The Quaid-i-Azam Lecture

The Design and Conduct of Monetary Policy: Lessons for Pakistan

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Movements in global capital during the late 1990s and the greater emphasis on price stability led many countries to abandon fixed exchange rate regimes and to design institutions and monetary policies to achieve credibility in the goal of lowering inflation. Such recent developments have brought to the forefront the idea that freely mobile capital, independent monetary policy, and fixed exchange rates form an "impossible trinity". Inflation-targeting regimes being adopted by many countries provide a way of resolving this dilemma, and it is suggested that such a regime be implemented in Pakistan as well.

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I. INTRODUCTION

The design and conduct of monetary policy has undergone two significant changes since the 1990s. First, a number of countries have moved from fixed exchange rate regimes to more flexible rates, thereby allowing for greater monetary independence. Second, inflation targeting regimes have been adopted as a framework for conducting monetary policy in several industrial economies, as well as in a number of emerging markets and developing countries. These changes have triggered considerable debate about monetary policy in the literature, a debate that has important implications and lessons for how monetary policy should also be designed and implemented in developing countries.[1]

This paper starts by discussing the key issue of "dynamic inconsistency", which has led to the major shift in the thinking about monetary policy. Dynamic inconsistency and inflationary bias in monetary policy arise because policy-makers have an incentive to "fool" the public by generating an inflation "surprise" to achieve a short-term gain in output. Setting up rules, or targets, for money and credit growth, interest rates, the exchange rate, and inflation are all mechanisms designed to overcome the dynamic inconsistency problem. In this connection, the paper will outline the principal arguments in the rules versus discretion debate to determine if there are significant advantages to be had from adopting a rules-based monetary policy like inflation targeting in the case of Pakistan.

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[1]The standard reference to modern monetary analysis is Woodford (2003). A recent survey by Chari and Kehoe (2006) also provides a useful description of where things stand with respect to the new developments in the design of monetary policy.

The paper is organised as follows. Section II provides a general discussion of dynamic inconsistency and inflationary bias. The issue of rules versus discretion in the operation of monetary policy is covered in Section III. Section IV outlines the evolution of different monetary frameworks that fulfil the need for a nominal anchor, and Section V discusses inflation targeting, focusing on the preconditions for implementing such a regime. Section VI considers the feasibility of inflation targeting in Pakistan, and Section VII contains some concluding remarks.

II. DYNAMIC INCONSISTENCY AND INFLATIONARY BIAS

While both theoretical and empirical studies have demonstrated that there is no long-run relationship between inflation and unemployment, under certain circumstances a short-run trade-off between these variables may be found. The existence of this short-run Phillips curve is widely believed to be associated with the presence of sticky wages and prices. The possibility that an expansionary monetary policy could increase output and employment in the short-run leads to what has been termed the "problem of dynamic inconsistency," developed principally by Kydland and Prescott (1977) and Calvo (1978).[2]

Dynamic inconsistency refers to the difference between the optimal policies that a central bank announces it would carry out, and the policies that the central bank would carry out after the public had made decisions on the basis of its expectations. If the central bank announces that it will target a particular rate of inflation, and the public engages in contracts based on that announcement, the central bank has an incentive to renege on its promise and try to achieve higher output by producing surprise inflation. But the public will then know this, and will adjust its inflationary expectations upward, thereby limiting the desired output gain. Another way of putting this idea is to say that policy-makers unconstrained by rules have an incentive to "cheat" the private sector in order to spur an output gain. However, since rational agents recognise the incentive of policy-makers to produce surprise inflation, they will change their behaviour accordingly, creating an economy with an inflationary bias.

One could therefore ask the following question: Are countries condemned to an equilibrium with high inflation rates, where the public distrusts the government because of its incentive to inflate? Of course, there are institutional reforms that countries can adopt to lower inflationary expectations and still keep some flexibility to counteract shocks in the economy. Chari and Kehoe (2006) propose two possible ways of alleviating the dynamic inconsistency problem and the consequent inflationary bias. One option is to pass legislation that would require the monetary and/or fiscal authority to abide by a clear set of rules. The second option is to tie the hands of the government by delegating policy to an independent authority. This brings the issue of rules versus discretion in the operation of monetary policy into the picture.

III. RULES VERSUS DISCRETION

Most economists and central bankers now agree that central banks cannot act in a completely discretionary manner. Some kind of guideline or rule is essential for good policy, and acting without a rule may have adverse consequences. This consensus

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[2]For a good summary of the time inconsistency problem, see Chari and Kehoe (2006).

emerges from a long debate among economists regarding the relative merits of rules versus discretion in the conduct of monetary policy.[3]

Traditionally, economists have focused on two main kinds of instrument rules:

- Money growth rules [advocated by McCallum (2000 and 2004)] are extensions of Friedman's (1960) proposal for constant money growth but have been extended to include feedback elements as a way to correct past mistakes or to gradually adjust to permanent shifts in velocity.
- Interest rate rules [advocated by Taylor (1993)] also include feedback elements: the central bank raises interest rates when expected inflation rises but also reduces interest rates when unemployment rises above an undesirable level.

Which of these target rules should be more successful in restraining inflation, preventing unnecessary business cycle fluctuations, or encouraging growth over the long term remains an unsettled question. More recently, economists have come to agree that rules may apply to targets as well as instruments. Examples of target rules include both exchange rate management regimes and inflation targeting regimes. Finally, most economists now agree that any rules-based regimes still permit a margin for discretion, and have come to reject the idea that rules and discretion are diametrically opposed. The more well-defined the rule, the more effectively can discretionary policy be applied.

IV. THE NEED FOR A NOMINAL ANCHOR: EVOLUTION OF MONETARY FRAMEWORKS

As policy-makers in many countries throughout the world have gravitated toward an approach based more on rules than on full discretion, the issue of choosing an appropriate target for policy has become key. In a rules-based policy, the target serves as a communication tool with the public, as it reveals policy-makers' intentions and priorities, and indicates whether a policy action—for example, a change in the short-term interest rate, or intervention in the foreign exchange market—will be required. In turn, to the extent that the public observes and understands this target, it establishes a "nominal anchor" for agents' expectations, thus helping to achieve and maintain price stability.

Nominal anchors can either be price or quantity based. The list of possible price anchors is relatively extensive, encompassing for example, the exchange rate, the price of gold, and the inflation rate. On the other hand, discussion of quantity anchors tends to focus on two major candidates: monetary (and credit) aggregates and to a lesser extent, nominal income.

In practice, countries adopting rules-based frameworks in recent years have chosen either monetary or exchange rate targets as their nominal anchors. Although it is possible to operate within a relatively wide range of intermediate arrangements, it is apparent that more reliance on explicit monetary or inflation targets requires allowing a greater degree of flexibility in the exchange rate and, likewise, adherence to an exchange rate target or peg leads to greater volatility in monetary aggregates and inflation.

A number of factors weigh in favour of adopting monetary over exchange rate targets. Having a flexible exchange rate allows a country the option of pursuing an

[3]See, for example, Woodford (2003), Chapter 1, for a comprehensive discussion of this debate.

independent monetary policy, which may then be used countercyclically to minimise fluctuations in real activity. A flexible exchange rate could act as an automatic stabiliser in the event of adverse trade shocks, for example, by providing stimulus to demand for non-tradable when the market for a country's exports has been hit with a negative shock. Finally, the experience in recent years has shown that fixed exchange rates tend to be particularly vulnerable to speculative attacks, and thus currency crises are more likely when a government commits to a pre-announced level for the exchange rate.

For those countries that opt for greater exchange rate flexibility, the choice then shifts to what monetary target is more appropriate: monetary aggregates or the inflation rate itself. Targeting monetary aggregates has one appealing advantage: policy-makers exert much greater control over monetary aggregates such as Ml and M2 than they obviously do over the inflation rate. However, there are two major drawbacks to targeting monetary aggregates. First, monetary aggregates are less easily understood by the public, and thus their informational content is considerably lower than that of the inflation rate. Second, in order to be effective, monetary targets require that a stable, or at least predictable, relationship exist between the aggregate and the rate of inflation. If this is not the case, then policymakers run the risk of consistently meeting the target for monetary aggregates yet missing the (implicit) inflation target. Thus, policymakers will ultimately fail in their goal of lowering and stabilising the inflation rate, thereby rendering the exercise futile. Numerous studies have shown that instability of money demand is particularly common to developing countries undergoing processes of financial liberalisation, and even industrialised countries are not immune. Thus, most countries choosing monetary over exchange rate targets in recent years have favoured an inflation targeting framework over one that targets a monetary aggregate.

V. INFLATION TARGETING[4]

Over the past two decades, a number of countries have moved to an explicit and formal inflation targeting framework. Table 1 lists the 29 countries by the date at which the new regime was adopted. Starting in the late 1990s many developing and emerging market countries also adopted inflation targeting, and by 2007 some 19 of these countries were classified as formal "inflation targeters."

The successful implementation of an inflation targeting regime requires the presence of certain macroeconomic, institutional, and operational conditions. [5] First, the authorities should be fully committed to price stability as the primary goal of monetary policy. This rules out the possibility of targeting at the same time any other variable, including nominal exchange rate or unemployment (output). In this context, exchange rate arrangements with limited flexibility—crawling pegs or target zones—could coexist with inflation targeting as long as the latter has priority. Also, in a flexible exchange rate regime, central bank intervention in support of the exchange rate should be limited to smoothing out the effects of temporary shocks on inflation. This is particularly important in the case of small open economies in which the pass-through from the exchange rate to inflation may be high.

[4]For a recent survey of inflation targeting, see Freedman and Laxton (2009).
[5]A detailed exposition of inflation pre-conditions can be found in Carare, *et al.* (2002) and Freedman and Laxton (2009).

Unemployment (real output) stabilisation may also be given some consideration within an inflation targeting regime, but only as a secondary goal of monetary policy. In a "strict inflation targeting" regime the monetary policy instrument may respond to the output gap, but only to the extent that it affects the inflation forecast, and not because it enters in the central bank's loss function.

A second major consideration for an inflation targeting regime is central bank independence in the conduct of monetary policy, or what is known as "instrument independence" as opposed to "goal independence". Once the goal of monetary policy (the inflation rate to be achieved) is established either by the central bank, the government, or

Table 1

Inflation Targeting Regimes

Country	Effective IT Adoption Date
New Zealand[1]	January 1990
Canada[1]	February 1991
United Kingdom[1]	October 1992
Sweden[1]	January 1993
Finland[1]	February 1993
Australia[1]	April 1993
Spain[1]	January 1995
Czech Republic[1]	December 1997
Israel[1]	June 1997
Poland[2]	October 1998
Brazil[2]	June 1999
Chile[2]	September 1999
Colombia[2]	September 1999
South Africa[2]	February 2000
Thailand[2]	May 2000
Korea[1]	January 2001
Mexico[2]	January 2001
Iceland[1]	March 2001
Norway[1]	March 2001
Hungary[1]	June 2001
Peru[2]	January 2002
Philippines[2]	January 2002
Guatemala[2]	January 2005
Slovakia[1]	January 2005
Indonesia[2]	July 2005
Romania[2]	August 2005
Turkey[2]	January 2006
Serbia[2]	September 2006
Ghana[2]	April 2007

Source: Roger (2009).

[1]High income countries; [2]Low income countries (based on World Bank Development Indicators classification).

jointly, the central bank has to be able to choose and manage its instruments to achieve that goal. Instrument independence requires the absence of what is called "fiscal dominance". Fiscal dominance, a situation in which monetary policy is governed by the financial needs of the government, undermines the ability of the central bank to achieve the inflation target. This is particularly the case in which the public sector relies systematically and significantly on revenues from money creation, or on continuous placements of government bonds in thin domestic financial markets. Under these conditions the central bank may resist an increase in market interest rates to correct deviations of the forecasted inflation from the target because of the potential impact on the fiscal position.

A third major condition for the implementation of the inflation targeting is accountability of the central bank for achieving the goal, and transparency in communicating to the public the main aspects of policy design and implementation. This is essential to increase discipline and to enhance credibility in a framework in which monitoring performance against targets is difficult because of lags in the transmission of policy actions. It also contributes to reducing political pressures to deviate from the announced policy. Transparency implies the following: first, the explicit announcement of inflation targets; second, availability of clear and sufficient information to the public to assess the stance of monetary policy; third, the announcement of any changes in monetary policy, a clear explanation of the reasons behind the changes, and the expected impact on the inflation outlook; fourth, an ex-ante indication of a possible target breach, its causes, and the policy actions that will be taken to bring inflation back on track; and finally, an ex-post comprehensive analysis of the performance of monetary policy. The central bank may use different mechanisms to communicate these issues to the public, including through the periodic release of Inflation Reports, regular press releases and press conferences, and publication of the minutes of monetary policy meetings in the central bank.

Inflation targeting requires an operational framework to guide the authorities in conducting monetary policy. This framework relies on: first, reasonably well-understood channels between policy instruments and inflation, the relative effectiveness of different monetary instruments, and the lags involved; second, a methodology to produce inflation forecasts using different approaches and considering all information available; and third, a forward-looking operating procedure that derives an optimal policy rule—the central bank's reaction function—by which changes in the instrument depend on deviations of the inflation forecast from the inflation target.

One main issue present in several emerging market economies tends to complicate the task of the central bank in monetary management. Countries that have large capital movements may require some degree of central bank intervention in the foreign exchange market in the case of temporary shocks. The key issue here is for the central bank to be able to assess the true nature of the shocks, and determine if there is clear case of exchange rate appreciation or depreciation, which is by no means an easy task.

Although there is some disagreement on the criteria used to classify a country as a full-fledged inflation targeter, it is clear that there is an increasing trend in targeting inflation as the main goal of monetary policy. Even some emerging market economies that do not have in place all requirements for the adoption of a full-fledged inflation

targeting framework have initiated a transition process leading toward a future implementation of this framework.

In emerging markets the legal framework deserves greater attention prior to the adoption of a full-fledged inflation targeting. In this context, several emerging market countries have revised the central bank charter to allow for more institutional independence, including prohibiting central bank financing of the government. However, there is a clear and unique mandate to the central bank for achieving price stability only in a few countries. In most emerging market countries monetary policy objectives aim at achieving both internal and external stability. Finally, in most full-fledged inflation targeting countries, the government is involved in the setting of the inflation targets. This provides an additional support in those cases in which price stability is not a clear and legal mandate of the central bank.

There are some common features and several differences in operational issues between advanced countries and emerging markets. All inflation-targeting countries employ market-based instruments of monetary policy to achieve the desired level of the operating target—usually, the short run interest rate. With regard to differences, emerging market economies tend to rely less on econometric models in the conduct of monetary policy, and more on the use of judgment, due to the higher degree of uncertainty with respect to transmission channels and the effectiveness of monetary policy instruments because of ongoing structural changes. This also explains why in emerging markets central banks use shorter horizons as well as bands instead of point targets for inflation targets. Also, there are more frequent interventions of the central bank in the foreign exchange market, partly explained by the existence of a higher pass-through from the exchange rate to inflation, and its role in forming inflationary expectations.

On balance, the inflation targeting approach appears to be very promising for developing countries. It offers a number of operational advantages, and it compels policymakers to deepen reforms, enhance transparency, improve the fiscal stance, and eventually converge to the international level of inflation.

It is important to keep in mind that the inflation-targeting strategy is not a panacea. It is a useful framework for conducting monetary policy under constrained discretion. It relies on rules, as the adoption of explicit targets requires commitment by the central bank toward policy consistency. At the same time, it leaves at the central bank's discretion the decision on how to deploy its instruments, which allows for some flexibility in responding to unforeseen domestic and external shocks. In the end, maintaining sound macroeconomic fundamentals still remains the necessary condition for price stability under any monetary framework.

VI. INFLATION TARGETING IN PAKISTAN?

The principle objectives of monetary policy in Pakistan are to promote growth and maintain price stability.[6] The objective of achieving higher growth by monetary policy measures can, however, conflict with the goal of keeping inflation low. This section argues first why controlling inflation should be the primary objective of the State Bank of Pakistan (SBP), and then discusses what type of monetary regime is best suited to attaining this objective.

[6]These dual objectives are enshrined in the State Bank of Pakistan Act of 1956.

1. Inflation and Growth

Ask a macroeconomist what is meant by "macroeconomic stability" and the usual answer would be "low inflation". Why? Because high inflation has well known negative effects—it imposes welfare costs on society, impedes efficient resource allocation by obscuring the signalling role of relative price changes, inhibits financial development by making financial intermediation more costly, hits the poor disproportionately because they do not hold financial assets that provide a hedge against inflation, and perhaps most importantly, reduces long-term economic growth. As discussed in earlier sections of the paper, while it is possible to generate a spurt in the growth rate, or more precisely in the level of output, through expansionary monetary policies, this effect cannot be sustained and fairly soon growth will falter.[7] In the long run, the relationship between inflation and growth is negative.

So if inflation is inimical to long-term growth, it obviously follows that central banks should aim for a low rate of inflation. But how low should inflation be? There are several empirical studies now that provide fairly convincing evidence that the relationship between inflation and growth is nonlinear in nature.[8] More specifically, at low levels of inflation, the relationship can be positive or nonexistent, while at higher rates it becomes negative. In principle, it is possible to estimate the *threshold* level of inflation at which the sign of the inflation-growth relationship would switch from positive (or zero) to negative.

There are now several empirical studies that estimate this threshold level of inflation. Using panel data covering 1960-1996, Sarel (1996) estimates the threshold level of inflation to be in the 8-10 percent range. Below the threshold inflation rate of 8 percent, inflation has no significant effect on growth, but when it gets above 8-10 percent the effect is negative and statistically significant. Ghosh and Phillips (1998), using a larger sample than Sarel (1996), find a substantially lower threshold level of inflation of around an annual rate of 2 ½ percent. Khan and Senhadji (2001) show that the inflation thresholds tend to be higher in developing countries, with threshold estimates falling in the 7-11 percent range versus 1-3 percent for industrial countries. They also find the negative relationship between inflation and growth beyond the threshold level of inflation is quite robust to sample size, model specification, and the estimation method. Two studies on Pakistan also find evidence of a threshold between inflation and growth: Mubarik (2005), using time series data over 1973–2005, finds that an inflation higher than 9 percent harms growth in Pakistan, and Hussain (2005), on the other hand, estimates the threshold to be between 4-6 percent.

Growth and inflation are not, however, the only objectives that the SBP considers. Other objectives include the improving the external current account balance, increasing the stock of international reserves, and stabilising the real exchange rate.[9] But in contrast

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[7]This was very evident over the past decade in Pakistan. During 2001-2005 easy monetary policy supported a higher growth rate while the inflation rate was fairly modest. But in 2006 inflation started to pick up and growth began to slow down steadily. By 2008 inflation had gone over 20 percent, and growth had fallen to only 2 percent.

[8]Fischer (1993) was the first to describe the possibility of this nonlinear relationship between inflation and growth.

[9]Malik (2007) specifies and estimates a policy reaction function for the SBP relating the policy interest rate to the output gap, inflation, exchange rate, interest rate smoothing, and the trade deficit. He finds the most of the coefficients of these variables are statistically significant.

to the growth-inflation relationship, monetary policy geared to lowering inflation would reduce aggregate demand, and thereby improve the external imbalances and increase international reserves. Therefore, there is no trade-off between objectives. Similarly, achieving a rate of inflation equal to inflation rates in partner countries will stabilise a real exchange rate. Again, there is no trade-off here either.

2. Inflation Targeting by the SBP

The SBP has historically followed a regime of targeting monetary aggregates (basically M2 and bank credit) and continues to do so at present. As mentioned earlier, this type of regime assumes that the demand for money is a stable function of a well-defined set of variables, and that there is a close link between money and credit growth and the ultimate objectives of growth, inflation, and international reserves.

One reason for choosing a monetary targeting regime is that by controlling monetary aggregates the SBP can affect the outcome variables with some degree of reliability and predictability. But it should be noted that another important reason is that Pakistan has had a series of IMF programmes, and that the IMF "financial programming" approach gives credit a preeminent role.[10] This approach is based on the proposition that in a regime of fixed (or semi-fixed) exchange rates, the aggregate money supply is beyond the direct control of the central bank and is in fact endogenous. The central bank can only control the volume of credit, one of the sources of monetary expansion. Within this framework, the distinction between the monetary base (or money supply) and its domestic credit component becomes critical. For a given expansion of the demand for money, an equivalent increase in the money supply can be realised through a suitable increase in domestic credit. However, when the rate of domestic credit creation diverges from the changes in money demand, the difference is made up by equivalent changes in net foreign assets arising from a balance of payments surplus or deficit.

Using this financial programming framework, it is relatively straightforward to design the basics of an IMF financial programme. In the simplest case, only three steps are required. First, one has to set a target for changes in net foreign assets over some period of time, usually one year. Second, an estimate is made of the demand for money over the same period. This involves projecting the main determinants of money demand, such as real income and prices. This is the critical behavioural relationship in the analysis. The demand for money must be stable in order for there to be a predictable relationship between the balance of payments and domestic credit. Finally, given the forecast of the demand for money during the period in question and the overall target for the balance of payments (i.e., for the change in net foreign assets), the corresponding change in domestic credit is derived from the balance sheet identity of the assets and liabilities of either the central bank or the banking system. In IMF programmes these values for the change in domestic credit become "credit ceilings" that are used to monitor performance under the programme. That is why in all programmes, including the current one with Pakistan, performance criteria always include a ceiling on domestic credit expansion.

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[10]During the past decade, for example, Pakistan has had programmes with the IMF in 6 out of 10 years: a Stand-by arrangement (November 29, 2000-September 30, 2001); a PRGF arrangement (December 6, 2001-December 5, 2004); and most recently another Stand-by arrangement (November 24, 2008-October 23, 2010). As a matter of fact, in the 1990s Pakistan had an IMF programme every year.

The instruments that the SBP uses to affect monetary and credit aggregates are the standard ones of monetary policy: changes in the rediscount rate; open market operations; and reserve requirement changes. It should be noted that interest rates have at times themselves become a target if the SBP believes that the market is pushing rates up to much. In this case the SBP loses an important instrument of monetary control, and has to rely on direct controls, such as individual bank credit ceilings, or moral suasion to persuade banks not to extend credit beyond what is considered desirable by the SBP.

Several studies have questioned monetary targeting, principally by casting doubt on one of the key assumptions of this type are regime, namely the stability of the demand for money.[11] Although money and credit variables have been found to have a reasonably strong link with the ultimate objectives, the predictability of these effects is uncertain.[12] After 2001, M2 has consistently exceeded its target growth, and since 2004 inflation has been above the target number. Clearly, the targeting of monetary aggregates has not been particularly successful in recent years. It has been argued by some that this is a consequence of financial developments and financial innovations that have led to a breakdown of the money demand function, thus calling into question the monetary aggregates targeting regime. This is not a phenomenon unique to Pakistan, as many emerging market and developing economies have experienced similar problems and been forced to think of alternative monetary regimes.

In circumstances where the link between monetary aggregates and inflation is weakened or breaks down, it makes sense to move directly to targeting inflation. Essentially, this is what led 19 emerging market in developing countries (listed in Table 1) to adopt formal inflation targeting as the monetary policy regime.[13] Should the SBP then move to formal inflation targeting? This is a question that has been debated in the SBP, although the decision is apparently to stay for the present with the monetary targeting framework.[14] So if the SBP were to move to inflation targeting, are the preconditions outlined in Section VI met?

(a) *Commitment to Price Stability*

This has to become the highest priority for the SBP, even though it is not necessary to completely forgo other objectives like output and the balance of payments. However, if there is a conflict among objectives, inflation stabilisation must dominate the others. In recent years, the SBP appears to have made inflation its highest priority, and inflation targeting would simply formalise an existing practice.

(b) *Flexible Exchange Rate*

While not freely floating, the exchange rate has considerable flexibility. In fact, full flexibility may not be desirable in countries like Pakistan that are prone to external

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[11]In an IMF paper, Bokil and Schimmelpfennig (2005) show that the money demand equation for Pakistan has non-constant coefficients when estimated with either annual or monthly data. Similar instability has been found by SBP researchers; see Moinuddin (2009) and Omer and Saqib (2009).

[12]For example, by Ahmed, *et al.* (2005) and Khan and Schimmelpfennig (2006). Qayyum (2008) questions this supposed link, particularly since 2000 on.

[13]In fact many other countries have adopted the same practice, albeit less formally.

[14]For a discussion of the pros and cons of inflation targeting in Pakistan, see Felipe (2009) who does not favour it, and Moinuddin (2009), who argues that the SBP should move in this direction.

shocks and where the pass-through from exchange rate changes into consumer prices may be quite rapid. Most emerging market and developing countries intervene in the forex market to counter excessive movements in the exchange rate.

(c) *Independent Central Bank*

The SBP became more independent from the government since 1994, but its operations are still significantly influenced by the Ministry of Finance. However, an amendment to the SBP law to enhance the central bank's operational independence was submitted to Parliament in December 2009, and is expected to be passed in 2010. In the meantime, the SBP announced the formation and composition of the nine-member Monetary Policy Committee (MPC) of the SBP Board, and this committee started its work in November 2009. At this point, the MPC reports to the SBP Board and includes two members of the Board, which is unusual since the MPC should ideally be independent of the Board as well, but possibly the reporting requirement and the composition of the MPC will change as the amendments going through Parliament become law.

(d) *Absence of Fiscal Dominance*

In order for the SBP to implement formal inflation targeting, it must have instrument independence. That is, it must be able to focus exclusively on inflation and be able to use the instruments at its disposal, particularly interest rates, to achieve the target. Fiscal dominance can interfere with this objective in two related ways. First, the government can oblige the central bank to finance its fiscal deficit, thereby creating excess liquidity in the economy. Second, the government can pressure the central bank to keep interest rates low so as to lower the government's borrowing costs as well as the interest payments on its outstanding debt. In such a case, the central bank will likely be unable to achieve its goal of low inflation, since its ability to manage monetary conditions and liquidity in the economy will be circumscribed.

The SBP has operated under the constraint of fiscal dominance throughout its history. While it has gained a measure of independence since 1994,[15] nevertheless the government has continued to have a major influence on its operations. The most obvious example is the period leading up to the recent crisis that ended up with Pakistan approaching the IMF for a programme. Starting in early 2007, as international oil prices continued to rise steadily, basically for political reasons the Musharraf government decided to abandon the domestic oil pricing formula, and the increases in international oil prices were not passed on to the public.[16] As a result, the government's subsidy bill ballooned, and the fiscal deficit jumped from 4 percent of GDP in 2007 to 7.3 percent in 2008. This fiscal deficit was financed mostly by the SBP, to the tune of Rs 650 billion (nearly $10 billion). Effectively this amounted to printing money to finance the fiscal deficit, and the two well-known consequences of such a policy are inflation and a loss of international reserves. That is exactly what happened. Inflation, which was already rising because of the increase in food prices, jumped to over 20 percent in 2008, almost triple

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[15]Prior to 1994, the SBP functioned like an agency of the Ministry of Finance, and all major monetary policy decisions had to have the implicit, if not the explicit, approval of the Secretary of Finance (who also still sits on the SBP Board).

[16]This policy was continued by the successor caretaker government in early 2008.

the 2007 rate, and the country lost nearly $6 billion in international reserves between June 2007 and June 2008.

Very reluctantly the government then approached the IMF at the end of 2008 for a programme. Recognising the reasons why Pakistan had got into the crisis, the IMF introduced an important condition into the programme—SBP financing on the government had to be eliminated.[17] It is worthwhile noting that the condition has been met during the course of the programme, even though the ceiling on the fiscal deficit has not.[18] Therefore, it is certainly possible to argue that the government can adhere to the condition of no borrowing from the SBP if it so chooses, and fiscal dominance can be eliminated as a constraint on SBP operations.

In a sense, the adoption of inflation targeting by the SBP would in fact lead to a fundamental institutional change, unrelated to an IMF programme, that would restrict the Ministry of Finance from borrowing from the SBP and trying to keep interest rates below market-determined levels. From that standpoint alone, the adoption of inflation targeting would serve as an important disciplining device on the government in exercising undue influence over the SBP in the conduct of monetary policy.

(e) *Transparency and Operational Capability*

The SBP already has initiated a policy of making public its inflation reports and the MPC monetary policy decisions. A substantial degree of transparency has already been achieved, and presumably more transparency and accountability will follow, hopefully with the publication of the minutes of the MPC discussions. The SBP has the basic operational capacity to make inflation forecasts, and further work on both econometric models and short-term forecasting models should enable it to make their projections. The tools and the capacity are there, and it is only a question of how they are refined and utilised in the design of monetary policy. Furthermore, as argued previously in the paper, because of ongoing structural and institutional changes, inflation forecasts in emerging market and developing countries have to rely on judgment as well as models.

Overall, a move to inflation targeting by the SBP is both desirable and feasible. All the preconditions that are considered necessary for implementing inflation targeting are satisfied, save one. And that is the absence of fiscal dominance. However, by adopting an inflation targeting regime the independent SBP would be in a position to turn down any Ministry of Finance request for deficit financing if it ran counter to its policy of keeping a low rate of inflation. It would also be a clear and transparent rules-based policy and easily understood by the public, leading to greater accountability for the SBP. Right now the SBP is held responsible for inflationary developments even though it may only be supporting the policies of the fiscal authorities. With inflation targeting, the responsibility will rest squarely with the SBP and it would be accountable to the public, the government, and Parliament for the outcomes.

The new monetary regime could be implemented in the fairly near future as the amendments to the SBP Act become law. However one issue to take into account is the

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[17]More specifically, net borrowing by the government from the SBP was to be zero on a quarterly basis.

[18]It has been argued that meeting the zero net borrowing target has been achieved through an element of "window dressing". That is, net borrowing takes place during the quarter, creating excess liquidity in the system, and is brought down to zero in the last days of the quarter. So while the ceiling is formally met, the damage has been done.

current IMF programme, which is based, as argued before, on the monetary aggregates targeting framework. The standard IMF programme would therefore be inconsistent with inflation targeting, although it can be adjusted to fit the different framework.[19] However, as the IMF programme ends later this year, it may be advisable to wait until then to establish the new framework so as not to go through a protracted renegotiation of the current programme. Inflation targeting could therefore be implemented in January 2011, leaving enough time to make the necessary operational and institutional preparations for the new monetary regime.

VII. CONCLUSIONS

In developing countries, monetary policy has become increasingly important in recent years, even though capital accounts have been progressively liberalised. The reason is that the large movements in global capital during the late 1990s forced many of these countries to abandon fixed or closely managed exchange rate regimes and implement monetary policies to control inflation. Such recent developments have brought to the forefront the now well-known fact in international monetary economics: namely that freely mobile capital, independent monetary policy, and fixed exchange rates form an "impossible trinity," or "Trilemma," as it has come to be called. Specifically, it is possible to have any two of these policies, but not all three.

In a globalised capital markets environment, there is less room for divergence of views among market participants about the appropriate stance of exchange rate and monetary policy, less time to adjust to shocks, and greater pressure to achieve closer convergence of economic performance among trading partners. As a result, a number of developing countries have adopted exchange rate regimes with more flexibility—and therefore provided greater scope for monetary policy.

Traditionally, monetary rules have been based on the behaviour of monetary instruments. However, in an environment of large international capital flows with continuing financial innovations and ever more sophisticated asset markets, rules based on monetary aggregates have become more difficult to implement. Accordingly, central banks have increasingly embraced the inflation-targeting approach. In some cases, the approach has helped monetary policy become more coherent, transparent, and credible. And, if supported by proper fiscal measures, the inflation-targeting approach has helped policymakers guide inflation rates lower, while permitting them some discretion to stabilise output. This regime has become increasingly popular even in developing countries, and so far the results have been promising. It is a monetary regime that the SBP should adopt if it is to fulfil its role as guardian of monetary and financial stability in Pakistan.

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[19]This was in fact done in the case of the last IMF Brazilian programme in 2002-2003.

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Comments

At the outset I would commend Mohsin Khan's efforts in preparing a very good paper on a subject that is quite important for understanding the efficacy of economic management in Pakistan. I feel the paper would serve as good reading material both in macroeconomics as well as in monetary theory.

Although he discusses a variety of objectives and instruments of monetary policy, the main thrust of the paper is to highlight the critical role of central bank in ensuring price stability through a rule based policy, particularly in developing countries where inflation remains an important fact of life. It is underlined that in the backdrop of weak institutional arrangements and low credibility of central bankers in such countries incentives are created that promote dynamic inconsistency and inflationary bias in the conduct of monetary policy. The paper comprehensively surveys the instruments available to central banks in achieving the objective of policy stability and narrates in some details how the use of such instruments has evolved over the last several decades.

I would take the liberty of moving straight to the key recommendation of the paper, which is for the SBP to move toward inflation targeting. It has already been noted that in the framework of an IMF programme monetary aggregates still remain the dominant modes of conducting monetary policy. It has also be recognised and despite this being the case inflation remains an important consideration in judging the success of stabilisation programme. And even though inflation may not be a performance indicator like the build-up of reserves or credit expansion yet it remains a guiding principle, for instance in interest rate setting. Without having a formal linkage, since interest rate remains an important part of the programme, an implicit mechanism of worrying about inflation is already available in the present programme. This is not to suggest that we already have an inflation targeting monetary policy in place. Clearly, there is work to be done before we can claim to be amongst the countries following rule based monetary policy.

At the outset, let me state that the pursuit of price stability should not be a basis to create wedge within the apparatus of economic management. I see many implications of this recommendation that may be unintended but in the context of past experience in Pakistan, they are quite pregnant with suggestions that will promote precisely such consequences.

To begin with, and without de-emphasising what has been proposed, it needs to be recognised that inflation has not been a problem in Pakistan the way it has affected many other emerging markets. The unusual inflation we experienced last year is an outlier in the data on inflation, which may have occurred once or twice more in the last six decades of our existence. As one of the papers read out in the conference has demonstrated, the average inflation in the past 60 years has been in the range of 5-6 percent. And that is because this is a country, with low income and high population, where peoples' capacity to absorb large doses of inflation is quite low. The country produces a great deal of its own food and many people are engaged in subsistence agriculture and are occasionally paid in-kind, which is an effective way of insulating them from price-hikes. This may be a reason behind the relative price stability observed over a very long period of time. Again, speaking in relative terms, inflation has not been a problem which could warrant a one-dimensional conduct of monetary policy.

In the case of Pakistan, I would suggest that rather than inflation it is growth that has been a more worrying concern for the policy-makers. It is growth, or lack of it, that pushes people into poverty. Obviously, you will argue that growth itself is affected because of inflation. Without denying the growth retarding character of inflation, it should be noted that there have been episodes of major decline in growth which had nothing to do with inflation nor, as I have already suggested, has inflation been so menacing as to retard growth. For instance, the unusual draught in the first few years of the present decade clearly had nothing to do with price stability or loss of it. That draught had pushed people significantly below the poverty line. Similarly, we have had long spells of growth without high inflation.

Let us recognise that we should be interested in price stability *per se*. For there are mechanisms, indeed very brutal ones for that, for instance through ceding the country's sovereign right to create money tremendous price stability can be achieved. If a country does not print money beyond that which is absolutely necessary to meet the growing needs of the economy, barring the questions of stability of demand for money function, then clearly there will be no inflation. But it will be difficult to make out a case for a country like Pakistan that it should move in that direction, for we have never had inflation so problematic as to warrant such an extreme step. Accordingly, by price stability it should not be meant that the country should lose its sovereign right to enjoy the seigniorage which is a legitimate income of any government. Needless to say that this has to be within reasonable limits.

When we move toward price stability through the mechanism of inflation targeting this issue has to be solved as to who will have the right to decide as to what level of inflation should be targeted. Will it be an empirical thing or judgment? And if it's a judgment, whose judgment it will be? The paper has spelled out the conditions needed for efficient conduct of inflation targeting. It has been particularly noted that SBP's freedom or independence is an important requirement for the success of this exercise. The author and I have had the privilege of witnessing together how this issue of central bank's autonomy has evolved in Pakistan over the years. Clearly, prior to 1990-91, when public auction of debt started there was not much by way of monetary management. The entire capital market was in the public sector. There was not much public debt traded by banks or general public, it was held exclusively by the nationalised commercial banks. It all started with the public auctioning system. The first step toward giving autonomy to State Bank was taken in 1993. When a new initiative was proposed by the IMF in the current programme, I had really wondered what is wrong with the current quantum of autonomy that would call for yet another round of amendments in the law.

It has been stated that the SBP was treated like an attached department of the ministry of finance and that the secretary finance or additional secretary were running the SBP. Frankly, I have not had this privilege to treat SBP in this fashion, not that I wanted to, or to influence in any way, the manner in which the SBP was run. To the contrary, I saw on many an occasions that the powers that vest in the Board of Directors of SBP were freely exercised by the Governor, and occasionally, not entirely in accordance with the law. The first three Governors the country has seen since the central bank was made autonomous would conduct monetary policy as a one person show. They will take decisions and will come to the meeting of the Board simply announcing their decisions. Clearly, this is not the kind of freedom or autonomy that is envisaged in the SBP Act.

The package of autonomy, when approved in 1993, had envisaged a Monetary and Fiscal Coordination Board which were to set the basic policy parameters, including a determination of the inflation target for the year. The Board has not met as frequently as it should have. But that does not take away the significance of its existence. If State Bank has to work as an insulated institution divorced from what is happening in economic management in the rest of the economy, clearly there will be huge coordination problems. The paper apparently does not address this issue. I would also like to bring before this august forum the Indian Reserves Bank Act, which was precisely the same as SBP Act before it was amended in 1993. There has been not been a single notable amendment in the Indian law since its promulgation the way that we amended our law or are going to do yet again. Now I wonder if India is wanted in any way in the conduct of its monetary policy or its economic management of the type we have just been discussing.

It is important to note that it is the federal government that interacts both with the IMF and the World Bank. It is the government that negotiates the programmes with these bodies. I have had occasions to share candidly this with these institutions that the way they are promoting the notion of autonomy and independence of several economic institutions, it is only encouraging—I hate to say disintegration—divisions within the government and thereby affecting the coherence in economic management and perhaps, on occasions, we may working at cross purposes. Accordingly, the quality of economic management expected of the government is missing precisely. New agendas are added to an already complex policy-making regime with little significance and relevance, which adversely affect the ability of the ministry of finance to deliver on the discipline that is imposed through a Fund programme.

Although not part of the paper, the author in his discourse has expressed a view regarding the causes behind the recent inflationary episode which eventually led the country into an IMF programme. He has said the Musharraf Government had not passed-on the oil price increase to consumers for political expedience and the resulting deficit was financed through central bank borrowing. He suggested that had the central bank been independent it would have refused to finance this huge deficit and the consequent derailment of economic stability would have been avoided. I would beg to differ with this description as the facts are quite different than what is being suggested.

There is clear evidence that during those important days the auctions of public debt held had witnessed considerable demand from commercial banks for government securities. It was SBP's decision, who curiously was conducting such auctions and deciding on how much to take and what prices. It was SBP who decided not take those offers even when these were within the reasonable limit of interest rates and the Ministry of Finance would not have any objection in accepting those offers. I have difficulty in understanding on what basis the SBP then decided to reject those offers and instead buy those securities and create reserve money in the process.

At a broader level, let me also suggest that price stability cannot be the only objective of economic management to be handled at a different place and the rest of economic management somewhere else. There has to be coordination. There has to be some understanding amongst all those responsible for economic management. After all we should look at how the US Federal Reserve has handled the recent financial turmoil. Here again we will the contrast between what is an international best practice and what is

being done here in Pakistan. In the aftermath of the financial melt-down, Federal Reserve Bank had gone in the market and purchased any kind of securities issued by any authority, including private securities to an extent that it has doubled its balance sheet. It was discounting these securities because it wanted to provide the liquidity that was the single most important reason why the entire financial system had paralysed and frozen. Well, compared to what was happened in USA, there was not much that happened in Pakistan. In our case some small banks and mutual funds were faced liquidity problems. They had some illiquid assets, in the form of rated-TFCs (term financing certificates) of corporate sector entities, some of those carrying AAA rating. The then governor was not interested in discounting those securities. This position was not modified even when the Government was willing to provide a guarantee for this purpose. Curiously, the Governor was occasionally insisting federal government to provide it guarantee in the same form as it provides to commercial banks. This was not entirely in accordance with the provisions of law, as the federal government has the authority to give directions to central bank on such matters, and of course the responsibility and obligations incurred on this account are those of the federal government.

It may also be noted that whenever federal government borrows from the central bank it is priced at the same rate as is observed in the last auction of 6-month T-Bills and as such there is no pre-determined rate at which government borrows and this rate keep changing, because much of government borrowing is short term.

Finally, I would like to say that this issue of independence has to be settled with respect to its fullest meaning. One of the Governors, who was attending the meeting of the Senate's Standing Committee on Finance, asked the Chairman: Sir, you are part of the government, please help us in controlling the government from borrowing excessively from the State Bank. Obviously, the Chairman was shocked that the governor thought the Senate was part of the government.

Here lies the dilemma. What is it that the Central Bank would like to be? Is it part of the executive, or judiciary or legislature? Where would it like to fit in? I think there is no other model in the world but to acknowledge that central banks, despite any amount of autonomy, remains a part of the executive. Undoubtedly, they are carrying a fiduciary responsibility that calls providing it special existence, duly sanctioned under the law and with protection of tenure and insulation from normal bureaucratic intervention in its working. But such considerations cannot be carried too far to develop an antagonism with the executive branch and arrogate more responsibility for economic management then an elected government has under the Constitution of Pakistan.

I have no difficulty in supporting a programme whereby the central bank will move toward inflation targeting. But at the same we must recognise that the objectives of economic management are much broader, and in particular growth is no less important an objective. Accordingly, there has to be close coordination amongst the institutions charged with the formulation and implementation of economic policies.

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Comments

Dr Khan has presented a comprehensive paper on various aspects of monetary policy emphasising in particular the issues of dynamic inconsistency, the nexus between inflation and economic growth, and rules-based vs. discretionary monetary policy frameworks. The paper methodically builds on several strands of literature in the broad areas of macroeconomics and monetary economics to make a convincing case for the adoption of inflation targeting regime in Pakistan.

The idea of inflation targeting has been extensively debated in the literature and has now gained broad acceptance among academic and policy circles. The empirical evidence shows that the performance of Inflation Targeting regimes around the world has been largely positive. Average inflation in both emerging markets and developed economies is found to be substantially lower after the adoption of the Inflation Targeting regime than immediately before its adoption.

In view of the compelling theoretical arguments in favour of Inflation Targeting and broad empirical support, there can be little question on the desirability of adopting Inflation Targeting regime as long as the pre-conditions for its successful implementation are met.

The question then is of feasibility. In this context, the paper spells out various conditions that are necessary for inflation targeting; and examines in detail whether these conditions are satisfied in Pakistan. It is argued that all the conditions are met except the condition of fiscal dominance.

To be sure, the adoption of the Inflation Targeting regime would mark a fundamental shift in macroeconomic management in Pakistan. At the same time it would pose some difficult challenges too.

First and foremost is the issue of fiscal dominance. The paper argues that the adoption of Inflation Targeting would act as a disciplining device helping to restrain government borrowing from the central bank. However, this is going to be difficult in a country where:

(1) Tax to GDP ratio has been chronically low;
(2) Efforts to raise tax revenues have not been very successful in the past with future prospects remaining uncertain; and
(3) Financial markets lack the necessary depth making it difficult for the government to use market-based debt instruments to finance the fiscal deficit.

All these issues would have to be resolved to effectively limit the scope of fiscal dominance.

Second, in view of diverse development challenges typically faced by the developing economies, it may be difficult to accept the primacy of price stabilisation over

all other macroeconomic objectives. For example, poverty remains a pressing issue in Pakistan and consequently, one of the major goals of economic policies is poverty alleviation. As economic growth is a necessary condition for poverty reduction, there will always be a strong temptation to achieve higher economic growth in the short term through the use of accommodative monetary policy.

Third, Pakistan would have to brace for a greater degree of exchange rate flexibility typically associated with an Inflation Targeting regime. As rightly pointed out in the paper, more flexible exchange rate could serve as an automatic stabiliser in the face of adverse external shocks. However, if the exchange rate becomes excessively volatile, this would enhance exchange rate risk which is detrimental to international trade and investment and hence economic growth. As a matter of fact, there is some empirical evidence that volatility of exchange rate in emerging countries adopting Inflation Targeting has been higher than in developed market economies.

Fourth, there may be some practical issues in the implementation of Inflation Targeting regime. For example, there is evidence in the case of Pakistan that interest rate channel of monetary policy is rather weak and that there are long lags in the pass through of short term interest rate to the lending rate. This implies that the short term interest rate—which is the principal policy tool in inflation targeting regimes—does not have significant effects on the rate of inflation. Surely there will be ways to deal with this problem but exactly how the central bank would tackle this issue needs to be looked into.

It should be emphasise here that none of these problems is insurmountable. What is required is a strong political will and a focus on long term goals rather than short term expediencies. The adoption of Inflation Targeting regime would help solve the fundamental problem of dynamic inconsistency associated with a discretionary monetary policy regime. As the paper rightly emphasises, this problem is especially important in low income countries with weak institutions and low credibility of the central bank.

Research undertaken at the PIDE corroborates this view in the context of Pakistan. The PIDE regularly conducts inflation expectations survey and these surveys have found a persistence of inflationary expectations which is taken to be a sign of low policy credibility. Incidentally, the fact that inflationary expectations are fairly entrenched partly explains the persistence of inflationary pressures in the economy despite tight monetary policy in the recent period.

Let me say in the end that the paper is a valuable contribution on modern views of monetary policy and lessons for Pakistan. The issues raised in the paper are of profound significance and deserve serious consideration and debate.

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