Inflation Targeting, Employment Creation and Economic Development:

Assessing the Impacts and Policy Alternatives[*]

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Inflation targeting (IT) has recently become the dominant monetary policy prescription for both the developing and the industrialized countries alike. Emerging market governments, in particular, are increasingly pressured to follow IT as part of their IMF-led stabilization packages and routine inernationall consultation processes. However, the common expectation of IT promoters that price stability would ultimately lead to higher employment and sustained growth has failed to materialize. Generally, the world economy is growing too slowly to generate sufficient capital investment and reduce unemployment. Cast in a deflationary environment where there has been a significant addition to the global labor supply, the IT central banks' almost exclusive focus on price stability fails to help address the root causes of the macroeconomic instability, including the globalization of unregulated finance in the past two decades. To contribute to better policy, we offer viable alternatives to inflation targeting central bank policies to promote employment, sustained growth and improved income distribution.

I. Introduction

Inflation targeting (IT) is the new orthodoxy of mainstream macroeconomic thought. The approach has now been adopted by twenty four central banks (CBs), and many more, including those in developing countries, are expressing serious interest in following suit. Initially adopted by New Zealand in 1990, the norms surrounding the IT regime have been so powerful that the Central Banks (CBs) of both the industrialized and the developing economies alike have declared that maintaining price stability at a as low as possible rate of inflation is their *only* mandate. It was generally believed that price stability is a pre-condition for sustained growth and employment, and that "high" inflation is damaging the economy in the long run.

In broad terms, the IT policy framework involves "the public announcement of inflation targets, coupled with a credible and accountable commitment on the part of government policy authorities to the achievement of these targets" (Setterfield, 2006: 653). For its proponents, the appropriate inflation target is typically prescribed as maintaining price stability, though there is less agreement on the meaning of this term and on its precise

measurement. Many practitioners simply adopt the widely-cited definition of Alan Greenspan, the former Governor of the US Fed, as "a rate of inflation that is sufficiently low that households and businesses do not have to take into account in making every day decisions". For Feldsein (1997), however, price stability meant a long-run inflation rate of zero. In addition, inflation targeting is usually associated with appropriate changes in the central bank law that enhances the *independence* of the institution (Bernanke, *et. al.* 1999, p.102; Mishkin and Schmidt-Hebbel, 2001, p.8. See also Buiter, 2006 for an evaluation).

Ironically, employment creation has dropped off the direct 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, 2006b). The ILO estimates that in 2003, approximately 186 million people were jobless, the highest level ever recorded (ILO, 2004a). The employment to population ratio —a measure of unemployment– has fallen in the last decade, from 63.3% to 62.5% (ILO, 2004b). 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 22% of the developing world's workers earn less than $1 a day and 1.4 billion (or 57% of the developing world's workers) earn less than $2 a day. 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 a 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; Heintz, 2006a). In addition, the 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 (Batini, *et. al.*, 2006, p. 8).

Moreover, China's and India's opening up to the global markets and the collapse of the Soviet system together have added 1.5 billion new workers to the world's economically active population (Freeman, 2004; 2005; Akyuz, 2006). This means almost a doubling of the global labor force and a reduction of the global capital-labor ratio by half. Concomitant with the emergence of the developing countries in the global manufacturing trade, about 90% of the labor employed in world merchandise trade is low-skilled and un-skilled, suffering from marginalization and all too frequent violation of basic worker rights in informalized markets (Akyuz, 2006; 2003).

Under these conditions, a large number of developing countries have suffered de-industrialization, serious informalization, and consequent worsening of the position of wage-labor, resulting in a deterioration of income distribution and increased poverty. Many of these phenomena have occurred in tandem with the onset of neoliberal

conditionalities[1] imposing rapid liberalization of trade and premature deregulation of the indigenous financial markets.

With the ascendancy of finance, much evidence has now been accumulated that the globalization of finance has become an underlying source of instability and unpredictability in the world economy (see, *e.g.* UNCTAD, 1998; Epstein, 2005; Adelman and Yeldan, 2000; Stiglitz, 2000; Crotty, 2007. See also Prasad *et.al.* for a contrasting view). The key problem is that the ongoing "financial globalization" appears primarily to redistribute shrinking investment funds and limited jobs across countries, rather than to accelerate capital accumulation across global scale (Akyuz, 2006). Simply put, the world economy is growing too slowly to generate sufficient jobs and it is allocating a smaller proportion of its income to fixed capital formation.

Under these adverse conditions, the so-called emerging market economies seek to rely on foreign direct investment (FDI) and are conditioned to adopt and maintain contractionary monetary policies in order to secure "investor confidence" and "international creditworthiness". Thus, the governments of these (emerging market) developing economies who seek to attract and maintain inflows of foreign capital have become constrained in the *ex ante* sense to adopt a series of restrictive monetary and fiscal policies (Grabel, 1995).

After several decades of experience with this inflation focused-market based approach, the policy record has been rather disappointing for many countries. In a number of countries, inflation has come down, to be sure, but 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). Moreover, 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.

Yet, surprisingly, 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), an increasing number of central banks in emerging markets are planning to adopt inflation targeting as their operating framework. (Batini, *et. al.*, 2006. See Table 1, below). 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. More relevant to our concerns, nearly three-quarters of these countries expressed an interest in moving to "full-fledged" inflation targeting by

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[1] Note that with the use of the term "conditionality" here we refer not to the IMF's stand-by rules in the narrow sense of balance of payments stabilization, but to the broader set of reforms and structural adjustment agenda as advocated by the international finance community and the trans-national corporations. Often dubbed as the *(post-) Washington consensus*, the warranted set of policies range from inflation targeting central banks and flexible foreign exchange markets to broader institutional reforms such as flexible labor markets and increased *governance*. See Williamson (1993) for the original deployment of the term "Washington consensus", and Rodrik (2003) for further discussion.

2010. To support and encourage this movement, the IMF is providing technical assistance to many of these countries and is willing to provide more (Table 1, and further discussion below). In addition, the IMF is considering altering its conditionality and monitoring structures to include inflation targets. In short, 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 up for full fledged inflation targeting in developing countries. Promotion efforts by the IMF and western trained economists are at least partly responsible for this increasing popularity.

While it might seem obvious that stabilization 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 inflation 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 many of the successful currently developed countries, as well as in many developing countries in the post-Second World War period, pursuing development objectives was seen as a crucial part of the central banks' tasks. Now, by contrast, development has dropped off the policy agenda of central banks in most developing countries.

Table 1. Inflation Targeting Countries: Initial Conditions and Modalities

Developing Countries (in order of adoption)	IT Adoption Date	Inflation Rate at Start (%, per annum)	Current Inflation Target (%, per annum)	Officially Declared Policy Instrument
Israel	1997Q2	8.5	1-3	Headline O/N rate
Czech Rep.	1998Q1	13.1	3 (+/- 1)	2 week repo
Poland	1998Q4	9.9	2.5 (+/- 1)	28 day intervention
Brazil	1999Q2	3.3	4.5 (+/- 2)	Selic O/N rate
Chile	1999Q3	2.9	2-4	O/N rate
Colombia	1999Q3	9.3	5 (+/- 0.5)	Repo
South Africa	2000Q1	2.3	3-6	
Thailand	2000Q2	1.7	0-3.5	14 day repo
Korea	2001Q1	3.2	2.5-3.5	O/N call rate
Mexico	2001Q1	8.1	3 (+/- 1)	91-day Cetes
Hungary	2001Q2	10.5	3.5 (+/- 1)	2 week deposit
Peru	2002Q1	-0.8	2.5 (+/- 1)	
The Philipinnes	2002Q1	3.8	5-6	Reverse repo
Slovak Republic	2005Q1	3.2	3.5 (+/- 1)	
Indonesia	2005Q3	7.8	5.5 (+/- 1)	1-month SBI
Romania	2005Q3	8.8	7.5 (+/- 1)	
Turkey[a]	2006Q1	7.8	5 (+/- 2)	CB O/N rate
Turkey[b]	2001Q2	82.0	n.a	CB Net Domestic Assets
Industrial Countries				
New Zealand	1990Q1	7.0	1-3	cash rate
Canada	1991Q1	6.2	1-3	O/N funding rate
United Kingdom	1992Q4	3.6	2	Repo
Sweden	1993Q1	4.8	2 (+/- 1)	Repo
Australia	1993Q2	1.9	2-3	cash rate
Iceland	2001Q1	3.9	2.5	
Norway	2001Q1	3.7	2.5	
Candidate Countries				
Costa Rica, Egypt, Ukraine	Near Term (1-2 years)			
Albania, Armenia, Botswana, Dominican Rep., Gutemala, Mauritius, Uganda, Angola, Azerbaijan, Georgia, Moldova, Serbia, Sri Lanka, Vietnam, Zambia	Medium Term (3-5 years)			
Belarus, China, Kenya, Kyrgyz Rep., Moldova, Serbia, Sri Lanka, Vietnam, Zambia Bolivia, Honduras, Nigeria, Papua New Guniea, Sudan, Tunisia, Uruguay, Venezuela	Long Term (> 5 years)			

Notes: *a*. Official adoption date for Turkey; *b*. Turkish CB declared "disguised inflation targeting" in the aftermath of the 2001 February crisis.

Source: Batini et. al. 2006.

The theme of this special issue and this introductory paper is that there should be a return to the historical norm of central bank policy: in particular, employment creation and more rapid economic growth should join inflation and stabilization more generally as key goals of central bank policy. This paper outlines why a shift away from inflation targeting, the increasingly fashionable, but problematic approach to central bank policies, and a move back toward a more balanced approach is both feasible and desirable. Of course, the paper does not argue that inflation stabilization, is unimportant. Indeed, historically, some central banks went much too far in downplaying the stabilization role, sometimes with disastrous consequences. But this does not mean that the optimal policy is to go to the other extreme and ignore the developmental role entirely. As we try to show in this paper, balancing between the inflation stabilization and developmental roles is both desirable and feasible for many central banks.

The rest of the paper is organized as follows. In the next section, we briefly survey the macroeconomic record of IT and its current structure. Section III focuses on the role of the exchange rate as one of the key macro prices, and discusses alternative theories of its determination. We also make remarks on the issue of inflation targeting in the context of the so-called "trilemma" of monetary policy. In section IV we discuss various alternatives to inflation focused central banks, concentrating on the results of a multi-country research project undertaken with the support of UN-DESA, among other organizations. 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 V concludes.

II. Macroeconomic Record of IT

"Full fledged" inflation targeting consists of five components: absence of other nominal anchors, such as exchange rates or nominal GDP; an institutional commitment to price stability; absence of fiscal dominance; 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. In addition, inflation targeting is usually associated with changes in the CB law that enhances the independence of the central bank (Bernanke, *et. al.* 1999, p.102; Mishkin and Schmidt-Hebbel, 2001, p.8).

Much of the existing literature on the record of IT has focused mostly on whether systemic risks and accompanying volatility had been reduced in the IT economies, and whether inflation has come down actually in response to adoption of the framework itself or due to a set of "exogenously welcome" factors. On the one side, there is fair amount of agreement that IT had been associated with reductions in inflation, even though the existing evidence suggests that IT has not yield inflation below the levels attained by the industrial non-targeters that have adopted other monetary regimes (Ball and Sheridan,

2003; Roger and Shore, 2005; Mishkin and Scmidt-Hebbel, 2001). Moreover, 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.

On the "qualitative" policy front, it is generally argued that with the onset of central bank independence, communication and transparency have improved. Proponents also argue that accountability has improved. Still it is hard to understand the claim that accountability has increased in contexts where "independent" central banks choose the target inflation rate themselves, unencumbered by any democratic processes. Notwithstanding the opportunity costs of ongoing scarce research time, the inflation targeters have published inflation reports, CB meeting minutes, and inflation forecasts of CB econometric models. All these efforts were welcome by the financial community, domestic and international alike, to help improve the expectation formation on future prices. Furthermore, exchange rate *pass-through* effects were reportedly reduced and consumer prices have become less prone to shocks (Edwards 2005; Mishkin and Schmidt-Hebbel, 2001).

Yet, little is known on the true costs of IT on potential output growth, employment, and on incidence of poverty and income distribution. Bernanke, *et. al.* (1999) and Epstein (2000), for instance, report evidence that inflation targeting central banks do not reduce inflation at any lower cost than other countries' central banks in terms of forgone output. That is, inflation targeting does not appear to increase the credibility of central bank policy and therefore, doe not appear to reduce the sacrifice ratio. Per contra, based on an econometric study of a large sample of inflation targeters and non-targeters, Corbo *et. al.*, (2001) concluded that sacrifice ratios have declined in the emerging market economies after adoption of IT. They also report that output volatility has fallen in both emerging and industrialized economies after adopting inflation targeting. This position is recently complemented by a study of the IMF economists, who, 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 (Batini, *et. al.*, 2006). 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.

However, in the assessments of "stability", these papers do not consider the issue of the stability of asset prices, including exchange rates, stock prices and other financial asset prices. As we discuss further below, asset price stability may need to be included in a full analysis of the impact of inflation targeting on overall economic stability.

Asset price stability aside, while intriguing, these results are only as strong as the simulation model on which they are based and are only as relevant as the relevance of the questions they pose. Moreover, they are only as broad as the alternatives they explore. On all these scores, these 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 (se, *e.g.*, 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 being to contribute directly to economic growth, employment creation and poverty reduction.

A further note at this conjuncture pertains to the practical problematique of setting the targeted rate of inflation itself. Even if the advocated requisites of the IT regime are taken for granted, it is not yet clear what should the practically targeted rate of inflation be. Even though there appears to be a consensus among the advocates of the IT regime that the inflation target has to be "as low as possible", there is no theoretical justification of this assertion; and as such, it sounds more of a recommendation than a careful calculation. Most disturbing is the common belief that what is good for the industrialized/developed market economies should simply be replicated by the developing countries as well. That, this may not be the case is forcefully argued in Pollin and Zhu (2006). Based on their non-linear regression estimates of the relationship between inflation and economic growth for 80 countries over the period 1961 – 2000, Pollin and Zhu report that higher inflation is associated with moderate gains in GDP growth up to a roughly 15 – 18 percent inflation threshold. Furthermore they report that there is no justification for inflation-targeting policies as they are currently being practiced throughout the middle- and low-income countries, that is, to maintain inflation with a 3 – 5 percent band.

An overall picture on the selected macroeconomic indicators of the inflation targeters can be obtained from tables 2 and 3. In table 2, we provide information on the observed behavior of selected macro aggregates as *annual average of 5 years **before*** the adoption of the IT *versus* the *annual average **after*** the adoption date to current period. Table 3 keeps the same calendar frames and reports data on key macro prices, *viz.*, the exchange rate and the interest rates.

As highlighted in the text, evidence the on growth performance of the IT countries is mixed. Taking the numbers of Table 2 at face value, we see that seven of the 21 countries report a decline in the average annual rate of real growth, while three countries (Canada, Hungary and Thailand) have not experienced much of a shift in their rates of growth. Yet, clearly it is quite hard to disentangle the effects of the IT regime from other direct and indirect effects on growth. One such factor is the recent surge in household deficit spending bubble. As the excessive capital accumulation in telecommunications and the *dot.com* high tech industries phased out in late 1990s, the global financial markets seem to have enter another phase of expansion. The *Institute of International Finance* data reveal, for instance, that the net capital inflows to the developing economies as a whole has increased from US$47 billion in 1998, to almost US$400 billion in 2006, surpassing their peak before the Asian crisis of 1997.

Despite the inconclusive verdict on the growth front, the figures on unemployment indicate a significant increase in the post-IT era. Only three countries of our list (Chile, Mexico and Switzerland) report a modest decline in their rates of unemployment in comparison to the pre-IT averages. The deterioration of employment performance is especially pronounced (and puzzling) in countries such as The Philippines, Peru, Turkey, and South Africa where rapid growth rates were attained. The increased severity of unemployment at the global scale seems to have affected the IT-countries equally strongly, and the theoretical expectation that "price stability would bring growth and employment in the long run" seems quite far from being materialized yet.

Table 2. Selected Macroeconomic Aggregates in the IT Countries

Before: annual average of 5 years prior to adoption of IT; *After*: annual average of adoption of IT to current

	Year IT Started	Growth Rate		Unemployment Rate		Trade Balance (Mill US$)		CB Foreign Reserves (Mill US$)	
		Before	After	Before	After	Before	After	Before	After
New Zealand	1990	2.7	3.0	4.2	6.9	755.3	733.9	2,897.9	4,623.2
Canada	1991	2.9	2.8	8.4	8.7	8,254.9	28,643.9	11,964.0	24,256.0
UK	1992	2.2	2.7	7.4	5.2	-29.8	-52.4	39,666.5	37,408.5
Sweden	1993	0.8	2.7	2.8	6.1	5,075.4	16,810.5	15,399.0	18,521.8
Australia	1994	2.2	3.9	8.6	7.3	430.0	-5,842.6	13,777.9	20,337.1
Israel	1997	5.8	3.1	8.5	9.4	-6,054.3	-3,892.6	7,567.3	24,421.1
Czech Rep[a]	1998	4.5	3.2	4.0	8.9	-3,250.9	-1,601.2	9,172.5	21,686.5
Poland	1998	7.9	3.7	14.3	16.7	-4,567.0	-7,852.7	12,591.8	31,581.8
Brazil[b]	1999	3.2	2.3	7.0	9.8	-2,200.8	16,718.6	47,701.3	42,304.5
Colombia	1999	3.3	2.3	11.1	15.8	-2,390.7	1,245.9	7,567.3	24,421.1
Mexico	1999	1.7	4.8	2.7	1.9	-135.9	-7,625.3	20,630.9	51,396.6
South Africa[c]	2000	2.6	3.8	4.9	27.7	2,711.4	2,663.3	15,860.0	9,580.0
Switzerland	2000	1.4	1.7	4.1	3.1	1,929.8	6,342.3	38,277.1	40,646.5
Thailand	2000	1.5	1.7	1.9	2.4	2,873.3	9,074.5	32,556.1	40,474.8
Korea	2001	4.6	4.5	4.4	3.7	13,749.8	24,251.8	55,299.5	157,739.2
Hungary	2001	4.2	4.2	7.962	6.1	-1,993.7	-2,525.8	9,918.1	13,652.1
Peru[d]	2002	2.0	5.2	7.8	10.2	-1,075.2	2,270.7	9,264.8	11,222.9
Philippines	2002	3.1	5.1	10.2	11.5	-5,873.6	-6,152.8	11,281.6	14,006.6
Indonesia	2005	4.6	5.6	6.5	10.3	23,249.2	22,368.0	31,326.7	32,989.2
Turkey[e]	2006	4.5	7.8	9.9	10.4	-16,335.0	-27,980.0	33,237.4	56,990.4
Turkey[e]	2001Q2	4.0	4.5	6.6	10.0	-14,301.6	-16,335.0	20,083.4	33,237.4

Source: *IMF Statistics and Asian Development Bank*

a- The period before the inflation targeting refers the period of 94-97 for Growth and CPI in Czech growth

b- The period before the inflation targeting refers the period of 96-98 for reserves in Brazil

c- The period before the inflation targeting refers the period of 94-97 and after inflation targeting refers the period of 99-04 for unemployment rate in South Africa. The change method of unemploymet cnahge after the aphertheid regime can be seen here.

d- The period after the inflation targeting refers the period of 03-04 for unemployment rate in Peru.

e- Official adoption date for Turkey is 2006. However, Turkish CB declared "disguised inflation targeting" in the aftermath of the 2001 February crisis.

The adjustment patterns on the balance of foreign trade have been equally diverse. 10 of the 21 countries in Table 2 achieved higher (improved) trade surpluses (balances). While there have been large deficit countries such as Turkey, Mexico, The Philippines, and Australia, there were also sizable surplus generators such as Brazil, Korea, Thailand, Canada, and Sweden. Not surprisingly much of the behavior of the trade balance could

be explained by the extent of over-valuation of the exchange rates. This information is tabulated in Table 3.

Table 3. Macroeconomic Prices in the IT Countries

Before: annual average of 5 years prior to adoption of IT; *After*: annual average of adoption of IT to current

	Year IT Started	CPI		Exchange Rate Depreciation[1]		CB Interest Rate[2]		Treasury Interest Rate[3]	
		Before	After	Before	After	Before	After	Before	After
New Zealand	1990	11.6	2.2	4.0	1.6	18.6	7.7	13.7	7.3
Chile[a]	1991	19.7	7.2	13.7	3.2	..	7.2	3.6	2.6
Canada	1991	4.5	2.1	-3.1	0.4	10.5	4.7	10.3	4.6
United Kingdom	1992	6.4	2.6	4.1	0.4	11.9	5.6	11.4	5.4
Sweden	1993	6.9	1.5	-1.6	2.7	9.7	3.2	11.9	4.3
Australia[b]	1994	4.2	2.5	-2.8	1.5	11.3	5.8	10.4	6.6
Israel	1997	11.3	3.1	7.1	4.0	13.3	8.1	12.8	8.1
Czech Republic[c]	1998	9.1	3.1	2.5	-3.0	11.0	3.8	9.1	4.0
Poland[d]	1998	24.1	4.7	19.6	0.2	25.7	10.9	25.9	16.3
Brazil	1999	819.2	7.9	391.1	13.4	36.6	23.6	32.3	20.3
Colombia	1999	20.4	7.5	10.9	8.0	38.8	14.1	21.9	9.5
Mexico	1999	24.5	7.2	27.3	2.7	32.0	12.2	27.7	11.0
Thailand	2000	5.1	2.2	9.6	1.2	10.0	3.8	9.8	5.3
South Africa[e]	2000	7.3	5.1	11.7	2.6	15.9	9.6	14.6	9.3
Switzerland	2000	0.8	1.0	2.4	-2.7	1.0	1.1	1.7	1.3
Korea	2001	4.0	3.3	10.0	-1.6	3.8	2.3	10.5	5.4
Hungary	2001	15.2	5.9	17.6	-6.5	17.2	9.3	17.5	9.2
Peru	2002	5.0	1.9	3.4	3.3	14.3	3.9	8.8	1.4
Philippines	2002	6.3	5.0	15.0	2.0	11.4	6.0	11.5	6.2
Indonesia	2005	8.0	10.5	1.8	8.6	12.2	12.8	12.1	8.1
Turkey[f]	2006	28.3	10.5	22.0	9.3	40.0	18.0	43.1	21.0
Turkey[f]	2001Q2	74.1	28.3	64.2	22.0	60.8	41.0	98.0	43.8

Source: *IMF Statistics*

1- A rise in value indicates nominal distribution. Annual average market rate is used for: United Kingdom, Canada, Turkey, Australia, New Zealand, Brazil, Peru, Israel, Indonesia, Korea, and Philippines; Annual average Official Rate is used for: Colombia, Thailand, Hungary, Poland and Switzerland; Principle rate is used for: South Africa, Mexico and Czech Republic

2- Sweden, New Zealand, Canada: Bank Rate; Mexico: Banker's Acceptance.

3-Colombia: Interbankaria TBS; Peru and Chile: Saving Rate; New Zealand Newly issued 3 months Treasury bill rates; Indonesia: 3 Months Deposit Rate; Korea:National Housing Bond Rate; Thailand: Government Bond Yield Rate

a- the period after the inflation targeting period refers the period of 93-05; the period before the inflation targeting refers the period of 87-90

b- Treasury Bill: the period after the inflation targeting refers the period of 94-00; CB Rate: the period after the inflation targeting refers the period of 94-95

c-the period before the inflation targeting refers the period of 94-97;

d-Treasury Bill rates; the period after the inflation targeting refers the period of 98-00;

e- Treasury Bill: the period before the inflation targeting refers the period of 94-00

f- Official adoption date for Turkey is 2006. However, Turkish CB declared "disguised inflation targeting" in the aftermath of the 2001 February crisis.

Table 3, as previously in Table 2 above, calculates the annual averages of the five-year period *before* the IT *versus* annual averages *after* IT to-date. Here, the more proper comparison should be made between the exchange rate depreciation *in real terms* after the CPI inflation (the first two columns of Table 3) are netted out.[2] Focusing on the inflation-adjusted *real* exchange rate movements, we find a general tendency towards *appreciated* currencies in the aftermath of adoption of the IT regimes. Mexico, Indonesia and Turkey are the most significant currency appreciating countries, while Brazil, and to some extent Columbia, have pursued active export promotion strategies and maintained real depreciation. The Czech Republic, Switzerland and Hungary are observed to have experienced *nominal* currency appreciation, and Korea seems to have maintained a neutral path for its real exchange rate.

Clearly much of this generalized trend towards appreciation can be explained by reference to the increased expansion of foreign capital inflows due to the global financial glut mentioned above. With the IT central bankers announcing a "no-action" stance against exchange rate movements led by the "markets", a period of expansion in the global asset markets have generated strong tendencies for currency appreciation. What is puzzling, however, is the rapid and very significant expansion in the foreign exchange reserves reported by the IT central banks. As reported in the last two columns of Table 2 above, foreign exchange reserves held at the CBs rose significantly in the aftermath of the IT regimes. The rise of reserves was especially pronounced in Korea, The Philippines and Israel where almost a five-fold increase had been witnessed. Of all the countries surveyed in Table 3, UK and Brazil are the only two countries that had experienced a fall in their aggregate reserves.[3]

This phenomenon is puzzling because the so-called "flexible" exchange rate regimes were advocated as a concomitant component of the IT, with the argument that the CBs would be free in their monetary policies and would no longer need to hold reserves to defend a targeted rate of exchange. In the absence of any exchange rate target officially stated, the need for holding such sums of foreign reserves at the CBs should have been minimal. The proponents of the IT regimes argue that the CBs need to hold reserves to "maintain price stability against possible shocks". Yet, the acclaimed "defense of price stability" at the expense of large and costly funds that are virtually kept idle at the IT central banks' reserves is questionable at best in an era of prolonged unemployment and slow investment growth, and needs to be justified economically as well as socially.

We now turn to the issue of exchange rate policy more formally.

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[2] That is, based on simple differences of the nominal exchange rate depreciation figures and the inflation rates as reported under the CPI column.

[3] Brazil's case is actually explained in part by the recent decision (late 2005) of the Lula government to close its debt arrears with the IMF with early payments out of its reserves.

III. The Role of the Exchange Rate under IT

Part of the broader requirements surrounding the IT system is often argued to be the implementation of a "floating/flexible" exchange rate system in the context of free mobility of capital. Accordingly, the CBs should abandon their interventionist policies in the foreign exchange markets for all practical purposes other than pursuit for price stability.

Thus, "exchange rate flexibility and floating exchange rate system" became the new *motto*, and to many advocates, central bank "policy" has typically been reduced to mean merely "setting the policy interest rate". The exchange rate and macro prices are, in theory at least, thereby left to the unfettered workings of the global finance markets. The role of the exchange rate as an adjustment variable has clearly increased over the last decade since the adoption of the floating exchange rate systems. In the meantime, however, the role of the interest rates and reserve movements has declined substantially as counter-cyclical instruments available to be used against shocks[4] (see Table 2 above).

Against this background a number of practical and conceptual questions are inevitable: what is the role of the exchange rate in the overall macroeconomic policy when an explicit inflation targeting regime is adopted? Under what conditions should the central bank, or any other authority, react to shocks in the foreign exchange market? And perhaps more importantly, if an intervention in the foreign exchange market is regarded necessary against, say, the disruptive effects of an external shock, what are the proper instruments?

To the proponents of IT, the answer to these questions is simple and straightforward: the CB should not have any objective in mind with regards to the *level* of the exchange rate, yet it might interfere against the *volatility* of the exchange rate in so far as it affects the stability of prices. However, nuances remain. To what may be grouped under "strict conformists", the CB should be concerned with the exchange rate only it affects its ability to forecast and target price inflation. Any other response to the foreign exchange market represents a departure from the IT system. Advocated in the seminal works by Bernanke *et. al.* (1994) and Fischer (2001), the approach argues that attending to inflation targeting and reacting to the exchange rate are mutually exclusive. Beyond this assertion, the conformist view also holds that intervention in the foreign exchange market could confuse the public regarding the ultimate objective of the central bank with respect to its priorities, distorting expectations. In a world of credibility game, such signals would be detrimental to the CB's authority.

Yet, while maintaining the IT objective, one can also distill a more active role for the exchange rate in the literature. As outlined by Debelle (2001), this "flexible IT" view proposes that the exchange rate can also be a legitimate policy objective alongside the inflation target. More formally, an operational framework for the "flexible IT" view was

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[4] Though, note the one sided ever increase in the aggregate reserves of the CBs. The social desirability and economic optimality of this phenomenon in the aftermath of the adoption of floating exchange rate systems is another issue that warrants further research.

envisaged within an expanded *Taylor rule*. Taylor (2000) argued, for instance, that an exchange rate policy rule can legitimately be embedded in a Taylor rule that is consistent with the broad objectives of targeted inflation rate and the output gap. As a test for the fear of floating assertion, Schmidt-Hebbel and Werner (2002) studied the econometrics of such an expanded-Taylor rule for Brazil, Chile and Mexico. They specify a Taylor rule for the real interest rate (R_t) over the deviation of expected inflation from its target ($inf^E - inf^T)_t$, the output gap ($Ygap_t$), the nominal exchange rate depreciation (dep_t), and the rate of long term government bonds denominated in foreign currency ($B^G)_t$.

$$R_t = \beta_1 + \beta_2 R_{t-1} + \beta_3 (\inf^E - \inf^T)_t + \beta_4 Ygap_t + \beta_5 dep_t + \beta_6 B_t^G$$

A robust finding is that the effect of exchange rate depreciations on real interest rates fails to be significant; that is, there is no evidence that central banks have consistently reacted to exchange rate movements above and beyond their effects on inflation. Schmidt-Hebbel and Werner interpret this finding as evidence that the CBs of these Latin American countries had not disclosed any *fear of floating* (a la Calvo and Reinhart, 2002), and that their monetary rules had in fact been on the conformist IT track.

In contrast to all this, the structuralist tradition asserted that irrespective of the conditionalities of foreign capital and boundaries of IT, it is very important for the developing economies to maintain a stable and competitive real exchange rate (SCRER) (see, *e.g.*, Frenkel and Taylor 2005; Galindo and Ros, 2006 (this volume), Frenkel and Ros, 2006; Frenkel and Rapetti, 2006). They argue 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)* (Frenkel and Ros, pp. 634-637). While the size and even direction of these channel effects might differ from country to country, in many countries, including countries in Latin America, maintaining a competitive and stable real exchange rate is likely to have a positive employment impact though some combination of these effects.

The gist of the structuralist case for SCRER rests on a recent (and unfortunately not well understood and appreciated) paper by Taylor (2004). Resting his arguments on the system of social accounting identities, Taylor argues that the exchange rate can not be regarded as a simple "price" determined by temporary macro equilibrium conditions. The mainstream case for exchange rate determination rests on the well-celebrated Mundell (1963) and Fleming (1962) model where the model rests on an assumed duality between reserves (fixed exchange rate system) *versus* flexible exchange rate adjustments. The orthodox mainstream model, according to Taylor, presupposes that a balance of payments *exists* with a potential disequilibrium that has to be cleared. This, however, is a false presumption. The exchange rate is not an "independent" price and has no fundamentals such as a given real rate of return (or a trade deficit) that can make it *self-stabilizing*. In Taylor's (2004, p.212) words, "… the balance of payments is at most an accumulation rule for net foreign assets and has no independent status as an equilibrium

condition. The Mundell-Fleming duality is irrelevant, and in temporary equilibrium, the exchange rate does not depend on how a country operates its monetary (especially international reserve) policy". Accordingly, the exchange rate "has to evolve over time subject to rules based on expectations about its values in the future. (Yet), in a world of shifting and perhaps unstable expectations, no simple dynamic theory (of foreign exchange markets) is likely to emerge" (p.223).

In a practical setting, the fact that the foreign exchange market can be in *equilibrium* in the sense of meeting the demand for foreign exchange with its supply in the spot market, and yet its level might still be "*mis-aligned*" with respect to overall macro equilibrium has been recently claimed in Edwards (2003 and 2001). Accordingly, exchange rate is regarded as *mis-aligned* if its realized value exhibits a persistent departure from its long run equilibrium trend (Edwards, 2001, p.6). The long run equilibrating value, in turn, is taken to be that rate which, for a given set of "structural fundamentals" is compatible with simultaneous achievement of internal and external equilibrium[5]. It is clear that such an assessment has to go beyond the simple PPP calculations, which are wrought with issues of the choice of a relevant price index and a proper base year.

The preceding discussions clearly underscore that the real world behavior of exchange rates is quite complex and the focus of the inflation targeting regime for floating exchange rates (in expectation of dropping it from the policy agenda altogether) is a *mirage*. This view of exchange rates helps to explain why many believe that there are no viable alternatives to inflation targeting as a mode of central bank policy, a view that we try to document in the next section, is not correct.

IV. Socially Responsible Alternatives to Inflation Targeting CB Policies

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 two main factors accounting for this perception. First, as we discussed in the previous section, 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 system, 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 (see the above arguments cited from Taylor, 2004 and Frenkel and Taylor, 2006). From our 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

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[5] See also Fischer (2001) on the formal statement of the problem within the context of a finer classification of the exchange rate systems.

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 "tri-lemma" (Ocampo, 2004; Epstein, Grabel and Jomo, K.S., 2005).

Secondly, 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 further 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).

Viable Alternatives *Do* Exist

In this section we report on a series of country studies undertaken by a team of researchers working on a Political Economy Research Institute (PERI) (University of Massachusetts, Amherst)/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. A range of alternatives were developed by the researchers, 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, rather than inflation 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 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, such as the real exchange rate, employment, or investment. 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 (Ocampo, 2004; Epstein, Grabel and Jomo, 2006).

IV-1. Modest but Socially Responsible 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 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). They suggest modifying the IT framework to make it somewhat more employment friendly. In the case of Mexico, Galindo and Ros find that monetary policy was asymmetric with respect to exchange rate movements –tightening when exchange rates depreciated, but not loosening when exchange rates appreciated. This lent a bias in favor of an over-valued exchange rate in Mexico. So 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.[6]

In his study of Brazil, Nelson Barbosa-Filho also proposed extending the inflation targeting framework, but as we will see 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). 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.

IV-2. 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 (2005) and Frenkel and Rapetti (2006) argue that the central banks should maintain a moderate inflation rate and should maintain a competitive and stable real exchange rate. (See Frenkel and Rapetti, 2006 for Argentina; Barbosa-Filho, 2005 for Brazil; Galindo and Ros, 2006 for Mexico; Lim, 2006 for The Philippines; Packard, 2006 for Vietnam). 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 the countries they studied might need to impose short-term capital controls and other capital management techniques to help them manage the exchange rate will maintaining moderate inflation.

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[6] 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 basis for the monetary policy bias toward exchange rate appreciation.

For the case of Brazil, Barbosa-Filho developed a more elaborate policy framework which includes a focus on maintaining a competitive and stable real exchange rate together with a targeted reduction in the real interest rate. Given Brazil's large public debt, Barbosa-Filho also proposes that the targeted reduction in the real interest rate 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. Furthermore, 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).

Brazil is not the only highly indebted country in our project sample. Turkey is another case with that problem. Here, too, the authors raise concerns to the conformist straightjacket of inflation targeting, and develop an alternative macroeconomic framework. Using a financial-linked computable general equilibrium model (CGE) for the case of Turkey, Voyvoda and Yeldan (2007) illustrate the real and financial sectorial adjustments of the Turkish economy under the conditionalities of the *twin targets*: on *primary surplus to GNP ratio* and on the *inflation rate*. They utilize their model to study the impact of a shift in policy from a strict inflation targeting regime, to one that calls for revisions of the primary fiscal surplus targets in favor of a more relaxed fiscal stance on public investments on social capital, together with a direct focus on the competitiveness of the real exchange rate. They further study the macreconomics of a labor tax reform implemented through reduction of the payroll tax burden on the producers, and an *active* monetary policy stance via reduction of the central bank's interest rates. They report significant employment gains due to a policy of lower employment taxes. However, as a result of lower tax revenues, they find that the labor tax reform policy suffers from the insufficiency of fiscal funds for public investments, along with a loss of *credibility* of the government. It also leads to a rise of the inflation rate above the central bank's targeted rate of inflation, bringing into question whether the CB will be willing to tolerate the breached limits of its inflation target. They also find that the economy's response to the reduction of the CB's interest rate is positive in general; yet, very much dependent on the path of the real exchange rate, thus a call for maintaining a *stable real exchange rate* path a la Frenkel and Ros. (Voyvoda and Yeldan, 2007).

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. 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. (Thus), 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, 2006).

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.

IV-3. More Comprehensive Alternatives to Inflation Targeting

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, 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 (2006) 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). Pollin, *et. al.* developed an "employment-targeted economic program" designed to accomplish this goal, with a focus on monetary policy, credit policy, capital management techniques, fiscal policy and industrial policy. The purpose of the program is to reduce unemployment rate by 50% in line with the government's pledge to reduce the official unemployment rate to 13% by 2014.[7] Here, "employment targeting" replaces inflation targeting as the proposed operating principle behind central bank policy, and moderate inflation becomes an additional constraint which the central bank must take into account when formulating its policies. (Epstein, 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 "bet 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 4 presents a summary of the alternatives proposed in the PERI/Bilkent project and is discussed further in what follows.

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[7] As of March 2005, South Africa had an unemployment rate of anywhere from 26% to 40%, depending on exactly how it is counted.

Table 4. PERI/BILKENT Alternatives To Inflation Targeting Project, Summary

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

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

Source: see text.

V. Concluding Comments

In this paper we 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 orthodox inflation targeting in balancing the developmental and stabilization functions of central banks.

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