

Economic and Labour Market Papers

# Central banks, inflation targeting and employment creation

Gerald Epstein

**2007 / 2**

**Employment Analysis and Research Unit  
Economic and Labour Market Analysis Department**

Copyright © International Labour Organization 2007

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Permissions), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: [pubdroit@ilo.org](mailto:pubdroit@ilo.org). The International Labour Office welcomes such applications.

Libraries, institutions and other users registered in the United Kingdom with the Copyright Licensing Agency, 90 Tottenham Court Road, London W1T 4LP [Fax: (+44) (0)20 7631 5500; email: [cla@cla.co.uk](mailto:cla@cla.co.uk)], in the United States with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923 [Fax: (+1) (978) 750 4470; email: [info@copyright.com](mailto:info@copyright.com)] or in other countries with associated Reproduction Rights Organizations, may make photocopies in accordance with the licences issued to them for this purpose.

---

ISBN 978-92-2-120072-7 (print)  
ISBN 978-92-2-120073-4 (web pdf)

First published 2007

---

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

ILO publications can be obtained through major booksellers or ILO local offices in many countries, or direct from ILO Publications, International Labour Office, CH-1211 Geneva 22, Switzerland. Catalogues or lists of new publications are available free of charge from the above address, or by email: [pubvente@ilo.org](mailto:pubvente@ilo.org)

Visit our website: [www.ilo.org/publns](http://www.ilo.org/publns)

---

Printed by the International Labour Office, Geneva, Switzerland

## Preface

Despite alarming levels of unemployment and underemployment in the developing world, many central banks no longer consider employment creation as part of their mandate. Rather, monetary policy is limited to restraining inflation to the low single digits. This more limited policy reflects the growth of “inflation targeting,” a monetary strategy first used by New Zealand in 1990, which entails having the central bank pre-announce a rate of inflation to be met for the year and centring policy on achieving this goal. The IMF encourages countries to adopt inflation targeting by providing technical assistance, and in some instances, by making the adoption of inflation targeting a condition for borrowing.

Yet limiting monetary policy solely to price stabilization cannot guarantee that economic growth will improve since low inflation does not necessarily lead to high and stable economic growth. Furthermore, a high rate of economic growth does not necessarily lead to a high rate of employment growth. For this reason, the UN World Summit in 2005 and the ECOSOC Ministerial Declaration of 2006 stressed the need to place productive employment and decent work into economic policy making, recognizing that employment can no longer be considered a derivative of economic policies.

The purpose of this present study is to improve knowledge on how best to place employment at the centre of economic and social policies, as mandated in by the Ministerial Declaration as well as the 2006 “Vision” document on Employment Strategies for Decent Work. This study argues that monetary policy should be expanded to consider employment creation along with inflation control, in those countries where unemployment and underemployment are a cause of concern. The author discusses a range of policy options that can be used to pursue this goal including credit allocation policies, supporting development banks and devising regulations in support of development lending. Central banks were important agents of economic development in the 1950s, 1960s and 1970s, in both developed and developing countries, and we can learn from that experience.

Riswanul Islam  
Director  
Economic and Labour Market Department

## **Acknowledgements**

The author is very grateful to Janine Berg for her extremely helpful comments on previous drafts and her general support throughout. Thanks also to Erinc Yeldan, co-director of the PERI/Bilkent project on "Alternatives to Inflation Targeting" for many helpful discussions of these issues, to the other members of the PERI/Bilkent group for their contributions to the project, to Jomo Kwame Sundaran, Jose Antonio Ocampo, Butch Montes and Jan Kregel of UN-DESA for their help and suggestions, and to Ilene Grabel, James Heintz, Arjun Jayadev, Leonce Ndikumana, Lynda Pickbourn, and Robert Pollin for their contributions to various aspects of this research. Remaining errors are mine alone.

## Contents

<b>I. Introduction .....</b>	<b>1</b>
<b>II. Structure, Promise and Impacts of Inflation Focused Monetary Policy .....</b>	<b>5</b>
<b>III. Central Bank Policy for Employment Creation .....</b>	<b>12</b>
<b>IV. Employment Targeting Monetary Policy in South Africa: An Extended Example....</b>	<b>29</b>
<b>V. Central Banks as Agents of Economic Development.....</b>	<b>34</b>
<b>VI. Conclusion.....</b>	<b>39</b>
<b>Bibliography .....</b>	<b>41</b>



## I. Introduction

In a recent *IMF World Economic Outlook*, the authors announce a truism about current day Central Bank policy: "It is now widely accepted the primary role of monetary policy is to maintain price stability". (IMF, 2005b, chapter 4) Indeed, they were being too modest. For inflation targeting central banks, virtually the *only* role of monetary policy is to maintain price stability, and not just at any level, but in the *low single digits*. Thus, it is ironic that employment creation has dropped off the agenda of most central banks just as the problems of global unemployment, underemployment and poverty are taking center stage as critical world issues (Heintz, 2006a). The ILO estimates that in 2006, approximately 195.2 million people were jobless, the highest level ever recorded (ILO, 2007). The employment to population ratio—a measure of unemployment—has fallen in the last decade, from 62.6% to 61.4 per cent in 2006 (ILO, 2007). And as the quantity of jobs relative to need has fallen, there is also a significant global problem with respect to the quality of jobs. The ILO estimates that 17.6% of the developing world's workers earn less than \$1 a day and 1.37 billion in 2006. (or 47.4% of the developing world's workers) earn less than \$2 a day (ILO, 2007). To reach the Millennium Development Goal of halving the share of working poor by 2015, sustained, robust economic growth will be required. The ILO estimates that on average, real GDP growth has to be maintained at 4.7% per year to reduce the share of \$1/day poverty by half by 2015, and significantly more than that to reduce the share of \$2 a day poverty by half. According to the ILO: "...of the seven regions under consideration in this paper, only the three Asian Regions and the Middle East and North Africa region appear on track to meet the \$1 target, and East Asia is the only region on track to reduce \$2 working poverty by half. (Kapsos, 2004, p.v.; Heintz, 2006a.) In addition, IMF economists estimate that economic growth needs to be sustained at 7% per year or more to reach the millennium development goal of reducing poverty by half by 2015 (IMF, 2005a, p. 8).

Yet, as the quote from the IMF above suggests, for the past decade or more, the so-called "global best practice" approach to central banking has not focused on economic growth or employment generation; instead, it pursues formal or informal "inflation-targeting" (*IT*), in which keeping a low rate of inflation has been proposed as the dominant and often exclusive target of monetary policy. In this *inflation-focused monetary policy*, other important goals, such as rapid economic growth and employment creation, are seen as inappropriate direct targets of central bank policy; rather they are viewed as hoped for – even presumed – by-products of an inflation focused approach to monetary policy. (IMF, 2006). Thus, according to this orthodox approach to monetary policy, the focus of policy is on "stabilization", rather than "growth" or "development", with an implicit assumption that once "stabilization" is achieved, economic growth, employment creation, and poverty reduction will follow.<sup>1</sup>

After several decades of experience with this inflation-focused approach, the policy record has been disappointing. To be sure, in a number of countries, inflation has come down. Yet, it is questionable to what extent the drop in inflation is due to changes in domestic monetary policy, rather than the overall global fall in inflation. (Ball and Sheridan, 2003; Roger and Stone, 2005). But even if domestic monetary policy *has* reduced inflation, the hoped for gains in employment have generally NOT materialized; and, for many countries following this orthodox approach, economic growth has not significantly increased. The key point,

---

<sup>1</sup> For more discussion of some of these issues, see Epstein (2007), on which some of this paper is based.

then, is this: despite what the orthodox approach maintains, employment generation and economic growth, are NOT automatic by-products of "stabilization-focused" central bank policy. Indeed, this approach can be shown in many cases to have undermined robust employment generation. Central bankers, who have confined their attention to reducing inflation can "crow" about their success, but the unemployment and poverty that surround them are testament to a rather different verdict.

Worse still, despite a disappointing record, this almost single minded focus on inflation is gaining a more secure foothold in monetary policy circles and the circles are widening to include an increasing number of developing countries. According to a recent report by the International Monetary Fund (IMF, 2006), an increasing number of central banks in emerging markets are planning to adopt inflation targeting as their operating framework. (See Table 1) An IMF staff survey of 88 non-industrial countries found that more than half expressed a desire to move to explicit or implicit quantitative inflation targets (IMF, 2006). More relevant to our concerns, nearly three-quarters of these countries expressed an interest in moving to "full-fledged" inflation targeting by 2010. (*Ibid.*, p. 8). To support and encourage this movement, the IMF is providing technical assistance (TA) to many of these countries and is willing to provide more (Table 1, and further discussion below). Thus, despite little evidence concerning the success of inflation targeting in its promotion of economic growth, employment creation and poverty reduction, and mixed evidence at best that it actually reduces inflation itself, a substantial momentum is building in poor countries for full fledged inflation targeting. Promotion efforts by the IMF and western trained economists are at least partly responsible for this increasing popularity.



**Table 1: Inflation Targeting Countries, Current and Potential**

Country	When Adopted	Current Inflation Target % per annum	Technical Assistance Being Requested From and given by the IMF
<b>Current Targeters (in order of adoption)</b>			
<i>Emerging Markets</i>			
Israel	1997	1-3	
Czech Republic	1998	3 (+/- 1)	
Poland	1998	2.5 (+/- 1)	
Brazil	1999	4.5 (+/- 2)	
Chile	1999	2-4	
Colombia	1999	5 (+/- .5)	
South Africa	2000	3-6	
Thailand	2000	0 – 3.5	
Korea	2001	2.5-3.5	
Mexico	2001	3 (+/-1)	
Hungary	2001	3.5 (+/-1)	
Peru	2002	2.5 (+/-1)	
Philippines	2002	5-6	
Slovak Rep.	2005	3.5 (+/- 1)	
Indonesia	2005	5.5 (+/- 1)	
Romania	2005	8.8	
<i>Industrial Countries</i>			
New Zealand	1990	1-3	
Canada	1991	1-3	
United Kingdom	1992	2	
Sweden	1993	2 (+/- 1)	
Australia	1993	2-3	
Iceland	2001	2.5	
Norway	2001	2.5	
<b>Candidates for Inflation Targeting</b>			
Costa Rica, Egypt, Turkey, Ukraine (4)	Near Term, 1-2 years		YES
Albania, Armenia, Botswana Dominican Republic, Guatemala, Mauritius, Uganda (8)	Medium Term, 3-5 years		YES
Angola, Azerbaijan, Georgia, Guinea Morocco, Pakistan, Paraguay (6)	Medium Term, 3-5 years		NO
Belarus, China, Kenya, Kyrgyz Republic, Moldova, Serbia, Sri Lanka, Vietnam, Zambia (9)	Long term: more than 5 years		YES
Bolivia, Honduras, Nigeria, Papua New Guinea, Sudan, Tunisia, Uruguay, Venezuela (8)			NO

Source: IMF, 2006, "Inflation Targeting and the IMF", Tables 1 and 2.

While it might seem obvious that inflation-focused central bank policy represents the only proper role for central banks, in fact, looking at history casts serious doubt on this claim. Far from being the historical norm, this focus by central banks on stabilization to the exclusion of development represents a sharp break from historical practice, not just in the developing world but also in the now developed countries as well (Epstein, 2006). In the post-Second World War period, development was seen as a crucial part of the central bank's tasks. Whereas now, by contrast, development has dropped off the "to do" list of central banks in most developing countries.

The theme of this paper is that there should be a return to the historical norm of central bank policy: in particular, employment creation or other developmentally valuable objectives should join inflation and stabilization more generally as key goals of central bank policy. This paper outlines why a shift away from inflation targeting, and a move back toward a more balanced approach is both feasible and desirable. Of course, the paper does NOT argue that stabilization, including a moderate inflation rate, is unimportant. Indeed, historically, some central banks went much too far in downplaying the stabilization role, sometimes with disastrous consequences. But the response should NOT be to go to the other extreme and ignore the developmental role entirely. As I try to show in this paper, balancing between the stabilization and developmental roles is a superior approach. In particular, for many countries, employment creation is a desirable goal of monetary policy.

Of course, central banks need not, and indeed, *cannot* be the only institution having an employment generation role. But, in most developing countries, central banks need to cooperate with other institutions by doing much more than simply keeping inflation rates in the low single digits. To bring this about, many institutions will have to play a supporting role. Among them is the IMF, which by modifying its conditionality and monitoring programs is enshrining inflation control as a dominant policy. The IMF should change its advice to a more balanced position between inflation control on the one hand and employment generation and poverty reduction, on the other.

The rest of the paper is organized as follows. In the next section, we briefly survey the current structure and impacts of inflation focused monetary policy, including a discussion of inflation targeting. Section III discusses alternatives to inflation focused central bank policy, summarizing the results of a multi-country research project focused on designing more balanced alternatives to inflation targeting.<sup>2</sup> This section shows that there are viable, socially productive alternatives to inflation targeting, including those that focus on employment generation, and makes the case that these alternatives should be further developed. Section IV elaborates on a case study of inflation targeting and their alternatives in South Africa. Section V discusses the historical practice of central banking in developed and developing countries, and, in particular, its developmental role. Section VI concludes.<sup>3</sup>

---

<sup>2</sup> This project was co-directed by the author on behalf of the Political Economy Research Institute (PERI) of the University of Massachusetts, Amherst and by Erinc Yeldan, from Bilkent University in Ankara, Turkey.

<sup>3</sup> This paper draws liberally on some of my earlier work, including Epstein 2000, 2006, 2007; Epstein, Gabel and Jomo, 2006; and Pollin, *et al.* 2006.

## II. Structure, Promise and Impacts of Inflation Focused Monetary Policy

According to its advocates, "full fledged" inflation targeting consists of five components: absence of other nominal anchors, such as fixed exchange rates or targeted nominal GDP; an institutional commitment to price stability; absence of fiscal dominance, in other words, debt levels which are not too high or financed by the central bank; policy (instrument) independence; and policy transparency and accountability. (Mishkin and Schmidt-Hebbel, 2001, p. 3; Bernanke, et. al. 1999). In practice, while few central banks reach the "ideal" of being "full fledged" inflation targeters, many others still focus on fighting inflation to the virtual exclusion of other goals. This is sometimes, called "inflation targeting lite". The overriding announced goal of inflation targeting central banks is typically "price stability", and is not just price stability at ANY level. It is usually defined to be an inflation rate in the low single digits. (Ibid., p. 99). In addition, inflation targeting is usually associated with changes in the law that enhance the independence of the central bank (Ibid., p. 102; Mishkin and Schmidt-Hebbel, 2001, p. 8).

The major claims made by advocates of inflation targeting is that it will<sup>4</sup>:

- Reduce the rate of inflation
- Enhance the credibility of monetary policy
- Reduce the *sacrifice* ratio associated with contractionary monetary policy
- Help to attract foreign investment

The evidence on these claims is mainly in the negative, and we briefly discuss each one in turn.

### *Does Inflation Targeting Reduce the Rate of Inflation?*

It is true that countries that adopt inflation targeting often achieve lower inflation rates. But there is strong evidence that this decline in inflation might not be due to inflation targeting itself, but rather to the general declines in world-wide inflation or to a simple reversion to a more normal inflation rate (Ball and Sheridan, 2003) Since the publication of Ball and Sheridan's piece – which was a major challenge to the claims made by advocates of inflation targeting, the supporters of IT have attempted to study further the evidence on the impact of inflation targeting on inflation and other variables. Part of the difficulty in this field, to which I will return below, is that the time periods are rather short and the number of country cases is small. Moreover, common global trends are often dominant. In any case, along the lines of IMF rebuttal, the IMF, in its *2005 World Economic Outlook* compare emerging market inflation targeters with a "control group" and find only small differences, perhaps 3.5% point inflation rates, on average between inflation targeters and the non-targeter control group. (IMF, 2005b, Chapter 4). While the IMF authors of the report imply that this is a large difference, they make no attempt to justify why a 3.5% point inflation rate would contribute substantially to economic welfare. As we discuss further below, it is unlikely that a reduction of 3.5% points in inflation rates will significantly improve economic performance, and, indeed, if inflation were already extremely low to begin with, it could harm performance.

---

<sup>4</sup> See Bernanke, et. al. (1999) and Mishkin and Schmidt-Hebbel (2001) and Roger and Stone (2005) for recent surveys.

### *Does Inflation Targeting Improve Credibility and Reduce the Sacrifice Ratio?*

Advocates of inflation targeting claim that inflation targeting (along with other institutional changes in the central bank, such as central bank independence) will convince financial markets, workers, and firms that the central bank is committed to low inflation and that this will enhance the "credibility" of the central bank. In standard, neo-classical macroeconomic theory, credibility means that investors and price setters will believe that the central bank will put "its money where its mouth is" and, as result, investors' expectations of future variables, such as inflation, interest rates and exchange rates, will conform to the central banks forecasts. In such a world, according to the theory, the central bank can reduce future inflation rates without having to impose significant costs on the real economy by raising real interest rates, thereby slowing down economic growth. If the central bank credibly commits to reducing inflation, then price setters (firms and workers) will simply believe them and build those lower inflation expectations into their pricing behaviors. This will become a self fulfilling central bank statement. Hence, enhanced central bank "credibility" will lead to lower inflation at a lower cost in terms of slower economic growth, higher unemployment, and higher real interest rates.

What does the evidence show? A line of empirical research on credibility effects has consequently focused on the behavior of inflationary expectations and employment costs of anti-inflationary policy under an inflation-targeting monetary regime. Laubach (1997) examines surveys and long-term nominal interest rates and finds no evidence that the introduction of inflation targets affects expectations of inflation. In most cases inflationary expectations have come down only as a result of a consistent and successful past record of maintaining low inflation demonstrated by central banks. Mishkin (1999) cites the empirical studies by Almeida (1998) and Bernanke et al.(1999) as demonstrating that after the adoption of an inflation-targeting monetary regime, inflation expectations do not come down immediately. There is also no reduction in the output loss associated with anti-inflationary policy in countries with inflation targeting. On the basis of the empirical work on the consequences of inflation targeting in Australia, New Zealand and Canada by Blinder (1998) and DeBelle (1996), Blinder states, "nor does the recent experience of OECD countries suggest that central banks that posted inflation targets were able to disinflate at lower cost than central banks without such targets."(Blinder, 1998:63) Similar results are obtained in Posen (1995) who found little evidence that inflation targeting has significantly reduced the employment costs of reducing inflation. The most thorough presentation of evidence on the impact of inflation targeting comes from advocates of the approach: Bernanke, et al., 1999. Aspects of their empirical evidence are not particularly favorable toward their approach.

Inflation targeting is no panacea ... it does not enable countries to wring inflation out of their economies without incurring costs in lost output and employment; nor is credibility for the central bank achieved immediately on adoption of an inflation target. Indeed, evidence suggests that the only way for central banks to earn credibility is the hard way: by demonstrating that they have the means and the will to reduce inflation and to keep it low for a period of time. (Bernanke, *et al.*, 1999, p. 308.) Moreover, overall...we must admit that the economic performance of the non-targeters over the period considered is not

appreciably different from that of the inflation targeters...While in all the inflation-targeting countries, inflation remains unexpectedly low as GDP growth returns to its predicted path, the same is true for (non-targeters) Australia and the United States. (Ibid. p. 283) In short, inflation targets are not a necessary condition for sustaining low inflation...(and)...even for countries with a long record of credible targeting, reducing inflation comes at the price of significant output reductions in the short run. (Ibid. p. 282)

Still, Bernanke, *et al.* are supportive of the idea that inflation targeting can provide a very useful framework for policy. On the basis of all this evidence, however, it is difficult to see where this support derives from. Typically, central banks that reduce inflation do so the old-fashioned way: by raising interest rates, causing recessions or slow growth, and by generating unemployment.

Some recent work has been more supportive of the credibility and sacrifice ratio claims of inflation targeting advocates. For example, Clifton, *et al.*, 2001 report some findings that inflation targeting might have improved the inflation unemployment trade-off in OECD countries, but they do not look at emerging market countries. Other studies suggest that inflation targeting might allow for lower long-term real interest rates by generating lower inflation expectations. (Also see IMF, 2005b). This *could* enhance the environment for investment, but if tight monetary policy does so at the expense of expected growth in aggregate demand, then the overall impact on investment might not be positive.

#### *Does Inflation Targeting Attract More Foreign Direct Investment (FDI)?*

Many developing countries, correctly or not, have made a priority of trying to attract foreign direct investment (FDI). Advocates of neo-liberal macroeconomic policy, influencing inflation targeting, have suggested that these policies help countries attract FDI. So the question arises: has inflation targeting helped developing countries attract FDI? There have been no direct studies of this question. However, work by Epstein (2000) shows that, if inflation is kept at 20% or below, there is no correlation between inflation and foreign direct investment inflows. Hence, on the basis of the limited existing evidence, it seems unlikely that inflation targeting improves a country's ability to attract FDI.

#### *What is the Impact of Inflation Targeting on Economic Growth and Employment Generation?*

Most studies have failed to look at the impact of IT on economic growth or employment generation. This is not surprising given the neo-liberal view that that the key role for monetary policy is to keep inflation in the low single digits, and the faith that, if they do, growth will take care of itself. A recent study by IMF economists, using a complex econometric model and policy simulations, report findings that inflation targeting economies experience reductions in the *volatility* in inflation, without experiencing increased *volatility* in real variables such as real GDP. According to these estimates, inflation targeting central banks do enhance economic "stability" relative to other monetary rules, such as pegged exchange rates and monetary rules (IMF, 2006). While intriguing, these results are only as strong as the simulation model on which they are based, only as relevant as the questions they pose, and only as broad as the alternatives they explore. On all these scores, these IMF

results are problematic. First, they do not simulate the impact of inflation targeting relative to other possible policy regimes, such as the real targeting regime discussed below. Second, the model is based on estimates of potential output that are themselves affected by monetary policy (Tobin, 1980, Michl, 2007). Hence, if monetary policy slows economic growth, it also lowers the rate of growth of potential output and, therefore reduces the gap between the two, thereby *appearing to stabilize the economy*. But in fact, it does so at the expense of slowing growth or even generating stagnation. This highlights the third key point: even if it could be shown that inflation targeting does a good job at stabilization, it is crucial to remember that the stabilization role of monetary policy is only one of the tasks facing central banks; the other task is to contribute directly to economic growth, employment creation and poverty reduction, and the IMF study fails to look at the impact of inflation targeting on the rate of growth of employment, or on the quality of employment. Yet, these are the issues at stake here.

To the extent that economists have looked at GDP growth, they have assessed the volatility of growth, rather than its level. However, if one does look at the data on economic growth, it appears that inflation targeting in developing countries does *not* have a positive impact on growth. When IMF economists compared developing country inflation targeters with a comparison groups, (interestingly, they left China out of the comparison group), one finds that the rate of economic growth for inflation targeters is no greater than the developing country comparison group (IMF, 2005b, Ch. 4), and by some measures, it is lower. Including China and some of the other rapidly growing Asian countries, many of who do NOT target inflation, would presumably make this comparison even starker.

### *Summary*

Inflation targeting, even if it does have a modest impact on reducing inflation and inflation expectations, does not seem to be associated with improved real performance of inflation targeting economies. Moreover, as we discuss further below, there may be some significant costs to these policies, including an over-valued exchange rate, excessive costs on sub-sectors of the population such as the poor and women, and slower employment growth overall.

### **Asymmetries and Misses in Inflation Targeting Regimes**

Experiences with inflation targeting present another odd feature: inflation targets are often missed, and they are often missed by a great deal. Moreover, inflation rates are just as likely to be too low as too high, and some times more so (See table 2). In other words, monetary policy is often more likely to be too tight than too loose. Yet, despite often missing the targets, countries who have adopted inflation targeting do not give it up. This presents several asymmetries which are possibly costly for employment and growth. If under inflation targeting inflation is often too low, that means that, central banks may be keeping monetary policy *too tight*, with possible negative implications for employment and growth. Second, why do countries continue to adopt inflation targeting even though the targets are often missed? With a stunningly Panglossian faith, IMF economists surmise: "These misses do not

seem to reflect "bad" monetary policy; otherwise, the regime would surely have been abandoned or substantially modified" (Roger and Stone, p. 37).<sup>5</sup>

Another more likely interpretation is that once countries adopt inflation targeting, they are locked into it. They feel they cannot abandon it for fear that abandoning inflation targeting will send the "wrong" signal to investors and could prove costly in terms of "investor confidence" leading, perhaps to exchange rate instability and capital flight. If this "fear of inflating" is true, then countries maintain the inflation targeting framework, even if they often miss the targets.

Some might argue that this means an inflation targeting regime is a "paper tiger", and that it therefore cannot have significant effects for good or ill. But I believe this is a mistaken interpretation. For one thing, as just mentioned, inflation targeters are just as likely if not more likely to have a monetary policy that is too tight in the sense that inflation is too low. But second, as long as central banks have an inflation targeting framework, they can argue that they do not need to worry about other objectives *except insofar as they affect inflation*. But of course, this absolves central banks entirely of their developmental obligations, and eliminates a key tool of macroeconomic policy from the developmental arsenal that attempts to expand good jobs, among other goals. Inflation targeting central banks can simply say: "Employment creation? That's not MY department!"

**Table 2: Inflation Outcomes of Inflation Targeting Countries**

	Frequency of Deviations (in percent)		
	Total	Below	Above
<b>All Countries</b>	43.5	24.2	19.3
<b>Stable Inflation Targets</b>	32.2	21.7	10.6
<b>Disinflation Targets</b>	59.7	27.7	10.6
<b>Industrial Countries</b>	34.8	22.5	12.3
<b>Emerging Market Countries</b>	52.2	25.9	26.2

These outcomes are measured relative to the edges of target ranges.

Source: Roger and Stone (2005), Table 7, p. 22.

### **Why the Focus on Inflation?**

There is a further, more basic problem with inflation targeting and the neo-liberal approach to central bank policy more generally. Why is there such a focus on fighting inflation to the exclusion of other goals? As reported in Bruno and Easterly (1996) and Epstein (2000) there is a great deal of evidence that moderate rates of inflation, inflation up to 20% or more, has no predictable negative consequences on the real economy: it is not associated with slower growth, reduced investment, less foreign direct investment, or any other important real variable that one can find.

---

<sup>5</sup> They offer an alternative answer as well: "Another way to answer this question is to note the lack of alternative regimes" (ibid., p. 38). I will discuss this point more below.

Some IMF economists and others have argued more recently that these results are misleading. They claim that there are non-linearities, such as threshold effects, that imply that inflation begins to harm economic growth at much lower levels than claimed by Bruno and others. (Ghosh and Phillips, 1998; Kahn and Senhadji, 2001; Burdekin, *et al.*, 2004). Some of these find that inflation begins to harm growth in developing countries at rates as low as 3 percent. However, an even more recent paper by Pollin and Zhu find that, taking into account non-linear impacts of inflation on economic growth, inflation and economic growth are occasionally positively related, especially when the cause of inflation is demand expansion. (Pollin and Zhu, 2006). More generally, they find that for developing countries, inflation below about 15 % is not harmful for economic growth, and can, indeed be beneficial. (Pollin and Zhu, 2006, p. 606.) Hence, they conclude, there is little justification, at least on growth grounds, to focus monetary policy on bringing inflation down to the low single digits, especially if such policy has economic costs.

Apart from growth effects, however, many economists have argued that inflation harms the poor more than the rich. Hence, on distributional grounds, inflation reduction into the low single digits should be a priority. While more research is necessary to fully investigate this claim, important recent work by Jayadev calls this conventional wisdom into question (Jayadev 2006a,b). Jayadev looks at survey data on people's preferences about inflation versus unemployment. Whereas previous researchers had asked if people disliked inflation, Jayadev investigated the more appropriate question: which is a bigger problem: inflation or unemployment? This question better reflects the idea that there is a trade-off between the two, at least in the short to medium term. When people are asked this trade-off question, interesting and highly relevant results emerge. Jayadev finds that those in the lowest quintile of the income distribution are more likely to perceive unemployment as a more serious problem than inflation. Those in the top quintile are more likely to have the opposite view (Jayadev, 2006a) In a later paper, Jayadev finds similar results when he divides the sample by classes rather than by income groups. He finds that workers, and in particular, low skilled workers on average find unemployment a more serious problem than inflation. (Jayadev, 2006b)

Of course, all agree that very high levels of inflation can have every serious impacts on growth and possibly the distribution of income.<sup>6</sup> But there appears to be very little justification for monetary policy oriented toward keeping inflation in the low single digits, especially when employment and poverty are significant problems.

#### *Gender and Inflation Focused Monetary Policy*

While moderate levels of inflation appear to have no significant costs, using central bank policy to fight these levels of inflation does have costs, and some evidence suggests that these costs are felt more by some groups than others. In particular, as shown by Braunstein and Heintz (2006), dis-inflationary monetary policy in developing countries, like that

---

<sup>6</sup> Of course, what is meant by "very high" is a matter of continuing dispute and subject of research. The original Bruno results suggested that up to 40%, inflation has no discernable negative effects. Pollin and Zhu found the number closer to 15%. Of course, these are average numbers, and as these authors state, it matters what is causing the inflation: is it supply side shocks, in which case it is very difficult to dis-intangle the impacts of supply reductions from the inflation itself, or is the higher inflation due to demand expansion, in which case the impacts appear to be more benign.



undertaken in connection with inflation-focused monetary policy regimes, has a disproportionately negative employment effect on women, relative to men. Their excellent work is highly suggestive that there may be important gender effects of monetary policy, suggesting that this issue needs much more research than it is currently receiving.

Their empirical exercise explores the effects of inflation reduction on women's and men's formal employment. They compiled data for 51 "inflation reduction episodes" in 17 low- and middle-income countries.<sup>7</sup> To assess the employment effects of inflation reduction periods, they looked at actual employment trends during each inflation reduction episode, disaggregated by gender, and compared these to long-run employment trends. They also examine indicators that suggest how monetary policy responded during inflation reduction episodes using a similar approach.

In looking at the impacts of disinflation on employment, they distinguished periods when both inflation rates and employment fell, relative to long run trends, from those periods when inflation rates fell but employment expanded. They use the term "contractionary inflation reduction episode" to refer to the inflation reduction periods when employment contracted and "expansionary inflation reduction episode" to those when employment expanded.

Their main findings are as follows:

- If employment contracts during an inflation reduction episode, it is likely that women will experience a larger loss of employment, in percentage terms, than men. In the majority of cases, contractionary inflation reduction has a disproportionately negative impact on women. However, during inflation reduction episodes in which employment expands, the gender-specific impact is ambiguous.
- When central banks respond to inflationary pressures by raising real interest rates above the long-run trend they are more likely to experience a slow-down in the growth of employment relative to those countries that keep interest rates in line with or below the long-run trend, with concomitantly higher losses for relative female employment. However, countries with negative real interest rates do not appear to be able to increase employment growth by lowering real interest rates still further.
- They find that real exchange rates (RERs) seem to impact the gender bias of contractionary inflation reduction episodes. In all cases where women experienced relative employment gains during employment contractions, exchange rates either depreciated or showed no deviation relative to long-run trends.
- Tightening the real money supply also seems to be negatively associated with employment in general and women's employment in particular.

These results suggest that contractionary monetary policy aimed at reducing inflation often has a disproportionately negative impact on women's employment, an effect that may be eased by maintaining a competitive exchange rate. Moreover, inflation reduction episodes where real exchange rates did not appreciate were less unfavorable to women's employment.

---

<sup>7</sup> Their choice of countries was limited to those for which reasonably reliable, gender-disaggregated formal employment data were available. Informal employment could not be addressed in this analysis because of the lack of a sufficiently long time series for a variety of countries.

### III. Central Bank Policy for Employment Creation

One reason that "inflation-focused monetary policy" has gained so many adherents is the common perception that there is no viable alternative monetary policy that can improve growth and employment prospects. There are three main factors accounting for this perception. First, many economists believe the Pre-Keynesian natural rate (or, alternatively, "Non-Accelerating Inflation Rate of Unemployment (NAIRU)) view of the labor market that claims that, left to their own devices, market forces will automatically bring the economy to full employment and, furthermore, any attempt to reduce unemployment beyond that will only result in ever worsening inflation. However, there is substantial evidence that the NAIRU theory is not empirically well based. The natural rate or NAIRU, if it exists, does not seem to be constant; importantly, it seems to be affected by macroeconomic policy itself. In some countries its effects are asymmetric, with increases in unemployment reducing inflation, but reductions in employment not increasing inflation; and it no longer even seems central to the work of mainstream economics (see Eisner, 1997; Baker, 2000; Ball and Sheridan, 2001; Ball and Mankiw, 2002; Pollin, 2005; Hall, 2005).

Second, in an internationally financially integrated economy with high levels of international capital flows, monetary policy can be extremely challenging. In particular it might be very difficult to gear monetary policy by targeting monetary aggregates, or by pegging an exchange rate along with trying to promote employment growth. This is often seen as the so-called "trilemma" which says that central banks can only have two out of three of the following: open capital markets, a fixed exchange rate, and an autonomous monetary policy geared toward domestic goals. While this so-called "trilemma" is not strictly true as a theoretical matter, in practice it does raise serious issues of monetary management (Frenkel and Taylor, 2006). From my perspective, the real crux of the problem turns out to be one leg of this 'tri-lemma', namely the fact that orthodox economists, by and large, have taken for granted that eliminating capital controls is the best policy, and that virtually complete financial liberalization with respect to the foreign sector is the optimal policy. Yet recent evidence amply shows that open capital markets can create very costly problems for developing countries and that many successful developing countries have used a variety of capital management techniques to manage these flows in order, among other things, to help them escape this so-called "trilemma". (See below for further discussion of capital management techniques.) Third, few economists have developed and proposed concrete alternatives to inflation targeting monetary policy in the current context so those searching for alternatives have trouble finding models. However, economists are now in the process of rectifying this problem and I report on these efforts in this section.

The main point of this section is this: there *are* viable alternatives to inflation- focused monetary policy (including inflation targeting), alternatives that can promote more and better employment and poverty reduction. Moreover, these alternatives are also responsive to the needs to keep inflation at a moderate level and to maintain an exchange rate that is not excessively volatile: in short, these alternatives are responsive to stabilization needs as well as developmental needs.

### *Alternatives To Inflation Targeting*

The alternatives I discuss here all go under the rubric of a *real targeting approach* to central banking. By "real" I mean a target connected to the real, as opposed to the monetary aspects of the economy: employment, real GDP growth, investment, the real exchange rate. I use the term "targeting" rather loosely, with its meaning placed anywhere along a continuum. At one end of that continuum it means a strict, numerical goal, as in inflation "targeting", pre-announced and narrowly focused; at the other end it means a general goal of monetary policy. Of course, as I have said repeatedly, along with these real goals, there are important monetary or financial goals which the central bank must also be concerned with, including achieving a moderate inflation rate. Hence, typically a central bank will attempt to hit one or more real targets, subject to inflation and possibly also an exchange rate volatility constraint.

### The Real Targeting Approach to Central Banking

#### *Advantages of the Real Targeting Framework*

This *real targeting* framework has a number of important advantages:

1. First and foremost, it places front and centre the economic variables that have the most immediate and clearest association with social welfare. In the case of implementing a strict "targeting" framework, the central bank will be forced to identify this target and then reach it, and if it doesn't do so, both explain why it failed and how it will improve in the next period.
2. Given the public pressure to reach this target, the central bank will have significant incentives to invest in research and other activities, to improve its understanding and tools to reach this real target.
3. Given that it will need to reach this target amid other constraints, it will need to develop new tools of monetary policy. For example, if a central bank must hit an employment target subject to an inflation and balance of payments constraint, then – in addition to interest rate policy - it might explore asset allocation strategies to encourage banks to increase their lending to high employment generating activities.
4. A real targeting approach lends itself naturally to a more democratic, transparent and accountable central bank policy that serves the genuine needs of the majority of countries' citizens, rather than the minority that typically benefits from the combination of slower growth, low inflation, and high real interest rates.
5. The framework is much more conducive to tailoring monetary policy to the specific needs of different countries. For example, if a country has a particular problem with generating good jobs for women, or more jobs in a particular region of the country, then the real targeting approach can target women's employment or more employment in a specific region (along with more employment generally) and devise instruments to achieve those objectives.

In short, the *real targeting approach* to monetary policy is likely to be more developmentally relevant, flexible, effective and democratically accountable than inflation targeting.

An important example of real targeting, developed in more detail below, is *employment targeting*.

#### *How would An Employment Targeting (ET) Framework Operate?*

The central bank, in conjunction with the government, would estimate a feasible target range for employment growth, taking into account the rates that are consistent with moderate inflation. Based on the estimate of the relationship between the central banks' policy instrument and employment growth, the central bank will try to achieve its target. Note that many of the problems that arise will be similar to those that arise with inflation targeting. For example, what are the best instruments to use? What is the best way to measure employment growth? What should be done about uncertainty and imperfect information? These are difficult issues. But there is no reason to believe that these issues will be any harder – or easier to deal with—than in the inflation targeting case.

#### *Objections to Employment Targeting*

The major objection to employment targeting from mainstream economists is also the least valid: it is the claim that only nominal variables can be affected by monetary policy, at least in the long run. But, as discussed earlier, there is plenty of evidence that central bank policy can have significant impacts on employment and other real variables, such as investment (eg. Ball, 1999).

There will be other objections to employment targeting. Many economists will argue that the association between central bank policy and employment growth is simply too loose to base policy on. But Bernanke et al, and other advocates of targeting have admitted that the connection between central bank policy and inflation is also loose and variable. (Bernanke, et. al. 1999) There is simply no macroeconomic variable worthy of interest, including inflation that is perfectly controlled by the central bank.

#### *The Indirect Advantages of Employment Targeting*

There are several extremely important indirect advantages of the employment targeting framework which themselves will contribute in a crucial way to the framework's success. These indirect advantages involve the accumulation of new knowledge about the connections between monetary policy and employment, and the generation and implementation of new ideas about how to generate more employment and economic growth. Both of these positive outcomes will stem from focusing the attention of the central bank, with its enormous human and financial resources, on the key issue of employment growth.

Making employment or employment growth a target of monetary policy will induce a profound shift in the attitude and the activities of the central bank. It will begin to assign its economists to study the relationships between monetary policy and employment growth; it will study what monetary policy instruments are best used to achieve employment growth; it will organize conferences on employment growth and monetary policy. It will give promotions and more resources to members of its staff that make breakthroughs in the

understanding of these connections. It will lead the central bank to link up with others outside the Bank who have knowledge and experience with respect to employment generation and its relationship to financial variables.

The creation of an employment targeting framework will not only lead the central bank to generate more knowledge about the relationship between monetary policy and employment growth. It will lead the bank to design new programs to help it reach its targets. To be sure, lowering interest rates, as I have suggested earlier, could have an important impact on investment and expansion behavior by many firms, large and small. But the central bank will also find that, in order to contribute to more employment generation subject to an inflation constraint, it will need additional instruments of monetary policy.

### *Targets and Instruments*

As Tinbergen argued in his classic piece on policy making, one needs at least as many independent instruments as targets to reach one's objectives. If the central bank were to adopt an employment targeting approach, in which it also had to meet an inflation constraint, then in effect there are up to two targets and only one instrument, the interest rate. In this situation, the Central Bank will undoubtedly search for more instruments with which to reach its targets.

There are a number of useful possibilities. Among the most promising are various mechanisms of credit allocation and capital management techniques.

### *Credit Allocation Mechanisms*

As described in more detail later in our discussion of post-War US, European and Japanese economic policies, central banks have used a variety of tools to help direct credit to preferred sectors to support social and economic goals. These tools include asset based reserve requirements, loan guarantees, support for pooling and underwriting small loans, utilizing the discount window in support of employment generating investments (see Pollin, et. al, 2006 and 1994, Epstein and Heintz, 2006, Palley, 2003, and my treatment below for more discussion of these approaches). Asset based reserve requirements are a system in which lending institutions are required to hold low-interest or zero interest yielding reserves as a proportion of their earning assets. Hence, banks loose money in proportion to the size of the reserves they need to hold. To make this part of a directed lending system, the central bank or government would assign lower requirements to preferred assets, such as employment generating activities, thereby creating an incentive for banks to hold these types of assets relative to less desirable assets. Another possible instrument would be to create a loan guarantee program for banks that lend to cooperatives and small businesses that generate good employment opportunities. Another example is to provide liquidity and risk sharing institutions for loans to businesses which have promise to generate employment but which now have restricted access to financial markets. An example of this type of policy would be to provide financial and administrative support for asset backed securities which would bundle loans for employment generation, and sell them as securities on the open market, much as Ginnie Mae and Fannie Mae do in the United States housing market.

As a final example, the Reserve Bank could open a special discount window facility, in

which it would offer credit, guarantee, or discount facilities to institutions which are on-lending to firms and cooperatives which have promising employment generating opportunities.

Of course, these types of policies can lead to abuse and corruption. It is crucial that monitoring and control systems be established to minimize these costs. As Amsden argues (2001), these control and monitoring systems were crucial to the success of newly industrializing countries such as South Korea and Taiwan that used credit allocation techniques to support their industrial policies. In the cases that Amsden describes, firm's success in generating exports was the key monitoring variable. Firms that did not succeed would be penalized.

### *Employment Targeting Through A Gender Lens*

Among the great advantages of combining credit allocation mechanisms with the employment targeting approach is that it provides the policy flexibility necessary to succeed in varying institutional contexts. For example, where female waged employment is important for social welfare, using a gender lens will be crucial for designing effective macroeconomic policy in general and employment targeting monetary policy in particular. In these contexts, the central bank could design asset based reserve requirements to generate more female employment; alternatively, the central bank could give preferential access to the discount window for financial institutions investing in or lending to organizations which will generate more, better, female employment. Indeed, even in the absence of a prior understanding of the importance of women's wage employment, in these situations, an employment targeting central bank will likely discover on its own the importance of using a gender lens in macroeconomic policy if it is going to achieve its employment generating targets. This is an excellent example of the beauty of implementing an employment targeting approach: it will force the central bank to learn much more about the nature of the labor force and how to increase gainful employment which, in many societies, will mean that it will learn much more about the female labor force.

### *Capital Management Techniques<sup>8</sup>*

As I discussed earlier with respect to the so-called *tri-lemma*, governments may need policy space from the vagaries of international capital markets to preserve autonomous monetary and other policies along the lines discussed here. In particular, to achieve this policy space they may need capital controls, exchange controls or, more generally, capital management techniques.

*Capital and Exchange Controls* place taxes or regulations over the buying and/or selling of international assets or debt (capital controls) or foreign exchange (exchange controls). These have been used widely to manage inflows and outflows of international capital and/or foreign exchange. *Capital management techniques* (CMT's) refer to two complementary (and often overlapping) types of financial policies: policies that govern international private capital flows (capital and exchange controls, as just defined) and those that enforce prudential

---

<sup>8</sup> This section draws heavily on joint work with Ilene Grabel and Jomo, K.S. See Epstein, Grabel and Jomo, 2006.

management of domestic financial institutions. Certain types of prudential financial regulations actually function as a type of capital control; moreover, capital controls themselves can function as or *complement* prudential financial regulations. There is often a great deal of synergy between prudential financial regulations and traditional capital controls. It can be difficult (and sometimes impossible) to draw a firm line between prudential domestic financial regulation and capital controls. For instance, domestic financial regulations that curtail the extent of maturity or locational mismatches may have the effect of influencing the composition of international capital flows to a country, even if those types of regulations are commonly classified as prudential domestic financial regulations and not as capital controls. Hence, for the IMF and others to argue that prudential management is "good" and capital controls are "bad" is to draw a distinction for ideological, rather than sound policy purposes.

Policymakers use Capital Management Techniques (CMTs) to achieve some or all of the following four objectives—to promote financial stability; to encourage desirable investment and financing arrangements; to enhance policy autonomy; and to enhance democracy. CMTs can promote financial stability through their ability to reduce currency, flight, fragility and/or contagion risks, thereby reducing the potential for financial crisis and attendant economic and social devastation. They can also influence the composition of the economy's aggregate investment portfolio, and can influence the financing arrangements that underpin these investments. Moreover, CMTs can promote desirable types of investment and financing strategies by rewarding investors and borrowers for engaging in them. Desirable types of investment are those that create employment, improve living standards, promote greater income equality, technology transfer, learning by doing and/or long-term growth; desirable types of financing are those that are long-term, stable and sustainable. Capital management can discourage less socially useful types of investment and financing strategies by increasing their cost or precluding them altogether.

CMTs can enhance policy autonomy in a number of ways: they can reduce the severity of currency risk, and can thereby allow authorities to protect a currency peg; they can create space for the government and/or the central bank to pursue growth-promoting and/or reflationary macroeconomic policies by neutralizing the threat of capital flight; by reducing the risk of financial crisis in the first place, CMTs can reduce the likelihood that governments may be compelled to use contractionary macro- and micro-economic and social policy to attract foreign investment back to the country or as a precondition for IMF assistance; finally, CMTs can reduce the specter of foreign control or ownership of domestic resources. It follows from the above that capital management can enhance democracy by reducing the potential for speculators and external actors to exercise undue influence over domestic decision making directly or indirectly (via the threat of capital flight). CMTs can reduce the veto power of the financial community and the IMF, and create space for the interests of other groups (such as advocates for the poor) to play a role in the design of policy. They can thus be said to enhance democracy because they create the opportunity for pluralism in policy design.

Regimes of capital management take diverse forms and are multi-faceted. Importantly, capital management techniques can be static or dynamic. Static management techniques are those that authorities do not modify in response to changes in circumstances. Capital management techniques can also be dynamic, meaning that they can be activated or adjusted

as circumstances warrant. Epstein, Grabel and Jomo (2006) undertook seven case studies of the diverse capital management techniques employed in Chile, Colombia, Taiwan Province of China, India, China, Singapore and Malaysia during the 1990s. To illustrate more specifically the various forms these techniques can take, I reproduce here tables taken from Epstein, Grabel and Jomo (2006) (table 3 and 4 below).

The positive lessons are as follows. First and most generally, they find that CMTs can contribute to currency and financial stability, macro and micro-economic policy autonomy, stable long-term investment and sound current account performance. CMTs also impart some costs. Specifically, there is evidence that in some countries the cost of capital to small firms is increased, and capital management can create space for corruption. Second, successful implementation of controls over a significant period of time depends on the presence of a sound policy environment and strong fundamentals. These include a relatively low debt ratio, moderate rates of inflation, sustainable current account and fiscal balances, consistent exchange rate policies, a public sector that functions well enough to be able to implement coherent policies (i.e., *administrative capacity*), and governments that are sufficiently independent of narrow political interests so that they can maintain some degree of control over the financial sector (i.e., *state capacity*).

Third, the cases show that causation works both ways: from good fundamentals to successful CMTs, and from successful CMTs to good fundamentals. Good fundamentals are important to the long-run success of CMTs because they reduce the stress on these controls, and thereby enhance their chance of success. On the other hand, these techniques also improve fundamentals. Thus, there is a synergy between CMTs and fundamentals. Fourth, the dynamic aspects of CMTs are perhaps their most important feature. Policymakers need to retain the ability to implement a variety of management techniques and alter them as circumstances warrant. Nimble and flexible capital management is very desirable. Chile and Taiwan POC's experience with these techniques is a good example of this type of flexibility. Countries with successful experiences with controls must maintain the option to continue using them as circumstances warrant.

Fifth, CMTs work best when they are coherent and consistent with the overall aims of the economic policy regime, or better yet, when they are an integral part of a national economic vision. To be clear, this vision does not have to be one of widespread state control over economic activity. Singapore is a good example of an economy that is highly liberalized in some ways, but one where CMTs are an integral part of an overall vision of economic policy and development.<sup>9</sup> Sixth, prudential regulations are often an important complement to capital controls, traditionally defined, and vice versa. In Singapore, for example, government moral suasion aimed at discouraging banks from lending to firms or individuals intending to speculate against the currency, is an example of an effective prudential regulation. In Chile, taxes on short-term inflows that prevent maturity mismatches are an example of a capital control that also serves as a prudential regulation. The case studies present many such examples.

Seventh, there is not one type of CMT that works best for all countries: in other words, there is no one "best practice" when it comes to CMTs. Epstein, Grabel and Jomo (2006) found a variety of strategies that work in countries with very different levels of state and

---

<sup>9</sup> See Nembhard, 1992, for an excellent discussion of these issues.



administrative capacities, with financial systems that differ according to their depth and degree of liberalization, with different mixes of dynamic and static controls, and different combinations of prudential financial regulations and capital controls.

**Table 3: Summary:  
Types and Objectives of Capital Management Techniques Employed During the 1990's\***

Country	Types of Capital Management Techniques	Objectives of Capital Management Techniques
<b>Chile</b>	<p><b>Inflows</b>            FDI and PI: One year Residence Requirement            30% URR            Tax on foreign loans: 1.2% per year  <b>Outflows:</b> No significant restrictions  <b>Domestic financial Regulations:</b>            strong regulatory measures</p>	<p>-Lengthen maturity structures and stabilize inflows            -help manage exchange rates to maintain export competitiveness            -protect economy from financial instability</p>
<b>Colombia</b>	<b>Similar to Chile</b>	<b>Similar to Chile</b>
<b>Taiwan POC</b>	<p><b>Inflows</b>  <i>non-residents</i>            -bank accounts can only be used for domestic spending, not financial speculation            -foreign participation in stock market regulated            -FDI tightly regulated  <i>residents</i>            regulation of foreign borrowing  <b>Outflows</b>            Exchange controls  <b>Domestic Financial Regulations</b>            -restrictions on lending for real estate and other speculative purposes</p>	<p>-Promote industrialization            -Help manage exchange for export competitiveness            -Maintain financial stability and insulate from foreign financial crises</p>
<b>Singapore</b>	<p><b>"Non-Internationalization" of Singapore \$ inflows</b>  <b>outflows</b>  <i>non-residents</i>            -financial institutions can't extend S\$ credit to non-residents if they are likely to use for speculation            -non-residents: if they borrow for use abroad, must swap first into foreign currency  <b>Domestic Financial Regulations</b>            -restrictions on creation of swaps, and other derivatives that could be used for speculation against S\$</p>	<p>-to prevent speculation against Singapore \$            -to support "soft peg" of S\$            -to help maintain export competitiveness            -to help insulate Singapore from foreign financial crises</p>
<b>Malaysia (1998)</b>	<p><b>Inflows</b>            -restrictions on foreign borrowing  <b>Outflows</b>  <i>non-residents</i>            -12 month repatriation waiting period            -graduated exit levies            inversely proportional to length of stay  <i>residents</i>            exchange controls</p>	<p>-to maintain political and economic sovereignty            - kill the offshore ringgit market            -shut down offshore share market            -to help reflate the economy            -to help create financial stability and insulate the economy from contagion</p>

	<p><b>domestic financial regulations</b>  <i>non-residents</i>  -restrict access to ringgit  <i>residents</i>  encourage to borrow domestically and invest</p>	
<b>India</b>	<p><b>Inflows</b>  <i>non-residents</i>  Strict Regulation of FDI and PI</p> <p><b>Outflows</b>  <i>non-residents</i>  -none  <i>residents</i>  exchange controls</p> <p><b>Domestic Financial Regulations</b>  -strict limitations on development of domestic financial markets</p>	<p>-support industrial policy</p> <p>-pursue capital account liberalization in an incremental and controlled fashion</p> <p>-insulate domestic economy from financial contagion</p> <p>-preserve domestic savings and forex reserves</p> <p>-help stabilize exchange rate</p>
<b>China</b>	<p><b>Inflows</b>  <i>non-residents</i>  -strict regulation on sectoral FDI investment  -regulation of equity investments: segmented stock market</p> <p><b>Outflows</b>  <i>non-residents</i>  -no restrictions on repatriation of funds  -strict limitations on borrowing Chinese Renminbi for speculative purposes  <i>residents</i>  exchange controls</p> <p><b>Domestic Financial Regulations</b>  -strict limitations on <i>residents</i> and <i>non-residents</i></p>	<p>-support industrial policy</p> <p>-pursue capital account liberalization in incremental and controlled fashion</p> <p>-insulate domestic economy from financial contagion</p> <p>-increase political sovereignty</p> <p>-preserve domestic savings and foreign exchange reserves</p> <p>-help keep exchange rates at competitive levels</p>

\*Sources: see Epstein, Grabel and Jomo (2006).

**Table 4:**

**Summary: Assessment of the Capital Management Techniques Employed During the 1990s\***

<b>Country</b>	<b>Achievements</b>	<b>Supporting Factors</b>	<b>Costs</b>
<b>Chile</b>	-altered composition and maturity of inflows -currency stability -reduced vulnerability to contagion	-well-designed policies and sound fundamentals -neoliberal economic policy in many domains -offered foreign investors good returns -state and administrative capacity -dynamic capital management	-limited evidence of higher capital costs for SMEs
<b>Colombia</b>	-similar to Chile, but less successful in several respects	-less state and administrative capacity than in Chile meant that blunter policies were employed -economic reforms in the direction of neoliberalism	No evidence available
<b>Taiwan POC</b>	-debt burdens and financial fragility are insignificant -competitive exchange rate and stable currency -insulated from financial crises -enhanced economic sovereignty	-high levels of state and administrative capacity --policy independence of the CBC -dynamic capital management	-limited evidence of concentration of lending to large firms, conservatism of banks, inadequate auditing and risk and project assessment capabilities -large informal financial sector -limited evidence of inadequate liquidity in financial system
<b>Singapore</b>	-insulated from disruptive speculation -protection of soft peg -financial stability	-strong state capacity and ability to use moral suasion -strong economic fundamentals	-possibly undermined financial sector development -loss of seignorage
<b>Malaysia 1998</b>	-facilitated macroeconomic reflation -helped to maintain domestic economic sovereignty	-public support for policies -strong state and administrative capacity -dynamic capital management	-possibly contributed to cronyism and corruption
<b>India</b>	-facilitated incremental liberalization -insulated from financial contagion - helped preserve domestic saving -helped maintain economic sovereignty	-strong state and administrative capacity -strong public support for policies -experience with state governance of the economy -success of broader economic policy regime -gradual economic liberalization	-possibly hindered development of financial sector  -possibly facilitated corruption

<b>China</b>	-facilitated industrial policy - insulated economy from financial contagion -helped preserve savings -helped manage exchange rate and facilitate export-led growth -helped maintain expansionary macro-policy -helped maintain economic sovereignty	-strong state and administrative capacity -strong economic fundamentals -experience with state governance of the economy -gradual economic liberalization -dynamic capital management	-possibly constrained the development of the financial sector -possibly encouraged non-performing loans -possibly facilitated corruption
--------------	--	---	--

\*Sources: see Epstein, Grabel and Jomo (2006).

### *Other Possible Real Targets for Monetary Policy*

In addition to a direct employment target for monetary policy, there are other real or intermediate targets that could be desirable candidates for central banks wanting to better balance developmental goals with inflation stabilization. Here I will briefly mention three others: first is real GDP growth, second is investment targeting, and third, is a *stable and competitive real exchange rates (SCRER)*. The latter is widely proposed in the case studies presented below.

#### *Real GDP Growth (Economic Growth)*

Economic growth is a natural alternative target for central banks, since it is generally considered a broad measure of economic performance and is widely thought to be influenced, at least in the short to medium term, by macroeconomic policy, including monetary policy. Moreover, many other important variables, such as employment and investment are broadly affected by the rate of economic growth. Its breadth and generality might also make it less amenable to monetary and credit policy than more narrow measures such as employment and investment. As a broad measure, it might also be less directly linked to specific outcomes with high social priority, such as poverty reduction than employment.

#### *Investment*

For some countries, employment generation is not the most immediate macroeconomic problem. Rather, productivity growth is a more important concern. In this case, investment, rather than employment, might be a more appropriate target. If the central bank were to adopt an investment target subject to an inflation constraint, it could do so in a targeting framework. In this case, the central bank would adopt target ranges for investment and would estimate the relationship between central bank policy and investment. It would also estimate the relationship between policy, investment and inflation and other important variables, such as exchange rate instability. It would choose a target range for inflation and assess whether the investment goal and the inflation goal are consistent. Just as in the inflation targeting framework, decisions will have to be made as to the proper index of investment to use. Based on the estimate of the relationship between the central banks' policy instrument, the central bank will try to achieve its target. Here too the problems that arise will be similar to those that arise in the inflation targeting approach. What is the best instrument to use? Most central banks use short term interest rates as their policy tool. But other variables are likely to be

more directly related to investment, including long term interest rates and credit availability. Therefore, Central Banks may find that other instruments, such as open market operations directed at long-term debt securities, directed lending, or incentives, such as asset based reserve requirements to induce banks to lend longer term, are more effective. (See the discussion on South Africa below).

#### *A Stable and Competitive Real Exchange Rate (SCRER)*

As will be clear from our discussion below, a number of the authors in the PERI/Bilkent research group have chosen a *stable and competitive real exchange rate* as an important real target for monetary policy. This is because in the countries they are studying, international competitiveness has a large impact on employment, productivity growth and economic growth. Moreover, they argue that targeting the real exchange rate is feasible for central banks, and can relatively easily accommodate a focus on stabilizing inflation, which for many Latin American countries, is a very important objective. More details on the SCRER and how it might operate are provided below.

#### *Summary*

The main point of this discussion has been that different targets for monetary policy are likely to be relevant in different contexts. For countries that have a massive unemployment problem, and where there has not been a serious recent experience with hyper-inflation so that citizens and investors are not inflation phobic, then an employment targeting central bank might be the more appropriate. Where inflation troubles have deep historical roots and where the economy is highly exposed to foreign trade and capital flows, a SCRER might be a better monetary policy target. For still other countries, where the external sector is not large and where employment is not the main concern, a GDP or investment target might be more relevant.

#### *PERI/Bilkent Multi-Country Study of Alternatives to Inflation Targeting*

In this section, I report on country studies undertaken by a team of researchers working on a PERI/Bilkent project on alternatives to inflation targeting, as well as a United Nations Development Project (UNDP) sponsored study of employment targeting economic policy for South Africa.<sup>10</sup> The countries covered are Argentina, Brazil, Mexico, India, The Philippines, South Africa, Turkey, and Viet Nam. As will be illustrated by these studies, one size does NOT fit all. A range of alternatives to inflation targeting were developed, all the way from modest changes in the inflation targeting framework to allow for more focus on exchange rates and a change in the index of inflation used, to a much broader change in the overall mandate of the central bank to a focus on employment targeting. Some of the alternative policies focus exclusively on changes in central bank policy, while for other countries changes in the broad policy framework and in the interactions of monetary, financial and fiscal policy are proposed. Some incorporate explicit goals and targets, while others prefer more flexibility and somewhat less transparency. But all of the studies agreed that the responsibilities of central banks, particularly in developing countries, while including

---

<sup>10</sup> For the PERI/Bilkent project see Epstein and Yeldan, eds. forthcoming; For the UNDP project see Pollin, et. al., 2006.

maintaining a moderate rate of inflation, must be broader than that, and should include other crucial "real" variables that have a direct impact on employment, poverty and economic growth.<sup>11</sup> They also agree that in many cases, central banks must broaden their available policy tools to allow them to reach multiple goals, including, if necessary, the implementation of capital management techniques.

#### *Alternatives to Inflation Targeting: Variations on a Theme:*

##### Modest but Useful Adjustments to the Inflation Targeting Regime

Some of the country studies in the PERI/Bilkent project proposed only modest changes to the inflation targeting regime. In the case of Mexico, for example, the authors argue that the existing inflation targeting regime has allowed for more flexible monetary policy than had occurred under regimes with strict monetary targets or strict exchange rate targets (Galindo and Ros, 2006). As a first step, they suggest modifying the IT framework to make it somewhat more employment friendly. More concretely, Galindo and Ros find that monetary policy in Mexico has been asymmetric with respect to exchange rate movements –tightening when exchange rates depreciated, but NOT loosening when exchange rates appreciated. This has lent a bias in favor of an over-valued exchange rate in Mexico. In its place, Galindo and Ros propose a "neutral" monetary policy so that the central bank of Mexico responds symmetrically to exchange rate movements and thereby avoid the bias toward over-valuation without fundamentally changing the inflation targeting framework.<sup>12</sup>

In his study of Brazil, Nelson Barbosa-Filho also proposed extending the inflation targeting framework, but, as discussed shortly, in a more dramatic way. Writes Barbosa-Filho: "...because of Brazil's past experience with high inflation, the best policy is to continue to target inflation while the economy moves to a more stable macroeconomic situation. So far, the great gain from inflation targeting has been the increase in the transparency and accountability of monetary policy in Brazil." (Barbosa-Filho, 2005).<sup>13</sup> But he goes on to say, "The crucial question is not to eliminate inflation targeting, but actually make it compatible with fast income growth and a stable public and foreign finance". (ibid.) As discussed in the next section, in order to do that, Barbosa-Filho joins a number of the country case study authors in proposing a monetary policy to maintain a stable and competitive real exchange rate (SCRER) which, they argue, will have a number of significant benefits for many of these economies and their peoples.

##### A Competitive and Stable Real Exchange rate

As just indicated, a number of authors, following the lead of Frenkel and Taylor (2005), Frenkel and Ros (2006) and Frenkel and Rapetti (2006) argue that central bank should

---

<sup>11</sup> It is true that so-called "Taylor Rules" that estimate policy rules governing monetary policy often find that central banks react to the deviation between "potential output" and actual output (the "output gap"), but, far from implying that central banks care about unemployment, these results often reflect the fact that the output gap affects future inflation; so a central bank that is focusing solely on inflation might still be concerned with the output gap (Eichengreen, 2002).

<sup>12</sup> Galindo and Ros also propose shifting from a CPI target to a domestic inflation target which would purge the exchange rate impact on the "target" inflation rate and further reduce the monetary policy bias toward exchange rate appreciation.

<sup>13</sup> See more on Brazil and Argentina below.

maintain a moderate inflation rate AND should maintain a competitive and stable real exchange rate. They note that the real exchange rate can affect employment, and the economy more generally, through a number of channels: (1) By affecting the level of aggregate demand (*the macroeconomic channel*) (2) By affecting the cost of labor relative to other goods and thereby affecting the amount of labor hired per unit of output (*the labor intensity channel*) and by affecting employment through its impact on investment and economic growth (*the development channel*). (eg. Frenkel and Ros , pp. 634-637) While the size and even direction of these channel effects might differ from country to country, in many places, including Latin America, maintaining a competitive and stable real exchange rate is likely to have a positive employment impact though some combination of these effects. For example, Frenkel and Ros find that in Latin America, in most of the Latin American countries experiencing increases in unemployment in the 1990's, these economies were characterized by significant appreciations of their real exchange rate.

In the PERI/Bilkent project, a number of country study authors proposed a new framework for central banks in which they should include as an "intermediate goal" a "stable and competitive real exchange rate" (SCRER). These countries included Argentina, Brazil, Mexico, The Philippines and Viet Nam. (See Frenkel and Rapetti, 2006; Barbosa-Filho, 2005; Galindo and Ros, 2006; Lim, 2006; Packard, 2005). In all of these cases, the authors argued that such a policy would help their economies pursue a more employment oriented growth path, while maintaining inflation in check. They all suggested that these countries might, in addition, need to impose short-term capital controls and other capital management techniques to help them manage the exchange rate will maintaining moderate inflation.

### *Argentina*

Frenkel and Rapetti, in the case of Argentina, show that targeting a stable and competitive real exchange rate has been very successful in helping to maintain more rapid economic growth and employment generation. They also showed that to be successful in the case of Argentina, the country implemented a partial default on its substantial foreign debt, and short-term implementation of capital management techniques. These policies were put in place after the disastrous break-down of the previous currency board arrangements. In their view, a monetary policy that has a broader mandate to generate more employment and economic growth, while keeping a stable and competitive real exchange rate, has had significant success in Argentina (Frenkel and Repetti, 2006).

### *Brazil*

The case of Brazil is more mixed, according to Barbosa-Filho. The inflation targeting framework was instituted in Brazil in 1999 in order to provide a nominal anchor to domestic prices. The National Monetary Council sets the targets and the Committee of Monetary Policy (Copom), formed by the President and the Directors of the Central Bank of Brazil (CBB) is responsible for meeting the targets. When the target is not met, the CBB has to issue an open letter to the President of Brazil why that happened and what could be to correct it. The impact of the IT regime between 1999 and 2006 has been relative macroeconomic stability, but slow over-all real GDP growth, high real interest rates and a tendency to currency appreciation. This currency appreciation, like that in Mexico as reported by Galindo and Ros (2006) appears to be partly due to asymmetric monetary policy, policy that works

against depreciations of the exchange rate less than it leans against the wind when the (real) exchange rate appreciates. The fundamental problem in Brazil, according to Barbosa-Filho, is that the growth of productivity and potential output responds to aggregate demand policy: so slow growth in aggregate demand leads to slow growth in potential output and therefore, it appears that the output gap is small. This leads to a self-fulfilling prophecy of the need for restrictive monetary policy. The challenge facing monetary policy is to expand growth in aggregate demand in order to raise the growth rate of potential output, without igniting inflation in the short run. A monetary policy that is careful to maintain a low and stable inflation rate can usefully be supplemented by monetary policy directed to avoiding an over-valued exchange rate and lowering real short term interest rates.

More specifically, for the case of Brazil, Barbosa-Filho developed a more elaborate policy framework which includes a competitive and stable real exchange rate. But, in addition, given Brazil's large public debt, Barbosa-Filho also proposes that the central bank target a reduction in the real interest rate, which would reduce the Brazilian debt service burdens and help increase productive investment. In terms of the familiar targets and instruments framework, Barbosa-Filho proposes that the Brazilian central bank choose exports, inflation and investment as ultimate targets, and focus on the inflation rate, a competitive and stable real exchange rate and the real interest rate as intermediate targets.

Barbosa-Filho also elaborates on the monetary policy tools that can be used to reach these intermediate and ultimate targets. To maintain the SCRER, Barbosa-Filho proposes an asymmetric managed floating exchange rate regime in which the Brazilian central bank places a (moving) ceiling on the appreciation of the exchange rate, and, when necessary implements tight macroeconomic policy to prevent speculative attacks leading to excessive depreciations. This is similar to the ideas proposed by Gallardo and Ros in the case of Mexico.

The central bank should also attempt to lower the real interest rate. In order to achieve these goals, the central bank can use direct manipulation of the policy interest rate, bank reserve requirements and bank capital requirements. (Barbosa-Filho, 2005).

#### *India, Vietnam and Mexico*

In the case of India, Jha also argues against an inflation targeting regime, and in favor of one that "errs on the side of undervaluation of the exchange rate" with possible help from temporary resort to capital controls (Jha, 2006, pp. 30-31.) Jha argues that, to some extent, such a policy would be a simple continuation of policies undertaken in India in the past. In Vietnam, Packard concludes: "...a strict inflation targeting (IT) regime is not appropriate for Vietnam. IT's rigid rules constrain policymakers to operate in a framework that requires inflation to take priority over more pressing development objectives....I argue that a stable and competitive real exchange rate is (a) superior alternative, precisely because it sets as a target a key macroeconomic relative price that is realistic, sustainable, and growth enhancing." (Packard, 2005). For Mexico, Galindo and Ros propose a more fundamental alternative to inflation targeting. They propose combining inflation targeting with real exchange rate targeting (Galindo and Ros, 2006). "More precisely, the central bank would promote a competitive exchange rate by establishing a sliding floor to the exchange rate in order to prevent excessive appreciation (an "asymmetric band"...). This would imply



intervening in the foreign exchange market at times when the exchange rate hits the floor (i.e., an appreciated exchange rate) but allows the exchange rate to float freely otherwise." (Galindo and Ros, 2006). They point out that such a floor would work against excessive capital inflows by speculators because they would know the central bank will intervene to stop excessive appreciation. If need be, Galindo and Ros also propose temporary capital controls, as do some of the other authors from the PERI/Bilkent project.

### *Turkey*

Brazil is not the only highly indebted country in our project sample. Turkey is another case. Here too, our project authors developed an alternative to inflation targeting. Using a computable general equilibrium model (CGE) for the case of Turkey, Voyvoda and Yeldan simulated the impact of a shift in policy from a strict inflation targeting regime, to one which had a focus on the competitiveness of the real exchange rate.<sup>14</sup> They find that such a shift generates much more rapid growth and employment creation, but at the expense of some worsening of the government debt position, relative to the strict inflation targeting and fiscal surplus regime currently in place (Voyvoda and Yeldan, 2006).

## More Comprehensive Alternatives to Inflation Targeting

### *The Philippines*

Other country case studies propose more comprehensive policy alternatives to simple inflation-focused monetary policy, including inflation targeting. Joseph Lim proposes a comprehensive alternative to inflation targeting for the case of the Philippines. Lim argues that the Philippine government has been seeking to achieve a record of dramatically higher economic growth, but that its monetary policy has been inadequate to achieving that goal. He therefore proposes an "alternative" that "clearly dictates much more than just a move from monetary targeting to inflation targeting". Lim argues that any viable alternative for the Philippines must take into account several key constraints or realities: 1) Easier monetary policy by itself will not stimulate investment or growth because it is accompanied by weak financial confidence and stricter financial requirements on banks. 2) Fiscal policy is highly constrained because of a large public debt. 3) High economic growth by itself will not necessarily enhance the quality of the growth – i.e., improving the growth of good jobs with good wages 4) Volatile external accounts and foreign exchange rates undermine rapid and high quality growth.

Lim's proposals include: 1) Maintenance of a stable and competitive real exchange rate (SCRER), either by pegging the exchange rate or intensively managing it as in South Korea. 2) To help manage the exchange rates, capital management techniques, as in China and Malaysia, are likely to be needed. This should include strong financial supervision to prevent excessive undertaking of short-term foreign debt, and tax based capital controls on short term capital flows, as was used, for example in Chile. 3) An explicit stating of output and employment goals, as the central bank transitions from a purely inflation-targeting regime. Lim argues that these policies can have beneficial impacts on the current Philippine problems of high fiscal deficits, lack of financial confidence and unemployment. 4) Incomes and anti-monopoly policies to limit inflation to moderate levels and 5) Targeted credit programs,

---

<sup>14</sup> Another important change was from a primary fiscal surplus to a more relaxed fiscal stance.

especially for export oriented and small and medium sized enterprises that can contribute to productivity growth and employment.

These policy proposals in broad outlines are similar to those proposed by Epstein (2005) for the case of South Africa, which, in turn, have been developed in a much broader framework and in more detail by Pollin, et al. (2006).

### *The Institutional Structure of the Central Bank*

Lurking in the background of these issues is the question of the institutional structure of the central bank and its relationship to the government's macroeconomic policy apparatus. As we discuss more below, in the Post-World War II period, most central banks were *integrated* into the government's macroeconomic policy apparatus, and monetary policy was made in a coordinated fashion with fiscal policy (see Epstein and Schor, 1990 for an earlier discussion). In the last twenty years or so, however, the "neo-liberal" approach to central banking has elevated central bank "independence" as a component of "best practice" institutional structure and many countries have adopted this plank of the neo-liberal platform. Combined with inflation targeting or other such rules, central bank independence has also meant a relative lack of coordination between monetary and fiscal policy.

In some of the papers for the PERI/Bilkent alternatives to inflation targeting, authors took a position on the best structure for central banks in their alternative framework: independent, integrated or independent but with a high degree of coordination (denoted, "coordinated", in what follows).

Table 5 presents a summary of the alternatives proposed in the PERI/Bilkent project and is discussed further in what follows.

## **IV. Employment Targeting Monetary Policy in South Africa: An Extended Example**

In this section, I describe an employment targeting (ET) policy for the Reserve Bank of South Africa in the context of an overall employment targeting program for the South African economy developed by economists at PERI for the United Nations Development Program (UNDP). In this section, I will give an extremely brief outline of the overall Employment Targeting program, to show generally the policy context within which the proposed Reserve Bank ET framework would operate. It will then focus much more specifically of the monetary policy component on the ET framework.

### *Employment Targeted Macro Policy in South Africa*

The specific focus of the UNDP study is the severe problem of mass unemployment in South Africa today. Unemployment in South Africa is variously measured as being between 34% and 42%, depending on how it is counted. In this context, it is striking the South African central bank (known as the Reserve Bank of South Africa) adopted a formal inflation targeting approach to monetary policy in 2001, and committed itself to achieving an inflation rate between 3 and 6%. With a few exceptions, it has hit that target range. Significantly, the Reserve Bank is under no obligation to consider employment generation as part of its mandate.

Nonetheless, a focus on employment targeting is consistent with the stated goals of the South African Government more generally. As an illustration, at the Growth and Development Summit in 2003, President Thabo Mbeki singled out “more jobs, better jobs, and decent work for all,” as one of the country’s four key economic challenges (the other three being expanding investment, advancing equity, and building local-level capacity; *Growth and Development Summit* summary pamphlet, Department of Labor, p. 3) More specifically, according to Presidential economic advisor Alan Hirsch, the government has committed itself, as its first economic priority, to reducing unemployment in half as of 2014.

In halving unemployment by 2014 the South African Government faces a significant challenge. Between 1994 and 2003, the South African economy grew at an average annual rate slightly below three percent, while average labor intensity of production fell by an average of one percent per year. If the South African economy proceeds along approximately this growth path for the next decade, it will not be possible for the government to achieve its goal of reducing unemployment by half by 2013. Making reasonable assumptions about labor force growth and the proportionate rise of informal versus formal employment, Pollin, et al. projects that continuing for the next decade at a 3 percent growth rate and a 1 percent annual decline in labor intensity will produce an official unemployment rate by 2013 of roughly 34 percent.

For the government to achieve a 50 percent reduction in unemployment by 2013, it would have to pursue an aggressive employment-targeted program, which would have to consist of two elements: it would have to raise the rate of economic growth and it would have to increase the over-all labor intensity of output. Pollin, et al., (2006) we develop an aggressive employment targeted macroeconomic framework, which is nonetheless sensitive to constraints such as inflation, the balance of payments and budget deficits. And even with our

aggressive policy, the unemployment rate as of 2013 would still likely be in the range of 17 percent.

The study proposes using traditional macroeconomic tools to try to raise the overall growth rate of the economy. But these tools will not be sufficient to halve the unemployment rate. Further measures have to be taken to increase the employment intensity of growth. To increase the employment intensity of growth, the authors propose taking special measures to target small firms, cooperatives, industries, and sectors that have high employment multipliers, directly or indirectly.

In broad outlines, the overall employment targeting framework includes:

1. Fiscal and monetary stimulus
2. Public Credit Allocation and Development Banking
3. Capital management techniques
4. If and when necessary, heterodox mechanisms of inflation control, possibly including Scandinavian style tri-partite agreements on wages and prices.
5. Other sectoral policies, for example, anti-trust and competition policy to correct infrastructure bottlenecks preventing more growth and employment generation.<sup>15</sup>

### *Central Bank Policy*

In this section, I detail a proposed *Employment Targeting* approach for the South African Reserve Bank. While this ET approach to monetary policy would work best within a broad ET framework as outlined above, elements of the approach could nonetheless be implemented even on their own.

### *The Role of Monetary Policy and the Reserve Bank in the Broader ET Program*

In thinking about the role of monetary policy in this program it is important to draw the distinction between *economic policies* and *economic institutions*. (Chang, 2002.) Both of these are crucial because the role of the Reserve Bank as an institution needs to be broader than its specific policies. As an institution within the policy making apparatus, the Reserve Bank is very important and powerful. It has a great deal of resources, both financial and human. As the house of one of the two main tools of macroeconomic policy, it has prestige and influence. Therefore, its institutional commitment to and support of a policy is almost as important as the precise settings of its monetary policy tools narrowly defined. Taking this distinction into account, the logic of this ET program implies the following roles for the Reserve Bank and for monetary policy.

Of course, the specifics of the proposed central bank policy proposed below should be seen as instructive rather than definitive in every detail. Only skilled practitioners with very concrete South African specific experience could actually implement a new policy framework such as the one proposed here.

---

<sup>15</sup> For more details, see Pollin, et al., (2006).

### *Policy Instruments*

1. The Reserve Bank will set its interest rates to achieve an overall real growth rate consistent with the plan which has an employment target at its core.
2. It will try to reach an inflation constraint that is mutually decided upon as part of the overall program.
3. It will manage some of the credit allocation programs that are part of the components of the policy.
4. It will manage the capital account as needed to maintain the exchange rate levels and exchange rate stability needed to implement the program.

### *Institutional Commitments*

1. The Reserve Bank will launch a set of research programs both within the bank and outside to improve its understanding of the relationship between monetary policy tools and employment growth, both in the formal and informal sectors.
2. The Reserve Bank will work with financial institutions, including development banks, major commercial banks, as well as smaller financial institutions, to develop instruments and programs to facilitate the allocation of credit for effective employment generating activities.
3. If the rates of economic growth achieved through more expansionary monetary policy do not generate as much employment as projected, the Reserve Bank is committed to finding new policies and mechanisms, along with the rest of the government, to achieve these targets.

In short, in the modern, and somewhat annoying parlance of development-speak, the Reserve Bank has taken on “ownership” of the employment targeting approach, while recognizing its special obligations to keep inflation and exchange rate instability in check.

### *Targets and Instruments and All That*

In the terminology of targets and instruments used in the monetary policy literature, in this framework the **ultimate target** of monetary policy is **employment growth**, while the **intermediate targets** are: **real GDP growth, inflation and exchange rates**. The **instruments** are **short term interest rates** (the repo rate in the case of current practice in South Africa), **capital management techniques**, and **credit allocation policies**.

### **Summary**

The major lesson of these case studies and auxiliary materials is that there are well thought out and plausibly viable alternatives to inflation targeting that can focus on important real sector outcomes such as employment generation, poverty reduction, and investment enhancement. Table 5 summarizes in schematic fashion the alternatives proposed in the PERI/Bilkent project. As one can see, there is a range of practical ideas on how to incorporate "real variables" such as employment, growth and the real exchange rate into monetary policy making while keeping inflation in check. If inflation targeting is resilient as the "big idea" of modern central bank policy because many perceive that there is no alternative, these case studies can provide an antidote by showing that viable alternatives are

plausible and can be further developed and put into practice. Indeed, as I argue in the next section, doing so would be consistent with long-standing historical practice.

**Table 5: PERI/BILKENT Alternatives to Inflation Targeting Project -- Summary Table**

<b>Country</b>	<b>Ultimate Targets</b>	<b>Intermediate Targets</b>	<b>Strict Target or Discretion</b>	<b>Additional Tools/Instruments</b>	<b>Central Bank: Independent, Integrated or Coordinated?</b>
<b>Argentina</b>	Inflation, activity level employment external sustainability	SCRER Interest rate	Discretion	Sterilization, reserve requirements (other prudential requirements), capital management techniques	Coordinated
<b>Brazil</b>	inflation, exports, investment	Inflation rate SCRER, real interest rate		Asymmetric managed float (moving floor on exchange rate), bank reserves, bank capital requirements, bank capital requirements	NA
<b>India</b>	GDP Growth, inflation, slightly undervalued exchange rate	Same as ultimate targets	Discretion	Capital management techniques, if necessary	Integrated
<b>Mexico</b>	Inflation, SCRER	Domestic inflation measure, SCRER, "sliding floor" on exchange rate	Discretion	Capital Management Techniques	NA
<b>South Africa</b>	Employment, inflation, exchange rate instability	GDP Growth, employment intensity of production	Strict employment target (coordinated with other institutions), looser inflation constraint	Credit allocation techniques (e.g. asset based reserve requirements, loan guarantees, etc.), capital management techniques	Integrated
<b>Turkey</b>	Inflation; SCRER	NA	Discretion	NA	NA
<b>Philippines</b>	Inflation; SCRER		Discretion	Capital management techniques; prudential supervision of banks; targeted credit; incomes policies;	Integrated
<b>Vietnam</b>	Growth, SCRER, Inflation		Discretion	Capital management techniques; prudential supervision of banks; targeted credit; incomes policies	Integrated

Source: see text;

Notes: SCRER: Stable and Competitive Real Exchange Rate

NA: No Answer, i.e., the issue was not directly addressed.

Central Banks: integrated means integrated into governmental macroeconomic policy making framework; coordinated means independent but committed to close coordination with other macroeconomic policy-making institutions.

## V. Central Banks as Agents of Economic Development

The real targeting approach to central bank policy described in the previous section might seem quite alien to those schooled in the orthodox tradition of inflation targeting and financial liberalization. But, in fact, policies like those described above historically have been quite common in both the currently developed and the developing countries (Epstein, 2006). Over the years, central banks have been seen as agents of economic development, not just agents of economic stabilization. And while sometimes central banks have failed quite spectacularly in this mission, there have been other important success stories, including important periods in the U.S., U.K., France, Germany, Japan, South Korea and India, to name just a few examples. In continental Europe, the banking system, often directed by the central bank in conjunction with the ministry of finance, helped to mobilize and direct credit for industrial development (Pollin, 1995; Grabel, 2000). Even in the U.S. and U.K. these policies were used to direct policy to promote social sectors such as housing; in the U.S. and the U.K., central bank policy and regulations were used to promote the financial sector as well. (Epstein, 2006.)

As for developing countries, Alice Amsden describes the key role that investment banks, played in the industrialization success stories such as South Korea, Taiwan, Malaysia, Brazil, Argentina and others, in mobilizing and directing savings to key industrial sectors, and in particular, those specializing in exports. (Amsden, 2001.) In many of these cases, central banks were a key part of the governmental apparatus that played a supporting role by maintaining low interest rates, maintaining capital controls to help stabilize exchange rates at competitive levels, and sometimes engaging in direct lending for preferred purposes.

In some countries, engaging in these developmental roles while using a wide variety of instruments was widely seen as a key part of the central bank's mission. After the Second World War, there was a major transformation of central banking in the developing world. In many respects, these changes paralleled those in the developed world just described. But in developing countries, central banks were much more emphatically *agents of economic development* than in many richer countries. As described by renowned monetary historian of the New York Federal Reserve, Arthur I. Bloomfield reported in 1957:

“During the past decade there has been a marked proliferation and development of central banking facilities in the underdeveloped countries of the world, along with an increasing resort to the use of monetary policy as an instrument of economic control. Since 1945, central banks have been newly established and pre-existing ones thoroughly reorganized, in no less than some twenty-five underdeveloped countries. In other cases the powers of pre-existing central banks have been broadened ... in large part the recent growth of central banking in the economically backward areas has also reflected a desire on the part of the governments concerned to be able to pursue a monetary policy designed to promote more rapid economic development and to mitigate undue swings in national money incomes.” (Bloomfield, 1957, p. 190.)

Bloomfield goes on to describe the functions, powers, and goals of these central banks.

“Many of the central banks, especially those established since 1945 *with the help of Federal Reserve advisers* (emphasis added) are characterized by unusually wide and flexible powers. A large number of instruments of general and selective credit



control, some of a novel character, are provided for. Powers are given to the central bank to engage in a wide range of credit operations with commercial banks and in some cases with other financial institutions.....These and other powers were specifically provided in the hope of enabling the central banks...to pursue a more *purposive* (emphasis added) and effective monetary possible than had been possible for most....that had been set up ...during the twenties and thirties...(that) for the most part (had) been equipped with... orthodox statutes and limited powers which permitted little scope for a monetary policy *designed to promote economic development and internal stability* (emphasis added)..." (*Ibid.*, p. 191).

Somewhat surprisingly from the perspective of today's financial orthodoxy, the Federal Reserve Bank of New York helped to establish developing country central banks and encouraged them to have a broad range of monetary and credit powers, especially in contrast to the orthodoxy of the 1920's and '30's. Of course, the Federal Reserve continued to be concerned about the importance of stabilization, controlling excessive credit creation and maintaining moderate inflation. Still, Bloomfield added:

"But (the central bank's) efforts need not, and in fact should not, stop here. The majority of central banks in underdeveloped countries have in actual practice adopted a variety of measures designed more effectively to promote the over-all development of their economies. Some of these measures are admittedly outside the traditional scope of central banking, but central banking in these countries should not necessarily be evaluated in terms of the standards and criteria applied in the more developed ones....the central bank can seek to influence the flow of bank credit and indeed of savings in directions more in keeping with development ends." (*Ibid.*, p. 197.)

Bloomfield describes the same tools of credit manipulation described earlier: "...selective credit controls applied to the banking system, through help in establishing and supporting special credit institutions catering to specialized credit needs, and through influence over the lending policies of such institutions, it can help to some degree to re-channel real resources in desired directions, both between the public and private sector and within the private sector itself." (*ibid.*, p.198.)<sup>16</sup>

While many central banks in developing countries adopted a developmental mission, alongside their stabilization objectives, not all of them succeeded in balancing the two. By 1971, Andrew Brimmer of the U.S. Federal Reserve Board revisited the issue of central banking in the developing world, and concluded that many of these countries had sacrificed too much stability for the developmental results achieved. (Brimmer, 1971.) To be sure, there are many cases where central banks in the developing world failed to prevent balance of payments crises and excessively high levels of inflation, indeed, even hyper-inflation (See Maxfield, 1997; Fry, 1995 for a discussion of some of these cases).

Still, there are plenty examples of success stories, where central banks supported the governmental developmental goals, while maintaining key stabilization requirements, often by using a variety of monetary instruments, including credit subsidies, capital controls, asset

---

<sup>16</sup> Of course, Bloomfield cautions that; "Such measures would for the most part be justified, however, only to the extent that they do not conflict with the overriding requirement of financial stability or involve the central bank in details of a sort that might distract its attention and energies from the effective implementation of a policy aimed at stability" (*ibid.*; p. 197)

based reserve requirements, and interest rate ceilings. Today, of course, these policies would need to be tailored to modern conditions, as described above. But doing so, far from being a novel procedure, would in fact be well in the established tradition of central banking in both the developed and developing world.

### *Credit Allocation and Economic Development in OECD Countries*<sup>17</sup>

A closer look at the experience of credit allocation by some now wealthy OECD countries might be highly instructive here.

It is well known that following the disasters of the Great Depression and the Second World War, governments in the UK, Europe, Japan and even the US asserted much greater control over central banks and the banking industries. (Capie, *et al.*, 1999.) Central banks became, once again, important institutions for financing and managing government debts accumulated during the war; and after the war, central banks also became important tools for rebuilding and restructuring national economies and providing for social needs, often under government's direction. Central banks utilized a variety of credit allocation techniques to accomplish these goals, and in most cases, these techniques were supported by capital and exchange controls on international capital movements. (See, for example, Epstein and Schor, 1992).

The types of controls central banks used, the goals they were directed to and their degree of success varied from country to country and time to time. No matter how successful, virtually all of these central banks had ended or severely limited their use of these controls by the mid 1980's. Under the neo-liberal play book, these controls, despite their long histories and many successes, were thrown in the dust bin of history.

### *Developed Country Central Banks as Agents of Development during the "Golden Age of Capitalism"*<sup>18</sup>

The great depression of the 1930's and then the Second World War was a watershed for central banks in the industrialized world. Virtually all were brought under more government control and were reoriented to facilitate government priorities. In the United States, the Federal Reserve was brought under tighter government control in the late 1930's and then, at the start of World War II was required to help the Treasury finance the war effort at relatively low interest rates.<sup>19</sup> It remained under Treasury control until 1951, but even after that, was subject to significant government pressures to support the market for U.S. government debt that had been accumulated during the war. In addition, the Humphrey-Hawkins full employment bill obligated the Federal Reserve to pursue policies to support high employment while controlling inflation. The era of Keynesian policies was at hand. (Epstein and Schor, 1990).

---

<sup>17</sup> This section draws on my paper "Central Banks as Agents of Economic Development", WIDER/PERI 2006.

<sup>18</sup> I have drawn the material for this section mainly from U.S. House of Representatives, (1972), Zysman (1987), Hodgman (1972), and U.S. Senate (1981). See also Pollin, 1995 and Gabel, 2000.

<sup>19</sup> Though Paul Samuelson, among others remarked that the long term interest rate should have been set even lower.

The U.S. government had a myriad of financial institutions, moreover, that supported national goals, notably housing. (Dymski, et al, 1993.) The Savings and Loan banks, along with other government supported financial institutions, for example, supported housing. During this period, the Federal Reserve policy was quite sensitive to the needs of the housing market concerns and even tailored its monetary policy to avoid significantly harming it. (Maisel, 1973.)

In Europe and England, central banks that had been independent before the War found themselves subject to state control after 1945 (Capie, et. al., 1999, p 72). During the War, monetary policy was often implemented through direct controls while interest rates were held low and constant. Direct controls continued in the aftermath of the war with various credit allocation techniques. (Capie, et al., 1999, p. 25.)

### *Credit Allocation Techniques*

Credit controls are commonly defined as measures by which the authorities seek to modify the pattern and incidence of cost and availability of credit from what markets would generate on their own (Hodgman, 1972, p. 137). Credit controls seek to influence credit allocation and interest rate structures. (*Ibid.*) In Europe credit controls have served a number of purposes: (1) to finance government debt at lower interest rates (2) to reduce the flow of credit to the private sector without raising domestic interest rates (3) to influence the allocation of real resources to priority uses and (4) to block channels of financial intermediation and thus to assist restrictive general monetary policy and (5) to strengthen popular acceptance of wage-price controls by holding down interest income. (Hodgman, *ibid.*).

European experiences with credit controls varied from country to country. In Germany, controls were used only briefly after the Second World War. In the Netherlands and the United Kingdom, extensive use was made of them, but they were always seen as temporary and short-run expedients. In the Netherlands, credit controls were used to support macroeconomic policy, rather than credit allocation. In the United Kingdom, the principle aim of controls was to facilitate low cost government debt. The government was concerned about the impacts of high interest rates on the bond market, on income distribution and on the balance of payments. A more limited aim of the quantitative ceilings was to guarantee a flow of short term credit at favorable interest rates to high priority activities such as ship building and the finance of exports and productive investment in manufacturing. Credit ceilings were put into place, and exemptions were sometimes made for priority sectors (Hodgman, 1972, p. 144). Moreover, the Bank of England identified sectors for which credit should be limited, such as consumption and the financing of imports. In England, as elsewhere, these credit controls were accompanied by exchange and capital controls.

In these countries, the controls and techniques were often seen as transitional and temporary. On the other hand, France, Italy and Belgium were a different story. There, the principle of controlling credit flows and interest rates to serve national interests was widely accepted. France had, perhaps, among the most extensive and successful sets of controls, that were part of the government's overall approach to industrial policy. The Bank of France was nationalized in 1945, and placed under the National Credit Council, the institution in charge of implementing the financial aspects of the government plan. (Hodgman, p. 147; Zysman, 1987.) The broad aim of credit policy in France was to contribute to the modernization of the

French economy and its ability to compete in international markets. To influence the volume and allocation of credit, the Bank of France used various methods (see Hodgman, 1972, p. 148 and Zysman, 1987, for descriptions).

*Asset based reserve requirements* were widely used. Banks have been required to observe minimum reserve requirements with lower rates on privileged assets. A second technique – ceilings on credit extension – has also been used. The ceilings were used to reduce credit expansion without raising interest rates, and also to allocate credit: priority sectors were exempted from the ceilings. These included short-term export credits, medium-term loans for construction, and others. These ceilings applied to a large range of financial institutions, and were accompanied, as well, by capital and exchange controls as an important concomitant. (Hodgman, 1972. pp. 148-149; Zysman, 1987.) A third tool was the scrutiny of individual credits made by banks. This allowed the Bank of France to approve loans for privileged purposes. Another approach to affecting the allocation of credit involved the use of rediscounting of bills for priority purposes (*ibid.*, p. 151).<sup>20</sup>

Zysman (1987) has emphasized the role of these credit allocation techniques in helping to revive the French economy and help it adjust to structural challenges in the post war period. This role has been facilitated by the existence in France of a bank based financial system, unlike the capital market based systems in the U.S. and U.K., which, according to Zysman, make such credit allocation mechanisms more difficult to implement (see also Pollin, 1995 and Grabel, 2000). Italy and Belgium also used similar policies. In the case of Italy, a major goal was to help develop the southern part of the country. (U.S. House of Representatives, 1972, p. 11.)

Oddly enough, there has not been a comprehensive statistical analysis of the effectiveness of these controls over a range of industrial countries. The studies that have been done report that the controls were effective (*ibid.*; p. 145). More broadly, the general consensus of analyses of these experiences is that they are most successful when the controls apply to a broad swath of the financial sector in order to avoid arbitrage and avoidance, when they are accompanied by capital and exchange controls, to avoid capital flight, and when they are part of a coherent plan of economic promotion and development (Zysman, 1987; Hodgman, 1972; U.S. Senate, 1972; U.S. House of Representatives, 1981). These same lessons apply to developing countries as well.

### *The Neo-liberal Order*

To be sure, not all of these efforts were successful. Yet most accounts suggest that some, if not many of them were useful in reaching important social goals including rebuilding industry, supporting housing and financing the overhang of government debt acquired during

---

<sup>20</sup> Analysis by Lester Thurow and the U.S. House Banking Committee in the early 1970's identified three main techniques for protecting or promoting priority sectors: (1) asset based reserve requirements (2) government borrowing in the capital market and re-lending to preferred sectors and (3) competition by government financial institutions for primary saving flows and lending captured flows to preferred sectors (for example, through the government postal savings system). In the case of Sweden, asset based reserve requirements were used to aid the housing market. (*ibid.*) In Japan, government savings institutions were used to capture personal savings flows and these were channeled by the finance ministry (of which the Bank of Japan is a part) to industries that were perceived to most preserve economic growth. (*Ibid.*, p. 13.)

the war while avoiding massive shifts in wealth toward rentiers. Still, by the 1990's many if not most of these programs had been swept away. The increase in inflation, elimination of exchange and capital controls, and the break down of the Bretton Woods system all contributed to the dramatic changes in financial markets and policies. Still, rather than seeing this evolution to liberalized financial markets and central banking policy as a conjunctural change, economists and policy makers have identified the current confluence of policies and structures as somehow "modern", even optimal, and therefore worthy of emulation throughout the globe.

## VI. Conclusion

In this paper, I have argued that the current day orthodoxy of central banking -- namely, that the top priority goal for central banks is to keep inflation in the low single digits -- is, in general, neither optimal nor desirable. This orthodoxy is based on several false premises: first, that moderate rates of inflation have high costs; second, that in this low inflation environment, economies will naturally perform best, and in particular, will generate high levels of economic growth and employment generation; and third, that there are no viable alternatives to this "inflation-focused" monetary policy. In fact, moderate rates of inflation have very low or no costs; countries where central banks have adopted formal or informal inflation targeting have not performed better in terms of economic growth or employment generation and even the impacts of these regimes on inflation itself is a matter of dispute. And there are viable alternatives to inflation targeting, historically, presently, and looking forward. Historically, countries both in the currently developed and developing worlds had central banks with multiple goals and tools, and pursued broad developmental as well as stabilization goals. Currently, very successful economies such as Argentina, China and India have central banks that are using a broad array of tools to manage their economies for developmental purposes. And looking forward, the PERI/Bilkent project on alternatives to inflation targeting and PERI's UNDP work on South Africa have developed an array of "real targeting" approaches to central banking which we believe are viable alternatives to inflation targeting and, in particular, do a better job than does inflation targeting of balancing the developmental and stabilization functions of central banks.

I have also argued that inflation-focused monetary policy has an insidious impact on central banks and, indeed, on the whole macroeconomic policy apparatus. It creates in central banks a *culture* of single-minded inflation focus, or even inflation obsession. Hundreds of thousands and even millions of dollars are spent on studying every aspect of inflation and few aspects of unemployment; thousands of hours of the time of highly scarce, skilled economists are spent pouring over complex models designed to show how to get inflation down from 8% to 4%, but not how to create a single high paying job; and if other government officials or those in civil society ask the central bank to do something about employment creation, the central banks can respond, "that's not our job".

In short, more than anything else, the cost of inflation-focused monetary regimes is to divert the attention of the some of the most highly trained and skilled economists and policy makers in developing countries away from the tasks that previous generations of central bankers took for granted as being their main job: to help their countries develop, to create jobs, and to foster socially productive economic growth. It is time to return to an earlier generation of

central banking where central banks were seen as agents of economic development, including as agents of employment creation. But, it is always crucial to keep in mind this modern lesson: central banks must balance their developmental goals with the crucial task of macroeconomic stabilization. Otherwise both stabilization and development will be lost.

## Bibliography

- Almeida, A. and Goodhart, Ch.A.E. 1998. "Does the adoption of inflation targets affect central bank behaviour?" in *Banca Nazionale del Lavoro -- Quarterly Review* 51, no. 204.
- Amsden, A. 2001. *The Rise of the Rest: Challenges to the West from late-Industrializing Economies*. Oxford, Oxford University Press.
- Baker, D. 2000. "NAIRU: Dangerous Dogma at the Fed" in *Financial Markets and Society*, Financial Markets Center, [www.fmcenter.org](http://www.fmcenter.org), December.
- Ball, L. 1999. "Aggregate Demand and Long-Term Unemployment" in *Brookings Papers on Economic Activity*, 2, 1999, pp. 189-253.
- Ball, L. and Sheridan, N. 2003 *Does Inflation Targeting Matter?* IMF Working Paper No. 03/129.
- and Mankiw, N.G., 2002. *The NAIRU in Theory and Practice*, NBER, Working Paper, No. 8940.
- Barbosa, N.H. 2005. "Inflation Targeting and Monetary Policy In Brazil". Presented at the *Alternatives to Inflation Targeting Monetary Policy for Stable and Egalitarian Growth in Developing Countries* conference, Centro de Estudios de Estado Y Sociedad (CEDES), Buenos Aires, May 13-14.
- Berg, J., Ernst, Ch. and Auer, P. 2006. *Meeting the Employment Challenge; Argentina, Brazil and Mexico in the Global Economy*. Boulder, Colorado: Lynne Rienner Publishers.
- Bernanke, B.S., Laubach, Th., Posen, A.S. and Mishkin, F.S. 1999. *Inflation Targeting: Lessons from the International Experience*. Princeton, NJ: Princeton University Press.
- Blinder, A.S. 1998. *Central Banking in Theory and Practice*. Cambridge, MA: MIT Press.
- Bloomfield, A.I. 1957. "Some Problems of Central Banking in Underdeveloped Countries" in *The Journal Of Finance*, Vol. 12, No. 2. May, pp. 190-204.
- Braunstein, E. and Heintz, J. 2006. *Gender Bias and Central Bank Policy: Employment and Inflation Reduction*, PERI Working Paper, [www.peri.umass.edu](http://www.peri.umass.edu)
- Brimmer, A.F. 1971. "Central banking and Economic Development: The Record of Innovation" in *Journal of Money, Credit and Banking*, Vol. 3., No. 4, November, pp. 780-792.
- Bruno, M. 1995. "Does Inflation Really Lower Growth?" in *Finance and Development*, September, 35-38.
- and Easterly, W. 1998. "Inflation Crises and Long-Run Growth" in *Journal of Monetary Economics*, 41, pp. 3 – 26.
- Burdekin, R.C.K., Denzau, A.T. et al. 2004. "When Does Inflation Hurt Economic Growth? Different Nonlinearities for Different Economies" in *Journal of Macroeconomics*, 26, 519-532.
- Capie, F. 1999. "Banking in Europe in the 19<sup>th</sup> Century: the role of the central bank" in Sylla et al., *The State, the Financial System and Economic Modernization*, pp. 118-133.
- Chang, Ha-Joon. 2002. *Kicking Away the Ladder*. London, Anthem Press.
- Clifton, E.V., Leon, H. and Wong, Chong-Huey. 2001. *Inflation Targeting and the Unemployment-Inflation Trade-Off*, IMF Working Paper, WP/01/166. Washington, IMF.

- Corbo, V., Landerretche, O. and Schmidt-Hebbel, K. 2001. *Does Inflation Targeting Make a Difference?* Central Bank of Chile Working Papers, No. 106. <http://www.bcentral.cl/Estudios/DTBC/doctrab.htm>
- Debelle, G. 1996. "The end of three small inflations: Australia, New Zealand, and Canada" in *Canadian Public Policy* 22: 56-78.
- Dymski, G., Epstein, G. and Pollin, R. 1993. *Transforming the U.S. Financial System: Equity and Efficiency for the 21<sup>st</sup> Century*. Armonk, NY, M.E. Sharpe.
- Eichengreen, B. 2002. "Can Emerging Markets Float? Should they Inflation Target"? mimeo, February.
- Eisner, R. 1997. "A New View of the NAIRU", in P. Davidson and J. Kregel, eds. *Improving The Global Economy: Keynesianism and the Growth in Output and Employment*. Brookfield, VT, Edward Elgar Publishers.
- Epstein, G. 2007. "Central Banks as Agents of Employment Creation" paper presented to UN-DESA conference on employment and Decent Work, New York: UN.
- . 2006. *Central Banks as Agents of Economic Development*, WIDER Working Paper, No. 2006-54. <http://www.wider.unu.edu/publications/rps/rps2006/rp2006-54.pdf>
- . 2005. "Employment Targeted Monetary Policy for South Africa", [www.peri.umass.edu](http://www.peri.umass.edu) .
- . 2000. *Myth, Mendacity and Mischief in the Theory and Practice of Central Banking*, PERI Working Paper, [www.peri.umass.edu](http://www.peri.umass.edu)
- , Grabel, I. and Jomo, K.S., 2005. "Capital Management Techniques in Developing Countries: An Assessment of Experiences from the 1990's and Lessons for the Future". in G. Epstein, ed. 2005, *Capital Flight and Capital Controls in Developing Countries*. Northampton, Edward Elgar Press.
- and Heintz, J. 2006. *Monetary Policy and Financial Sector Reform for Employment Creation and Poverty Reduction in Ghana* UNDP, International Poverty Centre, Country Study # 2. June 2006. <http://www.undp.org/povertycentre/ipcpublications.htm>
- and Schor, J. 1990. "Macropolicy in the Rise and Fall of the Golden Age," in St. Marglin and J. Schor, eds., *The Golden Age of Capitalism: Reinterpreting the Postwar Experience*. New York, Oxford University Press.
- and Yeldan, E. eds. Forthcoming. "Alternatives to Inflation Targeting for Stable and Egalitarian Growth" in *International Review of Applied Economics, Special Issue*.
- Frenkel, R. 2004. "Real Exchange Rate and Employment in Argentina, Brazil, Chile and Mexico", paper prepared for the Group of 24, September, Washington, DC.
- and Rapetti, M. 2006. *Monetary and Exchange Rate Policies in Argentina after the Convertibility Regime Collapse*, PERI Working Paper, [www.peri.umass.edu](http://www.peri.umass.edu) .
- and Ros, J.. 2006. "Unemployment and the Real Exchange Rate in Latin America" in *World Development*. Vol 34, No. 4, pp. 631-646.
- and Taylor, L. 2006. *Real Exchange Rate, Monetary Policy, and Employment: Economic Development in A Garden of Forking Paths*, Working Paper No. 19, Department of Economic and Social Affairs (DESA), United Nations, New York, February.
- Frey, M.J. 1995. *Money, Interest and Banking in Economic Development*. Baltimore, The Johns Hopkins University Press, 2<sup>nd</sup> Edition.



- Galindo, L.M. and Ros, J. 2005. "Inflation Targeting Mexico: An Empirical Appraisal" presented at the *Alternatives to Inflation Targeting Monetary Policy for Stable and Egalitarian Growth in Developing Countries* conference, Centro de Estudios de Estado Y Sociedad (CEDES), Buenos Aires, May 13-14.
- Ghosh, A. and Phillips, S. 1998. "Warning: Inflation May Be Harmful to Your Growth" in *IMF Staff Papers*, 1998, 45 (4), 672-686.
- Grabel, I. 2000. "Savings, Investment and Functional Efficiency: A Comparative Examination of National Financial Complexes", in R. Pollin, ed. *The Macroeconomics of Saving, Finance and Investment*. Ann Arbor, University of Michigan Press, pp. 251-298.
- Hall, R.E. 2005. *Separating the Business Cycle from Other Economic Fluctuations*, NBER Working Paper, No. 11651, September. [www.nber.org](http://www.nber.org)
- Heintz, J. 2006a. *Growth, Employment and Poverty Reduction*, DFID Discussion Paper, available at: [www.umass.edu/peri](http://www.umass.edu/peri).
- . 2006b. *Globalization, economic policy and employment: Poverty and Gender Implications*, Employment Strategy Department. Employment Strategy Papers. 2006/3. Geneva: ILO.
- Hodgman, D.R. 1973. "Credit Controls in Western Europe: An Evaluative Review", in The Federal Reserve Bank of Boston, *Credit Allocation Techniques and Monetary Policy*. Boston, Federal Reserve Bank, pp. 137-161.
- International Labour Office (ILO), 2007. *Global Employment Trends 2007*, Geneva.
- , 2004a. *Global Employment Trends 2004*, Geneva.
- , 2004b. *Global Employment Trends for Women 2004*, Geneva.
- International Monetary Fund, 2005a. *Monetary and Fiscal Policy Design Issues in Low-Income Countries*, Policy Development and Review Department and The Fiscal Affairs Department. Washington D.C., August 8.
- , 2005b. *World Economic Outlook*, Washington, D.C.
- , 2006. "Inflation Targeting and the IMF", (by N. Batini, P. Breuer, K. Kochhar and S. Roger), [www.imf.org](http://www.imf.org) .
- Jha, R. 2006. *Inflation Targeting in India: Issues and Prospects*, PERI Working Paper, [www.peri.umass.edu](http://www.peri.umass.edu) .
- Jayadev, A. 2006a. "Differing preferences between anti-inflation and anti-unemployment policy among the rich and the poor" in *Economics Letters*. 91. pp. 67–71.
- . 2006b. *The Class Content Of Preferences Towards Anti-Inflation And Anti-Unemployment Policies*, PERI Working Paper, [www.peri.umass.edu](http://www.peri.umass.edu)
- Kahn, M.S. and Senhadji, A.S. 2001. *Threshold Effects in the Relationship between Inflation and Growth*, IMF Staff Papers, 2001, 48 (1), pp. 1-21.
- Kapsos, S. 2004. *Estimating growth requirements for reducing working poverty: can the world halve working poverty by 2015?* Employment Strategy Papers, No. 2004/14, Employment Strategy Department, Geneva, ILO.
- Laubach, Th. and Posen, A.S. 1997. *Some comparative evidence on the effectiveness of inflation targeting*, Federal Reserve Bank of New York Working Paper 97, no. 14.
- Lim, J. 2006. *Philippine Monetary Policy: A Critical Assessment and Search for Alternatives Joseph Lim*, PERI Working Paper, [www.peri.umass.edu](http://www.peri.umass.edu)

- Maisel, Sh. 1973. *Managing the Dollar*. New York, Norton.
- Maxfield, S. 1997. *Gatekeepers of Growth; The International Political Economy of Central Banking in Developing Countries*. Princeton, Princeton University Press.
- Michl, T. 2007. "Tinbergen Rules" in *Eastern Economic Journal*.
- Mishkin, F.S. 1999. *International experiences with different monetary policy regimes*, NBER Working Paper 6965.
- Nembhard, J.G. 1996. *Capital Control, Financial Regulation, and Industrial Policy in South Korea and Brazil*. Westport, Ct, Praeger Publishers.
- Ocampo, J.A. 2002. *Capital-Account and Counter-Cyclical Prudential Regulations in Developing Countries*, WIDER, Discussion Paper, August.
- Packard, Tu Anh. 2005. "Monetary Policy in Vietnam: Alternatives to Inflation Targeting" presented at the *Alternatives to Inflation Targeting Monetary Policy for Stable and Egalitarian Growth in Developing Countries* conference, Centro de Estudios de Estado Y Sociedad (CEDES), Buenos Aires, May 13-14.
- Palley, Th.I. 2000. "Stabilizing Finance: The Case for Asset-Based Reserve Requirement", *Financial Markets and Society*, August.
- . 2003. "Asset Price Bubbles and the Case for Asset-Based Reserve Requirements", *Challenge Magazine*, May-June.
- Pollin, R.N. 1993. "Public Credit Allocation through the Federal Reserve: Why it is needed; How it should be done" in G. Dymski, G. Epstein and R.N. Pollin, eds. *Transforming the U.S. Financial System*.
- . 1995. "Financial Structures and Egalitarian Economic Policy", in *New Left Review*, 214, pp. 26-61.
- , 1998. "Can Domestic Expansionary Policy Succeed in a Globally Integrated Environment? An Examination of Alternatives" in D. Baker, G. Epstein and R.N. Pollin, eds. *Globalization and Progressive Economic Policy*. Cambridge, Cambridge University Press.
- . 2005. *Contours of Descent*. London, Verso Press.
- , Epstein, G., Heintz, J. and Ndikumana, L. 2006. *An Employment-Targeted Economic Program for South Africa*, a Study sponsored by the United Nations Development Program (UNDP), UNDP and Political Economy Research Institute (PERI). [www.peri.umass](http://www.peri.umass)
- and Andong Zhu, 2006. "Inflation and Economic Growth: A Cross-Country Nonlinear Analysis" in *Journal of Post Keynesian Economics*. Summer. Vol. 28, No. 4., pp. 593-614.
- Posen, A.S. 1995. "Central bank independence and disinflationary credibility: a missing link?" in *Federal Reserve Bank of New York Staff Reports 1*.
- Roger, S. and Stone, M. 2005. *On Target? The International Experience with Achieving Inflation Targets*, Washington, D.C., IMF, Working Paper, WP/05/163.
- Saad-Filho, A. 2004. "Pro-Poor Monetary and Anti-Inflation Policies: Developing Alternatives to the New Monetary Policy Consensus", mimeo, SOAS.
- Stone, M.R. "Inflation Targeting Lite", Washington, D.C., IMF, WP/03/12.
- Sylla, R., Tilly, R. and Tortella, G. 1999. *The State, the Financial System and Economic Modernization*. Cambridge, UK, Cambridge University Press.

- Tobin, J. 1980. "Stabilization Policy Ten Years After" in *Brookings Papers on Economic Activity.1.* pp. 19-71.
- U.S. Congress, House of Representatives, 92<sup>nd</sup> Congress, 2<sup>nd</sup> Session. 1972. *Foreign Experiences with Monetary Policies to Promote Economic and Social Priority Programs.*
- , Joint Economic Committee. 1981. *Monetary Policy, Selective Credit Policy and Industrial Policy in France, Britain, West Germany and Sweden.* Washington, Government Printing Office.
- Voyvoda, E. and Yeldan, E. 2006. "Macroeconomics of Twin-Targeting in Turkey: A General Equilibrium Analysis", [www.peri.umass.edu](http://www.peri.umass.edu)
- Zysman, J. 1983. *Governments, Markets and Growth.* Ithaca, Cornell University Press.

## **ECONOMIC AND LABOUR MARKET PAPERS**

- 2007/1 World and regional trends in labour force participation: Methodologies and key results, by Steven Kapsos
- 2007/2 Central Banks, inflation targeting and employment creation, by Gerald Epstein
- 2007/3 In search of optimal labour market institutions, by Peter Auer
- 2007/4 Why labour market regulation may pay off: Worker motivation, co-ordination and productivity growth, by Servaas Storm and C.W.M. Naastepad
- 2007/5 The Employer of Last Resort Program: Could it work for developing countries? By L. Randall Wray