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12.
MONETARY-POLICY TARGETING IN THE CENTRAL EUROPEAN TRANSITION ECONOMIES

Lucjan T. Orlowski

This chapter examines the monetary-policy-targeting systems, in the second half of the 1990s (until 1998), of three Central European EU-accession candidates—the Czech Republic, Hungary, and Poland—and advocates the potential benefits of applying a direct-inflation-targeting (DIT) system in them. For the purpose of the analysis presented here, DIT is defined as “a monetary policy framework that is based on the assumption of long-term price stability as the official policy goal and on the designation of the official inflation forecast as intermediate policy target” (Orlowski, 2000). Section 1 is a brief overview of monetary-targeting practices in the Czech Republic, Hungary, and Poland. It is followed, in Section 2, by an argument in favor of forward-looking monetary-policy rules. Section 3 presents a theoretical examination of DIT. Based on this examination, in Section 4 a model of inflation targeting for the transition economies is offered. The analysis in this section returns to an empirical examination of the basic rules, followed by an assessment of the early results of the Czech Republic’s core-inflation targeting since the beginning of 1998. A synthesis and additional policy recommendations are presented in Section 5.


Before the economic reforms of the early 1990s, monetary-policy played no active role in Central Europe. Competitive banking was nonexistent in the centrally planned economies. The socialist economy was serviced by a mono-bank, which facilitated the payments of centrally determined
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transactions. The monetary system was based on two separate circuits: (i) cash payments made by households for consumer goods and services and cash payments made by enterprises for wages; and (ii) payments made by enterprises through their bank accounts. The domestic currency was practically nonconvertible on both current-account and capital-account transactions. Monetary authorities planned the money supply to accommodate the credit plans that assigned funds to enterprises.

One of the prime tasks of postcommunist economic reformers was to establish the foundations for building modern monetary policies. Reforms began with the breakup of the mono-bank system into a central bank and several commercial banks. At an early stage in the reform process, the budding financial markets were gradually deregulated, and currencies were declared partially convertible on current-account transactions.

At the outset of the transition, central banks had no proven record of credibility and no available indirect-monetary-policy instruments. The lack of competition in financial markets and high, volatile inflation distorted market interest rates. The logical way to start the process of monetary stability and build competitive financial markets was to apply a currency peg, which served as both an intermediate policy target and a disciplinary tool. Under the fixed-exchange-rate system, the money supply became endogenous; thus allowing central banks to control only domestic components of the monetary base. With exchange-rate-based monetary policy, central banks could establish some initial credibility by "borrowing it from abroad."

This approach was crucial for reducing the corrective inflation that stemmed from the deregulation of prices set previously at low "ceiling" levels and, subsequently, for reducing the indexation of wages and prices as well as government expenditures. Although the magnitude of the corrective inflation varied among the Central European economies, from hyperinflation levels in Poland, in 1989–90, to moderate inflation in Hungary, the wave of corrective inflation along with the lack of a proven record of fiscal and monetary credibility introduced a culture of pronounced adaptive-inflation expectations and backward-looking indexation. The danger of high-inflation expectations impelled the new, inexperienced monetary authorities to monitor various price indexes and to actively counteract any recorded upswings in inflation.

The culture of discretionary reactions to any observed inflationary pressures was still a force in central-bank thinking in the late 1990s. Backward-looking discretionary policies were pervasive, despite a sub-
substantial expansion in the availability of monetary-policy tools and modifications in targeting practices. Because of the significant institutional development of financial markets and competitive banking, central banks in the transition economies could already make use of modern indirect monetary-policy instruments (Fink, Haiss, Orlowski, and Salvatore 1998). At the same time, they gained some credibility by reducing inflation. These advancements allowed monetary authorities to depart from fixed exchange rates and introduce "money-based" monetary policies that centered on targeting either interest rates or monetary aggregates.

Despite all the accomplishments, the central banks continued the practice of discretionary backward-looking reactions, which do not allow for sufficient decision lags necessary to make prudent judgments on whether a surge in inflation has a temporary (that is, self-correcting) or permanent character. The inconsistency of monetary-targeting practices and the active sterilization of capital inflows, in 1994–97, confirm that a highly discretionary approach to monetary policies was practiced in the Central European states.

In their annual reports and policy guidelines, the central banks of the Czech Republic, Hungary, and Poland were uniform in their ultimate goals (price stability) but differed substantially in their intermediate and operating targets (Krzak and Schubert 1997). Disinflation and stable exchange rates became long-term policy objectives in all three. But the National Bank of Hungary (NBH) paid relatively more attention to "external currency stability" than the National Bank of Poland (NBP) and the Czech National Bank (CNB). As a supplementary but ultimate goal, both the CNB and the NBP declared their intention to support the economic policies of their governments—a vague policy statement that should be interpreted with caution.

All three countries have designed and implemented various strategies that depart from the strict exchange-rate targeting applied at the beginning of the 1990s (Orlowski 1997). Poland abolished the fixed zloty-to-dollar peg in May 1991, after maintaining it for 16 months. At first the NBP replaced it with an adjustable peg and later with a crawling band that was introduced in May 1995, after widening the band of permitted fluctuations of the zloty against a five-currency basket (the dollar, the D-mark, the British pound, the French franc, and the Swiss franc). The Czech Republic maintained a pegged koruna to a basket of two currencies (the D-mark and the dollar) until the end of February 1996, when it enacted an adjustable band. After speculative attacks against the koruna, in May 1997, the CNB switched to a managed float. Hungary pursued an adjustable peg with a
narrow band, between January 1990 and March 1995, after which the forint was devalued and a crawling peg was introduced.

The intermediate and operating targets of the analyzed central banks varied significantly. At the end of February 1996 and until the close of 1997, the CNB assumed controlling the growth of M2 balances as its intermediate target, after an expansion of the band of permitted currency fluctuations was set at plus-or-minus 7.5 percent. The corresponding operating target was the one-month Prague Interbank Offer Rate (PRI-BOR) (Krzak and Schubert 1997). Since 1998, the CNB has applied a new solution—a core-inflation-targeting system (see below).

The NBH assumed as its intermediate targets the monitoring of both the exchange rate, within a relatively narrow 2.25 percent band on either side of parity, and the M2 growth rate. The bank has pursued, consequently, the interest-rate differential vis-à-vis European financial markets as its operating target. This approach permits the bank to effectively monitor net capital inflows.

The NBP claimed controlling broad money and the exchange rate, within a wide plus-or-minus 10 percent band (without publishing internal target zones), as its intermediate targets. There was a considerable degree of inconsistency in the choice of operational targets, too. Specifically, the bank targeted short-term interest rates in the first half of 1996 and domestic-credit expansion in the second half of 1996, when the GDP growth rate accelerated and the current-account deficit deteriorated. In 1997, it announced it was targeting the monetary base, and in 1998 it switched again to targeting interest rates.

The main reason for applying interest-rate targeting, as stated by the NBP, was out of a need to contain the rapid and volatile rate of credit expansion, induced by the sharp economic recovery and the increasing level of financial intermediation (initially much lower than in the Czech Republic). This forced the NBP to act with discretion, frequently resetting the interest-rate target. Hungary experienced similar problems with low financial intermediation and fast-growing broad money.

As seen in Table 12.1, the growth of M2 in Poland, in 1995–97, ran well above the rate of inflation, despite very high real interest rates. The growth of M2 balances in Hungary was also strong, accompanied by high real interest rates. Only the Czech Republic experienced a significant slowing in M2 growth. Czech real interest rates rose sharply in 1995–97, particularly after the fixed-exchange-rate system was abandoned at the end of February 1996 and, subsequently, after a real appreciation of the Czech koruna decelerated. As a result, the large capital inflows that pro-
voked various problems for the country in 1993–95, significantly retreated in 1996 and 1997 (Orlowski and Corrigan 1997). The Czech Republic has already reached a high level of financial intermediation, in comparison with Hungary and Poland. This is implied by its higher M2-to-GDP ratio than that in Hungary or in Poland.

Table 12.1. Selected Monetary Indicators in the Czech Republic, Hungary, and Poland

<table>
<thead>
<tr>
<th>Monetary Indicators</th>
<th>Czech Republic</th>
<th>Hungary</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI Inflation</td>
<td>9.0</td>
<td>8.8</td>
<td>8.5</td>
</tr>
<tr>
<td>M2-to-GDP ratio</td>
<td>0.87</td>
<td>0.82</td>
<td>0.76</td>
</tr>
<tr>
<td>M2 growth rate</td>
<td>29.3</td>
<td>6.4</td>
<td>1.6</td>
</tr>
<tr>
<td>REER*</td>
<td>135.3</td>
<td>142.7</td>
<td>144.3</td>
</tr>
<tr>
<td>3-month T-bill rate</td>
<td>11.0</td>
<td>13.0</td>
<td>15.5</td>
</tr>
</tbody>
</table>

Notes: REER* is the real effective exchange rate, compiled by J. P. Morgan, based on consumer prices; January 1990 = 100. The quoted 3-month T-bill rate is the end-of-period rate.


The Hungarian and Polish interest-rate-targeting systems had additional flaws. They neutralized the monetarist link between the money supply and inflation; thus making inflation more difficult to forecast. Interest-rate targeting contributed to the instability of the income elasticity of the demand for money in these countries, because in an environment of high, targeted interest rates, the growth of M2 is highly unpredictable and uncontrollable.

The unstable income elasticity of the demand for money inhibits an accurate determination of a desirable range of M2 growth, and it may induce large deviations of actual M2 money balances from the target range. Consequently, highly unpredictable growth rates of money balances may present a risk factor to the indexation of wages and prices, contributing further to inflationary pressures. As shown by Poole (1970), the targeting of interest rates proves to be a better policy choice only when money-market shocks (LM shocks) are more significant than the shocks in aggregate demand (IS shocks). Adversely, if aggregate-demand shocks prevail, a money-growth target is a better policy, since its impact on income is less destabilizing. It is difficult to determine what type of shocks prevailed in Central Europe in the second half of 1990s. But considering that the fast expansion of aggregate demand was accelerated by large inflows of foreign-direct investment, the real-economy shocks seem
to have prevailed over the money-market shocks. Under such conditions, the Poole (1970) model would suggest setting money targets rather than interest-rate targets.

The frequent resetting of interest-rate targets contributed to the poor transparency of monetary policies in Poland and in Hungary. Moreover, it exacerbated already excessively high market interest rates. The large, positive differentials between their domestic interest rates and the corresponding rates in leading international financial markets were a major source of large capital inflows. Table 12.1 shows that Poland had the highest positive real interest rates at the close of 1997. This situation stemmed from a successful disinflation coupled with high interest-rate targets, resulting from the implementation of a tight monetary policy. High real interest rates, in turn, increased the attractiveness of Polish fixed-income securities and time deposits not only to investors and to speculators but also to Polish exporters engaged in money-market hedging of export receivables.  

The frequent resetting of interest-rate targets in the transition economies inhibits monetary-policy credibility because these small, open economies are becoming increasingly dependent on the conditions in global financial markets. As a result, their exogenous domestic interest rates require frequent reactions to changes in international interest rates. The high dependency of domestic monetary policy on global financial markets proves that the policy is neither fully autonomous nor highly credible.

12.2. FORWARD-LOOKING VERSUS BACKWARD-LOOKING MONETARY POLICIES

Interest-rate targeting has been a dominant practice in the countries examined. Until the end of 1997, all three central banks utilized a discretionary approach to monetary policy rather than a rule-based one.

The central banks would be better off abandoning the current practice of interest-rate targeting and considering a DIT system instead (Orlowski 1998). To prepare the Central European’s monetary systems for accession to the EU and EMU, fewer discretionary policies are more desirable than backward-looking policies. A forward-looking monetary policy would affirm the monetary authorities’ commitment to disinflation. In addition, it would aid the transition economies’ central banks in fulfilling several key objectives while developing modern, efficient central-banking practices.
Several strategies can be suggested to the transition economies' central banks to make their monetary policies more compatible with EU policies. Establishing a proven, solid record of policy credibility should remain their primary objective. At a minimum, credibility can be achieved through a successful disinflation and through the stability of interest rates and market exchange rates; thus, ultimately, through the stability of financial markets. Disinflation is required for reducing the real appreciation of the Central European currencies and, subsequently, for diminishing the danger of excessive current-account deficits along with the risk of large short-term capital inflows. The central banks' credibility will be enhanced further by a higher degree of monetary-policy predictability: they need to develop forward-looking policies based on preannounced rules.

Improving the transparency of central-bank actions can be best accomplished by developing and publishing a set of feedback rules and policy guidelines, thereby allowing for optimal recognition and decision lags. These lags would allow for sufficient time for recognizing economic disturbances, for judging whether they are temporary or permanent, and for making the appropriate decisions about policy responses. Experienced, credible central bankers always exercise patience in their policy reactions to observed disturbances. They do not instantly react to price shocks and other disturbances in monetary variables because such disturbances may likely be self-correcting, presenting no permanent danger to economic stability. Predetermined recognition and decision lags are also necessary in order to account for delayed responses between prices, interest rates, exchange rates, and money balances.

A central bank needs to explain all of these lags to the public and to other branches of government so that all understand why the bank, in case of a temporary departure of monetary variables from the targeted level, elects not to undertake corrective actions. In order to establish a pattern of effective communications, the central bank needs to set guidelines for explaining to the public why it is silent in the face of some observed disturbances. In addition to the benefits noted above, a patient, less discretionary approach to monetary policy involves lower economic costs to government and the private sector. Specifically, if there are large capital inflows that are believed to be only temporary, a central bank may elect not to sterilize them; thus avoiding the high fiscal costs of sterilization. In addition, a nondiscretionary approach to monetary policy may lead to lower reserves (as a percentage of deposits) held by commercial banks, which benefits the expansion of domestic credit. In contrast, less-transparent discretionary policies will prompt banks to hold more reserves for
precautionary reasons so that they are able to hedge the uncertainty of future corrective actions by the central bank.

Forward-looking policies are also favorable for incorporating various impact lags of changes in the money supply on inflation. Their length varies among different monetary-transmission channels (Svensson 1997b). The aggregate-demand channel has a long adjustment period. Specifically, monetary tightening results in higher interest rates, which in turn reduce investment and consumption, stimulating a downward pressure on prices over a relatively long period of time. The channel of rational inflation expectations has a shorter impact lag. A monetary contraction diminishes inflation expectations, and if the policy is credible, it results in downward pressure on wages and prices. The effect of lower wages may not occur if the policy credibility is low. The exchange-rate channel has the shortest impact lag. Monetary tightening leads to a real appreciation of the domestic currency and lower import prices, which contribute relatively quickly to lower domestic inflation. While pursuing a forward-looking monetary policy, central bankers need to identify which one of the three transmission channels prevails in order to estimate when the targeted level of low inflation is likely to be reached.

More-transparent monetary policies in the Central European economies are likely to alleviate the problem of asymmetric information between central banks and financial institutions. Under a discretionary monetary policy, central banks tend to act without preannouncements. They do not fully disclose information about the current condition of their monetary policies and their possible responses to changes in monetary variables. If central banks develop clear rules and guidelines for their actions and set forward-oriented policy targets, the information gap between the monetary authorities and banks will narrow, and financial systems will be less susceptible to destabilizing shocks.

Furthermore, the transition economies’ central banks need to enhance their accountability for policy decisions. This can be accomplished by more extensive disclosure of information about the current condition of monetary variables and about conditions in financial markets as perceived by central banks. Such disclosure, coupled with the increased responsibility of policymakers for their actions to the public, may play an important role in educating households and small businesses, which possess little experience and understanding of the problems of macroeconomic stability and modern financial markets.
12.3. THE ADVANTAGES OF DIRECT INFLATION TARGETING (DIT)

In the recent literature on monetary-policy targeting, DIT has won strong support (Spaventa 1996; Wyplosz 1997; Krzak and Schubert 1997; Fischer 1997; Mishkin 1997; Mishkin and Posen 1997; Bernanke, Laubach, Mishkin and Posen 1999; and Svensson 1996, 1997a, and 1997b, 1999). Most of the authors arrive at the general conclusion that DIT, as a less discretionary, rules-based policy, emphasizes the central bank’s commitment to disinflation and helps in its attempts to gain credibility. As a forward-looking policy, DIT is likely to have a stabilizing impact on financial markets.

The theoretical literature is supported by the generally successful experiences of various monetary authorities that have practiced some form of DIT and lowered inflation, namely, the central banks of New Zealand, Australia, Canada, Sweden, Denmark, Finland, and the United Kingdom (Mishkin and Posen 1997; Svensson 1997b; Frowen and Karikutos 1997; Nadal de Simone 1998; Bernanke, Laubach, Mishkin, and Posen 1999).

Cecchetti (1996) and Carlstrom and Fuerst (1996) express some reservations about DIT. They argue that nominal-income-targeting rules are superior to price-targeting rules, because when the growth of nominal income and employment is the ultimate policy target, the move to a low inflation as an intermediate target may have a destabilizing impact on output. Some prominent policymakers have voiced additional concerns about DIT. Specifically, the European Central Bank president, Wim Duisenberg, opposed the system, in 1997, on the grounds that it is a “look-at-everything” approach to monetary-policy procedures (see Krzak and Schubert 1997: 33). Nevertheless, the arguments in favor of DIT are forceful and convincing. This approach has been successful in bringing inflation to low, sustainable levels and reducing the instability of monetary aggregates.

DIT has at least two distinctive advantages, which are consistent with the major objectives of the economic transition, and which apply mainly to the more advanced Central European economies that have developed fairly competitive financial institutions and markets [Orlowski 2000]. The first advantage of DIT is its forward-looking character. This forward-looking inflation forecast, as the official policy target, will enable central banks to retreat from discretionary, backward-looking policy adjustments. This, in turn, will allow them to improve transparency and,
ultimately, *credibility* of monetary policy. The second merit of DIT is also related to its forward-looking character. Once an initial credibility is established, the official forecast of low, sustainable inflation may gear the mechanisms of nominal indexation to lower price deflators and, consequently, benefit the disinflation process. In addition, a constrained discretion along with indexation geared to lower price expectations is likely to diminish the volatility of prices, interest rates and exchange rates that has been quite significant in TEs so far.

There are two extreme forms of DIT. In one extreme form a central bank may apply *strict inflation targeting* (SIT), with a narrow tolerance band of deviation of actual inflation from the midpoint target. A narrow band implies that the policy-decision lag is short and that the monetary policy is subject to frequent corrections and resettings. This is a discretionary policy that also restrains the flexibility of exchange rates. The policy utilizes, mainly, the exchange-rate channel because of its short impact lag. Thus it is often implemented by adjusting market exchange rates through active interventions in foreign-exchange markets. This policy implementation can be accomplished alternatively by adjusting the rate of the crawling devaluation or by changing the spread between the rates of required reserves on domestic- and foreign-currency deposits. Because of the shorter decision lag and the active interference with market exchange rates, SIT may result in the instability of money-market variables, preventing the exchange rate from corresponding to interest-rate differentials. SIT is seldom applied in practice because it does not generate the attractive features of expanded monetary flexibility.

*Flexible inflation targeting* (FIT) is the other extreme form of DIT. It is based on a wide tolerance band, which allows more time for the policy decision lag, necessary for proper judgment on whether the observed inflationary shock is temporary, that is, self-correcting, or more permanent. Wider bands restrain discretionary-policy reactions and reduce the frequency of target resetting; thus making the policy more predictable and transparent. They also allow central banks to expand the time horizon of their intermediate targets and focus on long-term disinflation goals. Thus the policy becomes forward looking. This may contribute to lower inflation expectations and to a weakening indexation of wages and prices. A wider tolerance band corresponds directly to more-flexible exchange rates. For instance, the broader margin of the permitted currency depreciation is consistent with a larger departure of actual inflation from the target level. Therefore, the application of FIT requires the expanded flexibility of exchange rates. As a result, by increasing the currency risk of
speculators, more-flexible exchange rates may improve the risk structure of net foreign-capital inflows, that is, the excess of foreign-direct and long-term portfolio investments over short-term portfolio investments. As opposed to SIT, the FIT framework allows for a higher degree of output variability, corresponding to the width of the tolerance band (Svensson, 1999). To be effective, the system requires well-defined policy rules and guidelines based on more complex inflation models.

12.4. A MODEL OF DIRECT INFLATION TARGETING FOR CENTRAL EUROPE

DIT is an attractive policy alternative for the Central European economies, which may help them overcome the present deficiencies of their macroeconomic policies, enhance the credibility of their central banks, and strengthen their commitment to disinflation. And it could facilitate their preparations for EU and EMU accession. But several conditions must be met to make the DIT regime successful.

First, maintaining fiscal discipline plays the crucial role in a successful disinflation. In Poland, for example, the continuation of economic growth would have to be combined with a considerably tighter fiscal stance than what is required by the Maastricht Treaty (a maximum 3 percent budget deficit to GDP ratio), in order to stem inflation to a low, sustainable level. Fiscal discipline in Poland is imperative for DIT, and it is needed even more in Hungary. Its inflation was the highest among the three examined economies, and its 1997 fiscal deficit reached 4.1 percent of GDP (excluding privatization revenues). Poland and the Czech Republic maintained better fiscal positions in that year, with budget deficits reaching 1.4 and 1 percent of GDP, respectively.

The choice of a tolerance band is critical in designing a DIT policy. In the early stages of their disinflation programs, the Czech Republic, Hungary, and Poland might consider applying a relatively narrow band until inflation is brought to a low, sustainable level. A narrow band would indicate that the central banks are firmly committed to disinflation. It would also enhance exchange-rate and interest-rate stability. Both are usually volatile when actual annual inflation persists at double-digit rates. The band ought to be wide enough, however, to allow for sufficient recognition and decision lags. It seems that the initial bands in these three economies could be set at plus-or-minus one percent around the intermediate-inflation target.
Feasibility studies for the possible introduction of DIT in Central Europe ought to identify the inflation indexes, which are selected as target variables. Moreover, these studies should determine whether items that are subject to administrative price controls should be included in the price basket. Another pertinent issue that needs to be resolved prior to any DIT implementation is the determination of the maximum permitted duration of any nonaction, that is, the lack of any policy response to a shock that is believed to be only temporary. In practical terms, this implies a maximum-allowed time of actual inflation running above the upper limit of the tolerance band. The central banks' credibility might be significantly damaged if they delay responding to any inflation overshooting the band for an excessive period of time.

Central banks pursuing DIT need to develop complex, nonmonetarist models of inflation in order to be able to rationally determine a midpoint-inflation target and the width of the tolerance band. There is no uniform model that can be rationally applied to both industrial and emerging-market economies. Since interest rates and exchange rates in the transition economies are highly exogenous, they are influenced by conditions in global financial markets. Inflation forecasts in these countries, as a result, must account for both domestic and international monetary conditions. Because of the high uncertainty of external conditions, the tolerance bands of permitted departures of actual inflation from the midpoint target should be relatively wide. A central bank ought to possess the legal right not to respond to significant exogenous inflation shocks that have only a temporary impact on the domestic economy.

Another key issue that needs to be resolved is whether the responsibility for setting the inflation target will reside with the central bank, the ministry of finance, or an economic council of the government. Normally central-bank autonomy is better protected when the bank is granted the exclusive right to make such decisions. In such a case, the bank assumes sole responsibility for lowering inflation. But this approach may not be desirable in small, open economies where the responsibility for price stability ought to be equally shared by fiscal authorities. It is advisable that the ministry of finance and the central bank jointly determine official inflation targets. This would allow the central bank to focus its actions on reducing the volatility of inflation and the instability of other monetary variables.

The monitoring of adherence to inflation targets is routinely conducted by independent research institutions, in addition to the central bank. Such an approach strengthens monetary discipline and improves the cen-
central bank’s accountability to the public. Moreover, it may prove helpful in winning public confidence and gathering public support for monetary policies.

Figure 12.1. A Model of DIT in the Transition Economies at Different Stages in the EU-Accession Process

Figure 12.1 presents a model of inflation targets and tolerance bands at various stages of disinflation and in preparation for EU membership. The model assumes that at the beginning of the road to EU membership, at time $t_0$, there is high, double-digit inflation that is by far too excessive for successful integration. Such high inflation disqualifies the candidates from locking their exchange rates to the euro. Thus disinflation becomes a top priority and the ultimate goal of monetary convergence. DIT is expected to successfully facilitate the process of disinflation. Subsequently the candidates will apply more-flexible exchange rates, until they begin active preparations for EMU accession.

Monetary policy adjustments are divided into three stages. Stage I, corresponding to the period $t_0$ to $t_1$, reflects active disinflation from the current high level $P_0$. The initial tolerance band at this stage is reasonably narrow (plus-or-minus one percent), in order to reaffirm the commitment of a central bank to disinflation and alleviate the problem of “instrument instability” (see above).

When the lower limit of the tolerance band reaches the predetermined inflation level $P_v$, the scope of permitted deviations from the midpoint tar-
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get may be expanded. This would allow monetary authorities to take advantage of the benefits of FIT. \( P_t \) may be viewed as a desirable level of inflation upon actual EU accession. In practical terms, if \( P_t \) is set at 5 percent, the corresponding midpoint inflation target at time \( t_1 \) will be 6 percent. This situation determines the actual timing of \( t_1 \). Although it may be difficult to estimate the timing in advance because it will likely depend on how successful the disinflation process is, it is recommended that central banks arrive at an approximation of \( t_1 \). By doing this and by announcing the \( t_1 \) estimate in advance, the banks would demonstrate their firm commitment to both monetary discipline and disinflation. It is imperative that fiscal authorities equally engage in setting the inflation target for the period \( t_1 \), to ensure that fiscal discipline is maintained. Considering the different levels of actual inflation and the various degrees of price and wage indexation in the transition economies, the actual timing of \( t_1 \) seems to be less remote for the Czech Republic than for Hungary and Poland.

The entrants would be well advised to expand the inflation-tolerance band during the second stage of adjustments, in the period \( t_1 t_2 \). Time \( t_2 \) denotes the moment of accession to the EU and the concurrent entry into the ERM II—the exchange-rate mechanism for EU members remaining outside the EMU. The Central European candidates are expected to join the ERM II and to lock in their exchange rates to the euro once they become official EU members. Prior to that moment, they may opt for FIT. The wider tolerance band in the second stage of adjustments is fully consistent with expanded exchange-rate flexibility. An important advantage of FIT would be the expanded uncertainty of exchange-rate fluctuations, which might ease expectations of the real appreciation of the domestic currency. Ultimately, more-flexible exchange rates are likely to defend current-account positions and rationalize the risk structure of capital inflows.

The final and third stage of the monetary-policy adjustment, represented by the period \( t_2 t_3 \), is consistent with a “post-EU-accession” strategy, which will focus on preparations for entry into the EMU. At time \( t_2 \), a new EU member will begin preparations for entering the EMU by joining the ERM II. In the following period, the monetary-policy targeting would have to gradually change from DIT to the euro-peg. Monetary-policy adjustments in this period can be labeled as a “return-to-peg” strategy—as the economic transition in Central Europe began from the currency peg and will end with the peg to the euro—while experiencing a gradual expansion of monetary flexibility when going from one to the other (Orlowski 1998).
At this third stage, the inflation-tolerance band will be gradually narrowed to ensure a smooth convergence to the irrevocable peg to the euro. Time \( t_3 \) denotes the moment of feasible entry into the EMU. The rate of inflation \( P_n \) corresponding to the time \( t_3 \) of entry to the EMU is consistent with the Maastricht Treaty benchmark of monetary convergence (the actual inflation in the candidate country is not to exceed 1.5 percent of the average of the three member states with the lowest inflation).

One of the most critical tasks in each stage of inflation targeting will be to determine the optimal time horizon of the intermediate target. It seems rational that a shorter time horizon of the intermediate target is applied at the first stage. The initial period of limited flexibility of inflation targeting, coupled with more aggressive disinflation, involves a higher risk of departures from the target. The central banks may want to expedite tighter control over adherence to the intermediate target by more frequently resetting it. This horizon can be expanded in the second phase of increased flexibility of monetary policy.

12.5. CORE-INFLATION-TARGETING IN THE CZECH REPUBLIC

In January 1998, the CNB introduced DIT, following earlier practice with other nominal anchors: an adjustable peg and, after February 1996, an adjustable band. With the introduction of a managed float, in May 1997, this disciplinary-policy tool was gone. Until the end of 1997, the bank sought to apply money-stock targeting, but the growth of monetary aggregates exceeded the targeted range. Given the circumstances, in January 1998 the CNB decided to introduce DIT as a policy-disciplining instrument.

The new strategy, implemented in 1998–2000, called for a 4.5 percent net annual-inflation target at year-end 2000, with a tolerance band of plus-or-minus one percent. The 1998 net inflation target was set at 6 percent, with a narrower tolerance band of plus-or-minus 0.5 percent. The CNB chose to target only the part of inflation that was believed to be effectively influenced by monetary policy. Net inflation excluded regulated price items in the consumer-price-index basket, which accounted for 18 percent (136 items) of all 754 items in the Czech CPI basket. Hence net inflation represented the movement of the remaining prices in the CPI basket. Excluded were those items whose prices were set directly by the central and local governments (rents, electricity, gas, railway transportation, etc.).
and the like), items with imposed price limits (education services, housing, heating, bus transportation, and the like), and items with administratively set fees.

Although the intention of targeting unregulated prices whose movements depend on monetary-policy conditions may seem fundamentally correct, the approach is questionable because regulated prices strongly influence the costs of production. Consequently, they have a strong indirect impact on unregulated prices with a relatively short time lag. In fact, the CNB reported that net inflation was running high in January and February 1998 because of the indirect effects of increases in administratively regulated prices and indirect taxes applied at the beginning of the year. Nevertheless, monthly changes in net inflation in the first quarter of 1998 yielded encouraging results. Monthly net inflation rates gradually declined from 1.5 percent in January, to 0.7 percent in February, and to a mere 0.1 percent in March (CNB March 1998).

As of mid-1998, it was still unclear whether Czech DIT was effectively fulfilling its disciplining function. The policy was applied at the outset of high CPI inflation, exceeding an annual rate of 13 percent in the first quarter of 1998. Because this surge in inflation was induced by significant adjustments in administratively prices—indirect taxes and fees—the introduction of DIT has cast it share of doubts. Some financial analysts proclaimed the new policy premature, and financial markets exerted some pressures on the koruna’s nominal depreciation, in the first quarter of 1998. Toward the end of 1998, CNB, still recovering from the financial crisis of 1997–1998, applied a very tight monetary policy that helped reduce net inflation to 1.7 percent in December, well below the lower bound of the official target set at 5.5 percent. A similar situation reoccurred in 1999 when the year-end net inflation fell to 0.2 percent, significantly below the lower bound of the tolerance band of 4.0 percent.

The narrow width of the tolerance band could also be questioned. It was rather a SIT system that favored discretionary policy reactions to observed departures of actual inflation from the target band, not warranting a sufficient decision lag. On the positive side, a one-year time horizon for the intermediate target seemed to be justifiable because it guaranteed that the target would not be frequently reset and that disinflation would be consistently pursued.
12.6. A SYNTHESIS

The analysis here implies that DIT is a desirable and beneficial choice for the Central European transition economies. This policy approach will help overcome the deficiencies of monetary policies in the region, namely, the backward-looking approach, the excessive discretion, the short time horizons of intermediate targets, and the focus on interest rates as operating targets.

The proposed DIT is a forward-looking approach. It is consistent with more-flexible exchange rates, which relinquish the disciplinary function of the initial currency peg. Implicit-inflation targets may thus assume the disciplinary role of the policy.

Cooperation between central banks, ministries of finance, and government agencies is critical to the overall success of disinflation policies. For this reason, DIT may contribute to a unified commitment to disinflation of all government branches not merely central banks. In contrast, the interest-rate-targeting system is not necessarily favorable for coordinating the actions of the entire government toward price stability.

DIT is likely to assist the transition economies in preparing for EU and EMU accession. As emphasized by Spaventa (1996), a coordinated inflation targeting among the members of the EMU and those outside the monetary union—both the EU members and the candidates—may prove better and more effective than exchange-rate pegging at stabilizing exchange rates and prices in the entire European system.

The analyzed countries should not be deterred if early DIT results are unfavorable. In the early stage of the new system's implementation, inflation may not be successfully reduced for a variety of reasons, such as administrative price increases (the case of the Czech Republic in the first quarter of 1998) or the contagion effects of competitive devaluations in the emerging-market economies. But in the long run, DIT may bring a number of advantages to stabilization efforts, including monetary-policy credibility, transparency, predictability, and accountability. It appears to be a viable policy alternative for achieving the monetary-stability conditions that are essential to the transition economies' full integration into the EU.
REFERENCES


NOTES

1 A Polish exporter who signed a DM 1 million export contract with a German importer in November 1997, with the transfer of receivables scheduled for March 1998, could generate PLN 2,112,186 in revenue from a money-market hedge. The hedging opportunity worked as follows: DM 1,000,000 \times 1 / 1.0233 was borrowed in November from a German bank (at the annual credit rate of 7 percent), converted into Polish zlotys at the November exchange rate of 2.02 zlotys per DM 1, and invested at a Polish bank for four months at the annual rate of 21 percent. By comparison, the unhedged transaction would yield 1,800,000 zlotys at the March spot exchange rate of 1.80, and the transaction hedged with a four-months-forward rate of 2.08 would generate 2,080,000 zlotys. The money-market hedge was more beneficial due to high Polish interest rates and provided the incentive to immediately swap any export receivables into Polish zlotys.

2 The GDP and fiscal indicators presented here are based on statistics from the Vienna Institute for International Economic Studies.