Challenges to Central Banking from Globalized Financial Systems

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INFLATION TARGETING LITE[1]

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Inflation targeting lite (ITL) countries float their exchange rate and announce an inflation target, but do not base monetary policy on a clear and credible commitment to the target. This paper assesses the monetary policy of ITL countries with a view to identifying important unresolved monetary policy questions for ITL central banks. ITL countries seem to focus mainly on bringing inflation into the single digits and on maintaining financial stability, including through a relatively interventionist exchange rate policy and less market-oriented monetary operations. The important policy questions include: the degree of transparency in the operation and objectives of monetary policy, the role of the central bank in financial reform, and announcement of a commitment to adopt in the long run either a hard exchange rate regime or full-fledged inflation targeting.

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INTRODUCTION

Many emerging market countries are using an inflation target to define their monetary policy framework, but are not able to subordinate the inflation target to other objectives. This monetary policy regime is called here inflation targeting lite (ITL). ITL countries choose not to adopt a fixed exchange rate because it would leave them vulnerable to speculative attack, while a monetary target is not practical owing to instability in money demand. Moreover, full-fledged inflation targeting (FFIT) is not feasible owing to the lack of a sufficiently strong fiscal position and a fully developed financial sector. Finally, ITL countries are different from countries such as the U.S. and the Euro area that also do not make a clear commitment to an inflation target, but can attain low inflation due to a high level of credibility.

This paper assesses the monetary policy of ITL countries with a view to identifying important and unresolved central bank policy questions. ITL is not usually classified as a monetary framework along with an exchange rate peg or FFIT, probably because it is a transitional regime aiming at maintaining monetary stability until the implementation of structural reforms in support of a single nominal anchor. Nevertheless, ITL is widely practiced, and thus its policy challenges warrant careful analysis. The emphasis here will be on the design and implementation of monetary policy because this is largely under the control of the central bank, although other crucial elements of policy credibility such as the fiscal position and structural reforms will be touched on.

Identification of the main policy questions is based on the structural and institutional features of ITL countries. ITL countries have a lower level of measurable credibility compared to other emerging market countries owing to a relatively weak fiscal position, shallow financial systems and vulnerability to economic shocks. As a result, ITL countries probably aim to bring inflation into the single digits and maintain financial stability, including through a relatively interventionist exchange rate policy. Further, ITL countries employ less market oriented monetary targets and instruments and are relatively untransparent in the operation and objectives of monetary policy owing to shallow financial markets.

The assessment of ITL central bank monetary policy raises, at a minimum, the following important and unanswered policy issues. First, a greater degree of transparency with respect to the operation of monetary policy may be advantageous. Second, greater transparency of the objectives of monetary policy could be beneficial under the appropriate circumstances. Third, the central bank could consider ways to use its special vantage point to accelerate financial reform. Fourth, the ITL central bank may want to announce a long-term commitment—given a sufficient degree of credibility—to either a hard exchange rate or full-fledged inflation target to bring forward the benefits of a single-anchor monetary regime. Finally, the country must choose when credibility is sufficient to adopt a single nominal anchor.

The paper is structured as follows. The next section identifies the nineteen ITL countries. Section II compares ITL countries with other medium and large emerging market countries to understand the revealed preference for and objectives of ITL. Section III discusses the

policy challenges for a central bank operating under ITL. The switch from ITL to a hard exchange rate target or FFIT is examined in Section IV. Section V summarizes the tentative policy conclusions but, mainly, spells out the more important issues that are unresolved and thus warrant further discussion and analysis.

I. SELECTION OF THE INFLATION TARGETING LITE COUNTRIES

The nineteen ITL countries were selected from the 185 IMF member countries in four steps:[2] First, small and less developed countries (countries with GDP under US$4 billion and countries with per capita GDP less than $720) are eliminated because their high degree of trade openness and limited integration into world capital markets largely restricts their options to a fixed exchange rate (Mussa, 2001). In addition, Belarus, Paraguay, Trinidad and Tobago and Tunisia were dropped owing to lack of data. This leaves 87 industrial and medium and large emerging market countries.

Second, the remaining countries are divided into fixed exchange rate countries and inflation targeting countries by eliminating those that do not have their own legal tender, or employ a currency board arrangements, other conventional fixed peg arrangements, a pegged exchange rates within horizontal bands, or a crawling peg. This leaves seventeen industrial country central banks (sixteen country central banks with the eleven EMU countries subsumed under the ECB) and thirty emerging market countries. All but one of these countries announces an inflation objective or forecast, while none, at least formally, give explicit targets for the exchange rate (Carare and Stone, 2002). Although those countries have inflation targeting in common, they are obviously an extremely diverse group with regard to the determinants of the monetary regime, including the size of the economy, level of development and vulnerability to shocks.

Third, the inflation targeting countries are separated into those that do and do not make a clear commitment to the inflation target. The clarity of the commitment to an inflation target is defined in terms of the central bank's own public description of its policy objective as of late 2001 together with the transparency of the institutional framework. Institutional transparency is gauged by the communication vehicles employed by the central bank, including the release of inflation reports and the frequency and detail of these reports, the announcement of changes in the stance of monetary policy via press release, reviews of inflation performance and changes in monetary policy, the publication of inflation forecasting models, and the use of media and other public presentations. These communication vehicles are documented in Schaechter et al. (2000) and were updated by Carare and Stone (2002).

Eighteen inflation targeting countries make an explicit commitment to an inflation target and implement a transparent framework to ensure that the central bank is accountable for the

[2] The selection process is described in more detail in Carare and Stone (2002).

target (Table 1). The other 24 countries do not explicitly commit to an inflation target and some have other announced objectives as well. The combination of the multiplicity of targets and their imprecise definition renders the commitment to the inflation target of the second group countries much less clear than that of the first group.

Fourth, the countries in this second non-explicit group of inflation targeting countries are further divided by the credibility of the commitment to low inflation. Credibility is measured here using two gauges (Table 2). The first credibility gauge is simply the actual rate of inflation during January 1999–May 2002 on the grounds that countries with relatively low rates of inflation can be viewed as more credible with respect to an inflation target. The wide dispersion of inflation indicates that credibility varies quite a lot across countries with a less clear commitment to an inflation target. The second gauge of credibility is the Standard and Poor's long-term local currency government debt ratings for 2001. Again, the dispersion of this gauge of credibility of inflation targeting countries without an explicit commitment is quite wide.

An overall ranking of credibility formed by constructing a simple average of the inflation and rating rankings divides the countries into two groups. The distinction between the low and high credibility countries would seem to help explain the wide diversity of countries that practice inflation targeting without an explicit commitment and point to useful policy implications regarding design of the monetary framework.

Taken together, examination of the clarity and credibility of the 42 inflation targeting countries leads to their classification into three distinct regimes. The seven industrial and eleven emerging market countries that make a clear commitment to an inflation target can be viewed as practitioners of *full-fledged inflation targeting* (FFIT). They have a medium level of credibility and they clearly commit to their inflation target and this commitment is institutionalized in the form of a transparent monetary framework that fosters accountability of the central bank to the target.

The second group of five central banks are those that are highly credible and make a less clear commitment to an inflation target. These countries share highly successful inflation records, but they are rather heterogeneous in their monetary policy frameworks with regard to the definitions of price stability and the operation of monetary policy. [3] They seem to have extra scope for discretion in either the *de facto* objectives or the operation of policy, and thus they are called *eclectic inflation targeters*. The central banks are all for industrial countries.

Countries in the third regime announce an inflation objective, but owing to a low level of credibility do not make a clear commitment. They also are relatively heterogeneous in the objectives and operation of monetary policy. This regime is called *inflation targeting lite*

[3] For example, the ECB uses two "pillars" to achieve its objective: a quantitative reference value for the growth rate of a broad monetary aggregate, and a broadly based assessment of the outlook for price developments and risks to price stability, while Singapore seems to use its exchange rate as an intermediate target.

because these countries are not able to make a credible commitment to an explicit inflation target. The number of ITL countries is nineteen, and all are emerging market countries.

II. The Revealed Preference for and Objectives of an ITL regime

This section compares key macroeconomic indicators of the ITL countries with other emerging market countries with a view to understanding the motivation for and objectives of an ITL regime. Other emerging market countries are used as the comparators because the high level of credibility enjoyed by industrial countries means that the credibility constraints within which they conduct policy are qualitatively different. All of the medium and large emerging market IMF member countries are included here and they are divided into ITL, FFIT, and fixed exchange rate (FXR) regime groups.

The main differences in key macroeconomic indicators across the three emerging market country groups are as follows:

- The *credit rating* of ITL countries is lower than that of their peers (Table 3). The median local currency government debt rating is B+ for the ITL countries, compared to BB for the FXR group and BBB for the FFIT countries.

- *Inflation* for the ITL countries is highly concentrated but has a fatter upper tail relative to inflation for the other regimes (Figure 1). Some 71 percent of the monthly year over year observations of all the ITL countries over January 1999–May 2002 were less than 10 percent, suggesting that inflation is relatively stable. However, 8 percent of the observations exceeded 25 percent. For the FXR and FFIT countries, 93 percent and 87 percent of the inflation observations fell below 10 percent, respectively.

- *Exchange rate* stability for the ITL countries is in between that of their FXR and FFIT counterparts (Figure 2). The exchange rate for the FXR countries doesn't change on a year over year basis for over half the observations. About 54 percent of the observations for the FFIT countries are in the -10 and 10 percent range, compared to 63 percent for the ITL countries.

- The ITL countries are the *least developed* and have generally *smaller economies*. Median GDP per capita for the ITL countries at $1,720 is less than one half that of the FXR countries and nearly one third that of FFIT countries. The median GDP level of ITL countries is about the same as that of FXR countries, although the ranges for both groups is quite wide, and the median GDP of FFIT countries is larger than the other two groups by a factor of six.

- The ITL countries tend to have shallower *financial systems*. The ratio of broad money to GDP is more than 50 percent lower for the ITL group vis-à-vis the two other

regimes. Further, median stock market capitalization of the ITL countries is about half that in the FFIT and FXR groups.

- ITL countries are less integrated into *international capital markets*. In particular, portfolio equity inflows are much higher for the FFIT than the other groups. The limited integration with capital markets may well reflect capital controls.

- ITL countries have a higher level of *government debt*. The fiscal balances during 1996-2002 across the three groups are broadly comparable. However, ITL countries have higher median government debt by one third than the FFIT countries. Further, the FFIT countries have much tighter restrictions on central bank financing of the government compared to the ITL countries.

- ITL countries are probably more exposed to *economic shocks*. Emerging market countries are more dependent on commodities and thus are more exposed to supply shocks vis-à-vis industrial countries (Agénor et al., 1999). ITL countries are probably more vulnerable to shocks owing to their relatively low of development compared to FFIT and FXR countries.

The structural differences between the three regimes may help explain why ITL countries have the lowest measured monetary policy credibility relative to FFIT and FXR countries. Their lower level of measured credibility can be attributed to the higher level of government debt, less developed financial systems and vulnerability to economic shocks.

The indicators also suggest that ITL countries focus on the attainment of single digit inflation, as well as financial stability. By definition, the ITL countries do not have explicit numerical objectives. However, the ITL countries do have a tighter distribution of the exchange rate then the FFIT countries reflecting their weaker integration with international capital markets, and more interventionist foreign exchange policy. Further, the distribution of ITL country inflation is mostly in the single digits, but a significant share exceeds 25 percent, which is a much higher share than the other two regimes. This comparison suggests that price stability is an ongoing challenge for some ITL countries and that if there is a single general objective for ITL countries, it could be to keep inflation in the single digits. Finally, financial stability is likely a crucial issue for ITL central banks given their relatively less domestic developed financial system and vulnerability to shocks.

The low level of policy credibility and lack of an explicit single objective for ITL countries indicates that ITL can be viewed as a transitional monetary regime. Clearly, a monetary policy regime founded on a single nominal anchor is preferable to ITL. However, adoption of a single anchor regime followed by its abandonment would be highly costly to monetary policy credibility. Thus, ITL can be viewed as a transitional regime aiming at maintaining monetary stability until the implementation of structural reforms in support of a single nominal anchor.

III. MONETARY POLICY FOR ITL CENTRAL BANKS

The policy challenges for an ITL country central bank are formidable. Monetary operations for any central bank are aimed at smoothing the impact of temporary liquidity shocks and attaining the objectives of monetary policy. Monetary operations for an ITL central bank are complicated by the multiple policy objectives and their undeveloped financial systems. This section assesses the challenges in the operation of monetary policy with an emphasis on the elements that are largely under the control of the central bank with a view to arriving at a few policy suggestions and motivating the important unresolved policy questions.

Domestic operating targets and instruments

Monetary operations are relatively straightforward for FFIT and FXR countries. The single policy anchor of FFIT countries logically leads to a single operating target implemented primarily by one monetary instrument. Further, FFIT countries have financial markets developed enough to allow the use of open market operations and a short-term interest rate operating target is used by all but one FFIT central banks to steer forecasted inflation to the inflation target (Carare et al, 2002).[4] Under FXR regimes monetary operations are relatively passive. At one end of the exchange rate fixity spectrum is a currency board under which reserve money moves closely with international reserves and interest rates adjust in line with those in the reserve currency country (Baliño et al, 1997). At the other end is a crawling exchange rate band whereby domestic interest rates are used mainly to keep the exchange rate within the band (Ugolini, 1996).

For ITL countries the operating targets and instruments are a mixed bag (Table 4). Short-term interest rates, the exchange rate, and quantity targets including not just bank balances with the central bank but also base money growth are all employed. Similarly, ITL countries use a variety of market and non-market monetary instruments. Most use open market operations with repos and outright sales and purchases of government securities. Standing facilities and direct instruments of monetary policy such as credit limits and interest rate controls are also used. Unsterilized foreign exchange operations are the main instrument for several ITL countries.

This wide spectrum of operating targets and instruments reflects not only the multiple policy objectives of ITL countries, but also a general lack of key financial system elements needed for open market operation instruments. A deep and liquid interbank market reduces reliance on the central bank for intermediating transactions, and ensures a broad distribution of the issuance of central bank paper. Deep and liquid securities markets can be used by the central bank to conduct open market operations. A number of healthy commercial banks to serve as counterparties in central bank operations facilitates smooth monetary operations by

[4] The exception is Mexico, which targets the aggregate commercial bank current account balance (corto) with the Banco de Mexico.

minimizing credit risk and enhancing competition in the market for the main instrument. The shallower financial systems and less market-oriented monetary operation procedures of the ITL countries likely carry with them real costs. Indeed, the median real interest rate during 1998-99 was 12.4 percent compared to 9.9 for the FFIT countries (Carare and Stone, 2002).

The benefits of a more developed financial system for monetary operations makes it very much in the interest of the central bank to do what it can to spur financial reforms. Many central banks can take steps that incur little or no budgetary or political costs. Central banks can educate the public on the benefits of reform, including lower fiscal costs and higher economic growth. In addition, central banks can push ahead with changes on a technical level, for example by improving coordination with the government on treasury operations and public debt management and establishing an efficient payments system.

Exchange rate intervention

ITL countries tend to intervene in the foreign exchange market more often then FFIT countries but less often the FXR countries (Appendix I). Most of the FFIT countries intervene at least on occasion. Most say that they intervene to smooth fluctuations and offset the impact of exchange rate changes on inflation, as opposed to adhering to an exchange rate objective. Obviously, FXR countries intervene quite actively in support of their anchor.

ITL countries tend to intervene more often because they are smaller and have thin foreign exchange markets and are thus more susceptible to foreign exchange fluctuations. Some ITL central banks report that they intervene only to limit exchange market volatility, while others state that they intervene with a view to influencing the exchange rate to maintain external competitiveness. The volatility of international reserves also demonstrates that ITL countries have more active intervention practices compared to the FFIT countries (these data are available from the author).

Policy formulation

Policy formulation under ITL is more opaque compared to FFIT and FXR regimes. Since FFIT countries essentially use an inflation forecast as the intermediate guide to monetary policy they will employ all available information on inflation when they formulate policy. The policy stance of FXR countries is basically driven by the deviation of the exchange rate from its target.

In practice, ITL policy formulation will depend on the relative weights given to the exchange rate, inflation and other objectives, policy transmission channels, the horizons over which these objectives are defined, and the duration of shocks to the objectives. A central bank which aims to influence the exchange rate to maintain the current level of export competitiveness and at the same time disinflate over the long term may undertake frequent foreign exchange intervention to maintain the exchange rate in the desired range, and conduct monetary operations less frequently to keep the level of liquidity consistent with the downward path of inflation. A central bank with a preannounced annual inflation objective

but without most of the elements of the FFIT framework can undertake frequent monetary operations to keep domestic monetary conditions supportive of the inflation target, and, at the same time react to exchange rate shocks with intervention in the foreign exchange markets.

Transparency

The less sophisticated monetary operations of ITL countries can impose real costs by resulting in greater uncertainty for companies and households in understanding policy and formulating their economic decisions. What can the central bank do in the context of multiple objectives and an undeveloped financial system?

One option may be to improve operational transparency. As noted above, ITL countries are not very transparent not only in the objectives of monetary policy, but also in its operation. In particular, the use of non-market instruments by many ITL countries and the thin markets of those who do make it more difficult for the markets to understand and anticipate policy changes. In addition, foreign exchange interventions seem to be less transparent for ITL compared to FFIT central banks. In this light, the central bank could consider letting the markets know when it is intervening to influence the exchange rate or inflation or smooth temporary shocks. Transparency may help reduce confusion by helping clarify for the markets the views of the central bank on whether they are intervening in domestic and foreign exchange markets with a view to smoothing liquidity shocks, or influencing inflation or the exchange rate. Another advantage of transparency is that it would provide an incentive for the formulation of a consensus on difficult operational issues within the central bank. However, greater operational transparency could increase confusion because in the context of a lack of explicit objectives the markets may not believe the stated reasons for intervention.

Consideration of operational transparency raises the broader issue of greater ITL central bank transparency with respect to its policy objectives. Transparency is indispensable to FFIT because lags in monetary transmission make it difficult for the public to monitor policy on an ongoing basis. Under an FXR regime transparency is less of an issue because adherence to the exchange rate target is easily observed. It may not be in the interest of an ITL central bank to state a clear commitment to an inflation target because this could raise output variability and financial instability in the context of its vulnerability to economic shocks and less developed financial system. Further, inflation will be driven by factors beyond the control of the central bank such as the strength of the fiscal position.

Financial stability

ITL countries seem to put more emphasis on financial stability compared to FFIT countries but less than FXR central banks (Table 5). Financial stability can be defined as a low degree of vulnerability to a systemic crisis, or a severe disruption to financial markets that by impairing their ability to function has large and adverse effects on the real sector. Countries with the credibility to commit to FFIT will generally enjoy a high level of financial stability. Conversely, many FXR country central banks were forced to adopt a fixed exchange rate by financial instability, and they are potentially exposed to a speculative attack

on the currency. The relatively flexible exchange rate of ITL countries leaves them less exposed to crisis-inducing one-way bets compared to the FXR countries and their financial sectors are relatively small. Still, relatively shallow financial markets and a lack of hedging instruments does leave them exposed to financial crisis, which can impose large economic and social costs.

Interestingly, the lower transparency of the ITL monetary policy framework may be an advantage in dealing with financial crises. Constructive ambiguity is needed in the lender-of-last-resort role of the central bank to address the contagion and moral hazard problems inherent in potential bailouts of banks that can be deemed "too big to fail" (Goodhart and Huang, 1999; Goodfriend and Lacker, 1999; Enoch et al., 1997). FFIT countries face a potential conflict between inflation and financial stability objectives in that the clarity they need to hold themselves accountable to the inflation target may lead to the moral hazard problems of bank bailouts. The generally higher level of financial stability of FFIT countries could reduce this conflict and allow them to explicit commit to an inflation target (Carare and Stone, 2002).

IV. Life after ITL: The Transition to a Single Objective Monetary Regime

This section reviews the transition from ITL to a hard exchange rate target or FFIT regime. The disadvantages of a multiple objective framework suggest that ITL countries should endeavor to switch to a single-objective monetary regime. However, by definition ITL countries do not have the credibility to do so right away.

There are good reasons why ITL countries should consider identifying and beginning the transition to the appropriate single-objective monetary regime as soon as credibility allows. First, a credible announcement of a commitment to an anchor may bring forward some of the benefits of a single policy objective. Second, public discussion of the benefits of a single anchor can help motivate the fiscal and structural reforms needed for the requisite credibility. Third, a period of transition may be needed to lay the institutional groundwork for the new regime.

Monetary regime choices in general can be listed along a spectrum defined at each end by hard commitments to an exchange rate and inflation targets:

(i) dollarization,
(ii) currency board arrangement (CBA),
(iii) pegged exchange rate,
(iv) ITL,
(v) EIT, and
(vi) FFIT.

Most ITL countries will probably eventually adopt either a hard exchange rate or FFIT regime. Dollarization imposes such a high price in the form of a loss of national currency that

it is usually appropriate only in special circumstances such as a severe financial crisis or political union. The declining popularity of exchange rate pegs for emerging market countries reflects the loss of independent monetary policy for offsetting economic shocks, as well as its greater vulnerability to a speculative attack. Indeed, according to Fischer (2001): "...economies open to international capital flows have been and are in the process of moving away from adjustable peg exchange rate systems, some towards harder pegs, more towards systems with greater exchange rate flexibility." Exchange rate pegs are more viable with capital controls, but in all likelihood controls sufficient to allow exchange rate autonomy for a relatively developed and sizable emerging market country are in most circumstances not beneficial for economic prosperity. Finally, the high level of credibility required for VIT precludes it as an option for ITL countries. This section focuses on the adoption of a CBA or FFIT regime.

The Transition to a CBA

In mid-2001, five medium and large emerging market countries adhered to a CBA.[5] Established CBAs have the advantages of a high degree of credibility and more resistance to speculative attack (Baliño and Enoch, 1997). Disadvantages include the loss of the ability of the central bank to offset economic shocks, as well as serve as the lender of last resort. Countries that have adopted a CBA seemed to have had a favorable macroeconomic performance (Ghosh, Gulde and Wolf, 1998). Countries that adopted CBAs did so either to reduce high rates of inflation or for more country-specific institutional reasons.

The preconditions for a CBA are demanding. First, a strong fiscal position is needed for the inherent discipline needed to back a credible switch to a CBA. Second, the foreign reserve position of the central bank must be large enough to back most, all, or even more of the monetary base. Third, the banking system should be strong enough to have the confidence of depositors, so that withdrawals need not force the central bank to provide banks with liquidity, which is especially problematic under a CBA. Finally, a political consensus must be gained in support of the move to a CBA.

Adopting a CBA entails a series of often contentious policy and technical decisions and institutional changes (Enoch and Gulde, 1997). A currency peg must be designated, and the initial level of the peg must be decided. Essential legal changes are required, including a new CBA law. Some CBA countries have set up a separate institutional entity to hold the foreign reserves underlying the CBA. Most CBA countries have taken measures to improve the quality of bank supervision, and have made special lender of last resort arrangements. Restrictions are imposed on government financial operations to preclude borrowing from the CBA and facilitate liquidity management.

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[5] These countries with the year of their adoption of a CBA are: Brunei (1967), Bulgaria (1997), China, P.R. Hong Kong (1983), Estonia (1992), and Lithuania (1994). Bosnia and Herzegovina (1997) and Djibouti (1949) also have a CBA but they are not in the group of countries studied in this paper.

The first step in the transition to a CBA is announcing a realistic timetable for the transition to the required operational and institutional changes. The timetable needs to be founded on a realistic period for implementation of the requisite operational and institutional changes. At the same time, an overly long transition period could be less credible and also increase the odds of an exchange rate misalignment that would make more difficult the all important decision on the level of the peg. Once the transition process is well along, the level of the peg can be determined and announced. Thereafter, a floating exchange rate can be expected to move toward the level of the peg. In the meantime, exchange rate volatility can be limited by a preannounced band that would narrow as the CBA adoption date approached.

The Transition to FFIT [6]

The eleven emerging market FFIT countries adopted this regime in the wake of exchange rate crises, high inflation, poor overall economic performance, and prospective accession to the European Monetary Union. Most emerging market countries switched from a crawling exchange rate band to FFIT. FFIT has not been used to engineer major disinflation from a starting point of high inflation, although Turkey may prove to be a test case. The relatively large number of emerging countries that have adopted FFIT in just the past few years have provided a good base of experience for ITL countries considering a switch.

As with a CBA, it may be risky for an ITL central bank to switch to FFIT, or even announce the beginning of a transition period, without supporting structural changes. First, a strong fiscal position and limits on central bank financing of the government are essential for the successful operation of FFIT by an emerging market country. [7] Emerging market countries undergo significant financial deepening before adopting FFIT. Typically, the adoption of FFIT is part of broad and successful policy reforms that facilitate price stability over and above monetary policy. Indeed, the adoption of FFIT can serve as a mechanism to improve credibility over the long run.

Many countries moving toward FFIT slowly introduced market-based instruments of monetary policy along the lines discussed previously. Furthermore, most central banks that have adopted FFIT have made important organizational changes to promote a more decentralized approach aimed at gathering more information from a variety of sources. In particular, many emerging market country central banks have had to enhance their analytic capacities and re-orient their economic analysis and data management activities toward gathering data, and building the models needed to generate regular inflation forecasts. Identifying the main transmission channels from short-term interest rates to inflation is a major challenge.

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[6] This section draws on Schaechter et al (2000) and Carare and Stone (2002).

[7] Interestingly, industrial country government debt rose actually rose prior to inflation targeting, and structural fiscal balances generally worsened, perhaps reflecting their higher level of initital credibility.

Emerging market countries must be especially careful in the timing of the adoption of FFIT. When FFIT is motivated by a crisis or high inflation enough time must pass to allow the buildup of sufficient credibility. Thus, most emerging market countries undergo a period of transition prior to the adoption of FFIT. The beginning of the transition period is marked by announcement of the intention to adopt inflation targeting often by choosing an inflation target in the context of an exchange rate band. The transition period can be seen as ending when most of the elements of a FFIT framework are in place. Emerging market countries have taken slow or fast transitions to full-fledged inflation targeting. The choice between a gradual and fast track transition for emerging market countries reflects the level of inflation at the beginning of the transition. Emerging market countries usually adopt FFIT during a period of recession and disinflation, presumably to enhance credibility.

The central bank can play a key role in signaling an imminent commitment to FFIT. The central bank should push for changes in its legal framework to establish price or currency stability as the central bank objective, instrument independence, and, ideally, goal dependence in the form of a commitment by the government to the inflation target and limits on central bank financing of the government. A joint announcement by the government and the central bank of a long-term inflation target, and an interim path, greatly facilitates disinflation. Interestingly, emerging market countries tend to make these changes prior to or at the adoption of FFIT, while industrial countries have sufficient credibility to wait until after switching to the new regime before making these changes. Finally, the central bank can take a lead role in educating the public about the workings and benefits of FFIT.

Implications of The Switch to a Single Nominal Anchor For ITL Monetary Policy

What are the implications of the imminent adoption of a CBA or FFIT regime for an ITL country? A view on which regime is best under what circumstances will not be expressed here. However, imminent adoption of the regimes has important commonalities and differences for ITL central bank monetary policy.

Announcement of the intention to adopt either CBA or FFIT could bring important benefits. Most important, articulation of the specific prerequisites needed for the success of either regime should focus public discussion and political will to make fiscal and structural reforms. The announcement of a single objective should begin to mitigate the problems caused by multiple objectives for monetary policy. For example, the setting of a single operating target and main monetary instrument in support of the objective should reduce uncertainty.

Announcement of the intention to adopt an FFIT has been used by some countries to begin a period of disinflation (Sterne and Mahadeva, 2002). For example, Chile and Israel distinguished between the long-run inflation goal and interim inflation targets. By using annual targets to adjust the speed of disinflation and take advantage of unexpected disinflation opportunities, they probably moderated the real costs of reducing inflation, while at the same time maintaining a strong commitment to long-run inflation control.

The greater loss of discretion under a CBA means that the central bank will lose policy flexibility upon announcement of the switch. The transition period can thus be risky because the same factors that prompted the ITL regime in the first place could undo the precommitment to a CBA. This suggests that the transition to a CBA should be shorter relative to the transition to a FFIT, and that the benefits of announcing the imminent adoption of a CBA could be less than that of precommitting to an FFIT.

V. Conclusion and Main Policy Questions

This paper assessed the monetary policy of ITL countries with a view to identifying important unresolved central bank policy questions. ITL countries are not clear in their commitment to an inflation target, and they have relatively low measurable credibility. They use an inflation target to define their monetary policy framework, but are not able to fully subordinate the inflation target to other objectives. Although ITL is not usually classified as a monetary framework along with an exchange rate peg or FFIT, it nevertheless is widely practiced, and therefore warrants careful analysis.

The comparisons between ITL countries and other medium and large emerging market countries suggested that the revealed preference of countries for ITL reflects structural differences. The relatively low level of measurable policy credibility of ITL countries can be linked to shallow financial markets, high levels of government debt, and vulnerability to economic shocks. The data suggest that ITL countries focus on the attainment of single digit inflation and financial stability, including through a relatively interventionist exchange rate policy.

This lack of a single unifying policy objective and the less developed financial systems create unique monetary policy challenges for ITL central banks. The limited menu of available targets and instruments complicates monetary operations. Exchange rate policies must contend with the unclear role of the exchange rate in the monetary framework. Financial stability also poses an important challenge.

ITL countries should endeavor to move to a single nominal anchor, once a sufficient level of credibility has been established through fiscal, financial and structural reforms. The main choices would seem to be a hard exchange rate, e.g. a CBA, or an FFIT. Once a decision has been made to go one way or the other, the experience of many countries can be drawn upon to formulate the transition to the new regime.

Since the main purpose of this paper is to ask questions and stimulate deeper analysis of the issues, it is appropriate to end by raising what seem to be the more important unresolved central bank policy questions.

1. Should ITL central banks boost the transparency of monetary policy on the operational level?

The operation of monetary policy under ITL is generally less transparent than under other regimes. Operational transparency could be boosted by the development and publishing of detailed liquidity forecasts on, say, a one-month horizon, if circumstances allow. In addition, the central bank could clarify for the markets its views on whether it is intervening in domestic and foreign exchange markets with a view to smoothing liquidity shocks, or influencing inflation or the exchange rate.

Such clarification could help smooth the impact of short-term liquidity shocks by separating liquidity smoothing from policy objective interventions. Greater transparency could also enhance the information needed for more efficient financial markets. Another advantage of transparency is that it would provide an incentive for the formulation of a consensus on difficult operational issues within the central bank. Finally, more transparency could foster a better understanding of how markets and monetary policy works, and thereby educate politicians and the public on the benefits of financial reforms.

At the same time, greater operational transparency could promote confusion because in the context of a lack of explicit objectives the markets may not believe the stated reasons for intervention. In addition, greater operational transparency reduces the scope for discretion on the part of the central bank. Further, during disinflation annual inflation targets on the downward path to the long run inflation level may be state-contingent in the sense that central banks may want to lock in unexpected inflation gains by moving to a lower than envisaged target. This state contingency complicates the design of monetary operations by confounding the interest rate and inflation objectives. Thus, the timing of the enhancement of operational transparency would require that the central bank have sufficient credibility to be trusted by the markets on an operational level and be able to effectively adopt operational rules.

2. Should the ITL central bank be transparent in the objectives of monetary policy?

Transparency with respect to the objectives of monetary policy varies quite a bit across central banks, notwithstanding the worldwide increase in transparency in recent years (Eijffinger and Geraats, 2002). The lack of transparency of ITL countries reflects their need to maintain flexibility to smooth output shocks, to which they are highly susceptible, and the disadvantages of transparency in maintaining stability of the financial system. However, the lack of transparency advantageous for output and financial stability is in conflict with the high degree of transparency needed for a credible FFIT.

An argument can be made that ITL central banks should be transparent with respect to the *objective* of price stability. Of course, price stability is less precise, and thus not as easily monitored, as a numerical target. Still, a formal and regular (perhaps annual or quarterly) public central bank discussion of price stability *ex ante* and *ex post* may be beneficial. In addition, transparency may help insulate monetary policy from outside political pressures,

which may be more pronounced for ITL countries given their weaker fiscal positions (Debelle, 1997).

Transparency beyond the price stability objective is probably more a matter of degree and judgment and is very much conditional in the circumstances of the country. ITL countries with a high weight on either inflation or the exchange may have scope for a more transparent policy, especially if they aim to adopt a FFIT or a CBA monetary regime. In contrast, ITL countries with a fragile financial system may want to afford themselves more flexibility.

3. How can the ITL central bank motivate financial reforms in support of a more effective monetary policy?

Central banks can consider taking the lead in educating market players and households with a view to building the political support needed for broad financial reforms. A developed financial system not only improves monetary operations, but also lowers the cost of government financing and generally enhances economic growth. The central bank is the best placed of any government institution to understand the benefits of a deep and broad financial system and thus articulate the case for reforms. Of course, central banks can only push so far without backing from other government institutions, especially when it comes to reforms whose fiscal and other benefits are more subtle and are realized only in the long run, such as paying market interest rates on government securities or recapitalizing the central bank.

Central banks should ensure that they identify and implement the more technical measures that have limited political and budgetary consequences. Less costly measures can be undertaken in the areas of liquidity forecasting and security market infrastructure. Measures in these areas can set the stage for the realization of the benefits of broader reform.

4. Should ITL central banks announce a commitment to adopt a CBA or FFIT in the long run to bring forward some of the advantages of a single anchor monetary regime?

A commitment to a single anchor could help motivate fiscal and structural reforms by focusing attention on the measures needed to gain the credibility for a single objective. Imminent adoption of a single anchor would help concentrate market expectations and could thus foster disinflation. Further, a commitment would allow the central bank to better focus monetary operations e.g. by adopting a single operating target and main instrument. Finally, imminent adoption of a single anchor would increase the scope for greater policy transparency.

The disadvantages of a commitment include the possibility of a costly reneging due to insufficient supporting fiscal and structural policies. In addition, commitment to a single anchor reduces the policy options and thus could backfire in a particularly fluid environment. Indeed, the credibly needed to realize these benefits rests largely on factors beyond the control of the central bank. The apparently shorter period between the announcement and adoption of a CBA vis-à-vis a FFIT raises the possibility that the benefits of announcing the imminent adoption of a CBA are less than that of precommitting to a FFIT.

5. When is credibility sufficient to allow the credible announcement of a commitment to adopt a single anchor monetary regime?

The timing of the exit from ITL to a single anchor monetary regime poses a difficult challenge. The low level of policy credibility and lack of an explicit single objective for ITL countries indicates that ITL can be viewed as a transitional monetary regime. Clearly, a monetary policy regime founded on a single nominal anchor is preferable to ITL. However, adopting a single anchor regime before structural reforms in support of a single anchor are fully entrenched could be highly costly to monetary policy credibility if the new anchor is subsequently abandoned.

The issuance of long-term local currency government debt would provide a market-based benchmark of monetary policy credibility. Further, improvements in debt ratings close to levels enjoyed by single nominal anchor countries would be a useful timing benchmark. Another marker for single anchor credibility would be the gaining of support by the government in support of the new regime.

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Table 1. Inflation Targeting Central Banks, Clarity of Commitment to Inflation Target, Late 2001

Countries with a Clear Commitment	
Brazil	2–6 percent inflation target
Canada	1–3 percent inflation target
Chile	2–4 percent inflation target
Colombia	8 percent for 2001, 6 percent for 2002
Czech Republic	2–4 percent inflation target
Hungary	5–7 percent inflation target
Iceland	1–4 percent inflation target
Israel	1–3 percent inflation target for 2003 on
Korea	2.5 percent inflation target
Mexico	6.5 percent for end-2001, 4.5 percent for end-year 2002
New Zealand	0–3 percent inflation target
Norway	2.5 percent inflation target
Poland	5.4–6.8 percent inflation target
South Africa	3–4 percent inflation target
Sweden	1–3 percent inflation target
Thailand	0–3.5 percent core inflation target range
U.K.	2.5 percent underlying inflation target
Australia	2–3 percent inflation target on average over business cycle.
Countries without a Clear Commitment	
Albania	2–4 percent inflation target range; aim to adopt formal inflation targeting in the future.
Algeria	The final monetary policy objective is a low level of inflation in the medium-term; this level is not specified but considered to be 3 percent.
Croatia	Monetary policy is primarily focused on price stability.
Dominican Republic	No stated inflation target. Objective: maintaining low inflation.
European Central Bank	The primary objective of the ESCB is the maintenance of price stability over the medium term, as a year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below 2 percent.
Guatemala	Monetary program that has a target for inflation (4–6 percent) and international reserves to maintain the value of the domestic currency.
Honduras	One of the principal objectives of the government is disinflation: 10 percent in 2001; 8 percent in 2002; 6 percent in 2003. Other objectives: moderate growth, preserve external competitiveness.
Indonesia	Inflation objective: 9–11 percent, to keep real interest rates at adequate position levels, to sustain and build market confidence. Achieved through reducing base money growth by 12.5 percent per year.
Jamaica	IMF program, multiple targets: NDA, NIR, foreign short-term borrowing, etc. Inflation: 5 percent for 2001/02.
Japan	The Bank of Japan is easing policy until the CPI (excluding perishables) registers stably a

	zero percent or an increase year on year.
Kazakhstan	Price stability and avoid excessive real exchange rate appreciation, interpreted as inflation around 10–12 percent in the future.
Mauritius	Price stability is not the primary objective of the BOM. The medium-term objective of the BOM is to keep the inflation rate in line with the trading partners and it does not have an exchange rate target. For 2001/02 the inflation target is 4.5–5 percent.
Peru	Price stability. Each year the end-year inflation target range and average rate of growth of base money is decided. 2001: 2.5–3.5 percent.
Philippines	2002: 5–-6 percent; 2003: 4.5–5.5 percent. Adopted IT starting 2002, announced in Dec. 2001.
Romania	Mixed objective, inflation target 22 percent at year-end 2002, in the context of a managed float. The National Bank of Romania (NBR) will attach more weight to the inflation objective, while not putting at risk the viability of the external accounts.
Russia	Main objective: protect the ruble and ensure its stability. Each year the CB presents the monetary program for the year. The primary objective of the monetary policy is disinflation. In 2000 the inflation target was 18 percent.
Singapore	Price stability as a sound basis for sustainable growth.
Slovak Republic	Each year the CB presents the monetary program for the year. The primary objective of the monetary policy is disinflation. For 2002 the inflation rate expected by the NBS is 4.1–4.9 percent, while the approved State Budget Act inflation rate is 6.7 percent.
Slovenia	The monetary policy is given a formal long-term inflation target, i.e., the European level of inflation by accession to the EMU at the latest, 4 percent by the end of 2003.
Sri Lanka	CB is bolstering price stability as the main objective of the CB. Inflation expected to be 6.5 percent in 2002 and 5.5 percent in 2003, if strong reforms implemented; 8.5 percent and 7.5 percent otherwise.
Switzerland	Price stability defined as CPI inflation of less than 2 percent per annum.
United States	Maximum sustainable growth with low inflation.
Uruguay	Crawling band of 15 percent, economy highly dollarized, therefore primary objective of the monetary policy is to keep the currency stable.
Venezuela	Monetary policy has an anti-inflationary orientation geared towards achieving an inflation rate within the target range set by economic authorities at the beginning of the year (for 2000: 15–17 percent). This strategy was based on the use of the exchange rate as the nominal anchor for prices, thereby promoting its orderly behavior within the framework of a scheme of floating exchange bands.

Source: Carare and Stone (2002).

Table 2. Indicators of Credibility, Selected Inflation Targeting Countries

Inflation, Jan. 1999–May 2002			S & P Long-Term Domestic Currency Government Debt Rating, 2001				
Country	Average	Rank	Country	Rating	Rank	Average Rank	
Japan	-0.9	1	United States	AAA	1	<u>High Credibility</u>	
Singapore	0.6	2	Switzerland	AAA	1	Singapore	1.5
Switzerland	1.3	3	Singapore	AAA	1	Switzerland	2.0
Algeria	2.1	4	EMU	AAA-	4	Japan	3.0
Peru	2.4	5	Japan	AA-	5	EMU	5.0
EMU	2.6	6	Slovenia	A	6	United States	5.5
U.S.	2.6	7	Slovak Republic	BBB-	7		
Albania	3.7	8	Croatia	BBB-	7	<u>Low Credibility</u>	
Philippines	4.8	9	Philippines	BB+	9	Croatia	9.0
Uruguay	4.9	10	Jamaica	B+	9	Peru	9.0
Croatia	4.9	11	Kazakhstan	BB	11	Philippines	9.0
Mauritius	5.6	12	Guatemala	BB	11	Uruguay	10.0
Guatemala	5.7	13	Uruguay	BB-	13	Slovenia	11.5
Dominican Rep	6.9	14	Peru	BB-	13	Algeria	12.0
Jamaica	7.2	15	Dominican Rep	BB-	13	Guatemala	12.0
Indonesia	8.2	16	Russia	B+	16	Jamaica	12.0
Slovenia	8.4	17	Romania	B+	16	Slovak Rep.	12.5
Slovak Rep	9.3	18	Venezuela	B	18	Dominican Rep.	13.5
Honduras	9.5	19	Indonesia	SD	19	Albania	14.0
Sri Lanka	10.6	20	Sri Lanka	No rate	20	Kazakhstan	16.0
Kazakhstan	11.6	21	Mauritius	No rate	20	Mauritius	16.0
Venezuela	17.1	22	Honduras	No rate	20	Indonesia	17.5
Russia	26.2	23	Algeria	No rate	20	Honduras	19.5
Romania	40.4	24	Albania	No rate	20	Russia	19.5
						Romania	20.0
						Sri Lanka	20.0
						Venezuela	20.0

Source: Carare and Stone (2002).

Table 3, Emerging Market Country Monetary Regimes, Key Indicators Summary Statistics

	S & P loc cur gov. debt rating 2001	$GDP, bils 2000	Per capita GDP 2000	Money to GDP 2001	St mkt cap to GDP 2000	Equity Flows to GDP 2000	Priv ext debt to GDP 2000	Trade flow s to GDP 1999-2002	Gov Bal to GDP 1996-2002
ITL									
Average	5.1	48.1	2702	41.3	20.8	0.11	1.8	80.2	-3.3
Median	5.0	19.2	1720	40.7	15.0	0.00	0.6	78.3	-2.6
Maximum	13.0	251.1	9170	79.2	69.0	0.41	6.7	149.7	2.3
Minimum	1.0	4.0	728	15.4	2.9	0.00	0.0	34.7	-10.2
St dev	3.4	63.5	2191	18.4	19.8	0.17	2.1	32.4	2.9
FXR									
Average	7.1	76.5	7571	71.2	59.0	0.25	1.3	94.0	-2.2
Median	8.0	16.4	3799	49.7	36.4	0.00	0.4	90.2	-2.1
Maximum	15.0	1079.8	34880	288.2	383.3	2.06	5.3	281.9	18.9
Minimum	1.0	4.6	855	12.7	5.1	-0.55	0.0	25.8	-20.4
St dev	5.2	189.4	8702	56.7	80.6	0.57	1.6	53.0	6.0
FFIT									
Average	10.0	217.1	5673	62.9	45.7	0.65	3.4	76.4	-3.2
Median	11.0	122.2	4728	57.2	26.3	0.64	3.6	64.4	-3.6
Maximum	12.0	593.7	18289	108.0	162.8	1.69	8.4	133.9	0.2
Minimum	6.0	48.4	1920	25.2	11.8	0.00	0.7	25.6	-6.6
St dev	2.1	213.8	4702	30.5	44.2	0.54	2.3	34.8	2.0

Sources: IFS, WEO database, World Bank, Bankscope.

Table 4. ITL Countries, Operating Targets and Main Instruments of Monetary Policy

	Operating Target	Main instruments
Albania	One week repo rate	One-week repos
Algeria	Amount of refinancing to state-owned commercial banks	Rediscount facility, Credit auctions, Repo standing facility, OMO (one operation carried out in 1996).
Croatia	Exchange rate path, interest rates	Repo auctions, domestic and foreign currency-denominated CNB bills, reserve Requirements forex intervention.
Dominican Republic	Interest rates and exchange rate	Reserve requirements, credit limits, induced sales of securities to banks, sporadic OMO.
Guatemala	Short-term interest rates and monetary aggregates	OMOs with central bank securities
Honduras	Reserve money growth	OMOs, and some indirect instruments
Indonesia	Base money growth	OMOs with central bank paper and FX intervention
Jamaica	Reserve money growth	OMOs
Kazakhstan	Exchange rate path and reserve money growth	OMO, credit facility and official rate regulation, refinancing of banks through registered bills
Mauritius	Lombard rate	OMOs
Peru	Average monthly current account balance of banks at the central bank	OMOs with central bank certificates of deposits, monetary regulation credit and purchases FX in the spot market
Philippines	Repo rate	OMOs with repos
Romania	Interest rate and exchange rate paths	OMO, standing facilities, forex operations
Russia	Base money growth	Forex interventions and deposit facility
Slovak Republic	Two-week repo rate	OMO, standing facilities
Slovenia	Monetary aggregates	Standing facilities and liquidity loans, OMOs
Sri Lanka	Reserve money growth	OMOs
Uruguay	Exchange rate path	Forex intervention
Venezuela	Base money growth	Forex intervention, repo and reverse repos with government securities, OMOs.

Source: Carare and Stone, 2002.

Table 5. Emerging Market Country Central Banks, Self-Reported Monetary Policy Objectives 1/

	Inflation Focus	Financial Stability Focus	Multiple Objectives
Inflation Targeting "Lite" (12)	44.0	37.5	47.0
Full-fledged inflation targeting (9)	88.0	33.0	28.0
Fixed exchange rate (18)	10.0	42.0	36.0

Source: Fry et al.., 2000.

1/ Number of countries with available data in parentheses. Central bank frameworks that aim at the objectives receive a higher score.

Appendix I, Emerging Market Inflation Targeting Central Banks, Publicly Reported Information on Foreign Exchange Market Intervention Practices during 2001

FFIT countries	
Brazil	The Central Bank do Brasil may intervene on a regular basis, to adhere to the inflation target, or in exceptional situations.
Chile	The Central Bank of Chile has the authority to intervene in exceptional circumstances; these interventions must be publicly announced and justified.
Colombia	The Banco de la República does not intervene in the exchange market to define a particular exchange rate, although auctions of foreign currency sale options are used to accumulate international reserves.
Czech Republic	Interventions only to moderate large fluctuations in the exchange rate.
Hungary	The National Bank of Hungary intervenes to maintain the forint in a +/- 15% band.
Israel	The Bank of Israel has not intervened since 1997, allowing market forces to determine the appropriate level of the exchange rate, within the confines of the exchange-rate band. The width of the band against a basket of currencies is 39.2 percent.
Korea	The Bank of Korea has intervened in the foreign exchange market in recent years.
Mexico	The Banco de Mexico lets the peso float freely.
Poland	A pure floating exchange rate regime has been in place since April 2000.
South Africa	The Reserve Bank did not intervene in the foreign exchange market during 2000 except to buy foreign exchange to lower the net open foreign exchange position.
Thailand	Direct foreign exchange intervention is limited.
ITL countries	
Albania	The Bank of Albania undertakes limited foreign exchange interventions to help smooth excessive fluctuations.
Algeria	The Bank of Algeria manages the exchange rate float in a flexible way to safeguard competitiveness and dampen external shocks.
Croatia	The Central Bank of Croatia intervenes on the foreign exchange market through foreign exchange auctions, but does not defend any predetermined exchange rate or band.
Dominican Republic	The Banco Central de la República Dominican increased exchange rate flexibility during 2000 (adjusting it weekly), due to the high private sector demand of foreign exchange. The exchange rate spread widened to 2 percent and there was a devaluation of the same amount.
Guatemala	The Banco de Guatemala intervenes to maintain a stable currency.
Honduras	The Banco Nacional de Guatemala intervenes to maintain the external competitiveness of the currency.
Indonesia	Sterilized increases in the supply of foreign exchange to the market are undertaken to control base money and to mitigate the depreciation pressure and exchange rate volatility.
Jamaica	Intervention to smooth demand pressures.
Kazakhstan	The Central Bank of Kazakhstan intervenes to keep the currency within a certain band, because of large capital inflows.
Mauritius	The Bank of Mauritius intervenes, as and when necessary, mainly to signal perceived misalignments of the exchange rate.
Peru	The Banco Central de Reserva del Peru undertakes foreign exchange operations to restore financial market confidence in conditions of high foreign exchange rate volatility.
Philippines	The Bangko Sentral ng Pilipinas occasionally enters the foreign exchange market, largely to maintain order and stability in the foreign exchange market to dampen sharp fluctuations in the exchange rate.

Romania	The National Bank of Romania has intervened regularly to maintain the exchange rate within a band.
Russia	During 2000, the Bank of Russia bought foreign exchange in the domestic market to replenish international reserves, took timely and purposeful steps to smooth sharp exchange rate fluctuations in the domestic foreign exchange market caused by transient factors, and prevented the ruble from getting too strong in real terms.
Slovak Republic	The National Bank of Slovakia may intervene in the event of excessive volatility in the crown exchange rate through foreign exchange transactions.
Slovenia	The Bank of Slovenia has intervened recently in the foreign exchange market to offset the impact of exchange rate changes on prices and complement interest rate actions.
Sri Lanka	The Central Bank of Sri Lanka participates actively in the foreign exchange market, through buying and selling foreign exchange at or near market prices.
Uruguay	Crawling band of 15 percent, economy highly dollarized, therefore primary objective of the monetary policy is to keep the currency stable.
Venezuela	The Central Bank of Venezuela promotes orderly behavior of the exchange rate within the framework of a scheme of floating exchange bands.

Sources: Central bank websites, annual reports, and publicly available IMF documents.

Figure 1a. ITL Countries: Year over Year Monthly CPI Inflation Density
January 1999-May 2002

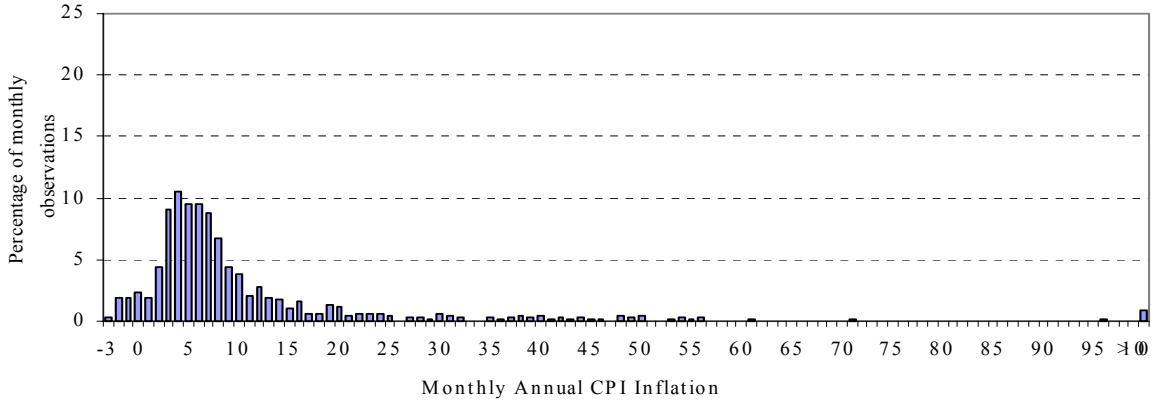

Figure 1b. FFIT Countries: Year over Year Monthly CPI Inflation Density
January 1999-May 2002

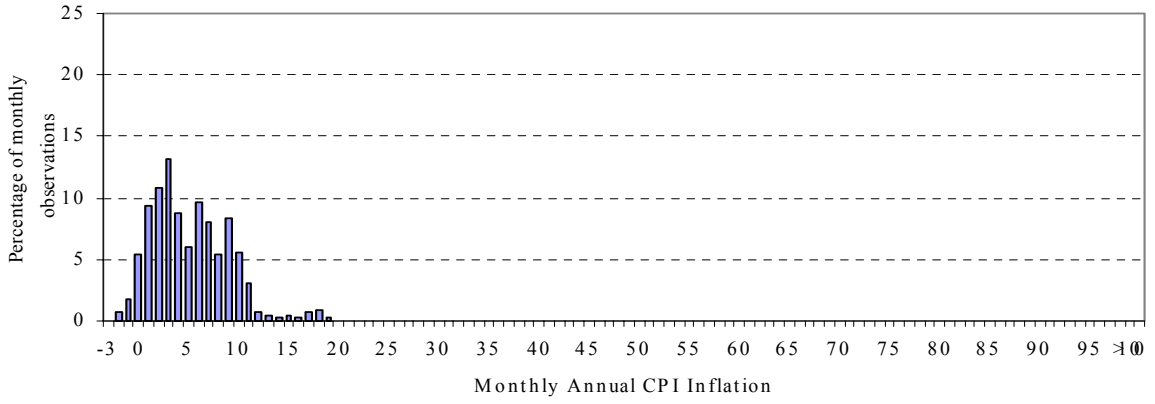

Figure 1c. FXR Countries: Year over Year Monthly CPI Inflation Density
January 1999-May 2002

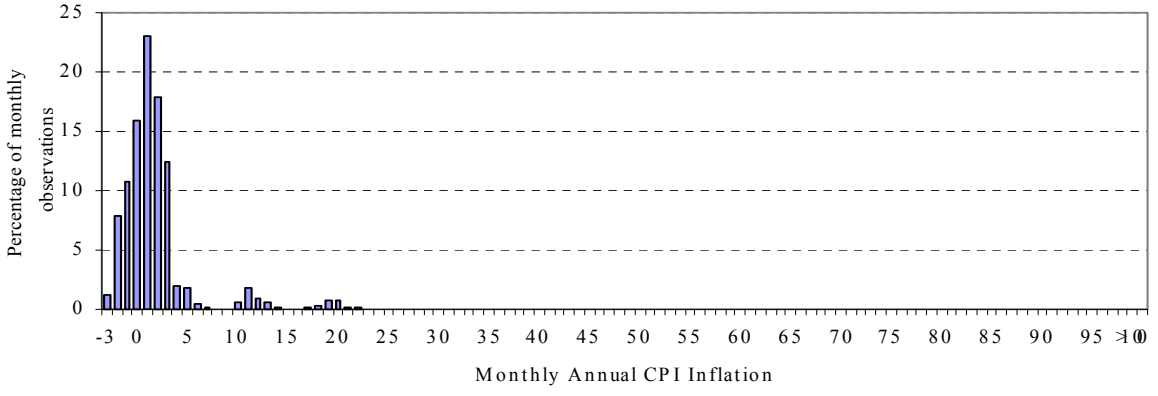

Figure 2a. ITL Countries: Year over Year Monthly Exchange Rate Change Density
January 1999-May 2002

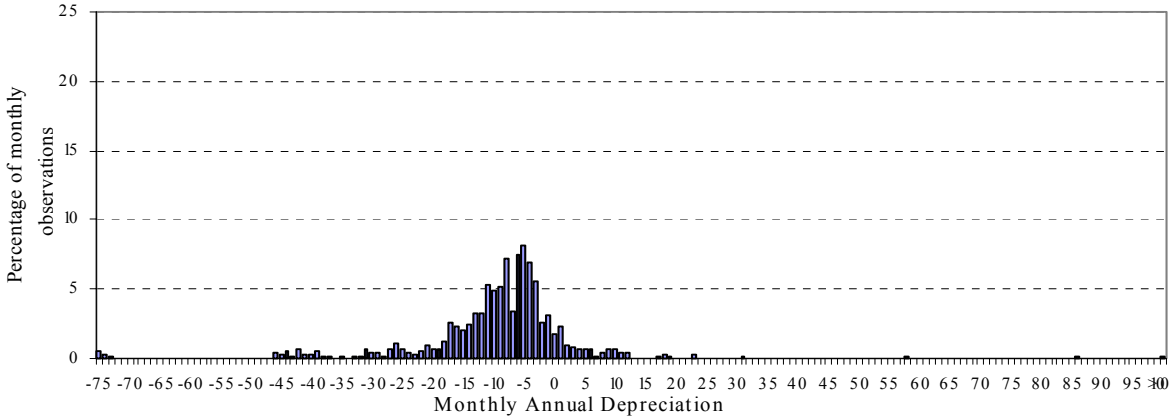

Figure 2b. FFIT Countries: Year over Year Monthly Exchange Rate Change Density
January 1999-May 2002

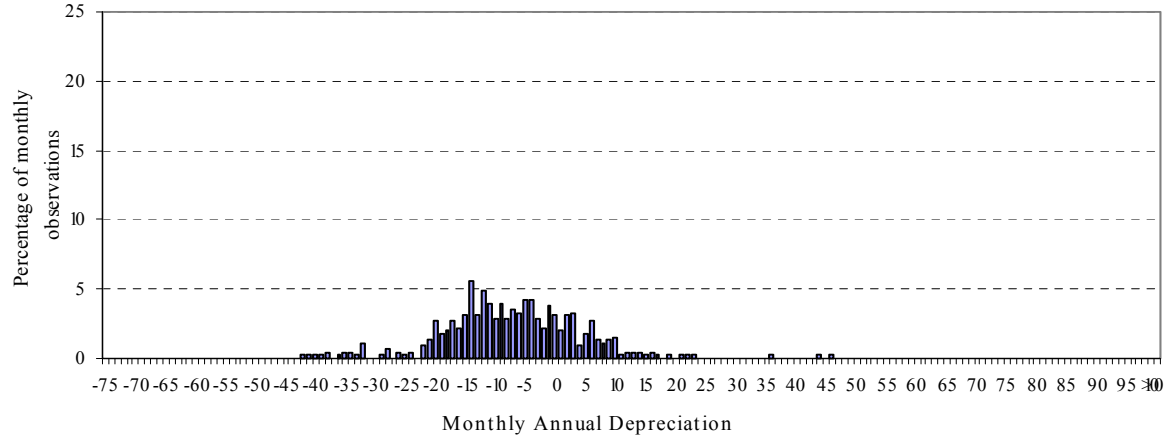

Figure 2c. FXR Countries, Year over Year Monthly Exchange Rate Change Density
January 1999-May 2002