Designing Poland's Macroeconomic Strategy on the Way to the Euro Area

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Abstract

In this paper we discuss selected aspects of Poland's road to the euro zone. Our attention focuses on the proper design of macroeconomic policy during the accession period. We address the issue of entering ERM II, with special attention to the choice of central parity, fluctuation bands, possible revaluation of the parity and sharing the burden of interventions with the ECB.

Further we concentrate on the issue of a simultaneous fulfilment of all convergence criteria. We point at the central role of fiscal austerity in providing a save framework for fulfilling the inflation, exchange rate and, obviously, the public deficit criteria. The key role of timing is accentuated.

Keywords: Transition economies, ERM II, equilibrium exchange rate

JEL: E58, F33

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Introduction

After the enlargement of the European Union, the preparation of the accession countries to join the Eurosystem gains importance and momentum. The National Bank of Poland (NBP) is strongly willing to join the euro area as soon as possible and, with respect to its competence, feels responsible for the best preparation of Poland for this event.

To join the single currency area, Poland has to fulfill the Maastricht convergence criteria. First, this requires the central bank to lower inflation in a credible way. Second, the credibility of low inflation must be confirmed by market expectations in form of low long-term interest rates. Third, this requires the government to make an effort to lower the general government deficit and prevent public debt from increasing excessively. Finally, this requires the government and the NBP to prepare and introduce a successful program of participation in the Exchange Rate Mechanism II (ERM II).

In this paper we concentrate on major issues related to the necessity of fulfilling simultaneously all convergence criteria. Special emphasis is placed on the coordination problem between monetary and fiscal policies. We are trying to elaborate on the problem of optimal timing between monetary and fiscal policy on the way to the euro. We also highlight the main ambiguities, inconsistencies and vagueness of the design of the accession pattern. Some possible solutions are suggested.

The rest of the paper is structured as follows. Part 1 describes briefly the Polish experience with the strategy of direct inflation targeting (DIT) in the period 1999-2004. Part 2 discusses the issues related to entering ERM II. Special interest will be placed on choosing the right parity and the width of fluctuation bands as well as the question of sharing the burden of foreign exchange interventions with the European Central Bank (ECB). Part 3 will be devoted to describing our view on how to design the accession process. In particular we will address the issue of necessary appreciation of the Polish currency during the participation in ERM II, discuss problems related to the Balassa-Samuelson effect and consider the possibility of revaluing the central parity during

the participation. Here the problem of coordination between monetary and fiscal policy will be addressed. Part 4 concludes.

1 Towards ERM II

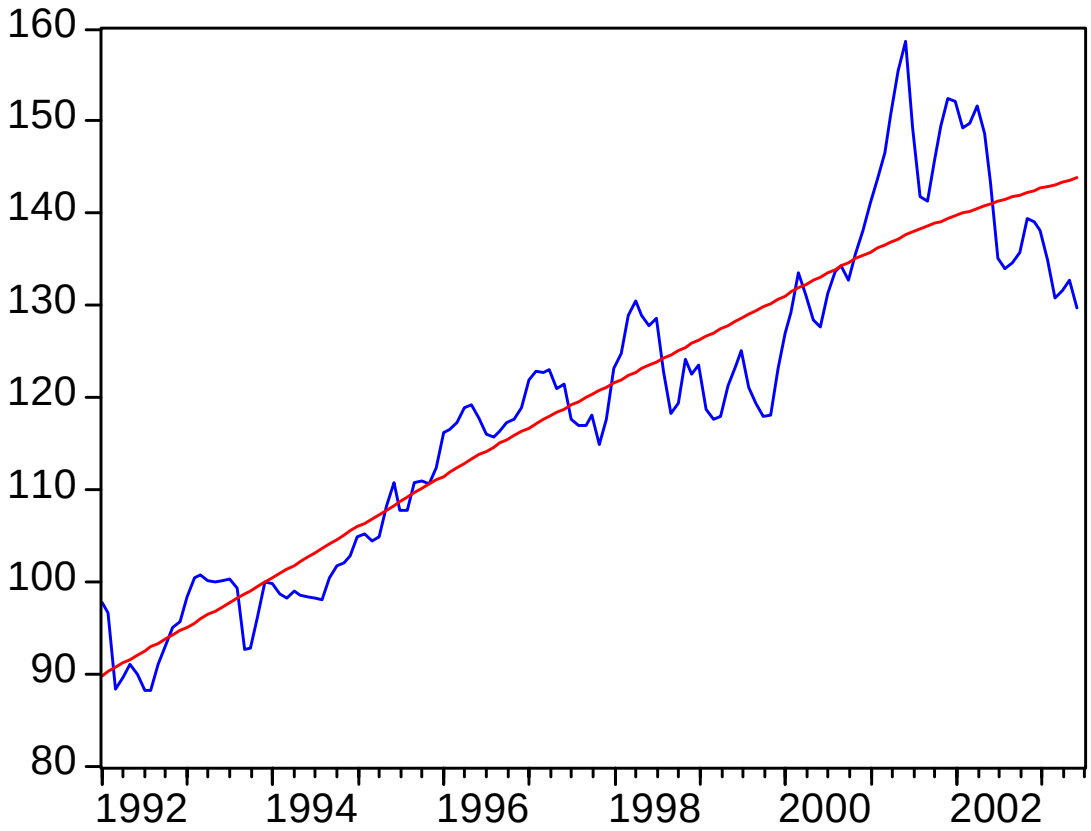
In 1998, the newly established Monetary Policy Council (MPC) decided to introduce the regime of direct inflation targeting (DIT). The "*Medium-Term Strategy of Monetary Policy 1999-2003*" set a goal of below 4% for the inflation rate in 2003 (MPC 1998), and announced floating the zloty exchange rate in the future. According to the Strategy, the departure from the crawling peg regime was supposed to let market forces bring the market rate closer to its equilibrium level, before the Polish currency would enter ERM II.

The floating found place in April 2000, however actually the deep regime changes occurred already in 1998, when the NBP stopped FX interventions, and in 1999, when it ceased so called transactional fixing operations with the banking sector that enabled the commercial banks to close their open foreign exchange positions with the central bank at the end of a day (Osiński 1999). Soon after the floating, in July 2000, the process of strong appreciation, both in real and nominal terms started (Fig. 1). However, as it can be seen, finally the real effective exchange rate returned to its long run appreciation path of about 4% per annum. Thus, although increased volatility of the series can be clearly observed, the evidence speaks strongly against the often-repeated view, that floating the exchange rate would dramatically speed up the real appreciation trend.

It can be also said with much certainty that the floating exchange rate protected Poland against turbulences that in the recent years took place in emerging markets around the world. The reactions in the Polish FX market were tempered even in the event of the Argentinean crisis, or the huge external imbalance on the Polish current account which exceeded 8% of GDP in Q1 2000 (Fig. 2).

From the perspective of four years it can be said unambiguously that the floating exchange rate was a good choice for the Polish economy[2]. Not only did it provide the full autonomy of antiinflationary monetary policy (constrained by the "impossible trinity problem"), but also immunized the economy against external shocks that could have otherwise caused a currency crisis[3]. Hence, in our view, Poland should stick to the floating exchange regime in the nearest future, until the ERM II entry.

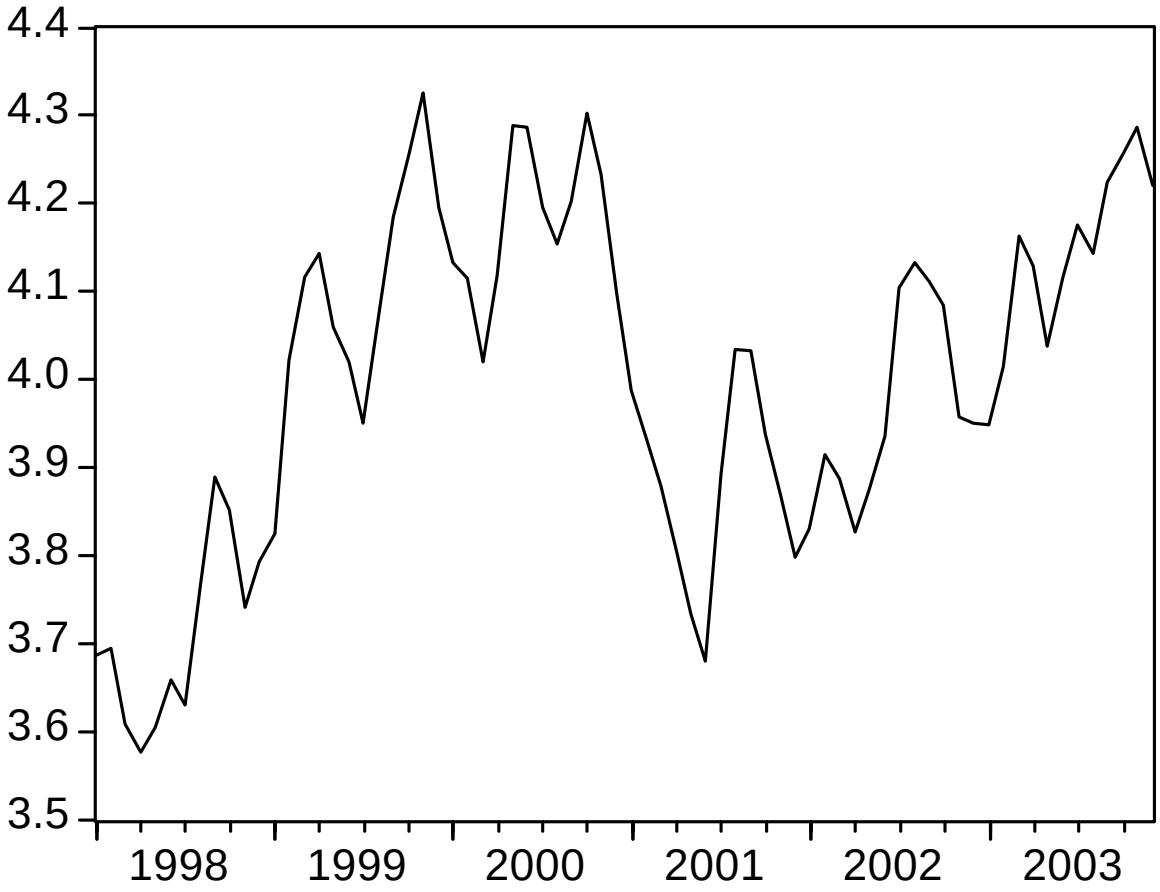
Figure 1: Zloty real effective exchange rate (CPI deflated) and H-P trend 1992-2003



Source: own calculations based on NBP data

[2] This view is, however not uncontroversial. For a critical assessment see for instance Bofinger (2003).
[3] The problem of internal inconsistency faced by the monetary policy in Poland in 1995-1997 is discussed in greater detail by Polański (1998) and Szpunar (2000).

Figure 2: Nominal exchange rate of the zloty against the basket[a)], 1998-2003



a) Basket consists of 50% USD and 50% EUR.

Source: own calculations based on NBP data

2 ERM II - getting inside

As it has previously been noted, direct inflation targeting with a floating exchange rate seems to be a well designed monetary policy regime for a country like Poland. Thus, from our point of view, the quasi-fixed exchange rate system we have to go through in order to fulfill the Maastricht criteria cannot be considered as a very tempting one. Consequently, it seems to be a reasonable solution to proceed in a way that will guarantee as short as possible participation in ERM II. In view of the accession procedure this means not much longer than two years of

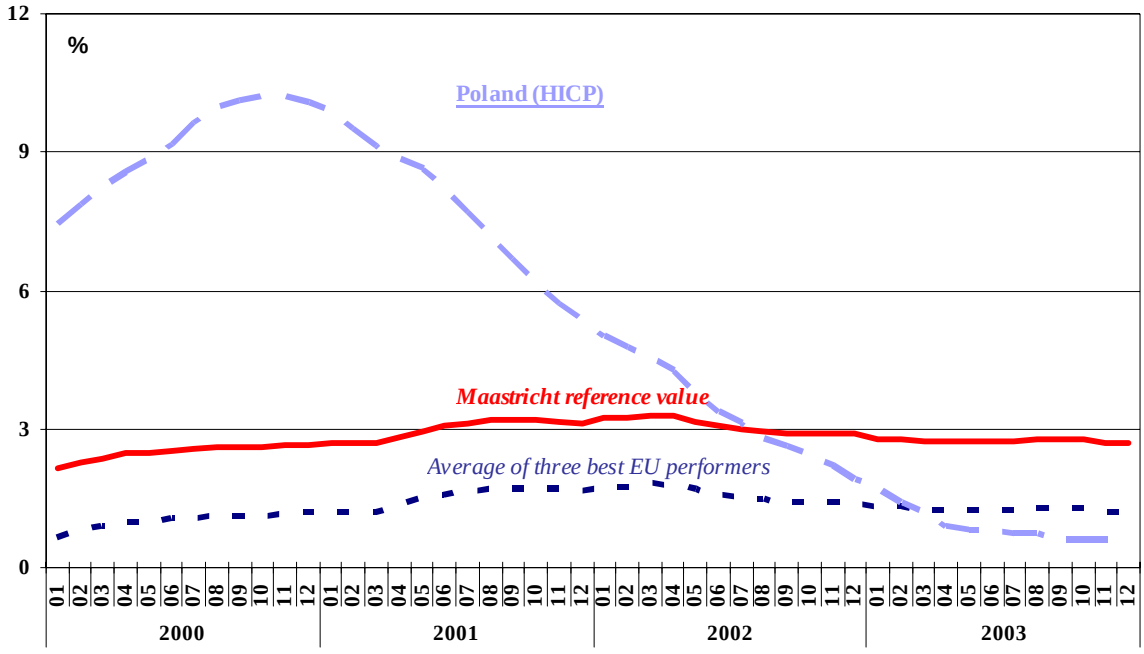
participation, provided that at the moment of evaluation Poland will fulfill the remaining convergence criteria.

2.1 Fulfilling the convergence criteria

Hence, from our point of view, entering the ERM II will make sense only, if the remaining Maastricht criteria are to be met within 2 years. Below we present a brief discussion of all the criteria:

i) inflation: in 2003 CPI inflation stabilized at a low level of 0.8%. The (Harmonized Index of Consumer Prices (HICP) for Poland shows only minor difference against the CPI, and its average over the last 12 month stabilized in December 2003 at 0.7% so that Poland fulfils the Maastricht inflation criterion (Fig. 3). Since January 2004 the NBP's inflation target has been stabilizing the CPI growth rate at 2.5% with a tolerance band of +/- 1 p.p. (MPC 2003). If we consider that the reference value can be expected to fluctuate around 2% over the long run, inflation will probably require a slight reduction before the evaluation. This however, should not be a major issue (NBP 2004).

Figure 3: The annual average HICP inflation in Poland vs. the reference value 2000-2003.

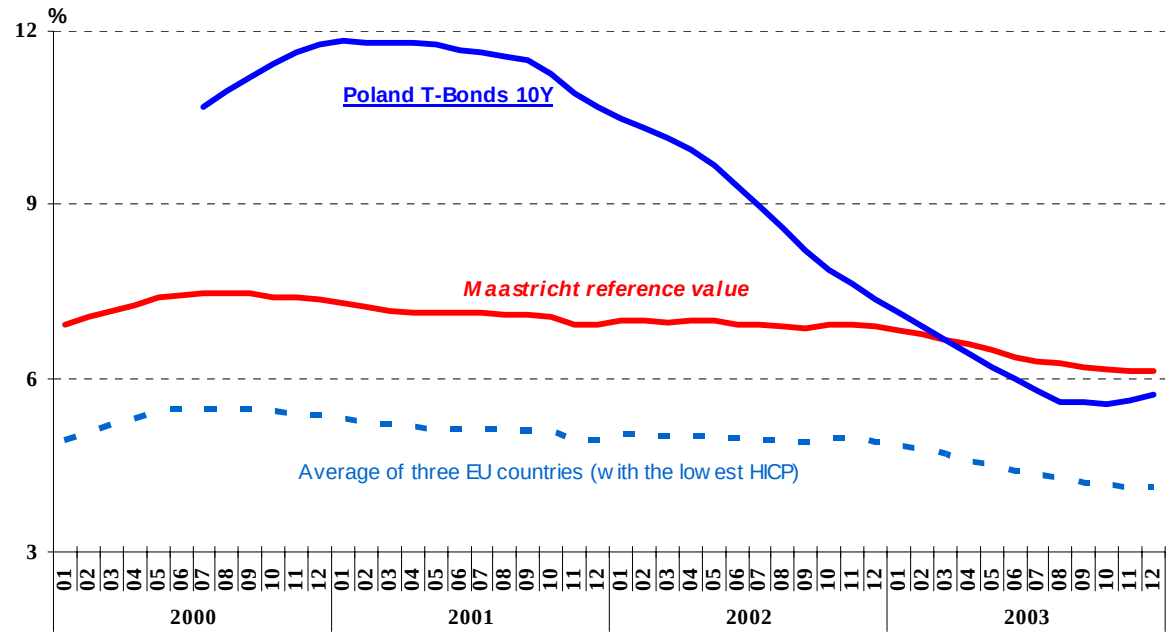


Source: NBP calculations based on Eurostat and Central Statistical Office data

ii) interest rates: long term interest rates have come down sharply in the period 2000-2003, so that Poland fulfils the interest rate criterion as well (Fig. 4). One can be pretty sure that, even if temporary reversal in the convergence process pushes the rates again above the reference value, at the latest after entering ERM II, interest rates will further converge to the levels observed in the euro area, as it happened in Greece in 1999 - 2000, provided that the parity would be credible (Borowski, Woreta 2002).

iii) public debt: in 2002 public debt attained 41.8 % of GDP (Tab. 1). Although the ratio has been rising and is projected to grow further over the recent future, we do not see a major threat that the explosion of debt over the 60% reference value could jeopardize Poland's accession to the euro area. This is because of the constitutional limit, which obliges the government to provide a budget in surplus if the debt (increased with anticipated guaranty and surety payments) to GDP ratio exceeds 60%.

Figure 4: Yield on 10-year Polish government bonds (12-month average) and the reference value 2000-2003.



Source: NBP calculations based on Eurostat and Bloomberg data

Table 1: General government debt in Poland (as % of GDP) 2002-2006

Specification	2002	2003	2004	2005	2006
	Execution	Forecast			
Public debt increased with anticipated guaranty and surety payments	47.4	50.8	54.5	57.1	57.2
General government debt (ESA'95) *	41.8	44.3	46.9	49.2	49.1

- *Acc. to the ESA 95, the general government sector debt does not include matured liabilities of budget units that are treated as accrual basis expenditures but they constitute an element of the debt according to the Polish methodology.*
- *The ESA 95 methodology treats the second pillar pension funds (OFE) as part of the public sector. Consequently treasury securities held by OFE are netted out of general government debt. In 2003 this explained approximately 5 p.p. of the difference between the methodologies presented above.*

Source: PEP (2003)

iv) general goverment deficit: the general government deficit in 2003 exceeded 4% of GDP (according to ESA 95), which is well above the Maastricht benchmark. Over the last year the government projections became less and less favourable and point currently at staying above 3% until 2006 (Tab. 2). This means that the deficit can become the major obstacle to the fulfillment of convergence criteria.

Table 2: General government balance (as % of GDP) 2002-2006

	2002	2003	2004	2005	2006
	Execution	Forecast			
Balance (ESA'95)	-3.8	-4.1	-5.0	-4.0	-3.4

Source: PEP (2003)

Having said this, it must noted that there are certain institutional problems with the design of the Maastricht criteria which can complicate the convergence verification process soon. The Treaty states that the reference values both for the inflation and interest rate criterion are calculated on the basis of three best EU (not euro zone!) performers. Paradoxically this may soon (already in May 2004) be 3 new member states and thus non euro-area participating countries. In December 2003 from among the future EU-25 it was Lithuania, Czech Republic and Poland who had the lowest inflation rates (respectively -1.1%, -0.1% and 0.7%). Assuming that deflation is inconsistent with price stability, the wording of the Treaty may still be problematic as the

countries with deflation will after some time (once the positive inflation rate reappears) enter the group of the three best EU performers in terms of price stability. All this would lead to a drop in the reference value followed by its higher volatility (Chmielewski, Rozkrut 2004) and thus complicate the pursuit of the macroeconomic policy aimed at compliance with convergence criteria.

A similar problem applies to the interest rate criterion. Since the reference countries are the same as above, it might soon be the case that three new member states will set the interest rate criterion as well. However, as opposed to the previous case, in this case an increase in the reference value might be expected (again accompanied by its higher volatility), since long-term yields are higher in most new member states that in the euro area.

Summing up, although Poland already fulfils three convergence criteria, the euro-zone accession process may be all but fast and simple. First, it does not seem very likely that the government could lower the public sector deficit below 3% before 2007. Second, even though the inflation criterion is fulfilled at the moment, given the central bank target of 2.5% CPI inflation over the medium run it is possible that at some point in the future Poland will again find itself above the reference value. What worsens the matter is the ambiguity about the future level of the reference value resulting from its formulation in the Treaty. Last but not least, the two-year participation period in ERM II, necessary to fulfil the exchange rate criterion, lies still ahead.

In what follows, we discuss the major issues resulting from the above-presented trinity of targets. In the remainder of this section we concentrate on issues related to entering ERM II. In section 3 we concentrate on combining exchange rate, interest rate and fiscal policy before and during ERM II participation to reach the goal of necessary convergence.

2.2 Choosing the central parity

Choosing the central parity for ERM II will be a difficult issue, not only because of supposedly hard negotiations with the ECB, but also due to the analytical burden. As there are various ways to calculate the equilibrium rate of exchange, there is very scarce knowledge, which is the best

one, and they will probably return different results (ECB 2002 b). The most frequently used concepts of equilibrium exchange rate are the corrected Purchasing Power Parity (PPP), one known as the Fundamental Equilibrium Exchange Rate (FEER) approach and one based on the Behavioral Equilibrium Exchange Rate (BEER) methodology.

The approach based on PPP is a two step algorithm (Brook, Hargreaves 2001; Baude, Coudert, Couarde 2002). In the first step the exchange rate that would result from applying directly the concept of absolute purchasing power parity is being calculated. Obviously the rates differ substantially from the market rates (for instance according to this estimate, the zloty equilibrium exchange rate in 2000 should have been 1.98 PLN/USD against 4.34 PLN/USD average market rate). This estimate must be corrected by the difference in GDP per capita between countries, which is the second step of the analysis.

In order to calculate the Fundamental Equilibrium Exchange Rate (Wiliamson 1985) two estimates are necessary: the exchange rate elasticities of exports and imports and the sustainable current account position. Further, one has to calculate the equilibrium exchange rate that would have equalized the current account balance with medium term financing possibilities in each period of time at the same time providing internal equilibrium (i.e. zero output gap).

The Behavioral Equilibrium Exchange Rate concept (Alberola et al. 1999; Habereier, Mesquita 1999; Brook, Hargreaves 2001) is based on the estimation of a long run relationship between the real exchange rate and various macroeconomic variables such as productivity, terms of trade and the central budget balance that explain the behaviour of the equilibrium exchange rate over the longer horizon.

As regards the choice of the central parity in the ERM II, following conclusions may be drawn.

First, empirical research produces – not surprisingly – a fairly wide range of estimates of the equilibrium exchange rate for Poland (Borowski et al. 2004). For instance, in the first quarter of 2002 the zloty exchange rate misalignment ranged from +2,6% (overvaluation, BEER) to +20% (overvaluation, PPP). As a corollary, despite the well established frameworks for modelling

equilibrium exchange rate, the ultimate decision on setting the central parity will have to be to some extent judgemental.

Second, it is the FEER concept that explicitly addresses the issue of attaining both external and internal equilibria thus accounting for the individual characteristics of the economy (on the contrary to the panel-based techniques). While setting the central parity, the estimates generated by the FEER approach should therefore deserve particular attention among various concepts of the equilibrium exchange rate.

Third, large uncertainty surrounding the empirical findings suggests that the probability of setting the parity at the wrong level – if driven exclusively by model-based estimates – is relatively high. The strong case can therefore be made for factoring in the market exchange rate developments during a certain reference period. This conclusion is valid as long as exchange rate fluctuations are driven mainly by fundamentals, i.e. they are not triggered by short-term factors such as changes in the risk premium. In other words, the market exchange rate may be used as a benchmark for setting the central parity in ERM II provided that the entry to the system is preceded by a sufficiently long period of relatively high exchange rate stability.

2.3 Choosing the fluctuation bands

The second important decision regarding Poland's entry into ERM II is the choice of fluctuation bands. The European Council decided in its 1997 resolution that one should interpret "normal fluctuation bands" referred to in the Treaty (Art. 121) as +/- 15% around the central parity. However the institutions responsible for preparation of convergence reports are not clear, how they interpret the Treaty provisions. According to the recent Convergence Report on Sweden (European Commission 2002), one of the conditions to be respected in fulfilling the exchange rate criterion is as follows:

> *„Exchange rate to have been maintained within a fluctuation band of ±2.25% around the currency's central parity against the euro in the context of the ERM II. However, the extent to which a breach of the ±2.25% fluctuation band would correspond to severe tensions would take account of a range of relevant considerations. A distinction is to be*

made between exchange rate movements above the 2.25% upper margin and movements below the 2.25% lower margin."

The ECB is even more enigmatic about its application of the Treaty provisions. In the latest Convergence Report (ECB 2002) the following interpretation is provided:

„... in the assessment of exchange rate developments the emphasis is placed on exchange rates being close to the ERM II central rates. [...] the issue of "severe tensions" is generally addressed by examining the degree of deviation of exchange rates from the ERM II central rates against the euro, by using such indicators as short-term interest rate differentials vis-à-vis the euro area and their evolution, and by considering the role played by foreign exchange interventions."

Thus, although the focus is on the narrow bands, in both cases it is not clear what fluctuations will be regarded as a breach of the bands. Moreover, in both cases the application is provided with regard to the current evaluation, without mentioning the procedure that would be applied in the future. Relying on previous experience with Greece, one can only expect that (at least when the wide corridor is adopted) both the Commission and the ECB will accept appreciation above the 2.25% margin.

It need not be explained thoroughly that such a situation is very uncomfortable for the future EU members, Poland included. As noted earlier, we are not convinced, whether a quasi-fixed exchange rate arrangement is the proper one for a country like Poland as it can be less sustainable than a float. However, the rules have been set and we are strongly willing to follow them and fulfill all the convergence criteria as described in the Treaty. Nevertheless, it would be desirable to have a clear description of how the Treaty will be applied. Thus, instead of a vague description, how the Treaty provisions have been interpreted, we would rather know, how they will be applied during the next evaluation.

Nevertheless, some basic conclusions can be drawn. First, each depreciation of the exchange rate below the +/- 2.25 margin can be regarded as potentially incompatible with the convergence

process and thus, has to be avoided. On the other hand a long-term trend for real appreciation of the zloty should be expected (due to the Balassa-Samuelson effect and other factors described in more detail in part 4.2). As a corollary, in order to maintain inflation below the reference value (i.e. likely below the current inflation target) the currency must be allowed to appreciate in nominal terms, possibly above the 2.25% benchmark over the two year horizon. Taking these issues into account, the most reasonable solution seems to be adopting the wide +/- 15% fluctuations margin and preventing – by means of foreign exchange interventions or interest rate changes - the nominal exchange rate from depreciating below the -2.25% margin.

This solution, though the most reasonable one from the macroeconomic point of view, has one strong disadvantage - it requires intramarginal interventions. As opposed to interventions at the margins, these do not find unlimited financial support from the ECB provided within the framework of Very Short-Term Financing Facility (VSTF). The ceiling for these loans is being set within a bilateral agreement between the ECB and the non euro-area member states' central banks and has been recently only symbolical as compared with the amount of foreign exchange reserves and average daily turnover in the foreign exchange market (Tab. 3)

Table 3: VSTF limits, foreign exchange reserves and daily foreign exchange turnover in selected EU countries (EUR mn)

Country	VSTF limit	Foreign exchange reserves (January 2004)	Foreign exchange turnover (April 2001)
Denmark	520	30,068	26,000
Greece	300	4,052	6,000
Sweeden	990	18,275	24,000
UK	3,480	36,381	504,000

Source: ECB (1998), BIS (2002), New Cronos.

As national central banks ought to make "appropriate use" of their own reserves, before they use the ECB facility, it seems highly unlikely that Poland would really ever need the ECB money. Even using a small part (say 25%) of our foreign reserves (USD 34 bn at the end of 2003) to defend the exchange rate, should be considered a useless and costly struggle against the markets

and would be probably classified as “severe tensions”. Hence, the support of the ECB is in fact needed to strengthen the stance of the NBP versus the markets. This can be achieved by setting a high ceiling VSTF drawings, a ceiling that would probably never be used. After all, a currency crisis is in nobody’s interest, since it always affects one’s trading partners as well.

3 Coordination of interest rate, fiscal and exchange rate policies

In the previous section it has been stated that Poland should enter ERM II with the central parity set at a level consistent with the long-term equilibrium exchange rate and with wide fluctuations margins. Now it is time to consider the interaction of macroeconomic policies during the accession process. As already mentioned, the major issue will be a simultaneous fulfilment of the exchange rate, inflation and general government deficit criteria. To achieve this goal, policymakers will have to optimally design interest rate, exchange rate and fiscal policies. Below we present some considerations behind this relatively complicated control game. For reasons of transparency these are grouped by criterion.

3.1 Exchange rate criterion

We see two interesting points with respect to the fulfilment of the exchange rate criterion. First, it is worth considering, how the presence of the Balassa-Samuelson effect interferes with the stability of the exchange rate. Second, we would like to describe the major determinants of a relatively safe participation in ERM II.

It must be stated clearly that the magnitude of the Balassa-Samuelson effect in Poland is not overwhelming. According to various studies the inflation differential between Poland and the EU should not be bigger than 3% *per annum*. Estimates done at the National Bank of Poland show that, according to various estimation methods, the magnitude of the Balassa-Samuelson effect probably lies between 1 and 2% (Chmielewski 2003). One of the estimation techniques is presented in Box 1.

One should therefore expect that once inflation rates between Poland and the euro area equalize in the convergence process, the effect will come out as nominal currency appreciation of 1-2% per year. However, this implies the full and fast pass through from the nominal exchange rate to prices of tradable goods which – given nominal rigidities – is never the case. Further, given the recent experience, one can expect that the real appreciation might be higher than the estimates of B-S. In fact, over the last 10 years the zloty appreciated in real terms (CPI deflated) on average by 4% per year. Hence 2-4%, accumulated over the two year participation period, should be considered as the lower bound of the equilibrium exchange rate appreciation resulting from the catching-up process. As an equilibrium phenomenon, this process should not be prevented and a revaluation of the central parity of an appropriate magnitude should be carried out by the end of ERM II participation.

The second interesting issue related to the exchange rate target is a relatively safe participation in ERM II. Several points of good practice can be mentioned here.

First and foremost, sound public finances are a prerequisite for decreasing the risk of turbulences in the financial markets. Too high public sector deficits and related current account deficits have triggered several currency crises over the last decade around the world. Poland should not incur this risk. Second, the NBP should not allow, for whatever reason, for too much exchange rate appreciation above the parity as this may – once reduced exchange rate risk and possible doubts about the sustainability of this process are factored in – trigger speculative attacks and a sudden exchange rate depreciation. Such an abrupt trend reversal could be interpreted by the ECB and the European Commission as "severe tensions" even in case of not surpassing the -2.25% benchmark. Moreover, a sharp depreciation, if occurring too early, could give an inflationary impulse jeopardizing the fulfilment of the inflation criterion. Last but not least, firm support of the ECB is necessary to convince the markets that the NBP will not stay alone intervening in favour of the zloty if it threatens to depreciate below the 2.25% margin. This point is strongly related to the question of VSTF limits, discussed in section 2.

Box 1: Estimating the Balassa-Samuelson effect in Poland

Over the recent years many authors have presented estimates of the B-S impact on inflation in Poland. Among others Egert (2002) and Egert et al. (2002) estimate the B-S component of CPI inflation at approximately 1-2%. Halpern and Wyplosz calculated the effect within a panel of transition countries and assessed the B-S magnitude at 3% across the region with relatively minor country specific effects.

At the NBP a method similar to Canzoneri et al. (1999) has been adopted (Chmielewski 2002). The basic model consists of 2 standard equations:

(1) $p=\alpha p_T +(1-\alpha)p_N$

(2) $p_N-p_T= \beta(a_T-a_N)$

which imply:

(3) $p=p_T +(1-\alpha)\beta(a_T-a_N)$

Where p is the log CPI price level, p_N is the log of service prices, p_T the log of manufacturing prices, a_N the log of labour productivity in manufacturing industry and a_T the log of labour productivity in services.

The $(1-\alpha)$ coefficient, being the share of services in CPI, has been calibrated at 0.3, β has been estimated from equation (2) by cointegration techniques at 1.2-1.5. The productivity growth rates have been calculated as 8.2% per annum in manufacturing and 5% in the service sector.

Accordingly, the component $(1-\alpha)\beta(a_T-a_N)$ of equation (3), representing the influence of B-S on inflation was estimated in the range 1.2-1.7% per annum.

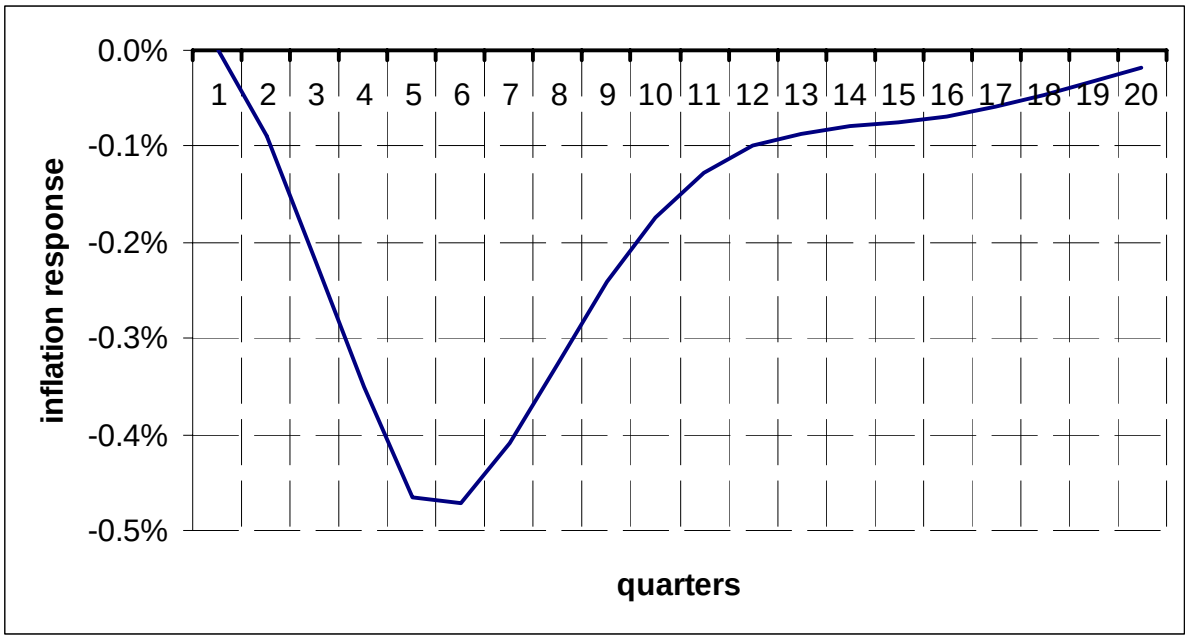
3.2 Inflation criterion

According to the "*Monetary Policy Strategy Beyond 2003*" (MPC 2003) Poland will enter 2004 with an inflation target of 2.5% (+/- 1 p.p.). In what follows we assume that at the point Poland decides to enter ERM II inflation will be in the middle of the target range. Since it can be

assumed that the reference value for inflation may lie around 2% (NBP 2004), a lowering of the inflation rate by approximately 1 p.p. during the first year of ERM II participation and keeping it at the lower level during the second year will be necessary to safely fulfil the criterion. The reason is that inflation performance during the second year will be taken into consideration when verifying compliance with convergence criteria.

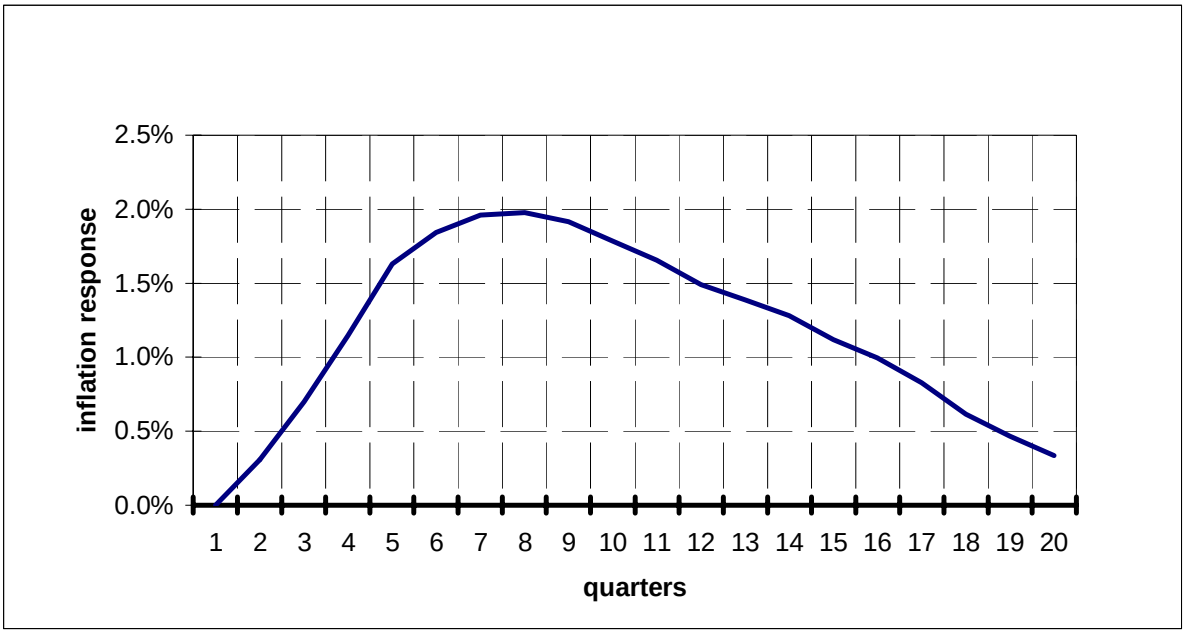
The reduction in inflation could be achieved in three ways, by raising interest rates (which *de facto* means a continuation of DIT in ERM II), by letting the exchange rate appreciate or by using a fiscal tightening. Below we consider the benefits and drawbacks of these solutions. We start by showing the reaction functions of inflation to the aforementioned policies.

Figure 5: Inflation response to a permanent lowering of the general government deficit by 1 per cent of GDP



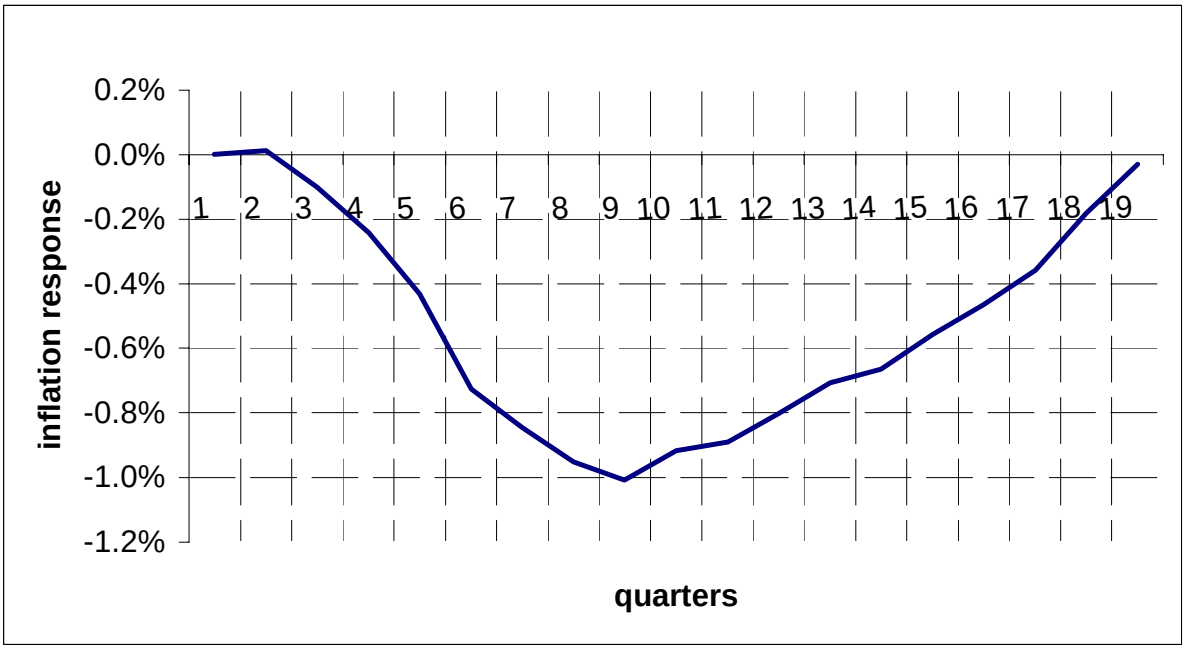
Source: simulations in the ECMOD model

Figure 6: Inflation response to a permanent 10% depreciation of the zloty



Source: simulations in the ECMOD model

Figure 7: Inflation response to a temporary increase in interest rates by 1 p.p.



Source: simulations in the ECMOD model

Let us start with the exchange rate. From the point of view of the reaction function it seems tempting to use this tool for lowering inflation. However, in our view, two arguments speak clearly against this choice. First, it has already been mentioned that because of safety reasons we would like lo avoid going with the exchange rate to far from the parity. Lowering inflation by 1.5 p.p would, however require about 8% nominal exchange rate appreciation. The second reason for not relying on the exchange rate is related to the risk that once in ERM II, there may be not enough pressure for currency appreciation. Given the current spread of around 150-200 b.p. on long term bonds, and taking into account that around 50 b.p. may result from country risk that will not disappear after adopting the euro, the field for convergence play seems relatively limited. Taking this into consideration we are likely to reject the appreciation option from our policy design. The only appreciation of the nominal exchange rate we accept is the one resulting from productivity differentials described in the previous section.

Analyzing the role of interest rate policy in reducing inflation we must start with a remark that this kind of relationship is always subject to long (Figure 7) and variable lags[4]. This cannot be considered as an argument against interest rate policy *per se*, since many central banks successfully implement direct inflation targeting strategies. However, it must be noted that once on the way to ERM II and later within the system, the efficiency of this strategy may diminish in a dramatic and unpredictable way. The main reason is related to the fact that monetary policy is transmitted not only through short-term rates, controlled by the central bank, but also by medium and long-term rates determined in financial markets. There is no simple mechanism that translates short-term into long-term rate changes, however under normal conditions they often move in the same direction. However, once the euro-area accession date becomes known, medium- and long-term rates will enter into the last phase of convergence and one can be pretty sure that their relationship to short-term rates will vanish. This can potentially weaken the efficiency of interest rate policy on the eve of the euro adoption.

The last policy tool to be analyzed in this context is fiscal policy. Given the presented response function of inflation to a fiscal shock (Figure 6) one can argue that a fiscal tightening could give

[4] This is also reflected by the high variability of the natural rate of interest (Brzoza-Brzezina 2003, 2004)

support to monetary policy in reducing inflation. This option is especially tempting, since fiscal policy will have to be tightened anyway in order to fulfil the fiscal convergence criterion.

3.3 Fiscal criterion

It is out of the scope of this paper to analyze thoroughly what exactly should be done to reduce the public deficit and fulfil the criterion. Instead we will concentrate on the interdependencies between the necessary fiscal tightening and other criteria. As it has already been stated, fiscal policy could be useful in both reducing the inflation pressure and increasing the credibility of macroeconomic policy thus adding to the probability of fulfilling the exchange rate criterion. Now it is time to consider the question when exactly the fiscal tightening should be applied to give assistance to the fulfilment of all three criteria.

We analyze 3 possible moments of the fiscal tightening (Figure 8). This can be done either very early, much before ERM II accession, on the eve of ERM II accession or already in ERM II. Let us start the analysis from the end.

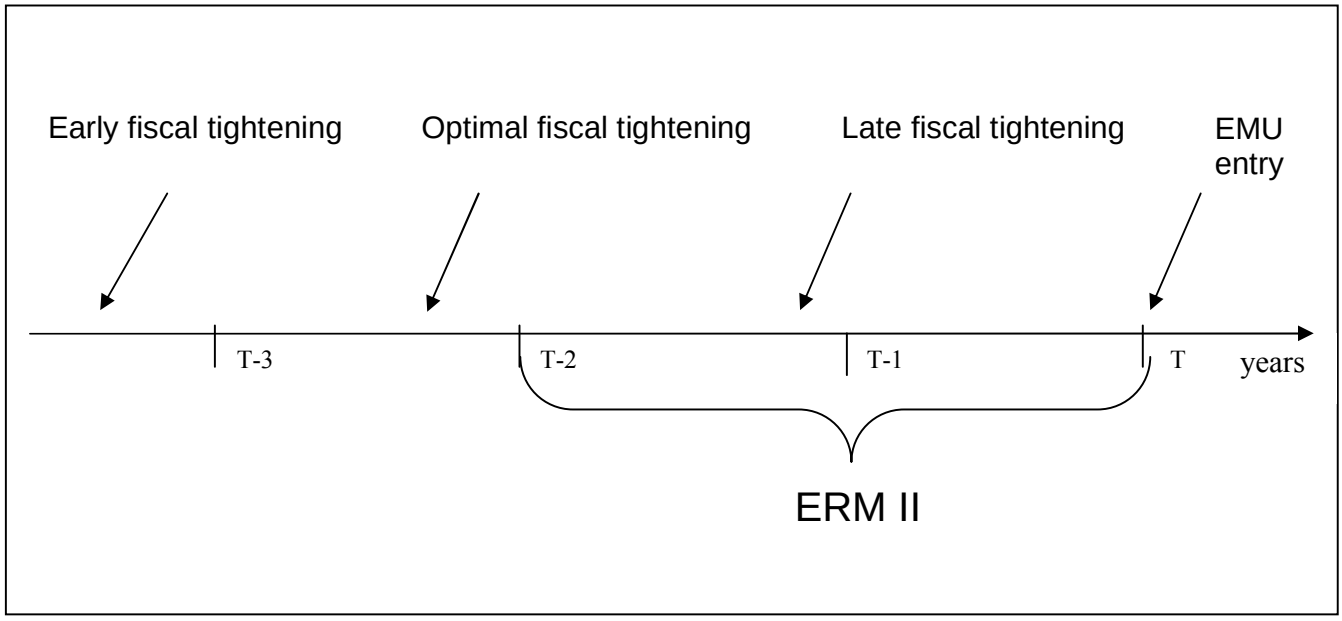
If fiscal austerity is applied only in ERM II, the only goal it can achieve is the fulfilment of the public deficit criterion. It will not, however add to the credibility of overall macroeconomic policy and, thus not support the sustainability of the exchange rate regime. Neither will it, given the lag visible in figure 6, help in fulfilling the inflation criterion. The reaction will obviously come too late.

Now, let us analyze the possibility of an early tightening. This would obviously give support to both the public deficit criterion and to the credibility problem. However, one problem would remain, since in this case the support to disinflation policy would come too early. The disinflationary impact of the tightening would die out before the criterion would be evaluated.

Thus, one can suppose that somewhere in the middle there is a point of optimal timing. Given all the constraints it should be probably placed shortly before ERM II accession. A fiscal tightening on the eve of ERM II could help increase credibility of exchange rate policy, bring about

fulfilment of the deficit criterion and bring the necessary disinflationary impact at the right moment, somewhere in the middle of ERM II participation.

Figure 8: Optimal timing of the fiscal tightening



Summing up, a fiscal tightening done at the right moment could help solving the major dilemmas of policymakers resulting from the process of nominal convergence. It has been argued that the credibility and hence, viability of the quasi-fixed exchange rate regime can be substantially increased by transparent and stability-oriented fiscal policy. Given the recent unpleasant experience of many countries with fixed exchange rates, Poland should seek mechanisms that would foster credibility. As a corollary, support from the fiscal side seems critical. We also argued that the pursuit of monetary policy, if left with the burden of decreasing inflation shortly before accession to the euro area, can be complicated by significant uncertainty surrounding the monetary transmission process in a period of strong interest rate convergence. Again, a well-timed fiscal support could be of significant value.

The above-described problem is an example of a game, where the cooperative solution is clearly superior to non-cooperation. Having said this, we must finish with the unpleasant digression that the record of policy coordination between the central bank and the government in Poland and other countries shows that the strategy of tight cooperation is likely to remain just nice theory.

4 Conclusions

In this paper we addressed some of the issues resulting from Poland's will to join the euro area. Our attention focussed on topics related to the entry into the European system of fixed exchange rates ERM II.

The first important choice is related to fixing the central parity. It may be here concluded that – given the variety of empirical estimates - the ultimate decision on setting the central parity will have to be to some extent judgemental. To minimize the risks arising from exchange rate misalignment, the Fundamental Equilibrium Exchange Rate should be used as a leading concept for deriving the equilibrium exchange rate. Further, developments in the market exchange rate as a potential benchmark should also be factored in, provided that the reference period used is characterised by relatively high exchange rate stability.

As regards the choice of the fluctuation bands, it is highly possible that some appreciation of the zloty will take place during the ERM II participation period. This is related above all to the presence of the Balassa-Samuelson effect. Hence, we see the NBP choosing the wide +/- 15% band to allow for necessary upward movement of the currency. However, as negative deviations from the central parity by more than 2.25% may be regarded as a breach of the Treaty provisions, the NBP should prevent the nominal exchange rate from depreciating below this margin. The effectiveness of this policy would be enhanced if the potential support provided by the ECB within the framework of Very Short-Term Financing Facility turned out to be substantial.

The possible exchange rate trend above the central parity will have to be somehow corrected within ERM II. We conclude that at the moment it is difficult to asses, whether this target will be achieved via a revaluation of the parity or by allowing the exchange rate to depreciate towards parity in the final stage of ERM II. From the economic point of view it seems more reasonable to revalue the parity than to let the exchange rate depreciate towards parity in the final stage of ERM II, though such a decision may be very hard from the political point of view.

Finally, we considered selected problems related to the accession process. These can be divided into two groups. Some stem from the institutional design of the process of adopting the euro. Others are more related to macroeconomics.

In our view, the major institutional obstacles to smooth transition into the euro-area consist of unclear interpretation of the exchange rate, inflation and interest rate criteria. As regards the first, it is completely in the discretion of the ECB and European Commission to state in an unambiguous fashion what are the requirements for a positive evaluation. If the European partners were to confirm the importance of the lower -2.25% margin within ERM II, the ceilings for VSTF as a mean of financing intramarginal interventions should be set at a relatively high level. As regards the latter two criteria, the problem seems more difficult, since they have been relatively unambiguously described in the Treaty and we do not see much room for pushing through a more reasonable interpretation.

The second group of problems relates to the necessity of a simultaneous fulfilment of the exchange rate, inflation and general government deficit criteria. To achieve this goal, policymakers will have to optimally design interest rate, exchange rate and fiscal policies. In our view, there is a big role for fiscal policy. Since the fiscal tightening seems inevitable (otherwise Poland will not fulfil the deficit criterion) it can be designed in a way that would support both the fulfilment of the exchange rate and inflation criterion. If fiscal austerity is applied at the right point of time, i.e. shortly before ERM II accession, it will not only increase the credibility of exchange rate policy, but also give strong support to interest rate policy in the process of final disinflation at a point where the effectiveness of monetary policy is likely to be constrained.

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