

MONETARY POLICY IN THE SLOVAK REPUBLIC

IMPLICIT INFLATION TARGETING AND THE CHOICE OF AN OPTIMAL EXCHANGE RATE REGIME

Mathias Nell

Continued from issue 10/2004

5.4. Implicit Inflation Targeting and Crawling Pegs – Opt. II

A crawling peg regime is characterized by a periodic adjustment of the domestic currency in small amounts and at a fixed, pre-announced rate. In a crawling peg regime the exchange rate path is mostly determined by the domestic and the foreign inflation rate. There are two variants of a crawling peg.

In an active crawl arrangement the monetary authorities publicly announce an inflation target. Coupled with the foreign inflation rate, the nominal exchange rate path is thus pre-determined and publicly known:

$$\Delta s^T = \pi^T - \pi^* \quad (17)$$

The problem for an implicit inflation targeting central bank such as the NBS obviously is the public announcement of the target for the inflation rate. Hence, the NBS could only mimic an active crawl regime by either choosing its inflation forecasts or its internal target as a replacement for the official target. The former option would be closer to the original active crawl. However, it is only viable if the central bank has a good track-record of keeping actual inflation close or identical to its forecasts. In other words, the central bank has to have excellent forecasting capabilities. If the internal target were chosen, in fact the regime would also become implicit or internal. That is, the exchange rate adjustments would not be pre-announced.

If an implicit inflation targeting central bank would like to provide the public with a nominal anchor, it would have to go with the first option. So equation (52) may be re-written as:

$$\Delta s^T = \pi^{\text{forei} | i-1} - \pi^*. \quad (18)$$

If one accounts for private sector UIP and relative PPP, the actual real MCI is:

$$MCI^{\text{active}} = r^* + \alpha^* + (1 - \rho) (\pi^{\text{forei} | i-1} - \pi). \quad (19)$$

Under an active crawl domestic monetary conditions would again be significantly determined by exogenous variables, i.e. the foreign real interest rate and the risk premium. One advantage could be that the forecasts can be revised – as they usually are by the NBS once a year. This would give the Slovak monetary authorities some discretionary room. Still, too frequent a revision would harm credibility. An autonomous conduct of monetary policy in an active crawl regime is therefore limited.

In a passive crawl – the second variant of a crawling peg regime – the exchange rate target simply accommodates for the inflation differential:

$$\Delta s^T = \pi - \pi^*. \quad (20)$$

The MCI becomes:

$$MCI^{\text{passive}} = r^* + \alpha. \quad (21)$$

As with a fixed peg, the Slovak monetary authorities would completely lose their autonomy because domestic monetary conditions would be influenced by exogenous variables only.

Both variations of a crawling peg regime suffer from a significant lack of autonomy for the central bank. Hence, in the pursuit of autonomy the NBS should consider other alternatives.

5.5. Implicit Inflation Targeting and Flexible Exchange Rates – Opt. III

In a framework of implicit inflation targeting with flexible exchange rates, the central bank may set the real interest rate according to domestic macroeconomic conditions and exchange rate changes as implied by equation (14). The nominal, and thus the real interest rate may be set in line with the following rule:



$$r = MCI^{\text{opt}} + \rho \Delta q^1 \quad (22)$$

If relative PPP held even in the short run, i.e. Δq , there would be no problems for the monetary authorities since they could focus solely on domestic macroeconomic developments. However, there are various reasons for the real exchange rate to deviate from relative PPP in the short run. For instance, companies may not adjust their prices in the anchor country in reply to a nominal appreciation so as not to lose out in market share (pricing-to-market). Moreover, exchange rate movements are caused by myriad of other factors, for example behavioral ones such as herding or noise trade.

In fact, if following the random-walk-theory, the changes in the real exchange rate may become random in the short run:

$$\Delta q = \eta, \quad (23)$$

with η being a random white noise disturbance.

Then, the optimal real interest rate in a flexible exchange rate regime is:

$$r^{\text{opt}}_{\text{flex}} = MCI^{\text{opt}} + \rho \eta. \quad (24)$$

The actual MCI, i.e. $MCI^{\text{flex}} = r - \rho \eta$, would also become random. Thus, it is left to pure chance whether or not domestic monetary conditions correspond with their optimum. If the NBS adopted a pure floating regime, it could thus either accept the randomness and hence a recurrent violation of internal equilibrium, or it could adjust the interest rate frequently, making domestic monetary conditions highly unstable. Both options are unacceptable in most cases.

5.6. Implicit Inflation Targeting and Managed Floating – NBS

A managed floating central bank has to set the target path for the nominal exchange rate in accordance with the interest rate differential (Bofinger and Wollmershäuser, 2001):

$$\Delta s^T = i - i^*. \quad (25)$$

Moreover, PPP should prevail:

$$\Delta q^T = \Delta s^T \pi^* - \pi. \quad (26)$$

Inserting the condition for the nominal exchange rate target path given by (25) into (26) yields:

$$\Delta s^T = r - r^*. \quad (27)$$

Then, the optimal real interest rate in a managed floating regime initially takes the following form:

$$r^{\text{opt}}_{\text{man}} = MCI^{\text{opt}} + \rho r - \rho r^*. \quad (28)$$

If one assumes that the real interest rate is equal to the optimal real interest rate, the final policy rule is given by:

$$r^{\text{opt}}_{\text{man}} = \frac{1}{1 - \rho} MCI^{\text{opt}} - \frac{\rho}{1 - \rho} r^*. \quad (29)$$

Thus, the monetary authorities can always achieve optimal domestic monetary conditions if the targeted exchange rate path is compatible with UIP and PPP. This can also be seen if one looks at the actual MCI within a managed floating arrangement:

$$MCI^{\text{man}} = (1 - \rho)r - \rho r^*. \quad (30)$$

The MCI depends on the domestic and the foreign real interest rate. The latter is exogenous. The former, however, can always be adjusted by the central bank so that $MCI^{\text{man}} = MCI^{\text{opt}}$.

If the condition of UIP and PPP held also with flexible exchange rates, the same result would be obtained. This makes it clear that the strategy of managed floating tries to achieve what independent or pure floating would if both conditions would always be met.

The main advantage of managed floating over a flexible exchange rate regime is that in the former there exists a stable and systematic relationship between interest rate differentials and the path of the exchange rate, while in the latter the exchange rate becomes a random variable. Consequently, a flexible exchange rate regime would demand extremely high adaptability with regards to the setting of the domestic interest rate from the Slovak monetary authorities. This certainly is not desirable.

In comparison with a fixed or a crawling peg, a strategy of managed floating gives the monetary authorities a lot more space for the sovereign performance of monetary policy. Autonomy, however, is achieved at the expense of a nominal anchor.

Conclusion

Given the economic conditions in the SR, managed

¹ The superscript T is omitted because with flexible exchange rates there is no target for the exchange rate.

floating may be the best exchange rate regime the NBS can operate. Still, managed floating is not without problems. Above all, it does not supply the NBS with a nominal anchor for private sector inflation expectations. Hence, a suitable monetary policy framework has to be chosen.

Even though full-fledged inflation targeting would probably be the optimal choice in terms of managing expectations in line with the overriding long-term goal of price stability, the preconditions for such a demanding framework are at present not met in the SR. This leaves the NBS only with the choice of implementing an extenuated version of the framework, i.e. implicit inflation targeting. In fact, this framework is not in conflict with the exchange rate arrangement and has thus far served the NBS rather well.

Still, implicit inflation targeting by definition does not provide the general public with a nominal anchor in the form of publicly announced medium-term inflation targets either. In other words, the NBS' current monetary policy framework entirely lacks an explicit nominal anchor and may thus not be optimal in the long run. Therefore, the NBS should continue to assess its aptitude for full-fledged inflation targeting. Evaluations should be made on two fronts (see figure 4 below).

First, are the necessary preconditions met? Particularly, do government actions support the implementation of full-fledged inflation targeting? Second, does future ERM II entry make the (prior) adoption necessary or sensible?

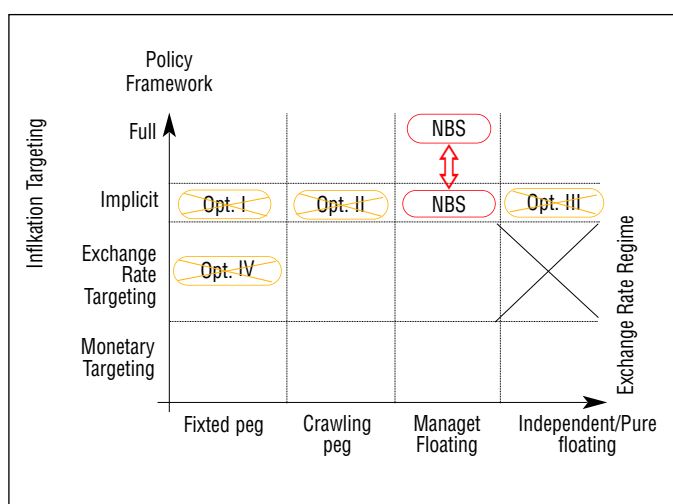
If the relatively frequent government changes prevail in the SR, the NBS cannot be assured that its full-fledged inflation targeting framework would be shored up indefinitely. Moreover, continuing reforms (e.g. of the public health sector and the pension system)

would make it hard for the NBS to materialize on pre-defined medium-term targets.

With regards to ERM II participation the issue is rather clear-cut. Full-fledged inflation targeting is not compatible with ERM II over a prolonged period. After ERM II participation the NBS will become a de facto member bank of the European System of Central Banks (ESCB). Its monetary policy autonomy will then be significantly limited. This means that there will be no room for an independent monetary policy framework. In other words, ESCB membership is incompatible with a sovereign conduct of inflation targeting. Hence, the crucial determinant of whether or not to adopt full-fledged inflation targeting is the schedule for ERM II participation and euro adoption. Only if both milestones were still to lay some time ahead would the implementation of full-fledged inflation targeting make sense. If full-fledged inflation targeting were to be implemented in the SR prior to imminent ERM II entry, the relatively young framework could suffer from a substantial loss of anchoring private sector expectations since people would not know which framework to believe in. The negative repercussions could be prolonged.

Thus, the NBS should only implement full-fledged inflation targeting if ERM II participation is scheduled for, say, three to five years from now. Otherwise, the Slovak monetary authorities may be best advised to continue operating implicit inflation targeting with managed floating.

Figure 1: Strategic Assessment of Full-Fledged Inflation Targeting



² Formally speaking, since the SR's entry into the EU on May 1, 2004, the NBS is already a member of the ESCB. However, membership, as for now, does not have any major implications for the day-to-day conduct of monetary policy.