

INFLATION TARGETING IN SOUTH AFRICA:
A PROMISING START WITH A CHALLENGING FUTURE



30 JUNE 2010

NO: 1274

WORDS: 3800

TABLE OF CONTENTS

Introduction (3)

Part 1: An Historical Perspective (4)

Part 2: Theoretical Framework and Argumentation (7)

Part 3: An Empirical Perspective (11)

Part 4: Challenges and Recommendations (17)

Conclusion (18)

List of References (19)

Appendix (20)

INFLATION TARGETING IN SOUTH AFRICA:
A PROMISING START WITH A CHALLENGING FUTURE

Introduction

The debate surrounding monetary policy has received great attention in recent times -this paper considers the strength of inflation targeting in the South African environment. First, we will consider the context of the inflation targeting debate with a focus on the history of South African monetary policy, as well as a discussion of the development of inflation targeting strategies throughout the world. Secondly we will analyse the theoretical arguments behind the use of inflation targeting by reviewing some existing literature and by contributing some new ideas. Thirdly we will investigate the empirical successes and failures of this specific regime in the rest of the world and in South Africa, again by reviewing literature – in this case using empirical analyses, and by conducting our own basic regression analysis. Finally we will make some tentative recommendations for the South African Reserve Bank (SARB), based on the challenges we expect the Bank will face in the future.

This paper will argue that the move to “flexible” inflation targeting represents a promising strategy to ensure an environment in which economic stability, growth and development, as well as improved employment can be achieved. That is, a policy of “explicit” but “flexible” inflation targeting allows for the formation of stable (well-anchored) expectations but at the same time allows for changes in policy based on other important macroeconomic goals. We recommend an extension of this policy that limits the Reserve Bank’s ability to use interest rate tools in attempts to control “supply side” inflationary pressure, as mentioned in Minister PravinGordhan’s letter of clarification to the Governor.¹ The historical, theoretical, and empirical evidence presented in this paper all acts to prove this argument by considering all possible views on the matter.

Part 1: An Historical Perspective

¹ Gordhan, Pravin. Letter to the governor: Clarification of the Reserve Bank’s mandate. Ministry of Finance, Republic of South Africa, 16 February 2010.

We might analyse South Africa's contemporary monetary policy development through three distinct (but sometimes overlapping) stages.² We would, however, like to consider the new leadership of the Reserve Bank, under Gil Marcus, as the beginning of a fourth stage of monetary policy in South Africa.

As with most beginnings, the monetary policy of the 1980s was shaky at best. High inflation (in absolute terms and relative to expectations) persisted throughout the decade along with fluctuating but often, negative real interest rates. These issues remained even after the implementation of official M3 targets in the second half of the decade.³

The 1990s saw a marked change when Chris Stals took over the leadership of the Bank. We might characterise the period as one of "implicit" inflation targeting. Inflation actually decreased during the period, which was a huge step forward for South African monetary policy. However, exchange rate volatility persisted and was especially damaging during the crises of 1996 and 1998. Also the bank was unable to attain its M3 targets (which were an intermediate mechanism).⁴ Most importantly, from our perspective, was the ineffectiveness of the response to the externally caused 1998 crisis that pushed up costs for importers drastically. The Reserve Bank reacted by increasing the repo rate - which usually dampened inflation. In this particular instance it dramatically reduced domestic borrowing, which further limited importers' ability to obtain their "factors of production", thus reducing investment, growth, and overall economic well-being.⁵ Thus the decade was one of great improvements but also one of revealing mistakes.⁶

² Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 4.

³ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 4.

⁴ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 5.

⁵ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 5.

⁶ An often forgotten element of all monetary policy from 1985, and throughout the early 1990s was the need to develop a healthy current account balance - which limited the ability of the bank to achieve its other objectives.

The third period of monetary policy commenced in February 2000 when the Reserve Bank announced it would pursue a policy of explicit inflation targeting, under Tito Mboweni. No longer was there provision for exchange rate related policy – instead it was assumed that the exchange rate would look after itself if stable inflation persisted. The inflation target band of between 3% and 6%, was exceeded in 29 of the 72 months in this period, which we view as a qualified success.⁷Burger and Marinkov conclude that the Reserve Bank relaxed its policy tools the moment inflation was set to hit the upper bound.⁸ This “trigger” policy design was the defining characteristic of the third period of monetary policy in South Africa.

Gil Marcus’s recent appointment has presented us with a subtle but important change in monetary policy. A renewed focus on “flexible” inflation targeting can be seen in both Minister PravinGordhan’s letter to the Governor when he states that, “the existing framework allows for temporary deviations of inflation from the target in the event of shocks over which monetary policy has no control.”⁹ In a speech on the outlook of South Africa’s monetary policy, Gill Marcus – Governor of the Reserve Bank – stated, “this means that while our primary objective remains the containment of inflation, it is not to the exclusion of factors such as growth and employment.”¹⁰This has meant that the Bank keeps an eye on the exchange rate when making decisions. In the appendix we have attached Gill Hammond’s summary of the current structure of the South African Reserve Bank prepared for the Bank of England.¹¹

⁷ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 6.

⁸ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 6.

⁹ Gordhan, Pravin. Letter to the governor: Clarification of the reserve bank’s mandate. Ministry of Finance, Republic of South Africa, 16 February 2010.

¹⁰ Marcus, Gill. Outlook for Monetary Policy. Address to the Bureau for Economic Research Annual Conference, 22 April 2010.

¹¹ Hammond, Gill. *State of the art of inflation targeting*. Centre for Central Banking Studies: Bank of England, Handbook no. 29, January 2010.

Fiscal policy in South Africa, since the transition to democracy, has seen three main phases. First RDP, secondly, GEAR and finally the Accelerated and Shared Growth Initiative for South Africa (ASGISA) that promotes development through growth.¹² Government are often in consultation with leading international economists and have recently argued that, “massive increases in expenditure did not always produce the results we wanted,” which has resulted in a new strategic approach to fiscal policy that focuses on achieving measurable outputs in the most efficient way possible.¹³

From this review of South Africa’s monetary and fiscal policies it seems clear that South Africa is performing a difficult balancing act. Monetary policy is used primarily for the economically “right” ideals that prefer small government (Reserve Bank independence), and policies that attract investment (stable inflation forecasts). Targeting inflation with a view to create price stability comes from a primarily “conservative” economic ideology that argues the state should only intervene in markets to create a stable environment for business. At the same time the renewed focus of “flexibility” under the new leadership allows the Bank to adjust policy when other goals (like employment or growth) become bigger priorities. In the same way that monetary policy is primarily used as a “conservative” economic tool, fiscal policy is used to appease the “liberal” left. High taxation allowing for spending on grants, education, and health care has become a major development task since 1994. Interestingly fiscal policy has allowed a similar “flexibility” in allowing for “conservative” ideals – most prominently through the new emphasis on observable outcome efficiency. If we view macroeconomic policy in this (qualitative) way we must commend policy makers for their ingenuity.

Inflation targeting as a policy tool has a relatively short history. In December 1989 New Zealand became the first inflation targeting nation. Today, close to 30 developed and developing nations follow the strategy, and while this means that

¹² Abedian, Iraj. *Fiscal and Monetary Management in South Africa*. Pan African Investment and Research Services: Johannesburg, 2006.

¹³ South African Budget Review 2010. National Treasury. Quote of Minister Collins Chabande, pp. 11.

most central banks around the world don't target inflation, it clearly highlights a trend towards inflation targeting. Interestingly not one nation that has adopted a policy of inflation targeting has dropped it. Debate on the policy predates its adoption but has increased since 1990 as central bankers consider its real world effectiveness. And while many banks have adopted it as a policy they all have their own particular "brand" of targeting.¹⁴ Furthermore there were many different reasons for adopting inflation targeting amongst these nations.

It is because macroeconomic policy is so vital for South Africa's development and because inflation targeting has aroused such great debate amongst the international community that we must have our discussion today.

Part 2: Theoretical Framework and Argumentation

If inflation is very costly there is good reason to think it should be targeted and limited. Higher inflation is associated (empirically) with higher volatility in inflation, which makes it much harder for investors to calculate the net returns of any long term investments they are considering – making investment less likely. Lower investment means a lower capital stock, which in turn decreases productivity (not only current productivity but possibly also the growth of potential future productivity – which has serious long term growth consequences). The fact that different sectors absorb inflationary pressure at different times and in different ways means that inflation causes price distortions, which makes relative pricing inaccurate and leads to less than optimal decision making (and the misallocation of important resources) on the part of the consumer. This effect is worsened when taxation is involved, and may cause substantially large distributional costs (which South Africa really needs to avoid). There is also a wealth of literature discussing the harms caused to the legal and accounting frameworks (which assume some level of price stability), as well as the potential for inflation to cause asset price bubbles.¹⁵ A problem especially relevant in South Africa is related to labour. Workers are more likely

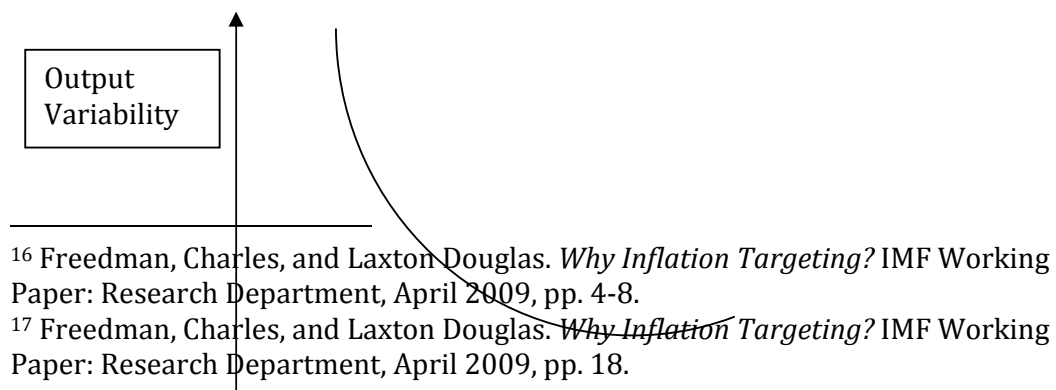
¹⁴ Walsh, Carl. *Inflation Targeting: What have we learned?* University of California: Santa Cruz, 2008, pp. 1-2.

¹⁵ Freedman, Charles, and Laxton Douglas. *Why Inflation Targeting?* IMF Working Paper: Research Department, April 2009, pp. 4-8.

to strike when there is high inflation or when there is an increase in expected inflation. In fact any variability in the inflation rate makes workers more likely to request higher wages (and strike if need be). This is especially problematic considering the power of trade unions in South Africa, and the vicious cycle of inflation that is created when wages increases at rates above inflation. Finally we would also point out that high inflation aggravates the boom-bust cycle, which again makes consumption smoothing very difficult.¹⁶ Because theory (and empirical evidence) tells us that inflation is costly, it makes good sense to support a policy that controls (or targets) it.

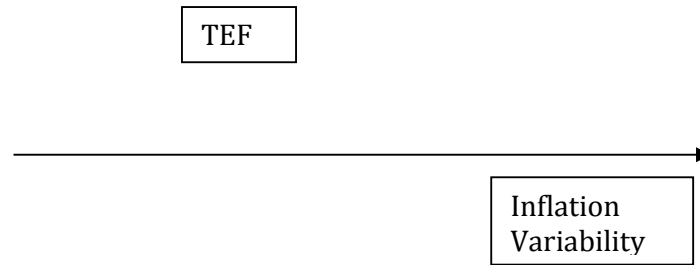
Milton Friedman and Edmund Phelps were the first theorists to point out that there wasn't an exploitable long run trade-off between inflation and output which meant that there wasn't a necessary long-term output loss attached to an economy with persistently low inflation. Rather it seems that there is only a trade-off between the variability of inflation and output.¹⁷ Thus, by targeting inflation, these theorists argue nations will not lose out on future output gains which nullifies a large portion of the traditional arguments against inflation targeting. The relationship between output variability and inflation variability is explored by the "Taylor Efficiency Frontier" presented below.

Figure 1: Taylor Efficiency Frontier



¹⁶ Freedman, Charles, and Laxton Douglas. *Why Inflation Targeting?* IMF Working Paper: Research Department, April 2009, pp. 4-8.

¹⁷ Freedman, Charles, and Laxton Douglas. *Why Inflation Targeting?* IMF Working Paper: Research Department, April 2009, pp. 18.



In the diagram, higher variability in inflation means lower variability in output. The function shifts in or out depending on the structural aspects of the economy.

Kydland and Prescott's time-inconsistency problem analysis is less popular than the above work but presents some interesting thoughts. On this view, "the presence of nominal rigidities and distortions in the economy provide incentives for policymakers to exploit the short-run Phillips curve to try to achieve levels of output that are higher than potential."¹⁸

We would argue that if we consider the biggest problems attached to inflation, we will soon realize that they are problems related to volatility. Thus the real challenge for inflation targeters is to anchor inflationary expectations. If the population expect a stable and consistent inflation rate then it is highly likely (outside of some massive exogenous supply shocks) that the inflation rate in actuality will be a stable one. The central bank can best do this by establishing credibility for itself. If the "threats and promises" of the central bank are taken seriously then they can do an effective job. Credibility of course requires that the bank be independent, transparent, and accountable. This isn't easily achieved and Reserve Banks put great effort into earning the trust and respect of citizens. This requires the Reserve Bank to consistently meet targets and explicitly "explain" deviations.

¹⁸ Freedman, Charles, and Laxton Douglas. *Why Inflation Targeting?* IMF Working Paper: Research Department, April 2009, pp. 19-20.

Frankel and Sturzenegger argue that South Africa's inability to permanently keep inflation below 6% is an indication of an "overheating" economy.¹⁹ However like Blanchard, Dell'Ariccia, and Mauro, we argue that very low inflation may present policy problems during times of crisis.²⁰ The interest rate shouldn't get down to zero and this means that the level of inflation and interest should be set such that there is "room to maneuver" when an economy needs support (from a decreased interest rate for example).²¹ In fact the theoretical lessons learnt from the recession are all lessons in support of flexibility. Monetary and fiscal policy need to operate together, in a counter-cyclical fashion, to achieve macroeconomic stability.²²

In creating the perception of credibility the central bank must make decisions in a consistent fashion. At the same time following rules in an entirely rigid fashion might be harmful in some circumstances. Many theorists suggest that the central bank follow some version of a flexible Taylor Rule.

$$r(*t) = r + a(\pi - \pi *) + b(y - y *) + c(e - e *) + z$$

Where the real interest rate set by the central bank (as the primary tool with which it can influence inflation) is a function of the average interest rate, the inflation gap, the output gap, the exchange rate gap, and an exogenous shock variable over which the central bank has flexibility in its decision making. By selecting the interest rate the central bank can control the demand for money (by making it cheaper or more expensive) and thus control inflation.

Ideally, the central bank would explain any deviations from this rule to the public in the interests of transparency and accountability. Interestingly the

¹⁹ Frankel, Jeff, and Sturzenegger, Federico. *Policy Memo: The Macro Team*. KSG, Harvard University, August 14, 2007, pp. 2.

²⁰ Which is especially relevant in the current global context.

²¹ Blanchard, Olivier, Dell'Ariccia, Giovanni, and Mauro, Paolo. *Rethinking Macroeconomic Policy*. IMF Staff Position Note, International Monetary Fund, February 12, 2010, pp. 10-13.

²² Haussman, Ricardo. *Final Recommendations of the International Panel on Growth*. Prepared for the South African Government.

“explanation clause” under which the South African Reserve Bank operates performs a similar function. We would argue that if credibility is so important for effective monetary policy then inflation targeting has a major advantage over its competitors. Unlike monetary and exchange rate controls, inflation targeting is easy to understand from the public’s perspective. The direct nature of interest rate controls means that the public are more willing to buy into the inflation targeting process because they understand it better. This makes the anchoring of expectations much easier under inflation targeting.

We think it is appropriate to end our discussion of the theory behind inflation targeting with a sound definition from where we may proceed. The definition finds support from Corbo, Ball, Sheridan, and Jemenez to name but a few.²³ An effective inflation targeting regime should aim to achieve:

- a better anchoring of inflation expectations
- a lower inflation inertia
- a weaker relationship between inflation and cost-push factors such as oil price changes
- a changed Phillips curve relationship
- lower inflation forecast errors

Part 3: An Empirical Perspective

Empirical studies on inflation targeting present us with varying views. Here we will investigate international findings local findings, and finally our own findings using South African data.

Walsh finds that inflation targeting has been very effective in reducing inflation levels and volatility. In a sample of industrialized nations he found that inflation averaged 9% prior to the adoption of inflation targeting, and only 3% after. Furthermore, “this decline in average inflation was accompanied by a drop in inflation volatility” (measured either in terms of the standard deviation or the

²³ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 7.

coefficient of variation).²⁴ Ball and Sheridan point out that this drop in inflation actually occurred even in nations that hadn't adopted inflation targeting as an official policy tool.²⁵ However, using the "difference in differences" approach, Walsh points out that the inflation targeting nations seem to have a statistically larger decrease in inflation levels and volatility.²⁶

Lin and Ye use another method in considering the effectiveness of inflation targeting when they compare inflation targeting nations with non inflation targeting nations of a similar economic structure. Using a "probit" model they find that inflation targeting is not a statistically significant cause of lower inflation.²⁷ However, as Walsh points out later, the method used by Lin and Ye is problematic since they compare inflation targeting nations with nations that have low inflation themselves. Obviously there won't be a huge difference in the inflation levels if the nations being compared all have low inflation.

Evidence in developing economies is more vast. Walsh, Mishkin and Schmidt-Hebbel, Batini and Laxton, as well as Vega and Winkelried all find significantly positive effects on key macroeconomic variables from regimes of inflation targeting. Because there is some evidence that nations chose whether or not to target inflation as a result of their past inflation levels, these tests included controls for the initial level of inflation, and still produced the positively significant results. ²⁸Goncalvas and Salles, more recently, have found that the

²⁴ Walsh, Carl. *Inflation targeting: What have we learned?* University of California: Santa Cruz, 2008, pp. 9.

²⁵ Ball, L, and Sheridan, N. "Does Inflation Targeting Matter?" in B. Bernanke and M. Woodford (eds.), *The Inflation Targeting Debate*, Chicago: The University of Chicago Press, 2005.

²⁶ Walsh, Carl. *Inflation targeting: What have we learned?* University of California: Santa Cruz, 2008, pp. 9.

²⁷ Lin, Shu, and Ye, Haichun. "Does Inflation Targeting Make a Difference? Evaluating the Treatment Effect of Inflation Targeting in Seven Industrial Countries," in the *Journal of Monetary Economics*, Propensity Scoring Approach, 54, 2007.

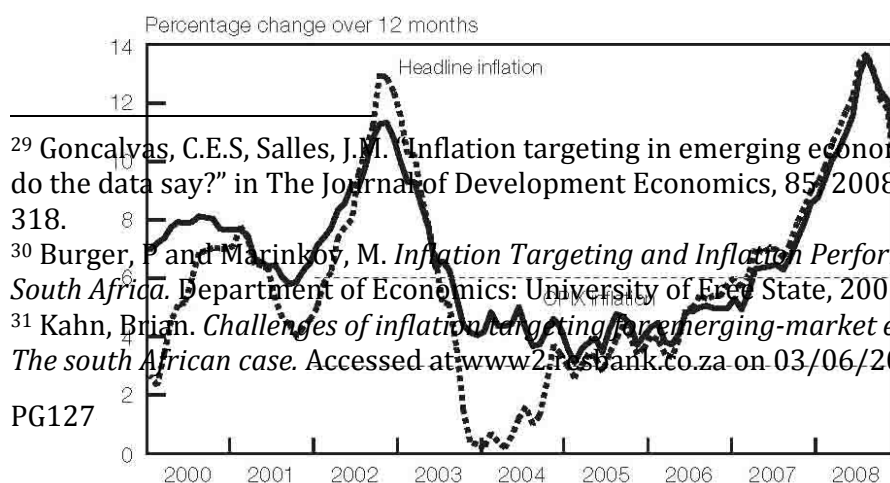
²⁸ Walsh, Carl. *Inflation targeting: What have we learned?* University of California: Santa Cruz, 2008, pp. 12.

adoption of inflation targeting, specifically in developing nations, reduced inflation (both statistically and economically significantly) by 2.5%.²⁹

Studies on the South African inflation targeting regime will be very revealing for our current investigation. Marinkov and Burger make a number of findings in their econometrically comprehensive paper. In an initial model they find an anchoring effect resulting from inflation targeting, but also find that the output gap is insignificant – which we wouldn't expect. In a second model they find that a lagged inflation variable is the only significant variable in explaining current inflation – which is a positive indication of inflation stability and anchored expectations. While these results would indicate that inflation targeting is an effective tool, Marinkov and Burger also find that inflation targeting is not particularly good at dealing with cost-push inflationary pressures.³⁰

Brian Kahn's study focusing on South Africa's inflation targeting regime presents us with even more positive feedback. Khan reports that CPIX inflation was at 9.7% before targeting, and at 6.5% after targeting. Furthermore, mean economic growth rates in the two periods increased from 1.6% to 4.3% after inflation targeting began. Khan also makes analysis related to the variability of these economic indicators. The standard deviation of inflation went down from 3.5 to 2.2, and the standard deviation of output growth went down from 2.3 to 1.1. Thus Kahn finds that inflation targeting in South Africa has decreased inflation levels and variability, while at the same time increasing economic output (growth) and decreasing its variability.³¹

Figure 2: CPIX and Headline Inflation



²⁹ Goncalves, C.E.S, Salles, J.M. "Inflation targeting in emerging economies: What do the data say?" in *The Journal of Development Economics*, 85/2008, pp 312-318.

³⁰ Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009, pp. 9-17.

³¹ Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The south African case*. Accessed at www2.resbank.co.za on 03/06/2010.

Figure 2 clearly shows how inflation levels and volatility have moved from 2000 to 2008.³²

Figure 3: South African Inflation and Growth before and after inflation targeting

Inflation	Mean (per cent)	Standard deviation
Pre-targeting period	9,7	3,5
Targeting period	6,5	2,2
Gross domestic product growth		
Pre-targeting period	1,6	2,3
Targeting period	4,3	1,1
Real policy rate		
Pre-targeting period	5,7	4,1
Targeting period	3,3	1,3

Note: The pre-targeting period is 1991Q1–1999Q4.
The targeting period is 2000Q1–2008Q2

The table presented in figure 3 compiles the results found by Kahn.³³ It shows how inflation and interest (levels and volatility) have decreased. It also shows how growth has increased while its volatility has been reduced.

³² The Reserve Bank moved from targeting CPIX to CPI in 2009 which makes for more effective policy decisions.

³³ Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The south African case*. Accessed at www2.resbank.co.za on 03/06/2010.

Kahn also finds improvements in other macroeconomic variables. The real interest rate decreased from 5.7% to 3.3% after inflation targeting as did the standard deviation (variability), from 4.1 to 1.3. In fact, Aron and Muellbauer showed in 2007 that the inflation targeting regime in South Africa has not “disadvantaged potential investment.”³⁴ Kahn does however point out that the South African case illustrates, “the difficulties that are faced when dealing with exchange rate or supply-side shocks.”³⁵ At the same time Kahn, as well as Aron and Muellbauer, argue that the Reserve Bank’s responses to such shocks have improved since the adoption of inflation targeting – especially since the adoption of flexible inflation targeting.

Figure 4: Repurchasing rate (repo)

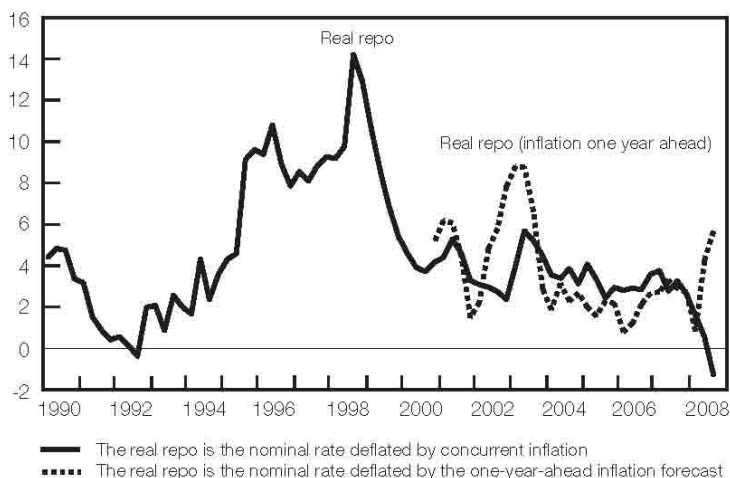


Figure 4 clearly shows the South African repo rate. Importantly it is lower and less volatile during the period of explicit inflation targeting.³⁶

Regarding Haussman’s recommendations about counter-cyclical monetary (and fiscal) policy, we refer to du Plessis’s structured vector autoregression (SVAR)

³⁴ Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The south African case*. Accessed at www2.resbank.co.za on 03/06/2010.

³⁵ Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The south African case*. Accessed at www2.resbank.co.za on 03/06/2010.

³⁶ Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The South African case*. Accessed at www2.resbank.co.za on 03/06/2010.

that found some inconclusive evidence for counter-cyclical policy. Using the same method, Frankel et al found that there was in fact evidence for counter-cyclical monetary policy under the inflation targeting regime (with the exception of 2004 and 2005), which presents even more evidence for the continued use of inflation targeting.³⁷ Thus the literature on South Africa's inflation targeting regime seems to support our argument that the policy is an effective one.

Our own evidence also supports this conclusion. Using simple ordinary least squares regression analysis with "Stata" we find results very similar to those discussed above. Here we present the t and F tests for a decrease in the mean and variability, respectively, of inflation.³⁸

Figure 5: T-test for change in mean inflation

t-Test: Two-Sample Assuming Equal Variances

	<i>Inflation 1991-2000</i>	<i>Inflation targeting Period</i>
Mean	0.090080173	0.062269448
Variance	0.00126668	0.001114195
Observations	120	109
Pooled Variance	0.001194132	
Hypothesized Mean Difference	0	
df	227	
t Stat	6.0823618	
P(T<=t) one-tail	0.0000000025	
t Critical one-tail	1.651593912	
P(T<=t) two-tail	0.0000000050	
t Critical two-tail	1.970469461	

It is clear to see that the mean has decreased, and this is found to be a statistically significant decrease with a t-stat of 6.1, and p-values very close to 0. Thus our own analysis corroborates the evidence that inflation has decreased in the current inflation targeting period.

Figure 6: F-Test for change in inflation volatility

³⁷ Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The South African case*. Accessed at www2.resbank.co.za on 03/06/2010.

³⁸ Our "null hypothesis" was that there was no change and this is clearly rejected.

F-Test Two-Sample for
Variances

	<i>Inflation 1991- 2000</i>	<i>Inflation targeting Period</i>
Mean	9.01%	6.23%
Variance	0.00126668	0.001114195
Observations	120	109
df	119	108
F	1.136857356	
P(F<=f) one-tail	0.249209914	
F Critical one-tail	1.365891458	

In this table we present an F-test for variability. This test is less conclusive about the decrease in variability. Yes, the variance has gone down from 0.0013 to 0.0011, but this is only statistically significant at the 25% level. Our evidence is thus inconclusive regarding the change in variability. If anything, there has been a slight decrease in the variability in inflation (and certainly not an increase).

Regression analysis also shows increased output in the mining, manufacturing, and financial sectors from 2000 to 2009 as reported in the South African Budget Review 2010. Along with allowances for the exchange rate to influence monetary policy (in seeking a stable exchange rate that will attract more foreign investment), it seems that inflation targeting in South Africa has grown into a comprehensive and effective tool.

Part 4: Challenges and Recommendations

The major challenges facing the South African Reserve Bank today include (but are not limited to):

- maintaining a credible image through interest rate adjustments that keep inflation between 3% and 6%
- ensuring that monetary policy does not act as a barrier to the solving of South Africa's structural unemployment problem
- creating a macroeconomic environment that is business friendly and conducive to growth

- supporting the initiatives for increased transparency and accountability, that includes better communication with the public (especially in terms of discussions with trade unions)

It would be unfair of us to demand that the Reserve Bank solve all of South Africa's problems. Sustainable job creation will require much more than efficient monetary policy. Rather we should view the Reserve Bank as a tool that creates the right "environment" for growth and job creation by controlling inflation and thus limiting uncertainty in the South African market.

In achieving this goal, the Reserve Bank should maintain its flexible but explicit targeting of an inflation band. This allows the bank to maintain credibility and predictability while allowing for other concerns to trump rigid inflationary goals at the necessary times. Attached to this we promote and endorse the "explanation clause" requiring the bank to explain any deviations from the targeted band. We also remind the bank of Hausman's counter-cyclical recommendations, as well as Blanchard's lesson from the recession that inflation shouldn't be too low.³⁹

Finally we would recommend that the central bank invests more research into the origins of inflation. While interest rate tools have proven to be effective in controlling demand side inflation the evidence presented in this paper highlights their ineffectiveness in controlling supply side (exogenous, cost-push) causes of inflation. Attached to this research the Bank should continue investigating the most effective ways to measure inflation that best represent the real price changes that South African citizens and businesses face.

Conclusion

This paper has taken on the huge task of analysing South Africa's monetary policy choice of inflation targeting. It started with a historical overview of both

³⁹ Even though Blanchard's recommendation here has been widely criticized we highlight only the fact that if Blanchard is in fact correct, South Africa is on the right track.

monetary policy in South Africa and of the adoption of inflation targeting around the world. It then went on to explore the theoretical developments surrounding inflation targeting and the arguments for its use that could be found there. This was followed by a detailed exploration of empirical evidence related to inflation targeting both around the world and in South Africa. It became clear that inflation targeting had, in most cases, been a success. We then made a number of recommendations on monetary policy for the Reserve Bank in light of the challenges it faces today. We support the current framework arguing that it could be slightly refined.

LIST OF REFERENCES

- Abedian, Iraj. *Fiscal and Monetary Management in South Africa*. Pan African Investment and Research Services: Johannesburg, 2006.
- Ball, L, and Sheridan, N. "Does Inflation Targeting Matter?" in B. Bernanke and M. Woodford (eds.), *The Inflation Targeting Debate*, Chicago: The University of Chicago Press, 2005.
- Blanchard, Olivier, Dell’Ariccia, Giovanni, and Mauro, Paolo. *Rethinking Macroeconomic Policy*. IMF Staff Position Note, International Monetary Fund, February 12, 2010.
- Burger, P and Marinkov, M. *Inflation Targeting and Inflation Performance in South Africa*. Department of Economics: University of Free State, 2009.
- Frankel, Jeff, and Sturzenegger, Federico. *Policy Memo: The Macro Team*. KSG, Harvard University, August 14, 2007.
- Freedman, Charles, and Laxton Douglas. *Why Inflation Targeting?* IMF Working Paper: Research Department, April 2009.

- Goncalvas, C.E.S, Salles, J.M. "Inflation targeting in emerging economies: What do the data say?" in *The Journal of Development Economics*, 85, 2008, pp 312-318.
- Gordhan, Pravin. Letter to the governor: Clarification of the reserve bank's mandate. Ministry of Finance, Republic of South Africa, 16 February 2010.
- Hammond, Gill. *State of the art of inflation targeting*. Centre for Central Banking Studies: Bank of England, Handbook no. 29, January 2010.
- Haussman, Ricardo. *Final Recommendations of the International Panel on Growth*. Prepared for the South African Government.
- Kahn, Brian. *Challenges of inflation targeting for emerging-market economies: The South African case*. Accessed at www2.resbank.co.za on 03/06/2010.
- Lin, Shu, and Ye, Haichun. "Does Inflation Targeting Make a Difference? Evaluating the Treatment Effect of Inflation Targeting in Seven Industrial Countries," in the *Journal of Monetary Economics*, Propensity Scoring Approach, 54, 2007.
- Marcus, Gill. Outlook for Monetary Policy. Address to the Bureau for Economic Research Annual Conference, 22 April 2010.
- South African Budget Review 2010. National Treasury. Quote of Minister Collins Chabande.
- Walsh, Carl. *Inflation Targeting: What have we learned?* University of California: Santa Cruz, 2008.

APPENDIX

South Africa

1. Inflation-targeting framework

1.1 Monetary authority	South African Reserve Bank.
1.2 Legal mandate	As stated in both the Constitution of the Republic of South Africa and in the South African Reserve Bank Act, No 90 of 1989, the primary objective is to protect the value of the currency in order to obtain balanced and sustainable economic growth. The Bank regards its primary goal as the achievement and maintenance of price stability while actively promoting financial stability.
1.3 Operational independence?	Yes.
1.4 Date IT adopted	February 2000.
1.5 Who sets the target?	The Government sets the target after consultation with the Bank.
1.6 Target measure; headline or core?	From January 2009, the twelve-month increase in headline CPI.
1.7 Current target	A target range of 3%–6%.
1.8 Target horizon	On a continuous basis.
1.9 Key policy rate	Repo rate.

2. Decision-making

2.1 Decision-making body	Monetary Policy Committee; there are eight members: the Governor, three Deputy Governors and four senior officials of the Bank.
2.2 External members?	No.
2.3 Terms of appointment of members	The President of the Republic of South Africa appoints the Governor and Deputy Governors of the Bank after consultations with the Minister of Finance and the Board of Directors of the Bank. Other MPC members are appointed by the Governor. The Governor and Deputy Governors are appointed for five-year terms and can be re-appointed.
2.4 Decision-making process	By consensus.
2.5 Frequency of decision-making meeting	Usually six times a year.

3. Modelling and forecasting

3.1 Type of models used by central bank	A core macro econometric model specifically suited for inflation targeting purposes, complemented by a suite of other models.
3.2 Published forecasts	A fan chart forecast of inflation is published in the <i>Monetary Policy Review</i> twice a year. The main elements of the central forecasts are described in the MPC statement published after each meeting.
3.3 Forecast assumption on interest rates	Constant.
3.4 Forecast owned by	MPC.

4. Accountability mechanisms

4.1 Open letter	No.
4.2 Parliamentary hearings	The Governor appears before the Portfolio Committee on Finance at least three times a year.

5. Communication and publications

5.1 Immediate announcement of policy decision	Yes, with a press release.
5.2 Press notice/conference after decision	Yes, live on national television.
5.3 Publication of minutes	No, but a Statement of the Monetary Policy Committee is published.
5.4 Publication of individual votes/balance of votes	n/a.
5.5 Inflation Report	<i>Monetary Policy Review</i> .
5.6 Frequency	Twice a year.