives (Horngren, 1995). Mishkin (2004) defines monetary policy as the management of money and interest rates. Rasche and Williams (2007) refer to it as any central bank action whose aim is to influence and/or target short-term interest rates or nominal exchange rates.

Regardless of the specific definition of monetary policy, the central bank has a broader aim of achieving stable (low volatility) of economic variables such as prices and growth among others.

Every central bank usually adopts a policy framework under which to implement monetary policy. A monetary policy framework essentially refers to "the institutional arrangements under which monetary policy is made and the constraints under which monetary policy makers operate," (Horngren, 1995). Therefore, a monetary policy regime outlines the mandate of a central bank, objectives of monetary policy and the central bank's supervisory role of the financial sector.

Central to any monetary framework is the use of a nominal anchor or policy target (Martinez, 2009). A nominal anchor is a single variable or device which the central bank uses to manage expectations of economic agents about the nominal price level or its path or about what the Bank might do with respect to achieving that path (Krugman, 2003). Central banks utilise intermediate targets because they do not have direct control over their final targets. Hence, an intermediate target (such as money supply or interest rate) is usually one the monetary authority can reasonably control and one that has a close link to the overall goal target. According to Mishkin (1998), the utility of a nominal anchor is that it enables the central bank to "tie down inflation expectations." This is possible because, with a nominal anchor as a key policy target, the central bank is able to easily and clearly communicate to the public its outlook of inflationary developments and so, pre-emptively indicate to the markets the likely policy direction. Thus, public expectations are aligned to central bank thinking thereby lessening uncertainty about inflation outcomes. Such clear communication, however, is difficult to achieve without the use of an explicit nominal anchor.

Monetary policy instruments are largely uniform across many central banks but the choice of a nominal anchor (intermediate target) is a point of divergence that differentiates monetary policy regimes.

Mishkin (2002) identifies and differentiates four main monetary policy frameworks on the basis of their choice of nominal anchors, namely: 1) exchange-rate targeting; 2) monetary targeting; 3) monetary policy with an explicit goal, but not an explicit nominal anchor (the "just do it" approach) and 4) inflation targeting. There are several other ways of classifying policy regimes of course but Mishkin's model is sufficient for our purposes as it covers frameworks previously experimented with in Zambia's economic history and so, serves as a basis for comparison.

Many central banks have used exchange rates as their nominal anchor under exchange rate targeting regimes. This is a common policy framework adopted by small open economies that are to a large extent incapable of conducting credible and independent monetary policy though it was once prominent in advanced industrial countries, for example under the Exchange Rate Mechanism (ERM) in Europe (Straumann and Schenk, 2014). Monetary policy under exchange rate targeting fixes a country's currency to either the value of a commodity (for example, the gold standard) or to the value of a large, low inflation country's currency (Mishkin, 1998). In this way, inflation is kept low by forcing a tightening of monetary policy when there is a tendency for the domestic currency to depreciate or a loosening of policy when there is a tendency for the currency to appreciate.

In a *monetary targeting regime*, the assumption is that, money supply has a stable relationship with inflation and so, in order to control inflation, all a central bank needs to do is manage the growth in the supply of money (Horngren, 1995; Cabos et al, 2003,). Therefore, when inflation is high, the monetary authority withdraws money from the economy effectively limiting economic agents' spending power (effective demand) which in turn arrests inflationary pressures. The opposite scenario is the release of money to stimulate demand if economic activity is low. Consequently, monetary targeting aims at maintaining a desired level of growth in some monetary aggregate quantities such as broad money.

The just-do-it framework for conducting monetary policy has been used in developed countries most notably the USA. Their central banks have succeeded in conducting monetary policy without any explicit targets or explicitly making reference to a particular nominal anchor. In contrast to the other two frameworks discussed, this "just-do-it" approach does not state a numerical target such as money growth, inflation rate or exchange

rate. However, it does implicitly commit to achieving low and stable inflation in the long-run. Developed countries that have high credibility (i.e., central banks able to deliver inflation that is close to their announced target) were able to successfully use this approach to curtail inflation.

Inflation targeting does not have a standard definition but it is a way of formulating and implementing monetary policy by anchoring individuals' expectations about inflation around an announced target (Awad, 2008: 108). Given the plethora of definitions, Mishkin (2002) summarises an inflation targeting framework as comprising of:

- i. a public announcement of a medium-term numerical targets for inflation;
- ii. an institutional commitment to price stability as the primary goal of monetary policy, to which other goals are subordinated;
- iii. 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 (multiple indicators approach);
- iv. increased transparency of the monetary policy strategy through communication with the public and the markets about the plans, objectives, and decisions of the monetary authorities; and
- v. Accountability of the central bank for attaining its inflation objectives.

Kahn (2008), reports that out of twenty-three (23) inflation targeting countries then, sixteen (16) were emerging market and developing. Formally, only Ghana and South Africa are inflation targeters in Africa. The international Monetary Fund (IMF) shows that by 2010, the number of inflation targeting countries had increased to twenty-eight (28). Only three (3) countries-- Finland, Spain, and the Slovak Republic--have abandoned inflation targeting on account of having joined the Euro currency.

Table 1 below provides a summary of the monetary policy frameworks.

**Table 1: Summary of monetary policy frameworks**

Monetary framework	Main instruments	Operational target	Intermediate target	Policy objective
Exchange targeting	Diverse administrative instruments	Foreign currency or gold reserves	Exchange rate	Inflation (implicit)
Monetary targeting	OMOs Standing facilities Reserve requirements	Reserve money	Broad monetary aggregate	Inflation (implicit)
Inflation targeting	OMOs Standing facilities Reserve requirements	Interest rate	Inflation forecast	Inflation (explicit)
Monetary policy without any explicit targets	OMOs Standing facilities Reserve requirements	Reserve money/ interest rate	Any of the following: Broad monetary aggregate/interest rate/inflation forecast/exchange rate	Inflation (implicit)

Source: adapted from Laurens, B.J. et al (2015)

It should be noted that while Table 1 above presents a neat categorisation of monetary policy frameworks, the success of inflation targeting has resulted in non-inflation targeting central banks adopting some of the tenets of inflation targeting. The result is a blurred distinction in practice about what exactly differentiates inflation targeting. Does this then weaken the case for a formal adoption of inflation targeting? We look at the justification for inflation targeting in the next section.

### 3. Why the shift to inflation targeting?

It is clear from the discussion in the preceding section that there are many options available to a central bank regarding how it conducts monetary policy. Having been spoilt for choice, the natural question to ask is: “Why choose one monetary policy framework over the other?”

The following questions can be used as criteria for the viability of a chosen policy framework:

- i. How strong is relationship between policy instruments and policy targets?
- ii. How much adjustment is necessary to correct misalignments? In other words, how do monetary policy interventions to achieve price stability impact on other economic variables such as growth, interest rates and employment?
- iii. Is the chosen framework sustainable under persistent shocks?
- iv. Given the choice of the framework, can a central bank conduct independent policy?
- v. Is monetary policy under the framework predominantly discretionary or rules-based?

Using the foregoing questions, it can be shown that the factors which undermined monetary targeting and exchange rate targeting facilitated the increased adoption of inflation targeting in developing and emerging markets (Awad, 2008: 109). For example, economic reforms such as financial market, exchange rate and capital flows liberalisation weakened the relationship between money supply and prices. As Chileshe and Longa (2016) observe, monetary policy targeting has become increasingly ineffective in the Zambian context. This is on account of an unstable money multiplier which makes the relationship between reserve money (operational target) and broad money (intermediate target) unpredictable<sup>1</sup>. Therefore, it is very difficult to determine the amount of intervention (adjustment) needed and form expectations about when the effects of policy will crystalize. Similarly, the relationship between money supply (broad money) and inflation has weakened. Consequently, large adjustments are necessary to correct inflationary pressures and this has adverse effects on output and interest rates.

Foreign exchange targeting suffered from inherent problems. In many instances, adherence to an exchange rate target or peg resulted in greater volatility in monetary aggregates and inflation (Kahn, 2010). Exchange rate targeting’s inability to efficiently respond to trade shocks due to the loss of independence of monetary policy caused great vulnerability of the economy on exposure to speculative attacks. Other limitations included an increased use of foreign currency in domestic transactions (“dollarization”) and the development of parallel currency markets (black markets) when private entities did not agree with the official rate.

International experience shows that inflation targeting has experienced some success in adopter countries such as New Zealand, Ghana, Peru, Turkey, Canada and Indonesia. There is evidence (for example, by Neumann and Von Hagen, 2002; Mishkin and Schmidt-Hebbel, 2000 and Landerretche et al., 2001) that inflation targeting can lead to better macroeconomic performance since the adjustment needed for monetary policy to correct inflation does not lead to large fluctuations in output.

Taylor (1996) supports this view and argues that there was no empirical evidence indicating a trade-off between inflation and unemployment in the long-run. Proponents of inflation targeting argue that this is good for central banks because they can stick to an inflation target without worrying that their action has sacrificed long-term employment or growth. The trade-off is, however, between inflation volatility and growth. Therefore, reducing inflation volatility through better anchoring of inflation expectations makes inflation targeting attractive.

<sup>1</sup> Money supply is also seen to have destabilising effects on the economy as banking innovations have resulted in unpredictability of the velocity of money resulting in unpredictable changes in economic output. The following equation illustrates the point: Money Supply x velocity = Nominal GDP = Price Level x Real GDP. That is, if money supply is altered in the face of unpredictable velocity, then real output (GDP) will be unpredictable. This is referred to as the velocity instability problem.

This view has sometimes been challenged. Heintz and Ndikumana (2010) contend that there is no empirical justification for keeping low inflation targets such as those observed in inflation targeting countries. Their stance is that while there is consensus that rapid inflation is undesirable, the turning point at which inflation begins to negatively impact economic growth ranges between 15% and 20% in developing countries. The threshold level of inflation has been subject to much study in Zambia but the results are mixed. For example, Phiri (2013) estimates 22.5% as optimal for Zambia whereas Nyamazana and Mungule (2014)<sup>2</sup> estimate it at 9%. The lack of consensus leads the central bank to play safe by opting for a lower target. Additionally, seldom do central banks set an optimal target but they must consider that a relatively high inflation target could build high expectations about inflation thereby resulting in higher actual inflation. Therefore a lower target ties down expectations and makes inflation more manageable.

An inflation targeting framework de-emphasises the role of intermediate targets and directly aims to influence the variable of interest or more accurately its forecasted path (Bernanke and Mishkin, 1997). Therefore, unlike monetary targeting, inflation targeting is less dependent on the relationship between monetary aggregates and inflation.

Furthermore, inflation targeting is arguably more consistent with the tenets of a liberal economy unlike exchange rate targeting. Most modern economies wish to have free flow of capital, float the exchange rate and conduct independent monetary policy. Under the targeting of exchange rates, the impossible trinity or trilemma problem arises in which case fixed exchange rates imply that either capital controls should be in place if independent policy is required or the central bank must lose its ability to set independent policy if it wishes to impose capital controls. That is, it is not possible to achieve all three objectives. Inflation targeting on the other hand subjugates the exchange rate and is therefore, able to respond to trade shocks and allow capital to freely flow into and out of the economy.

Another advantage of inflation targeting is that it sits as a compromise between strictly rules-based policy and discretionary policy. Bernanke and Mishkin (1997) refer to inflation targeting as “constrained discretion”. Inflation targeting, therefore, allows a central bank to follow a forecast inflation path to anchor price expectations as opposed to an overly aggressive pursuit of a rigid inflation goal<sup>3</sup>. This makes it very attractive since it enables managed policy interventions and subsequently avoids large and sudden declines in economic output. Hence, tight monetary policy in an inflation targeting regime is essentially non-recessionary<sup>4</sup>. In contrast, monetary targeting tends to have an inflation bias (due to relatively higher discretion) whereas exchange rate targeting imposes a rule that the exchange rate must be at a particular level whose costs can be seen in large gyrations in output.

---

<sup>2</sup> Nyamazana & Mungule (2014), “Inflation And Growth: Estimating The Threshold Level Of Inflation For Zambia,” NEAC Working papers (unpublished)

<sup>3</sup> Note that inflation targeting central banks use different targets of inflation whether point targets or ranges. The idea being propagated here is that inflation targets are flexible within this framework

<sup>4</sup> Some academics argue that inflation is a measure of the output gap and as such, the pursuit of stable inflation is one side of the coin and the other is output stability. So, inflation targeting having inflation as the sole objective of monetary policy has a dual impact. Others, however, still regard the effects of monetary policy shifts on output limited at best.

## 4. Pre-conditions for successful inflation targeting

*As with monetary policy frameworks, there are many forms which inflation targeting can take and these are distinguished by the varying degrees to which a country's central bank is able to carry out monetary policy in a manner consistent with inflation targeting.*

Notwithstanding the diverse forms inflation targeting can take, there are two principal institutional requirements for inflation targeting to have a chance of success (Masson et al, 1997). In the first instance, a central bank must be able to conduct independent monetary policy and in the second, it should firmly commit to price stability as the overriding objective of monetary policy.

These requirements are envisaged to help ensure that monetary policy has credibility--that is, the propositions and assumptions under which the central bank operates must be believable and it should ultimately have the capacity to achieve policy objectives. It is in possessing credibility that the central bank can effectively anchor expectations and consequently, control inflation.

Carare and Stone (2005) distinguish between countries practicing inflation targeting based on the level of clarity and credibility of their policy frameworks. Clarity in this context refers to the explicit announcement of an inflation target as the foremost policy objective and the existence of institutional arrangements to ensure accountability whereas credibility is the measure of success by comparing actual outcome of inflation to the target and the market's perception (ratings) of government domestic securities. Based on these criteria, Carare and Stone (2005) identify three types of inflation targeting namely: full-fledged inflation targeting (FFIT), Implicit Price Stability Anchor (IPSA) and Inflation Targeting Lite (ITL).

In a full-fledged inflation targeting regime, there is "a medium to high level of credibility, [central banks] clearly commit to their inflation target, and institutionalize this commitment in the form of a transparent monetary framework that fosters accountability of the central bank to the target," (Carare and Stone, 2005:1298). For an IPSA central bank, inflation is maintained at a relatively low level without much transparency and accountability due to the high credibility of the central bank in spite of it not having a clear commitment to an explicit inflation target. The IPSA is the inflation targeting version of what Mishkin (2002) referred to as the "just-do-it" approach. "Inflation targeting lite (ITL) 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, 2005:1298).

### 4.1 On central bank independence

McCallum (2010) defines independence as the capacity to take appropriate account of the effects of policy actions on events in the medium and distant future, without being dominated in thinking by concerns pertaining to the more immediate effects. Inflation targeting aims at realising institutional arrangements that would result in greater central bank independence. Garriga (2010) explains why this is necessary by observing that "Central bank independence is argued to lower inflation, to increase credibility of the monetary policy, and to reduce uncertainty among economic agents because private actors can trust that monetary policy will be stable and independent of changes in the political situation," (Garriga, 2010:1).

Generally, "independence tends to follow one of two models: goal independence (where the central banker has autonomy to follow his own policy prerogatives) or instrument independence (where the central banker sets a policy instrument in pursuit of a goal specified by the government)," (Crowe and Meade, 2008:4). By and large, the term independence refers to the ability to choose policy instruments. There are several reasons why goal independence may not be appropriate. First and foremost, Bernanke (2010) argues that independence cannot be unconditional since:

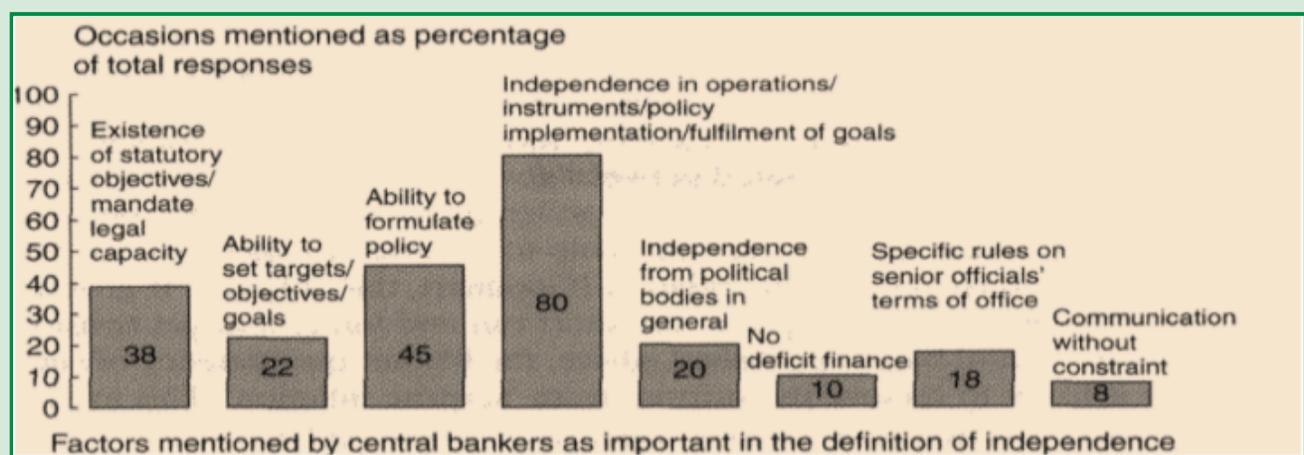
*"Democratic principles demand that, as an agent of the government, a central bank must be accountable in the pursuit of its mandated goals, responsive to the public and its elected representatives, and transparent in its policies."* (Bernanke, 2010:11).

Essentially, Bernanke highlights the importance of aligning the monetary policy objectives to societal priorities. To do this, some degree of independence is taken away. Furthermore, outright independence cannot be granted also as a way of minimising the principal-agency problem. However, for technical and practical reasons, citizens or their representatives cannot dictate the means by which those goals are achieved; hence, the political process should not be allowed to interfere with the *implementation* of monetary policy.

In addition, co-ordination of fiscal and monetary policy requires some agreement on what the objectives of economic policy should be. This is important because misalignment between the two could render monetary policy ineffective particularly in cases where there is fiscal dominance. Hence independence can be extended to situations where neither fiscal nor monetary policy dominates the other.

Further aspects of central bank independence are summarised in Figure 2 from a survey of sixty (60) central banks (23 industrial, 37 developing and transitional economy) conducted by Capie et al (1995)<sup>5</sup>.

Figure 2: dimensions of central bank independence



Source: Capie et. al (1995 page 111)

Figure 2: shows what central bankers thought were the most important factors that determined how independent a monetary authority was. What Figure 2 depicts is that central bank independence has a multitude of dimensions (besides legal provisions) which all need conscious consideration and are important in ensuring inflation targeting works for a particular country. The figure shows that central banks viewed operational (instrument) independence as the most important feature of their autonomy.

To ensure that political and fiscal considerations do not dictate the way in which monetary policy is conducted, several measures are put in the law and the structure of governance of central banks.

Central bank independence, however, goes beyond mere legal provisions since in practice; legal independence may be undermined by the capacity of governments to: (i) be represented on central bank boards, (ii) borrow from central banks, (iii) exert general pressure on central banks and (iv), exert influence on the staffing of central banks<sup>5</sup>. Furthermore, the economic environment may make it difficult to maintain independence when there is low economic growth and declining foreign direct investment (FDI) which may necessitate borrowing inevitably leading to high levels of foreign debt. Such circumstances put pressure on the monetary authorities to accommodate fiscal objectives and so, monetary policy becomes intertwined with the treasury function of government. This is the case of what is known as fiscal dominance.

<sup>5</sup> Capie et al, (1995) page 110

Zambia is an economy where there is evidence of fiscal dominance over monetary policy. Chileshe and Longa (2016) find empirical evidence that fiscal shocks play a significant role in explaining inflation especially in the post-HIPC era when fiscal policy has largely been expansionary. Their study shows that increases in nominal debt and fiscal deficits result in higher interest rates, wider interest rate spreads and a depreciation of the real exchange rate. Therefore, despite there being instrumental independence, fiscal dominance in Zambia manifests itself in two ways, namely: (i) through fiscal policy's direct impact on aggregate demand thereby influencing inflation and (ii), through its effects on the monetary policy transmission channels such as interest and exchange rates.

Furthermore, the governance structure of the Bank of Zambia and the appointment of key personnel have consequences for the degree of independence it can exercise. To begin with, the Governor and the two Deputy Governors are all appointed by the President but the conditions under which these officials may be removed from office are not stated. This is in contrast to international best practice where the law explicitly states the circumstances under which a Governor or Deputy may be removed. For example, New Zealand has among other things, a dismissal rule under which the Governor can be dismissed for failure to achieve the objectives as agreed in the Policy Target Agreement (PTA) subject to an escape clause where the failure to achieve a pre-agreed inflation target was on account of supply-side shocks such as natural disasters, terms of trade shocks, indirect taxes and so on.

Zambia, however, does not have a PTA and consequently no escape clauses are in place. The PTA would not only serve as a guide for monetary policy but also be a constraint on fiscal policy from being dominant since a PTA comes from agreement with the Minister of Finance. In addition, a PTA is a public document and gazetted. This sends to the public a clear message about the expected focus of monetary policy thereby helping to anchor expectations. In contrast, Zambia does not make public the terms of reference for the Governor and it is evident by the existence of fiscal dominance that little policy co-ordination exists between fiscal and monetary authorities.

In addition, the Secretary to the Treasury sits on the Board as an ex-officio member. Whereas this member may not have the right to vote, he or she is entitled to attend and participate in any meeting of the Board. Such representation of government on the Board enables some form of political influence to be exerted on the Bank of Zambia. This is in addition to the entire Board being appointed by the government. Therefore, whereas the Zambian Constitution guarantees that the Bank of Zambia shall not be subject to the direction or control of a person or an authority in the performance of its functions, its relationship with the government cannot be considered as one existing at arms-length.

**Box 1:** compares central bank governance and the monetary policy framework of Zambia with two inflation targeting countries—Israel and New Zealand.

## 4.2 Commitment to price stability

Modern-day monetary policy is largely concerned with the attainment of price and financial stability. However, no other monetary policy framework defends this objective more than inflation targeting. Other regimes allow for the pursuit of additional objectives such as high employment and economic growth with no particular prejudice to one objective. In contrast, inflation targeting imposes a hierarchy of objectives in which price stability is supreme. If monetary policy includes other policy goals, this is done only if they are not in conflict with the medium to long-term achievement of price stability.

What is more, inflation targeting requires an explicit quantitative definition of price stability whereas an implicit reference to price stability is tolerated in other frameworks (see Table 1). For this reason, an inflation targeting central bank cannot express its price stability objective qualitatively. Thus, a monetary authority must state what it uses to measure price stability, for example a consumer price index (CPI). In addition, it must state what level of the CPI or a change in the CPI it considers is consistent with price stability. This is in order to increase transparency of monetary policy and to improve communication which affixes inflation expectations. The explicit target is also seen as a way of ensuring that the central bank can be objectively held accountable for the attainment of policy targets.

In order to fully commit to price stability as the prominent objective of monetary policy, inflation targeting countries have plainly stated this within their laws. For example, the Bank of Israel Law states that “to maintain price stability [is the] central goal” and specifies a two-year time period within which price stability is to be achieved in case the target is missed. In addition, the law establishes a monetary policy committee which is distinct from an administrative board or council. Similarly, the Reserve Bank of New Zealand Act of 1989 states that the “primary function of the bank is maintaining stability in the general level of prices” while the Policy Target Agreement states a 1-3% range of inflation as consistent with price stability in the medium term.

In contrast, the Bank of Zambia Act falls short of explicitly stating the supremacy of the price stability objective but goes on to list other functions and states that those are to be achieved without prejudice to the price stability objective. In addition, the Act in outlining the powers of the Minister of Finance in setting policy states the following: “The Minister may convey to the Governor such general or particular Government policies as may affect the conduct of the affairs of the Bank and the Bank shall implement or give effect to such policies.” Further, the Act does not separately provide for the establishment of the Monetary Policy Committee (MPC) but vests all policy making powers in the Board. This implies that if the Board wishes to pursue different objectives, it can overrule the policy committee’s assessment. Thus, the power of the MPC in setting policy direction is limited.

Besides legal provisions proper, Zambia does not provide for a public reference document such as a policy target agreement which can be used to objectively appraise the central bank’s commitment to attaining price stability. A policy target agreement would not only state what level of inflation is considered consistent with price stability but it would also specify a critical level of inflation beyond which price stability cannot be achieved. That no such level is defined leaves considerable discretion at the hands of the central bank which is not consistent with optimal inflation targeting conditions. Under inflation targeting, discretion is supposed to be ‘constrained’ albeit not completely eliminated by rules.

In sum, Zambia’s commitment to price stability is threatened by: (i) the ability of the government to legally impose opposing objectives if it so wished and (ii), lack of specificity as to what exactly is meant by price stability vis-à-vis the absence of a critical level of inflation. This further undermines monetary policy credibility especially that fiscal dominance is already identified as a problem.

## Central bank governance and features of policy frameworks in Zambia, Israel and New Zealand

Factor/dimension	Zambia	Israel	New Zealand
<b>Governor appointment</b>	<ul style="list-style-type: none"> <li>President (subject to national assembly ratification)</li> <li>5-year term possibly 2<sup>nd</sup> term</li> </ul>	<ul style="list-style-type: none"> <li>President on advice of the government</li> <li>5-year term possibly 2<sup>nd</sup> term</li> </ul>	<ul style="list-style-type: none"> <li>MOF*</li> <li>5-year terms (more than 2 possible)</li> </ul>
<b>Governor change</b>	<ul style="list-style-type: none"> <li>End of 5-year term (possibility of 2<sup>nd</sup> term)</li> <li>Resign by 3 months' notice</li> <li>Removed by president (<b>no specifics of circumstances</b>)</li> </ul>	<ul style="list-style-type: none"> <li>End of 5-year term (possibility of 2<sup>nd</sup> term)</li> </ul>	<ul style="list-style-type: none"> <li>RBZ Act establishes a <u>dismissal rule</u> for the Governor</li> <li><b>Failure to achieve policy targets as per PTA</b> (renegotiation possible)</li> </ul>
<b>Governor TORs</b>	<ul style="list-style-type: none"> <li>Determined by MOF</li> <li>Contract not public</li> </ul>		<ul style="list-style-type: none"> <li><b>Determined by negotiation in Policy Targets Agreement (PTA)</b></li> <li><b>Gazetted in Parliamentary records</b></li> <li>PTA can be overridden by Governor for 1 year</li> </ul>
<b>Deputy governor (s) appointment</b>	<ul style="list-style-type: none"> <li>2 appointed by President for 5-year tenure</li> <li>Resign by 3 months' notice</li> <li>Removed by President</li> </ul>	<ul style="list-style-type: none"> <li>1 appointed by Governor for 5-year term (possibility of 2<sup>nd</sup> term)</li> <li>Term ends when new Governor appointed subject to government advice</li> </ul>	<ul style="list-style-type: none"> <li>By Board on recommendation of Governor</li> <li>1 or 2 can be appointed</li> <li>5-year term (possibility of 2<sup>nd</sup> term or more)</li> <li>Removed on recommendation of Governor by Boar</li> </ul>
<b>Board (s)</b>	<ul style="list-style-type: none"> <li>Chaired by Governor</li> <li><b>ST ex-officio member (no vote)</b></li> <li>6 other NEDs appointed by MOF</li> <li>No qualifications specified for NEDs</li> </ul>	<ul style="list-style-type: none"> <li>Administrative Council</li> <li>Chaired by government official</li> <li>Members: Governor, D-Governor, Bank member, 3 other public NEDs</li> <li><b>Qualifications for NEDs specified</b></li> </ul>	<ul style="list-style-type: none"> <li>Up to 7 NEDs** (appointed by MOF) plus Governor</li> <li>Chaired by an NED by majority vote of Board members</li> <li>No qualifications specified for NEDs</li> </ul>

Factor/dimension	Zambia	Israel	New Zealand
<b>Policy objectives</b>	<ul style="list-style-type: none"> <li>Price stability not sole objective</li> <li>Other objectives given equal status as price stability</li> <li>Price stability not defined</li> </ul>	<ul style="list-style-type: none"> <li><b>Price stability is overriding objective</b></li> <li><b>Other policy objectives mentioned</b></li> </ul>	<ul style="list-style-type: none"> <li>Price stability is overriding objective</li> <li>No other objectives (e.g. employment, growth, etc.) are mentioned</li> <li>Defines price stability as 1--3% inflation (as measured by CPI) around 2% per 2012 PTA</li> <li>In practice, an underlying inflation rate (adjusted for housing) is used</li> <li>Incentives provided for meeting targets (threat to dismiss)</li> </ul>
<b>Policy regime</b>	<ul style="list-style-type: none"> <li>Monetary targeting (by IMF classifications, BOZ)</li> </ul>	<ul style="list-style-type: none"> <li><b>Inflation Targeting</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Inflation Targeting</b></li> </ul>
<b>Time horizon for meeting target</b>	<ul style="list-style-type: none"> <li>1 year as per Gov't budget (short term)</li> </ul>	<ul style="list-style-type: none"> <li><b>2 years (medium term)</b></li> </ul>	<ul style="list-style-type: none"> <li>Over tenure (5 years) or less (medium term)</li> </ul>
<b>Decision for MP</b>	<ul style="list-style-type: none"> <li>MPC</li> <li>No provision for independent appointment of MPC***</li> </ul>	<ul style="list-style-type: none"> <li><b>Monetary committee (set up in law and distinct from the Administrative Council)</b></li> </ul>	<ul style="list-style-type: none"> <li>Governor</li> <li>MPC is only an advisory body to Governor</li> </ul>
<b>Independence</b>	<ul style="list-style-type: none"> <li>Instrumental</li> </ul>	<ul style="list-style-type: none"> <li><b>Instrumental</b></li> </ul>	<ul style="list-style-type: none"> <li>Instrumental</li> </ul>
<b>Setting policy objectives</b>	<ul style="list-style-type: none"> <li>In consultation with government</li> </ul>	<ul style="list-style-type: none"> <li>In consultation with government</li> </ul>	
<b>Policy statement</b>	<ul style="list-style-type: none"> <li>Every six months</li> </ul>		<ul style="list-style-type: none"> <li>Every six months</li> </ul>
<b>Nominal anchor</b>	<ul style="list-style-type: none"> <li>Policy rate (quarterly)</li> </ul>		<ul style="list-style-type: none"> <li>Official cash rate (six- weekly)</li> </ul>
<b>Escape clauses</b>	<ul style="list-style-type: none"> <li>None given/explicitly stated</li> </ul>		<ul style="list-style-type: none"> <li>Specifies supply- side conditions as only cases for divergence (e.g. TOT shocks, natural disaster, indirect taxes, etc.)****</li> <li>Specifies critical inflation threshold</li> </ul>

## 5. Some outstanding issues

In our discussion, we have shown the benefits of inflation targeting and the conditions under which the framework is likely to succeed. Unlike other monetary frameworks, inflation targeting demands much more in terms of institutional requirements and the evidence so far is that Zambia needs to increase central bank independence and that it should set up mechanisms which ensure that it commits to the price stability objective. In addition, care needs to be taken going forward in weighing the implications of fully adopting inflation targeting.

- First and foremost, judgement should be made as to whether it is appropriate to religiously commit to the maintenance of price stability as the supreme objective of monetary policy. What happens to growth and employment? It is well-known of course that stable inflation has benefits for economic growth and that high inflation can be disastrous for an economy (examples, Germany and Zimbabwe). However, what policy goal must be pursued when both low growth and high inflation are present? An inflation targeting central bank would tout the benefits of pursuing lower inflation but it should be borne in mind that low growth and high unemployment have a social cost—is low inflation worth it? On the other hand, we cannot reasonably expect that monetary policy easing can sustainably achieve growth. This choice-of-policy-objective dilemma is not easy to resolve and are not the preserve of monetary policy alone.
- A second consideration is that inflation targeting's success depends on the severity and cause of inflation. Experience in Israel, the United Kingdom and New Zealand, for example, has shown that inflation targeting faces difficulty when inflation results from a supply-side or terms of trade shocks (Walsh, 2009). Therefore, cost-push inflation may not be sufficiently dealt with within the inflation targeting framework. This implies that supply-side shocks require a different approach from the one proposed by inflation targeting and so, some flexibility is in order. This is the major reason why inflation targeters such as New Zealand have an escape clause. In addition, chronic or even hyperinflation scenarios require more comprehensive stabilization strategies and inflation targeting would only be of use if the fiscal roots of inflation are dealt with and inflation is relatively moderate (Masson et al, 1997).
- Furthermore, there is debate as to what the appropriate measure of inflation should be. Zambia, like most countries, uses the consumer price index (CPI) which is viewed as having an upward measurement bias--that is, it reports inflation to be higher than it actually is (Central Bank of Brazil, 2000) thereby prompting a disproportionate reaction from monetary policy. However, most inflation targeters would still favour a CPI because it is easily understood and so, it aids communication of policy stance and thus, results in a better anchoring of expectations. Gillitzer and Simon (2015) further observe that CPI variability is largely influenced by the import component but less so by domestic economic conditions. This, therefore, has weakened the link between output stabilization and inflation. As a result, an increase in CPI inflation poses the danger of prompting higher output volatility than is expected to be observed under inflation targeting. To counter this measurement problem, a measure of core inflation (trend inflation) which excludes volatile components such as energy and food prices has been suggested. However, the trade-off is that it may complicate communication as it is not easily understood by consumers. Thus, the central bank will need to consider how to deal with these measurement challenges going forward.

Emanating from the perceived limitations of inflation targeting outlined here, there are some calls for alternative monetary policy frameworks. While this paper does not discuss these alternatives in-depth, it suffices to note that they too are fraught with their own challenges. For example, the higher volatility of output imposed by using CPI is thought to be resolved by targeting nominal gross domestic product (GDP) instead of inflation. The challenge here is that nominal GDP includes export prices and excludes import prices in its approach to inflation which makes little sense. A further argument is that central banks should target the price level (actual CPI value) not changes in the CPI (inflation). This too is an experiment with limited empirical evidence of its ability to improve macroeconomic outcomes and outperform inflation targeting.

The foregoing debates raise critical concerns which must be taken into consideration in designing the Zambian version of inflation targeting. The fact that alternative approaches to monetary policy have their own limitations does not necessarily dismiss the need for a more cautious and systematic approach to the adoption of inflation targeting. Some compromises will have to be made.

## 6. Conclusion and recommendations

This paper has outlined the pre-requisites for successful implementation of monetary policy under an inflation targeting framework and finds that Zambia does not exactly comply with the pre-conditions of inflation targeting. With respect to central bank independence, government representation on the Board and absence of a policy target agreement; compromise the Bank's independence. Moreover, fiscal policy dominates monetary policy in which case fiscal policy directly fuels inflationary pressures and clearly influences the monetary policy transmission mechanism. Likewise, the central bank's commitment to price stability is undermined by the lack of specific text in law making price stability the overriding objective. Furthermore, the lack of an explicit recognition in law for the separate creation of the monetary policy committee subordinates its decisions to the discretion of the Board which may wish to pursue other objectives.

Consequently, the paper makes the following recommendations:

- i. The law should provide for a policy target agreement which should be published in the Government Gazette. The PTA will among other things, outline the dismissal rule, define escape clauses and establish the critical inflation level.
- ii. Fiscal and monetary policy should be better co-ordinated to ensure that there is no case of fiscal dominance.
- iii. The law should provide for the separate creation of the monetary policy committee.

Furthermore, whereas the paper has shown that inflation targeting boasts several advantages over other policy frameworks, it may not be an optimal policy under particular circumstances. For instance, supply-side shocks require a different approach to macroeconomic stabilisation than that prescribed by inflation targeting. Chronic inflation may also be incurable under an inflation targeting framework. Additionally, the decision to set price stability as the overriding objective of monetary policy requires some considered reflection and consensus between the Bank, government and the public. Also, the Bank of Zambia may need to weigh the pros and cons of using a particular measure of inflation in its communication with the public.

## 7. References

1. Abuka, C. et al (2015), "Monetary Policy in a Developing Country: Loan Applications and Real Effects," International Monetary Fund Working paper 15270, Washington
2. Awad, I.L. (2008), "Switching to the Inflation Targeting Regime: The Case of Egypt" in East-West Journal of Economics and Business, Vol. XI – 2008, No 1 & No 2
3. Bank of Botswana Annual Report 2008
4. Bank of Zambia Act Consultative Paper, 2010
5. Bernanke, B.S. and Mishkin, F.S. (1997), "Inflation targeting: a new framework for monetary policy?" Working Paper 5893, National Bureau of Economic Research, Cambridge, MA
6. Bernanke, B.S. (2010), "Central Bank Independence, Transparency, and Accountability," speech delivered on May 25 at the Institute for Monetary and Economic Studies International Conference, Bank of Japan, Tokyo, Japan
7. Cabos, K. et al (2003), "Some thoughts on monetary targeting vs inflation targeting," in German Economic Review 2 (3): 218-238
8. Carare, A. and Stone, M.R. (2005), "Inflation targeting regimes," in European Economic Review 50 (2006) pp. 1297 – 1315
9. Capie et al., F. (1995), "The Future of Central Banking [Online]," Cambridge: Cambridge University Press. Available from: Cambridge Books Online <http://dx.doi.org/10.1017/CBO9780511983696> [Accessed 02 February 2016].
10. Central Bank of Brazil (2000), "Issues in the Adoption of an Inflation Targeting Framework in Brazil," in Blejer, M.I., Ize, A, Leone, A.M., Werlang, S. (2000), "Inflation Targeting in Practice Strategic and Operational Issues and Application to Emerging Market Economies", International Monetary Fund, Washington
11. Crowe, C. and Meade, E.E (2008), "Central Bank Independence and transparency: evolution and effectiveness," IMF Working Paper No. 08/119, Washington
12. Federal Reserve Bank of New York Economic Policy Review, "German Monetary Targeting: A Precursor to Inflation Targeting," August 1997
13. Gillitzer, C. and Simon, J. (2015), "Inflation Targeting: A Victim of Its Own Success?" Research Discussion Paper 2015-09, Economic Research Department Reserve Bank of Australia
14. Hørngren, L. (1995), "Monetary policy in theory and practice," Quarterly Review, Sveriges Riksbank, pp. 5-12
15. Heinz, J. and Ndikumana, L. (2010), "Is there a case for formal inflation targeting in Sub-Saharan Africa?" Working Papers Series No. 108 African Development Bank, Tunis, Tunisia
16. IMF Country Report No. 06/39, January 2006
17. IMF (2014), "Annual report on exchange rate arrangements and exchange restrictions," Washington
18. Kahn, B. (2008), "Challenges of inflation targeting for emerging-market economies: The South African case," South African Reserve Bank, Conference Series
19. Khan, M.S. (2010), "The Design and Effects of Monetary Policy in Sub-Saharan African Countries" Working Paper 10-11, Peterson Institute for International Economics, Washington

20. Laurens, B.J., Eckhold, K., King, D., Maehle, N., Naseer, A., and Durré, A., (2015), "The Journey to Inflation Targeting: Easier Said than Done. The Case for Transitional Arrangements along the Road," IMF working paper, WP/15/136
21. Mishkin, F.S. (1998), "International experiences with different monetary policy regimes," Seminar Paper No. 648, Institute for International Economic Studies, Stockholm
22. Mishkin, F.S. (2000), "From Monetary Targeting to Inflation Targeting: Lessons from the Industrialised Countries," Bank of Mexico Conference, "Stabilization and Monetary Policy: The International Experience," Mexico City, November 14-15, 2000.
23. Mishkin, F.S. (2001), "Inflation targeting," Columbia University and National Bureau of Economic Research, July 2001
24. Moody's Investor Services (2015), "Moody's downgrades Zambia's government issuer rating to B2 from B1," September 25, 2015 available at: [https://www.moodys.com/rch/Moodys-downgrades-Zambias-government-issuer-rating-to-B2-from-B1--PR\\_334733](https://www.moodys.com/rch/Moodys-downgrades-Zambias-government-issuer-rating-to-B2-from-B1--PR_334733) accessed on 08/02/2016
25. Nyamazana, M. & Mungule, O. (2014), "Inflation and Growth: Estimating The Threshold Level of Inflation for Zambia," NEAC Working papers (unpublished)
26. Phiri, A. (2013), "Inflation and Economic Growth in Zambia: a Threshold Autoregressive (TAR) Econometric Approach," North West University, South Africa.
27. Reichlin, L. and Baldwin, R. (Eds.) (2013), "Is inflation targeting dead? Central banking after the crisis," Centre for Economic Policy Research, London
28. Schenk, C. and Straumann, T. (2014), "International Monetary Policy Regimes: Historical Perspectives," at Norges Bank Conference, Oslo 5-6 June, 2014
29. Svensson, L.E.O. (2010), "Inflation targeting," Working Paper 16654, National Bureau of Economic Research, Cambridge, MA
30. Thornton, D.L. (2012), "How Did We Get to Inflation Targeting and Where Do We Need to Go to Now? A Perspective from the U.S. Experience," in Federal Reserve Bank of St. Louis Review, January/February 2012, 94(1), pp. 65-81
31. Walsh, C.E. (2009), "Inflation Targeting: What Have We Learned?" *International Finance* 12:2, 2009: pp. 195-233





Zambia Institute for Policy Analysis and Research (ZIPAR)

P.O. Box 50782, Lusaka,  
Zambia CSO Annex Building  
Corner of John Mbita and Nationalist Road,  
Lusaka  
Phone: +260 211 252559  
Fax: +260 211 252566  
Email: [info@zipar.org.zm](mailto:info@zipar.org.zm)  
Website: [www.zipar.org.zm](http://www.zipar.org.zm)  
[www.facebook.com/OfficialZIPAR](https://www.facebook.com/OfficialZIPAR)  
Twitter: @ZiparInfo