

Exchange rate policy and foreign exchange interventions in Poland

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1. The evolution of the exchange rate regime in Poland

Since 1990, Poland has adopted nearly all possible exchange rate regimes, moving smoothly from fixed peg to pure floating. At the beginning of the transition period exchange rate policy was aimed mainly at stabilising the economy. It supported monetary policy in its fight against inflation, playing the role of a nominal anchor. Under the stabilisation plan, the Polish authorities decided to fix the zloty to the US dollar at the level of 9,500 zlotys to one US\$ in January 1990. In that way the government and the central bank delivered a strong nominal anchor for an economy facing dramatic and abrupt adjustments in the real sector and in relative prices. At the same time, the zloty became an internally convertible currency.

The stabilisation plan assumed that the rate of 9,500 zlotys per US dollar would be valid for the first quarter of 1990 only. However, due to a positive current account balance in 1990 it was maintained much longer. Finally, in the environment of a very high inflation, the fixed peg resulted in excessive real appreciation and a loss of price competitiveness for Polish exports. In 1991, Poland faced significant deterioration in its trade balance and current account. As a policy response the zloty was devalued by nearly 17% in May 1991. In addition, the peg to the dollar was abandoned and the zloty was tied to a basket consisting of five currencies: the US dollar (45%), the German mark (35%), the pound sterling (10%), the French franc (5%) and the Swiss franc (5%). That currency composition roughly mirrored the composition of Polish foreign trade.

The fixed exchange rate to the basket lasted until October 1991, when a pre-announced crawling peg system was implemented. It was supposed to constitute a compromise between the anti-inflationary policy and a reinforcement of the competitiveness of Polish goods on the international market. As the rate of inflation was higher than the rate of parity devaluation the real exchange rate was still appreciating. This entailed two further step devaluations, in February 1992 and August 1993.

A breakthrough in exchange rate policy took place in May 1995, when the Polish authorities introduced a crawling band system. This was a very important step towards exchange rate flexibility (which culminated finally in the floating of the zloty exchange rate). It was preceded on the one hand by agreements on the reduction of the Polish debt with both the Paris and the London Clubs, and on the other hand by the liberalisation of foreign exchange regulations. The excessive inflow of foreign currencies put pressure on exchange rate appreciation and, as the administrative barriers to capital flows practically disappeared, the role of foreign exchange interventions in foreign exchange policy conduct increased rapidly. The zloty's rate stuck to the lower limit of admissible fluctuations and therefore, in December 1995, the monetary authorities were forced to revalue the zloty. In 1998-1999 the fluctuation bands were widened several times and finally, in April 2000, the zloty was formally allowed to float freely. That formal decision had been preceded by abandoning foreign exchange interventions in the market from 1998 and in 1999, closing transaction fixing with commercial banks. The floatation of the zloty had an important impact on currency risk and therefore reduced the susceptibility of the Polish economy to currency speculation.

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2. Exchange rate and eclectic monetary policy in the period 1990-1997

The fixed exchange rate as a policy anchor determined the shape of monetary policy conducted in Poland in the period 1990-97, in which the National Bank of Poland was focused on the disinflation process. However, the actual disinflation path was not in line with the one officially targeted. The reason for this discrepancy lay to a large extent in the very procedure of setting the monetary policy targets in that period. The monetary policy guidelines defining the targets for every consecutive year were accepted in a resolution of the lower house of the Parliament (the Sejm). The Sejm usually changed the parameters projected by the NBP, including inflation targets and intermediate targets for broad money growth. In some years the Sejm set unrealistically low inflation targets. It was inspired by the distinct views of the Ministry of Finance, which could in this way achieve lower than planned deficits; higher inflation increased nominal budget incomes, whereas nominal expenditures were mainly fixed. That practice resulted in systematic overshooting of the inflation targets and unfavourably influenced the NBP's reputation.

Table 1
Targeted and actual inflation in 1990-99¹

Year	Target %	Actual %	Deviation % points
1990	95.0	249.3	154.3
1991	32.0	60.4	28.4
1992	36.9	44.3	7.4
1993	32.2	37.6	5.4
1994	23.0	29.5	6.5
1995	17.0	21.6	4.6
1996	17.0	18.5	1.5
1997	13.0	13.2	0.2

¹ Consumer Price Index, December to December.

Source: National Bank of Poland.

Nevertheless, the sustainable disinflation process was intact and still remained the main concern of NBP policy. At the same time, the NBP conducted its exchange rate policy, trying to moderate the appreciation of the zloty - initially mainly by administrative measures. After 1994, when the agreements with both the Paris and the London Clubs on Polish debt reduction were finally settled and the foreign exchange regulations liberalised, the importance of the administrative measures in foreign exchange policy conduct decreased considerably. Their role was taken over by the FOREIGN EXCHANGE interventions. The pre-announced devaluation pace was set lower than targeted inflation, so supporting gradual disinflation. Some tensions, however, were unavoidable as the efficiency of remaining exchange rate controls eroded with time. To depict the role of the exchange rate in the NBP approach it is useful to show the reaction to economic turbulences in 1995.

In December 1994, the Sejm formulated two ambitious targets for the year 1995: 5% GDP growth and reduction in CPI inflation to 17% (from nearly 30% in 1994). Both parameters were exceeded: CPI inflation reached 21.6% and GDP growth 7%, what was mainly due to very rapid export growth. The bulk of that growth resulted from the dynamic development of cross-border trade with Germany, which was experiencing accelerating economic activity and had much higher price levels. The cross-border trade was mainly realised by individuals and small enterprises and, to a large extent, was unregistered. It could only be covered indirectly by official statistics, via recording of net purchases of foreign exchange cash by banks from bureaus of exchange. In response the zloty appreciated. As the profitability of the official exporting industries was low, further appreciation could have led to the elimination of a large group of exporting enterprises and a substantial loss of export markets (hysteresis effect). Under these circumstances the NBP decided to abandon the short-term target for inflation and to protect the zloty from further appreciation using sterilised interventions. The NBP was buying foreign currencies from banks, what inevitably led to growth in the liquidity of the banking

sector. To absorb the increasing liquidity the NBP was conducting open market operations by selling its short-term bills. Huge foreign purchases, stemming from inflows from the surplus in the current account, accompanied by FDI and portfolio investment, generated an enormous increase in foreign reserves (US\$ 9 billion within 12 months, what equalled a 140% increase in reserves).

The assessment of that episode is open to debate. Some argue that keeping high interest rates and pursuing depreciation of the currency is contradictory in itself. In fact the Bank did not manage to keep entirely on course. Facing high foreign exchange inflows the NBP felt itself forced to widen the fluctuation band and finally to revalue the parity. Another strong argument is also put forward in the discussion: the NBP managed to protect the zloty from nominal appreciation (although only partly), but it failed to eliminate its real appreciation (Figure 1). It is, however, easy to notice that in the period in question a use of different deflators to calculate the real exchange rate leads to various outcomes. When the CPI is considered, strong appreciation results, whereas when other deflators (unit labour costs, export prices, PPI) are applied, stability or even depreciation of the real exchange rate is obtained (Figure 2).

Figure 1

Zloty real effective exchange rate (CPI deflated) and H-P trend 1993-2004

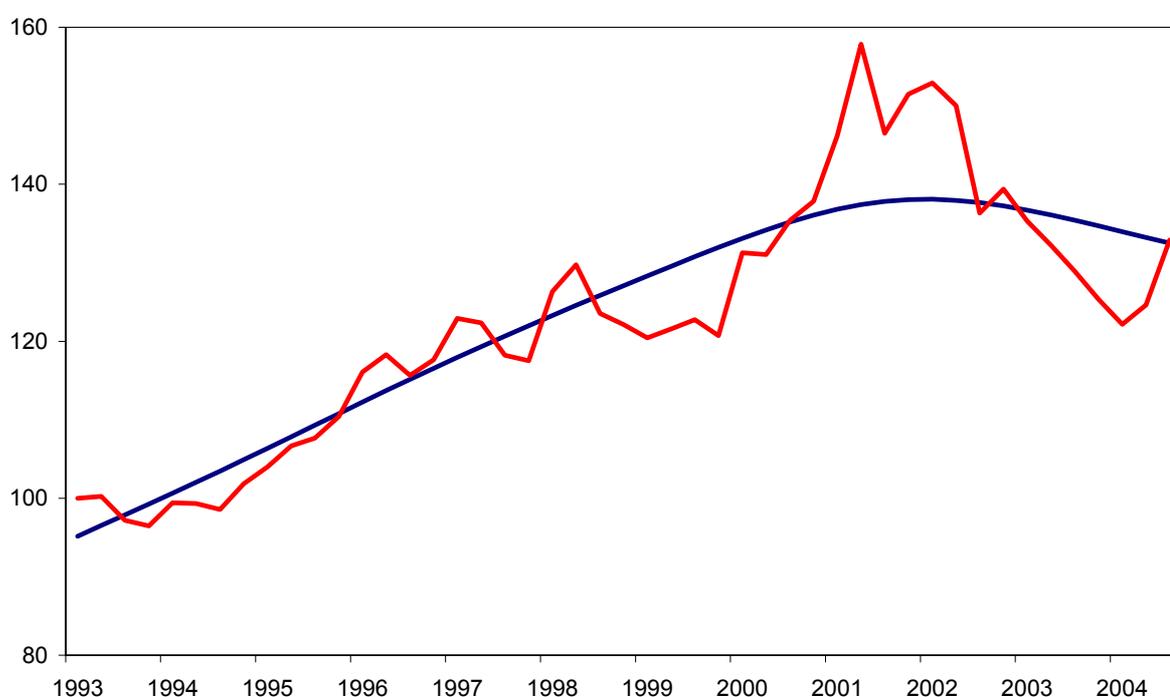


Figure 2

Zloty real effective exchange rate 1993-2004, quarterly data (Q1 1993 = 100)

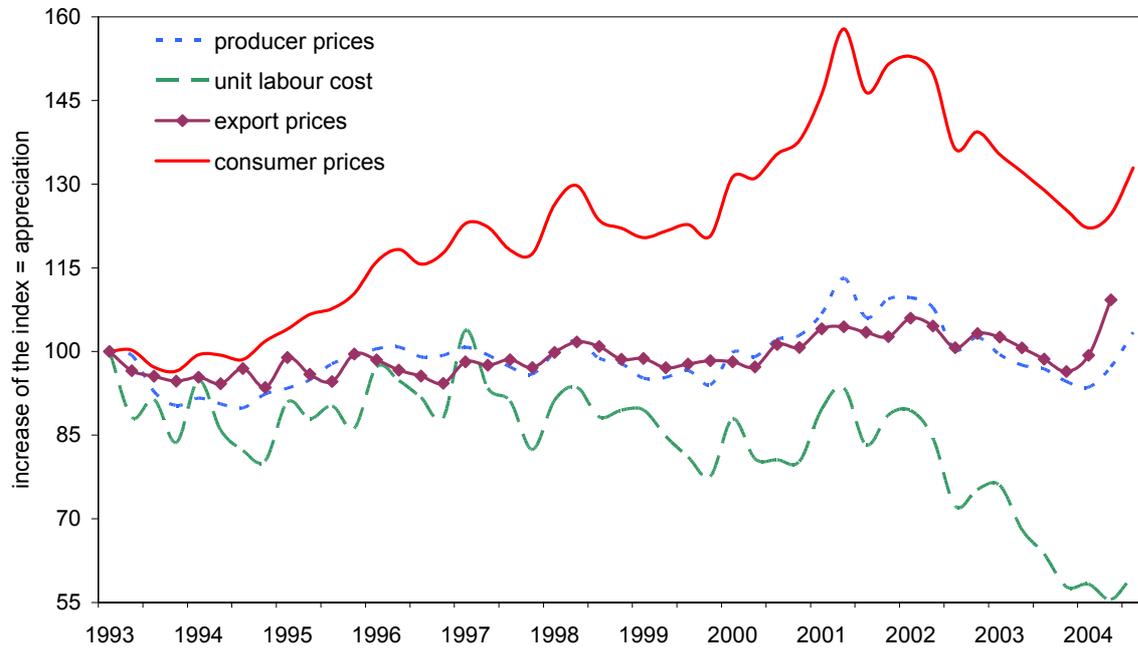


Figure 3

Foreign exchange interventions and nominal effective exchange rate of zloty

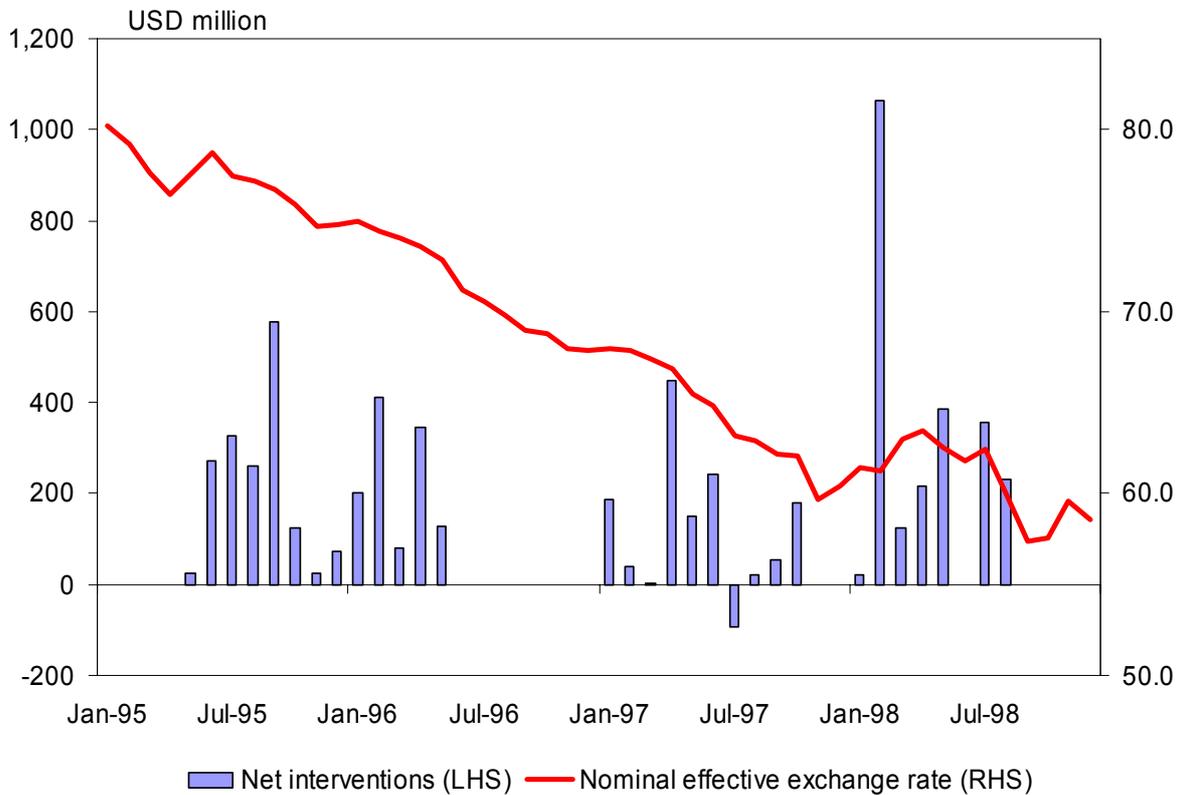
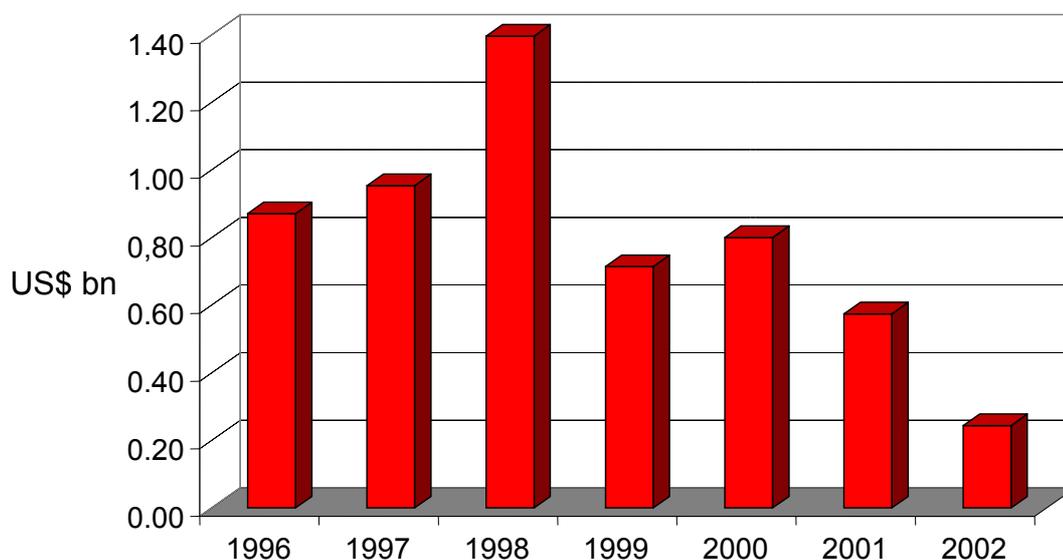


Figure 4

Costs of open market operations

The NBP was also criticised that its policy in 1995 contributed to imbalanced and unsustainable growth in the economy. A strong export-led recovery in 1995 translated into a consumption and credit boom in the following years. In late 1996, the current account deficit rose and started to grow at a very fast pace. High consumption was partly fuelled by expanding credit (in mid-1997 the dynamics of nominal credit to households exceeded 100%). Last but not least, the fiscal cost of sterilised intervention was significant (Figure 4). It resulted from the amount of the liquidity surplus (absorbed in the open market operations) and the interest rate differential.

On the other hand, however, there are also good arguments for a positive assessment of the NBP's policy. First, it is rather obvious that without NBP action in 1995 the Polish economy would have faced a sharp nominal appreciation and - in an environment of sticky prices and wages - the response of real variables to that shock would not have been fast and perfect. Second, the external balance would have deteriorated much faster, bearing in mind that deeper appreciation in 1995 would have eliminated a large part of exporting industry. Moreover, that effect would have been long-lasting, as lost markets are very hard to regain. That would have deepened the risk of currency crises in the late 1990s as the current account deficit rose very fast, reaching its peak at over 8% of GDP in the first quarter of 2000. Third, high, export-led economic growth in 1995 only triggered consumption boom, but the roots of that boom lay elsewhere - in a very low propensity to save and excessively optimistic expectations after a very long period of low consumption. To support that argument it is enough to mention that the policy of very high real interest rates was largely ineffective. The NBP used unconventional methods, such as collecting deposits directly from the public, to hamper expanding consumption. Fourth, excessive domestic demand in the late 1990s was triggered by lax fiscal policies, so that monetary action could have had only limited effects.

All in all, whatever the assessment of the NBP's approach in the mid-1990s, it is unquestionable that the policy of sterilised intervention was flexible and oriented in the long term at a gradual and sustainable disinflation. It was aimed at protecting still fragile economic growth and disinflation process from disruptive shocks in the exchange rate. At that time in the opinion of the NBP there was a risk that sharp appreciation in 1995 would have produced lower inflation in the short run, but would simultaneously have increased the threat of a currency crisis, with its high cost in GDP terms, and of a rebound in inflation.

As the financial markets in Poland were developing very fast, the foreign exchange interventions appeared to be less and less effective. Until 1998 there were two episodes when the NBP managed to maintain the zloty on the devaluation path using foreign exchange interventions. In 1998, despite an enlarged scale of interventions, the depreciation trend was broken (Figure 3).

Abandoning of foreign exchange interventions and the de facto floatation of the zloty in 1998 resulted in a strong appreciation of the Polish currency, but in the context of a much stronger real economy that had been the case in the mid 1990s. Accordingly, although it was costly, the appreciation did not disrupt economic growth.

3. Exchange rate determinants under DIT

Having liberalised capital flows, it is not possible to control both inflation and the exchange rate in the long run, which is a well known paradigm of the “impossible trinity”.² The NBP’s sterilised intervention policy was conducted in the environment of still developing financial markets and not a fully liberalised capital account of the balance of payments.³ That was, however, not enough to avoid the limitations of the sterilised intervention policy. Even at a very early stage of financial development, in 1995, under the pressure of market forces the exchange rate regime had to be changed from a rigid crawling peg to a more flexible crawling band with widened fluctuation margins. A step revaluation of the central parity was also unavoidable. The pressure of the markets increased greatly in 1998, when a deep London-based NDF market for the Polish zloty suddenly developed. The NBP intervened massively in February and then in July 1998, buying on one record day over 0.5 billion US\$ without any sustainable influence on the exchange rate. In response, the NBP stopped its interference in the foreign exchange market and the era of sterilised intervention was definitely over.

In 1998, the newly established Monetary Policy Council (MPC) decided to change the monetary policy strategy of the NBP and introduced a direct inflation targeting (DIT) regime. Published in September 1998, the “*Medium-Term Strategy of Monetary Policy 1999-2003*” set a medium-term inflation target of “below 4% by the year 2003”, and announced a gradual floating of the exchange rate regime. The decision on future floatation of the zloty was a strategic one and was not related to the current market situation. According to the *Strategy*, monetary policy - as implemented until 1998 - could have not been continued in the new environment of advanced integration of the Polish financial markets with the global markets, coupled with lowering investment risk in Poland. As a necessary condition for effective implementation of a new direct inflation targeting regime the MPC recognised a further floating of the zloty was needed. The *Strategy* advocated a smooth evolution toward a floating exchange rate system to allow market participants enough time for preparation and to enable the exchange rate to be brought closer to its equilibrium level before the Polish currency entered ERM II.

The official decision on floating was taken by the government and the MPC in April 2000. It was based on several arguments. First, the free float system is consistent with DIT strategy. Second, it constitutes a self-correcting device, acting as a shock absorber. Third, it extends freedom of monetary policy, as policy makers can increasingly concentrate on domestic developments when setting interest rates, paying less attention to international interest rates differentials. It is worth mentioning that *de facto* floating took place in mid-1998, when the NBP abandoned foreign exchange interventions, and was intensified in 1999, when it ceased organising so-called fixing operations with domestic banks. However, until April 2000, although the admissible fluctuation band of the zloty was very wide, the NBP still announced the central parity. It served as a benchmark for the market, which helped to stabilise the zloty’s exchange rate. After the floating, the volatility of the exchange rate increased significantly with resultant severe appreciation in the period 2000-01 and strong depreciation from 2002 to mid-2004.

The monetary policy conducted between 1998 and 2002 brought about the principal effect of reducing inflation from 13.2% in December 1997 to 0.8% in December 2002. The annual average inflation rate came down from 11.8% in 1998 to 1.9% in 2002, reaching the level observed in developed economies. The disinflation process was successfully ended.⁴ It should be added, however, that some

² Frankel, J A, 1999.

³ Full liberalisation took place from December 2001.

⁴ In 2003, the inflation rate fell considerably below the target, but it was mainly the result of the shocks (negative dynamics of food prices). The rebound of inflation in 2004 was also due to supply shocks in food and raw materials markets coupled with a growth in demand related to expectations of price hikes after Poland’s accession to the European Union. The underlying core inflation was much more stable.

other factors than monetary policy contributed as well to the achievement of that satisfactory result. They included disinflationary supply shocks in both food and fuel markets and slackening of Polish GDP growth, which was unavoidable within a deteriorating external economic environment.

In February 2003, the MPC announced a new strategic document, “*Monetary policy strategy beyond 2003*”, in which it introduced an ongoing inflation target of 2.5% CPI in year-on-year terms with a permissible fluctuation band of ± 1 percentage point either side of this target. In the opinion of the MPC, the above-defined continuous inflation target is consistent with strong economic growth. At the same time, the redefined inflation target comes close to the expected reference value for the Maastricht inflation criterion. From 1998 to 2002, reference values remained between 1.8% and 3.4%, and 2.7% on average. Therefore, an inflation rate stabilised at the level of 2.5% does not guarantee that the inflation criterion is fulfilled. However, any subsequent attempts to adapt inflation to the reference level will not require a substantial reduction in the price growth rate in Poland over a short period of time. Having decided this, the MPC switched to a regular approach to monetary policy under the DIT strategy aimed at stabilising the inflation rate close to the ongoing target.

The strategy of direct inflation targeting assumes abandoning intermediate targets, such as exchange rate management. Instead, the NBP reacts to any available information on factors influencing inflation, in particular developments which could jeopardise reaching the inflation target, including exchange rate movements. Thus, exchange rate volatility is one of the factors that may jeopardise reaching the inflation target. The zloty’s real appreciation/depreciation leads to future inflation decreases/increases, where the partial pass-through coefficient (ie assuming constant wages) is estimated at around 0.2.

The exchange rate, therefore, constitutes a very important element of the monetary transmission mechanism. According to an estimate based on the quarterly macro-econometric model, ECMOD⁵, used in the NBP, the path of the zloty’s real effective exchange rate depends on three factors⁶: the long-term trend of the real exchange rate that hinges on fundamentals such as the real convergence measure and net foreign assets; real interest rate disparity between Poland and its main trading partners; the risk premium parameter.⁷

Consequently, tight monetary policy increases the interest rate disparity and thus leads to temporary overvaluation and hence to an inflation decrease. On the other hand, a lax interest rate policy causes an undervaluation of the domestic currency and an increase in inflation. According to estimates based on ECMOD, raising the base interest rate by one percentage point for six quarters leads to the zloty’s real appreciation by up to 1.5 % (after six quarters). This, in turn, accounts for about half of the fall in inflation that is estimated at about 0.3 percentage points in all.

The modelling of the external sector is one of the key elements in preparing the inflation projection. The management board of the NBP approves the projection prepared by the staff for submission to the Monetary Policy Council, which is the most important input to the Monetary Policy Council’s decision-making process on interest rate setting. Under the floating exchange rate regime the central bank has considerable autonomy in setting its interest rates, which facilitates smoothing output and employment fluctuations, particularly when the economy is hit by asymmetric external demand shocks (or terms of trade shocks).

According to NBP analyses, at present the pass-through effect in Poland is weaker than it used to be during the late 1990s. Even so, it still remains strong, and its changes across the business cycle require further examination. Nevertheless, there is no temptation to use the pass-through effect as a

⁵ See Fic *et al*, 2004.

⁶ For example, according to Rosenberg, 1996, pp 243.

⁷ The current value of the nominal exchange rate is equal to the expected level of the exchange rate in the future, adjusted for the nominal interest rate differential and the risk premium. This baseline UIP formula is transformed into infinite horizon UIP in real terms, ie:

$$q_t = E_t(q_{t+\infty}) + \sum_{i=0}^{\infty} E_t(r_{t+i} - r_{t+i}^*) + \sum_{i=0}^{\infty} E_t(\sigma_{t+i}),$$

where q_t is the real exchange rate, while r_t and r_t^* represent real interest rates. As a result one can decompose the current value of the real exchange rate into expectations of three unobservable factors, as above.

policy tool. It would require employing the exchange rate as an intermediate target directly or in a form of MCI steering. There is broad evidence that having only one instrument, when it is the short-term interest rate, makes it extremely difficult, if not impossible, to steer exchange rate changes smoothly. The MCI steering as a policy rule is also not an attractive alternative. Apart from technical problems with precise defining and computing of the MCI, the changes in the MCI level may send misleading signals for monetary policy conduct.⁸

To sum up, on the one hand, in the case of Poland the effectiveness of a floating exchange rate in neutralising shocks to the Polish economy is confirmed by numerous analyses and is also visible in ECMOD simulations. To illustrate this, let us consider the example of a negative asymmetric external demand shock. First, there is a fall in the volume of exports and a deterioration of the current account. Second, if the contagion effect is present then the risk premium increases. Third, lower domestic demand may prompt the monetary authorities to conduct a more expansionary policy.⁹ All these three factors would lead to a real depreciation of the domestic currency, enabling a partially negative impact of the shock on the economy to be offset. This exchange rate adjustment mechanism occurred during the Russian crisis in August 1998, when the zloty depreciated by 8% within three days.

On the other hand, however, a floating exchange rate may generate unwelcome shocks to the economy. For example, if investors' perception of risk grows, the currency may depreciate without any changes in the economic fundamentals of a country. This may be illustrated by the 5% weakening of the zloty within a week in January 2003, due to disturbances in the Hungarian foreign exchange market (contagion effect). That is why the cost of abandoning the exchange rate after the euro-adoption tends to be overestimated, as the free float is not only a shock absorber but can be also a shock generator.

The superiority of a floating exchange rate over a fixed one as a shock absorber is not a crucial argument for choosing the former. The floating exchange rate is consistent with the DIT strategy and its merits are prevail. Unlike exchange rate control, inflation targeting delivers a stable and reliable nominal anchor for the medium-sized economy. That is the decisive argument for the MPC's declaration of willingness to maintain the float until ERM II mechanism adoption.

4. Conclusions

Since 1990, Poland has adopted nearly all possible exchange rate regimes (except for a currency board), moving smoothly from fixed peg to pure floating. Notwithstanding some tensions that occurred during this period, Poland managed to avoid any serious turbulences in the foreign exchange market. That encourages one to draw lessons from that experience.

First, the transition period is usually characterised by shallow financial markets and a fragile real sector. The eclectic policy conducted by the NBP was aimed at protecting the real sector from a shock appreciation of the domestic currency, with sterilised foreign exchange interventions as a main policy tool. Although that policy can still be debated, its results were rather encouraging during the period of economic transformation.

Second, as financial markets developed, foreign exchange interventions appeared to be less and less effective.

Third, a pure DIT regime was launched after a substantial period of gradual floating of the exchange rate, development of financial markets and growing productivity of enterprises. The gradual approach to floating the currency seemed to help economic agents to cope with higher volatility of the exchange rate and the episodes of severe appreciation.

⁸ Consider, for example, a case of inappropriate reaction on the part of the central bank of New Zealand (RBNZ) to an MCI change, stemming from the fall of external demand triggered by the Asian crisis of 1997. In response to the resultant depreciation of the NZ dollar, RBNZ raised interest rates, which led to unnecessary contraction in domestic demand and finally to a period of subdued economic growth.

⁹ It is, however, possible that currency depreciation may also invoke inflationary pressure and hence interest rate hikes. Which effect prevails, depends on the structure of the economy.

Annex Table 1

Exchange rate system history in Poland between 1990 and 2002

Period	Exchange rate system	Characteristics
Before 1990	Fixed rate against basket of currencies	Frequent and significant devaluations
1/1/1990	Devaluation (46.2%), fixed against US dollar	Exchange rate as anti-inflationary anchor
17/5/1991	Devaluation (16.8%). Fixed rate basket of five currencies	Real appreciation and strong decline in competitiveness
15/10/1991	System of crawling peg with monthly rate of devaluation levelled at 1.8%	Attempt to reconcile disinflation objective and maintaining competitiveness of exporters on the world market
25/2/1992	Devaluation (12%)	Improved competitiveness
27/8/1993	Devaluation (8%), monthly rate of devaluation 1.6%	Low level of foreign reserves and the reduction of inflation
13/9/1994	Monthly rate of devaluation 1.5%	Tightening anti-inflationary policy
30/11/1994	Monthly rate of devaluation 1.4%	Falling inflation
15/2/1995	Monthly rate of devaluation 1.2%	
6/3/1995	Increase in fluctuation band for transactions NBP/banks to +/- 2% around NBP parity	
16/5/1995	Implementation of crawling band system, with fluctuation band amount +/- 7%	Higher flexibility of the foreign capital inflow management
22/12/1995	Revaluation of the zloty exchange rate (6%)	Increased inflow of short-term foreign capital
8/1/1996	Reduction of monthly devaluation rate to 1.0%	Exchange rate policy subjected to inflation targeting
25/2/1998	Reduction of monthly devaluation rate to 0.8%	
	Expanding fluctuation band to +/- 10%	
17/7/1998	Reduction of monthly devaluation rate to 0.65%	
10/9/1998	Reduction of monthly devaluation rate to 0.5%	
29/10/1998	Expanding fluctuation band to +/- 12.5%	
1/1/1999	New currency basket: 55% euro and 45% dollar	
25/3/1999	Reduction of monthly devaluation rate to 0.8%	
	Expanding fluctuation band to +/- 15%	
12/4/2000	Floating the zloty: adopting free-floating system	Higher currency risk, lower opportunity of currency speculation

Source: National Bank of Poland

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