Poland and the European Union: The Monetary Policy Dimension. Monetary Policy before Poland's Accession to the European Union*

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1. Introduction

After fifteen years of post-communist transition Poland joined the European Union on 1 May 2004. This historic, and to a large extent symbolic, event has influenced most social, political and economic developments in Poland for considerable time. Among others, obviously, it has had an impact on monetary policy.

In this two-part article we first review Poland's monetary policy prior to the 2004 EU enlargement. Subsequently, in its second part, we will move to issues resulting from Poland's intention to become a member of the euro zone.

In the present part of the paper we argue that the EU challenge has been increasingly visible in Poland's monetary policy-making since the early 1990s. Although many of the institutional reforms and macroeconomic developments undertaken before EU membership had to be achieved due to the fact that Poland was transforming her economy into a market one, the EU enlargement perspective gave them many peculiar features that otherwise would not be the case. As one could expect, however, given mainly the legal (or regulatory) nature of the EU accession process, these influences were more visible on the adopted institutional framework for macroeconomic policies than on their design and conduct.

This part of the article is organized as follows. In Section 2 we provide some basic historical information framing monetary policy developments in the broader context of the Polish transition and EU-related events. Next, in Sections 3 and 4, Poland's monetary policy from 1990 to early 2004 is analyzed. Two clearly distinct periods are stressed. In Section 3 the 1990-97 period of eclectic monetary policy is studied while in Section 4 – the 1998-2004 period of direct inflation targeting. Section 5 concludes with few final remarks.

2. Some historical background information

Poland's policies have been geared towards European Union accession since the great social and political breakthrough of the 1989. Already by the end of the 1980s the first indications suggesting the political will to join the EU were made evident by the fact that Poland signed an agreement on trade and economic cooperation with the European Economic Community in mid-September 1989. It is not then surprising that on 16 December 1991 Poland, together with former

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Table 1 *The European Union and Poland: A Monetary Policy Perspective. Calendar of Main Events, 1991-2004*

Date	Event	Comment
December 1991	Maastricht Treaty agreed	Perspective of monetary union in the EU
December 1991	Poland signs the Association Agreement	Obligation, formally since 1994, to introduce new legislation compatible with Community standards
June 1993	Copenhagen criteria adopted	Obligation of adherence to the aims of political, economic and monetary union
February 1994	The Association Agreement comes into force	Obligation to introduce new legislation that is compatible with Community legislation
June 1997	Stability and Growth Pact adopted; Exchange Rate Mechanism 2 (ERM 2) established	Fiscal rules for EMU operation; exchange rate framework for EU countries with derogation and the opt-out clause to be in place since 1999
September 1998	*Medium-Term Strategy of Monetary Policy (1999-2003)* published	Polish monetary policy explicitly geared towards the EU and euro area accession
January 1999	EMU (monetary union of 11 countries) and ERM 2 start	EU single monetary policy launched; Greece and Denmark in ERM 2
January 2001	Greece joins the euro area	So far the only case of the initial monetary union enlargement
January 2002	Euro currency replaces national currencies in 12 countries	The EU monetary union takes its full form
December 2002	Copenhagen summit	Poland (and other 9 countries) officially invited to join the EU as of 1 May 2004
April 2003	Athens summit	Accession Treaty signed
June 2003	Referendum on the Accession Treaty in Poland	Polish nation accepts the Treaty
May 2004	Poland joins the EU	Poland, together with other 9 countries, becomes a member country of the EU

Source: own compilation.

Czechoslovakia and Hungary, signed the Association (or Europe) Agreement, which became effective as of 1 February 1994[2].

On 8 April 1994 Poland submitted a formal application for EU membership, which was accepted on 13 December 2002 at the European Council summit in Copenhagen. It was decided that Poland, together with other nine countries[3], was invited to join the EU as of 1 May 2004. This invitation was subsequently confirmed at the Athens summit of the EU heads of state where the Accession Treaty was signed on 16 April 2003. Less than two months later, on 7 and 8 of June 2003, the Polish nation agreed to the Treaty by referendum.

During the fifteen years following the 1989 breakthrough, Poland was subject to deep changes often referred to as "the transformation" or "the transition". Its description and analysis usually concentrates on policies aiming at building the political and economic fundamentals of a democratic society and a market economy. The European context of the Polish transformation mentioned above clearly suggests, however, that this process was aiming, increasingly over time, at what one could call "a European model".

In Poland, as in other transition countries, monetary and exchange rate policies have become of crucial importance after the collapse of the communist regime. Firstly, because by the end of the 1980s Poland faced the danger of hyperinflation. Secondly, because moving away from the socialist system to a market economy required a deep change in the process of money circulation. The switch to the market system, i.e. a monetary economy, required fundamental institutional and policy changes allowing for the active role of money both at the macro- and microeconomic level (Polański 1991).

These and subsequent monetary developments have not been taking place in a static international environment. On the contrary: as the Polish transition progressed, the EU was designing and preparing itself for the implementation of its crucial monetary reform, i.e. the so-called third stage of the Economic and Monetary Union (EMU). Consequently, since the middle of the first half of the 1990s Polish reforms and current monetary policy-making have not wavered from these changes.

The impact on Polish monetary policy of the developments linked to the creation, expansion and operation of the EMU, is one of the main topics of this

[2] Its trade part, however, had become effective two years earlier, i.e. in March 1992.

[3] Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, the Slovak Republic and Slovenia.

article. In order to facilitate further discussion we list in Table 1 the most important events shaping EU-Polish relationship as well as the main EU-related events that influenced Polish monetary policy and surrounding it discussions.

When discussing Poland's economic and monetary transition it is important to have in mind that certain policy decisions with non-trivial consequences were made before the start of the new policies in 1990. Significant changes in the Polish banking system were taking place as early as at the end of the 1980s, leading to the abandonment of the mono-bank system (typical of a socialist economy) in favor of a two-tier banking system (typical of a market economy). The crucial changes in this process were linked to the January 1989 legal acts: the Banking Law and the Act on the National Bank of Poland. Both laws were inspired by respective German legal acts. The first introduced universal banking in Poland, while the second set up basic prerequisites for the relatively (as far as for an early period of transformation) large independence of the central bank[4]. It must be remembered, however, that the NBP often did not act like a modern central bank up to the mid-1990s. NBP had to resort to discretionary and administrative methods, and perform duties not envisaged in contemporary, market-based central banking. This was because of the absence of developed money market mechanisms, the need to build the infrastructure of the monetary system, the widespread problem of bad loans and – last but no least – the NBP's role, which in part was financing budget deficits (Kokoszczyński 2004, chps. 8 and 10).

3. NBP's monetary policy between 1990 and 1997

After the social and political developments of spring and summer 1989, Poland's new political authorities faced a double economic challenge. They had to transform the economic system working on heavily distorted principles of a centrally planned economy, while at the same time reduce inflation. As the changeover of power was completed relatively quickly (the first post-communist government was appointed in September 1989), new policies could be implemented from the start of 1990. Poland was the first post-communist country to adopt such radical break with the economic strategy of the past. This new strategy, called – after its main architect and vice-prime minister Mr. Leszek Balcerowicz – "the Balcerowicz plan", encompassed different policy activities, among them monetary policy actions.

Taking into account the main characteristics of monetary and exchange rate policies conducted from 1990 until 1997, three sub-periods can be distinguished (Polański 2003):

- 1990-91, the Balcerowicz plan period featuring an exchange rate based IMF stabilization program.
- 1992-95, the period when monetary authorities attempted to implement a traditional (à la Bundesbank) monetary targeting strategy.
- 1996-97, the period when the central bank attempted to deepen the monetary targeting strategy by monetary base control (monetary base targeting).

One can easily trace two basic characteristics of these three sub-periods: monetary policy framework smoothly evolved from one regime to another, while the exchange rate, although increasingly subject to market forces, was to a large extent regulated[5]. Considering the latter, the 1990-97 period can be characterized as of eclectic (or mixed) monetary policy strategy.

From a historical perspective these policies must be evaluated positively as they allowed for a gradual, but consistent inflation (and currency substitution) reduction, while permitting for economic recovery since 1992, which substantially accelerated in the middle of the decade. In 1995 Poland became the first post-communist country to achieve the pre-transformation GDP level. In addition, during these years many structural problems were successfully solved (e.g. the bad loans problem in the banking system[6]) and major economic disequilibria avoided (only in 1996 a regularly growing current account deficit appeared). However, when looked at from a closer perspective, it is easy to notice that these policies were not free from substantial weaknesses.

Before going further, let us point out that at that time, under the existing legal framework, inflation targets were ultimately approved by the government (i.e. NBP had no goal independence). However, in 1992 the NBP Act was amended leading to a considerable strengthening of the central bank's position. The Governor's term of office was fixed at 6 years (with one renewal permitted) and a precise list of conditions, non-related to monetary policy decisions, allowing for the Governor to be recalled was set. These changes reflected the influence of the late 1980s and early 1990s discussions in the European Community which led to the creation of the European System of Central Banks'

[4] Two important comments must be made here. Firstly, the 1989 NBP Act assigned a significant role to the Polish Parliament in the conduct of monetary policy (the Parliament accepted annual monetary policy guidelines prepared by the central bank) and in overseeing NBP activities. Secondly, in the spring of 1989, it was decided that a candidate for the position of the central bank Governor should be proposed to the Parliament by the President of the Republic of Poland. This latter mechanism, reinforced by the 1992 and 1997 new central bank legislation, has been very helpful in maintaining political balance surrounding the NBP until now.

[5] For the main events in the development of the exchange rate regime see Table 4 (Subsection 4.3.3.).

[6] For more see Polański (1995 and 2002).

Table 2 *Inflation and Money Supply Targets in Poland, 1990-97*

Year	Inflation[a]			Money supply (M2) increase		
	Target (per cent)	Actual (per cent)	Deviation (per cent)	Target (bn PLN)	Actual (bn PLN)	Deviation[b] (per cent)
1990	95.0	249.3	+162.4	4.1[c]	10.3[c]	+151.2
1991	32.0	60.4	+88.8	8.5	9.0	+5.9
1992	36.9	44.3	+20.0	12.7	15.0	+18.1
1993	32.2	37.6	+16.8	15.0	14.8	-1.3
1994	23.0	29.5	+28.3	15.5-16.9	21.4	+26.6
1995	17.0	21.6	+27.1	17.1	26.9	+57.3
1996	17.0	18.5	+8.8	23.0	30.5	+32.6
1997	13.0	13.2	+1.5	27.4-28.6	39.7	+38.8

[a] Consumer Price Index. December to December.
[b] When targets are expressed as ranges deviations are calculated relative to the closest margin.
[c] „Domestic money", i.e. M2 excluding foreign currency denominated deposits.
Source: National Bank of Poland and Central Statistical Office.

(ESCB) statute and the acceptance of the Maastricht Treaty (see Gronkiewicz-Waltz 1992, part 3, and Kokoszczyński 2004, pp. 253-254). Thus, without major exaggeration, it can be said that the EU's impact on Polish monetary policy has been visible since 1992.

Table 2 shows the NBP's inflation and money supply targets as stated in its annual monetary policy guidelines, the actual outcomes, and their percentage deviations from targets. These deviations exhibit a peculiar pattern: while with the passage of time the central bank was more and more precisely controlling inflation, it had serious problems with money supply control, which were especially palpable from 1994. On the one hand, money demand was increasing much faster than expected as an effect of growing confidence in macroeconomic policy, which resulted from relatively high central bank independence (much larger than in other transition countries) and declining inflation. On the other hand, money stock developments revealed the incompatibility between targeting money supply and stabilizing the exchange rate in a small open economy, which Poland has become during the first half of the 1990s (Polański 1998). Although in mid-May 1995 Poland replaced the pre-announced crawling-peg exchange rate regime with a crawling band system, the inconsistent trinity (or triangle) problem was more than evident for most of the decade. Obviously, sterilization of capital inflows had its limits[7].

This observation leads to more operational problems and the question of the transmission of monetary policy impulses. Central bank's market based instruments gradually gained importance. Although since the implementation of the 1989 banking reforms the NBP influenced the conditions on the inter-bank money market through a variety of refinancing credits and reserve requirements, administrative ceilings on credit growth were the main policy tool during the 1990-92 period (Wyczański 1993, pp. 29-30). Since the beginning of 1993 they have no longer been in place, and the NBP started to conduct open market operations[8]. However, as the economy was undergoing profound structural changes (resulting from privatization, creation of new markets, and the dramatic evolution in economic agents' behavior), so was the money demand function and the entire monetary transmission mechanism. Against this background, and having in mind that larger sectors of the Polish economy were still not working on market principles, it is not surprising that the central bank's instruments were to a large extent inefficient.

The 1997 events are a case in point. Already at the end of 1996 the central bank judged that the Polish economy was becoming overheated and, thus, that it needed a more restrictive monetary policy in order to put the current account deficit under control and to restore a more vigorous disinflation trend. In mid-December 1996 open market interest rates were increased and the following year reserve requirement ratios were raised twice, so that their average level approached 12 per cent[9]; NBP official interest rates were increased once as well. Despite this, bank credit, especially consumer credit, continued booming, threatening to disequilibrate the economy further. As on the fiscal side restrictive actions were not undertaken (1997 was an election year), the NBP resorted to an unorthodox action. In the last quarter of 1997 it collected deposits directly from the public in order to reduce the liquidity of the economy and domestic demand growth. This unusual action proved

[7] These limits to sterilization could be seen in two aspects. Firstly, in the above money supply control problems. Secondly, in the increase of costs resulting from sterilization operations (in 1996 and in 1998 NBP profit considerably declined leading to a reduction of its amount transferred to the state budget).

[8] For more on monetary policy instruments development see Ugolini (1996).
[9] One should bear in mind that obligatory reserves were not remunerated in Poland until May 2004.

to be relatively successful as it induced banks to increase retail interest rates. It also confirmed, however, that the functioning of the economy was still not fully market based and the powers of traditional monetary policy tools were limited. In spite of this, and taking into account other, earlier mentioned problems, it cannot be forgotten that in terms of inflation reduction, economic growth and central bank credibility building, the 1990-97 period was on balance a successful one.

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The first years of Polish transformation can be characterized as the time of building fundamentals for a well-functioning market economy. This was consistent with the so-called Copenhagen criteria of 1993, which set a list of general conditions for the Central and Eastern European countries wishing to join the EU. Nevertheless, such monetary and exchange rate policies as conducted in Poland in the 1990-97 period would have been also followed without the Copenhagen list, since building a workable market economy was Poland's priority. However, in particular in the area of legal design, the EU enlargement commitment and the implications of the creation of the EMU have been visible since at least 1992.

4. Inflation targeting period: 1998-2004

The two years of 1997 and 1998 witnessed deep modifications both at the legal and macroeconomic policy levels that led to important changes in Poland's monetary policy. Firstly, the new 1997 legislation, largely adjusted to the EU *acquis communautaire*, significantly changed the institutional framework for the conduct of macroeconomic policies. Secondly, the legal changes allowed in 1998 for a substantial redefinition of the way monetary policy was designed and implemented. Below we start with legal issues, as they were instrumental in the evolution of Poland's monetary and exchange rate policies.

4.1. The new legal framework for macroeconomic policy

The first half of the 1990s witnessed prolonged discussions on Poland's new Constitution and some other laws, among them the new NBP Act. Finally, the new Constitution of the Republic of Poland was accepted in a referendum in the spring of 1997 (*The Constitution...*, 1997). In the summer of the same year, the Sejm (the lower chamber of the Polish Parliament) passed the NBP Act (*The Act...,* 1997). Both documents are interrelated, although it is obvious that the Constitution covers a much wider spectrum of issues than the law governing NBP policies and its functioning. Below we summarize shortly both laws from the perspective of the topics covered in this paper.

Firstly, the Constitution has incorporated into Polish law, this being probably the only case when a constitution does so, two of the public finances Maastricht Treaty requirements. The Constitution's article 220 (paragraph 2) prohibits central bank financing of the state budget, while article 216 (paragraph 5) places a 60 per cent of GDP ceiling on public debt[10].

Secondly, the Constitution devotes a whole article to the central bank, formulating its mission and introducing a new decision-making structure in the conduct of monetary policy. These issues are further developed in the NBP Act. For the sake of brevity let us summarize them from the well-known perspective of the three dimensions of central bank independence.

As concerns personal independence both documents make it clear that monetary policy is to be conducted by a 10-person Monetary Policy Council (MPC), whose members cannot be charged by any allegations because of matters related to monetary policy decisions. Terms of office in the MPC are for six years and are not renewable, except of the position of NBP Governor, which can be renewed once.

Functional independence can be split into instrument and goal independence. As concerns the former, the NBP's right to conduct an autonomous interest rate policy has been maintained. The same can be said about the exchange rate decision-making process: similarly as under previous regulations, decisions on the exchange rate regime have to be made by the government with the advice and consent of the central bank, while current exchange rate policy is conducted autonomously by the NBP.

Essential changes, however, took place regarding goal independence. While the Constitution has defined the central bank's mission in broad terms as "responsibility for the value of Polish currency", it has also assigned the bank "the exclusive right (...) to formulate and implement monetary policy" (Article 227, paragraph 1). The latter means that the NBP enjoys full goal independence, and therefore – similarly to the European Central Bank (ECB) – autonomously sets monetary policy quantitative targets. As concerns the qualitative definition of its mission, the NBP Act repeats the Maastricht Treaty provision on the objectives of the ESCB.

Regarding NBP's financial independence, the 1997 legislation has broadened its scope relative to the

[10] It should be noted that according to the Polish law „public debt" is defined in a broader way than in the EU. The Constitution's article 216 (paragraph 5) reads: "It shall be neither permissible to contract loans *nor provide guarantees and financial sureties* which would engender a national public debt exceeding three-fifth of the value of the annual gross domestic product" (italics added).

earlier situation, because of the Constitutional prohibition of central bank financing of the state budget. However, few minor issues concerning the auditing of central bank books remained not harmonized with ESCB's standards[11]. It was only with the 2003 amendments of the NBP Act that the central bank's financial independence has been made fully compatible with the EU legislation[12].

Summing up, the 1997 legal framework was designed with respect to the important principles of the *acquis communautaire* and it has resulted in a framework for macroeconomic policy promoting stability culture. On the one hand, high independence of the central bank has been assured, whilst on the other, by introducing some of the public finances Maastricht Treaty provisions, fiscal rules stabilizing the economy have been transferred to Poland.

4.2. The *Medium-Term Strategy of Monetary Policy (1999-2003)*

The 1997 NBP Act became effective from the beginning of the following year. With some delay, in mid-February 1998 the MPC assumed responsibility for Polish monetary policy. In early June it announced that the NBP would adopt a new monetary policy strategy, i.e. direct inflation targeting (IT), and made public the inflation target for 1999. In mid-October 1998 a document entitled *Medium-Term Strategy of Monetary Policy (1999-2003)* was released outlining the details of new policies.

The *Strategy* was an important innovation in Polish monetary policy-making for at least two reasons. It presented in a comprehensive while at the same time in a concise way, a strategy to be followed by the NBP in a perspective of more than 5 years (IT was officially to be implemented at the beginning of 1999). It set the medium-term target for monetary policy as "to reduce inflation to below 4 per cent by the year 2003" (MPC 1998, p. 12), arguing that yearly inflation targets would be set separately in annual *Monetary Policy Guidelines*. For credibility reasons (but also due to some technical problems) end-of-year inflation targets were to be defined in terms of the Consumer Price Index, although there was concern that this might create problems resulting from the important role played by seasonal fluctuations and administered prices. On the exchange rate side the *Strategy* advocated a smooth evolution toward a floating exchange rate regime. The existing crawling band system was considered to be inflationary, and prone to speculative attacks.

The *Strategy* was also unique for another important reason. It was the first Polish official, policy relevant document, which set the domestic policy economic targets in terms of the EU accession, assuming a long-term, monetary union perspective[13]. In its introduction we could read that "Drafting the *Strategy* is (...) justified by the future integration with the European Union, since monetary policy will play a crucial role in the process of adjusting the Polish economy to the EU and later, to the EMU. Meeting the eligibility criteria for joining the monetary union directly depends on the monetary policy decisions" (MPC 1998, p. 4). The *Strategy* supported the government's self-imposed objective to make Poland technically ready to join the EU by the end of 2002, and it justified the need to adopt the new monetary strategy in terms of the euro challenge. It stated that IT "is the best policy approach at the time preceding Poland's accession to the EU and the EMU" (p. 10), stressed that the price stability Maastricht criterion called for inflation "not exceeding 3-4 per cent annually" (p. 4), and that the participation of the zloty in the Exchange Rate Mechanism 2 "should be preceded by a period of freely floating exchange rate" (p. 13)[14]. (The latter opinion relied on the argument that only market forces can provide meaningful information on the equilibrium exchange rate, which ought to be considered when setting the ERM 2 parity rate[15].) On the monetary policy instrument side, the *Strategy* stressed the need for further changes, particularly pointing out to the harmonization of reserve requirements, so as to make them compatible with the ESCB's rules.

4.3. Policy outcomes and implementation problems

As mentioned, officially the *Strategy* was implemented from the beginning of 1999. There is no doubt, however, that 1998 was an interim year. Not only was the *Strategy* announced and published in the course of the year, but also many policy decisions indicated that IT was being implemented (for details see in particular Subsection 4.3.3.).

Below we shortly analyze the effects of the policies followed since 1998. After that we cover in more detail two crucial aspects of monetary policy: interest rate and exchange rate developments.

4.3.1. Overview of policy results

Poland was not the first post-communist country to introduce an IT based monetary policy. The first one

[11] According to the 1997 NBP Act (Article 69) the Council of Ministers appointed a commission that audited and assessed the annual accounts of the bank.
[12] Since then the auditing of central bank's books is being conducted by an independent private auditor.
[13] Actually, in early 1997 the Ministry of Finance made public a document, which to some extent covered similar issues (Ministry of Finance 1996). However, it was not accepted by the government and – consequently – had a "semi-official" status, and was not policy relevant.
[14] All quotes from MPC (1998).
[15] See also Polański (1998).

Table 3 *Inflation and the Money Supply, 1998-2004: Targets, Reference Values and Outcomes*

Year	Inflation[a]			Money supply (M2) increase		
	Target[b] (per cent)	Actual (per cent)	Deviation[c] (per cent)	Reference[d] (bn PLN)	Actual (bn PLN)	Deviation[c] (per cent)
1998	9.5	8.6	-9.5	28.2-35.3	44.1	+24.9
1999	6.6-7.8[e]	9.8	+25.6	34.0-41.0	42.7	+4.1
2000	5.4-6.8	8.5	+25.0	38.8-47.9	31.0	-20.1
2001	6.0-8.0	3.6	-40.0	40.0-46.0	40.4	0.0
2002	3.0±1.0[f]	0.8	-60.0	–	–	–
2003	3.0±1.0	1.7	-15.0	–	–	–
2004	2.5±1.0	–	–	–	–	–

[a] Consumer Price Index.
[b] 1998-2003 targets are end-of-year, 2004 target is a continuous (ongoing) band.
[c] When targets and reference values are expressed as ranges deviations are calculated relative to the closest margin.
[d] During 1999-2001 money supply increases were considered as reference values.
[e] Initially set at 8.0-8.5 per cent, changed on 24 March 1999.
[f] Initially set at 5.0 per cent ± 1.0 percentage point, changed on 26 June 2002.
Source: National Bank of Poland and Central Statistical Office.

was the Czech Republic, which embraced IT one-year earlier (in December 1997). There was, however, another important difference between Poland and the Czech Republic. While in Poland the adoption of the new monetary policy was a smooth, gradual process, mostly motivated by the search for a more efficient policy framework, in the Czech Republic IT adoption was the direct outcome of the May 1997 currency crisis. Thus, Poland's experience differed from that of some other EU countries as well, where IT strategies implementation resulted from the abrupt collapse of monetary frameworks[16].

The gradual evolution to a new monetary policy regime and the fact that IT adoption was not forced by any dramatic event does not mean, however, that the economy was prepared for this type of policy. On the contrary, questions were soon raised "Is Poland ready for IT?" on the grounds that statistical linkages were not yet robust enough (Christoffersen and Wescott 1999). It is not therefore surprising that when evaluating the initial stage of IT implementation, other IMF analysts arrived at the conclusion that "Poland's short experience with IT has been somewhat mixed" (Schaechter et al. 2000, p. 52).

One could ask then: what strategy would be better for Poland? And here we arrive at the crucial issue: for a country with a quickly evolving institutional structure and with unshaped basic behavioral properties no monetary policy strategy was fully feasible (as for instance evidenced by Polish experience with monetary targeting and the Czech and Hungarian experience with exchange rate targeting). Therefore, we are inclined to think that IT adoption was the best policy option for Poland, but its implementation confirmed that it was not free from pitfalls either[17].

Table 3 confirms that IT was not implemented without problems in Poland. The annual inflation targets were always missed (what is more they were not only overshot as was the case in the previous period, but also undershot), and in the years 1999-2000 the only serious inflationary re-trend took place after 1989.

Obviously, the main underlying reason for these problems was the already signaled issue of the transmission mechanism, which had been creating difficulties in monetary management since the start of transition. The typical, well-described problem of "limited knowledge about the transmission process" (Bofinger 2001, pp. 73-74) was magnified by the rapidly transforming economic system and the lack of a long enough time series. Only more recent research suggests that Polish monetary transmission mechanism is becoming increasingly similar to the one existing in market economies, in particular these from continental Europe, although it is still much weaker than there (Kokoszczyński et al. 2002). The problem of the transmission mechanism became more pronounced with the adoption of IT as this strategy called for linkages between statistical variables allowing for medium-term, forward-looking decisions influencing

[16] Finland, Sweden, the United Kingdom (and to some extent Spain) introduced IT-based monetary policies as a result of the 1992-93 failure of the Exchange Rate Mechanism, which pulled down the exchange rate and monetary policy frameworks existing in these countries. See Schaechter et al. (2000, pp. 46-55).

[17] Further analysis in this paper, although concentrating on policy problems, as well as the fact that many other countries moved to IT (among them such EU accession countries like Hungary and, in some aspects, the Slovak Republic) supports our point.

price behavior for which control, under the new legal framework, the central bank has become solely responsible.

The unclear transmission mechanism and the resulting problems with its perception by monetary policy-makers created ground for sub-optimal policy decisions[18], especially in the presence of shocks of a different nature. And these were abundant at that time, the most important being: on the external front – the Russian crisis of 1998 and the increase of world oil prices during 1999-2000; on the domestic front – the reappearance of larger public sector deficits after 1998, particularly serious since 2001[19]. These shocks led not only to problems with inflation control, but also to further deterioration of the balance of payments' current account gap, which peaked at more than 8 per cent of GDP in the first quarter of 2000 (see Table 5 in Subsection 4.3.3.).

When analyzing interest rate and exchange rate developments in the next two Subsections we will return to these issues in more detail[20]. As of now let us only state that at the turn of the decade these developments resulted in a highly restrictive monetary environment, evident by very high interest rates (real retail interest rates of approximately 10 per cent) and an appreciating exchange rate[21]. Consequently, since September of 2000 inflation began to drop and in the course of 2001, under the new NBP Governor Mr. L. Balcerowicz, monetary policy started to be gradually relaxed. Since May 2002 the year-on-year CPI has been below 2.0 per cent leading the MPC to the judgment that disinflation finished and price stability has been achieved. Therefore, in June 2002 a revision of the annual inflation target took place[22] and – what is more important – there was a change in inflation target formulation. Initially, the NBP replaced annual inflation targets set in a declining manner by a horizontal inflation target in the form of the end-year range of 3 per cent ± 1 percentage point. This approach was developed in a policy document *Monetary Policy Strategy beyond 2003* (MPC 2003). It suggested (among others to the new MPC which has taken responsibility in February 2004) that since the beginning of 2004 monetary policy target should be defined as a CPI continuous (ongoing) target band of 2.5 per cent ± 1 percentage point.

The Polish IT framework experienced an interesting evolution. Until 2001 monetary policy was conducted in a framework, which reflected some similarity to that of the ECB. The way the NBP's Council set the medium-term inflation target ("inflation below 4 per cent") was akin to the original ECB's definition of price stability ("increase in the HICP (...) of below 2 per cent"[23]). Moreover, Table 3 shows that initially money stock increases played the role of reference values in the NBP strategy, which resembled some analogy to the monetary pillar of the ECB's framework.

Things changed in 2002. Money supply vanished as the reference value, while the process of inflation target reformulation gained momentum leading finally to its present form of the horizontal, continuous range. One cannot avoid hinting that the manner the NBP formulates its quantitative parameters moved away from the ECB's approach into the direction of what could be referred to as a "Bank of England approach". On the other hand, however, it should not be forgotten that the NBP, similar to that of the ECB, enjoys goal independence, which is not the case of the UK's central bank.

The 1999 and subsequent monetary developments showed that the new legal framework in which Polish monetary policy was conducted allowed for its highly restrictive stance. It conflicted with some short-term objectives of the government and different lobbying groups, proving at the same time that the Polish central bank had become a highly autonomous institution. Despite missing the annual targets, IT strategy helped reducing inflationary expectations, and monetary policy facilitated the reduction of external imbalances by curbing domestic demand. Of course, in this context, there is an unavoidable question about the price paid for these achievements. However, due to the above-mentioned problems with the transmission mechanism, there is no clear-cut answer to this question[24].

Figure 1 shows the evolution of Polish GDP and domestic demand from the first quarter of 1998,

[18] As evidenced, for instance, by the 1999 inflation target change in the course of the year (see note 'e' in Table 3).

[19] According to the Polish methodology (see part 2 of the paper for details) the consolidated public sector deficit (privatization revenues excluded) was of 2.6 per cent of GDP in 1998, of 3.2 per cent in 1999, of 3.1 per cent in 2000 and of 5.1 per cent in 2001.

[20] They are also analyzed, together with other questions (i.e. financial stability issues), in Polański (2000 and 2002).

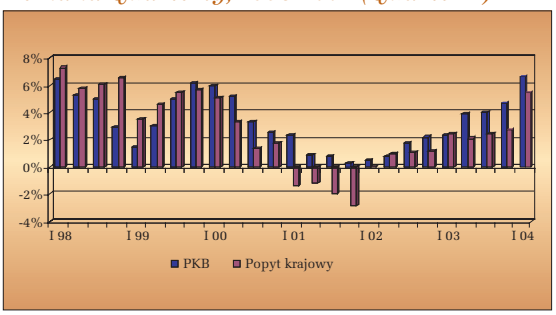
[21] See Figures 3 and 4 in Subsection 4.3.3. However, as the latter suggests, the evaluation of the direction and true magnitude of exchange rate fluctuations is strongly conditioned by the deflator applied when analyzing the development of the real exchange rate.

[22] See Table 3, note 'f'.

[23] See ECB (2004, pp. 50-51).

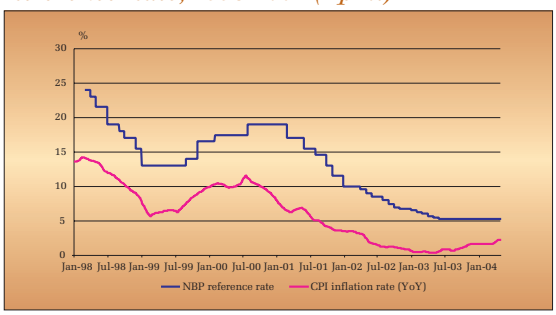
[24] Nevertheless it is worthwhile quoting in this context the results of research conducted at the Central Bank of Chile, which suggest that these policies might have involved considerable costs in terms of output. According to this research Poland displayed one of the highest implicit sacrifice ratios of restrictive monetary policy. The sacrifice ratio (understood as cumulative output loss over the cumulative reduction in inflation) for the 4-quarter horizon was estimated for Poland as almost twice higher than the average for 8 studied countries (Australia, Canada, Chile, Colombia, the Czech Republic, New Zealand, Poland, Switzerland), being clearly the highest among them. In the 8-quarters horizon Poland's sacrifice ratio was higher than in all but one country, remaining well above the average. In the 12-quarters horizon it approached, however, the average level. For details see Schmidt-Hebbel and Tapia (2002, pp. 9 and 41).

Figure 1 *Polish Real GDP and Domestic Demand Quarterly, 1998-2004 (Quarter 1)*



Note: Year-on-year percentage changes.
Source: Central Statistical Office.

Figure 2 *Year-on-Year CPI Inflation and NBP Reference Rate, 1998-2004 (April)*



Source: Central Statistical Office and National Bank of Poland.

suggesting that the deceleration of economic growth had started before the Russian crisis (August 1998). The loosening of monetary policy during 1998-99 helped in the temporary recovery of GDP growth. However, afterwards (from the fourth quarter of 1999) restrictive monetary policy must have had an impact on domestic demand, as despite increasing budget deficits, it began to grow slower than GDP. This led the current account imbalance to decline significantly (see Table 5), reducing the probability of a currency crisis, which – as the examples of some countries showed in the second half of the 1990s – could have resulted in a prolonged stagnation of the economy.

Looking at Figure 1 one should also not forget that in the first years of the present decade external developments have not been particularly conducive to Poland's growth. It must be noted, however, that during 2002-03 economic growth in Poland showed a revival that was not the case in some of her main trading partners: in 2002 Polish GDP increased by 1.4 per cent, while in 2003 by 3.8 per cent[25].

4.3.2. Interest rate policy

Both the adoption of IT strategy and the progress towards the floating exchange rate regime meant that over time interest rates have become the only important policy tool for the NBP. This has been additionally stressed by the further gradual harmonization of Bank's monetary policy instruments with Eurosystem's standards. In 1999 required reserve ratios were made uniform for all kind of deposits[26], considerably reduced since then (to the present 3.5 per cent level), becoming remunerated from the moment of Poland's accession to the EU. At the end of 2001 a standing deposit facility has been introduced, together with the already existing overnight lombard facility, leading to the creation of a corridor of interest rates within which short-term inter-bank money market rates fluctuate. With these and other steps of a more technical nature[27], the NBP's operational framework has clearly become more coherent with the Eurosystem's.

Thus, similarly as in the case of most modern central banks, monetary policy in Poland has become primarily an issue of interest rate setting. Taking into account NBP's changes of its base interest rate, four clear stages emerge in the period under consideration.

The first stage encompasses 1998 and most of 1999, i.e. the time of declining and relatively low inflation resulting from decisions that had been made before the MPC took power, the appreciating zloty, and the deflationary effect of the Russian crisis on Polish agricultural prices. From February 1998 to January of the next year, the NBP reference rate was lowered from 24 per cent to 13 per cent, while CPI inflation dropped from approximately 14 per cent to 6 per cent, thus implying a reduction of (measured *ex post*) real interest rates.

The second period covers the time from September 1999 until the end of 2000, i.e. the period of inflation reversal resulting both from the aforementioned external and internal shocks and the loosening of monetary policy, leading the year-on-year CPI to peak at 11.6 per cent in July 2000. Consequently, the MPC in several steps increased the reference rate to 19 per cent in August that year, increasing at the same time its real rate to approximately 10 per cent. Such interest rates

[25] According to the Convergence Programme GDP growth in 2004 is expected to be at 5.0 per cent (Republic of Poland 2004). European Commission's forecasts suggest a 4.6 per cent growth for Poland (EC 2004b, p. 89).

[26] There was, thus, still some difference with the Eurosystem's standard as it implies two different required reserves ratios of 2 per cent and 0 per cent. This continues to be so despite the fact that in mid-2004 the NBP introduced a 0 per cent required reserve ratio for repo transactions.

[27] In December 2001 the interest-free intra-day credit has been made available to banks as a settlement facility. Since 2002 regular, weekly open market operations have been conducted (before that they were implemented on an irregular basis), and since the beginning of 2003 the maturity of instruments applied in these operations has been reduced from 28 to 14 days. (In 2004, however, the ECB shortened the maturity of its main refinancing operations from 14 to 7 days. See ECB (2004, p. 80-81)).

were not sustainable in the longer run, especially that in August 2000 a disinflationary trend began, accompanied by a declining growth rate (Figure 1).

In February 2001 a new period in interest rate policy started – a period characterized by a long sequence of interest rate cuts. In less than two and a half years 20 interest rate reductions took place, leading in mid-2003 to NBP's interest rates in the range of 6.75 per cent (lombard rate) – 3.75 per cent (deposit rate), with the reference rate of 5.25 per cent. Since then these rates have remained unchanged, which suggests that a next stage in NBP interest rate policy has taken place.

The above changes in interest rates reveal some features of IT as implemented by the NBP, and some important aspects of monetary phenomena visible since transition has started in Poland.

Firstly, Polish IT was to a large extent backward-looking. This was a direct implication of an unclear transmission mechanism and the vague perception of its properties. It must be stressed, however, that as the monetary transmission mechanism seems to mature, attempts have been made to reduce the degree of backward-lookingness on behalf of a more forward-looking decision-making (i.e. as evidenced by the unchanged interest rates since June 2003 given the prospects of some inflation revival due to the gradual closing of the output gap).

Secondly, until 2000 the MPC had a tendency to implement large changes in interest rates, while since the start of 2001 an increasingly cautious approach in this respect can be observed. Clearly, this modification has to be linked to the change in the position of the NBP Governor which took place at the turn of 2000 and 2001.

Thirdly, active interest rate policy of the IT period does not contradict one puzzling aspect of Poland's monetary developments: contrary to the experience of most other economies, real interest rates are permanently at high levels in Poland. This is even more puzzling, if we realize that the period of strong economic growth (most of the second half of the 1990s) was accompanied by very high (on average) rates. Obviously, this could be explained to some extent in terms of monetary policy pre-emptive actions and lags. Such interpretation, however, would neither be fully consistent with our observation about backward-looking nature of monetary decision-making (which was also a characteristic of the pre-IT period), nor would it explain the permanent prevalence of high real interest rates.

Two major explanations, to some extent interrelated, have been offered to rationalize this puzzle. The first stresses that Poland faces a structural imbalance between savings and investments, reflecting low propensity to save and high investment needs of the economy, which results in high real rates (and the current account gap). This explanation was very popular in the second half of the 1990s (Orłowski 1999). However, with a sharp decline in investment activity, smaller external imbalances and lower nominal rates, it has lost its appeal.

In the last years we observe an attempt at a broader interpretation of the real rate puzzle, an attempt which is at the same time more closely linked to IT decision-making. A hypothesis stressing the concept of the natural interest rate has been advanced. In an OECD report, the natural rate assumed in the Taylor rule for Poland was estimated in the range of 5-7 per cent for the 1998-2001 period (OECD 2002, p. 43). Research conducted in Poland, based on data for 1997-2002, suggests that the average natural rate (interpreted as a real interest rate at which inflation rate is stable) oscillates between 4-6 per cent (Brzoza-Brzezina 2003). When interpreting the latter results, the following explanations seem plausible: high productivity growth and strong household's preference for consumption (high intertemporal discount rate) (Brzoza-Brzezina 2003), and the persistence of strong inflationary expectations at the time of disinflation coupled with increasing fiscal deficits. Both estimates clearly show that the Polish natural rate of interest is much higher than in stable, advanced economies, where they are usually estimated in the range of 2-3 per cent[28].

As it is the case with any investigation focusing on unobservable variables, such research outcomes can be questioned. Nonetheless, by stressing that high interest rates may result from structural characteristics of the economy, this approach suggests that before adopting ECB's monetary policy it is necessary to deepen the knowledge of structural factors underlying monetary developments in Poland.

4.3.3. Exchange rate developments

Since 1990 the exchange rate regime in Poland has passed through a long evolution from an administratively fixed exchange rate system of the IMF stabilization program to the present pure float. The IT period was decisive for the final elimination of NBP's interventions in the foreign exchange market. For more details of the process see Table 4 and Figure 3.

With the benefit of the hindsight, it can be easily proved that the gradual floatation of the zloty was a success story – almost unique in international dimension (Eichengreen 2002, pp. 100-111). It was a smooth process that had two important outcomes. First, it created

[28] New research by the above quoted authors (Brzoza-Brzezina 2004; OECD 2004, chp. 2) suggests, however, that the natural rate of interest for Poland might have slightly declined recently. Estimates of the natural rate for the US can be found in Blinder (1998, pp. 34-35) and Laubach and Williams (2003), while for the euro zone in Crespo-Cuaresma et al. (2003).

Table 4 *Calendar of Poland's Exchange Rate Developments, 1990-2004*

Date	Event
Administratively fixed exchange rate regime (January 1990 – October 1991)	
1 January 1990	Zloty fixed to the US dollar (0.95 PLN = 1 USD)
17 May 1991	Zloty fixed to a basket of 5 currencies (USD – 45 per cent, DEM – 35 per cent, GBP – 10 per cent, FRF and CHF – 5 per cent each) and devalued against USD by 14.4 per cent
Crawling-peg regime (October 1991 – May 1995)	
14 October 1991	Crawling peg introduced (monthly rate of crawl: 1.8 per cent) with a formal fluctuation band of ±2.0 per cent and NBP's margin of ±0.5 per cent
26 February 1992	Zloty devalued against the basket by 12.0 per cent
27 August 1993	Monthly rate of crawl: 1.6 per cent; zloty devalued against the basket by 8.0 per cent
13 September 1994	Monthly rate of crawl: 1.5 per cent
30 November 1994	Monthly rate of crawl: 1.4 per cent
16 February 1995	Monthly rate of crawl: 1.2 per cent
6 March 1995	NBP's margin increased to ±2.0 per cent
Crawling band regime (May 1995 – April 2000)	
16 May 1995	Fluctuation band increased to ±7.0 per cent; NBP intervenes in the foreign exchange market both directly[a] and indirectly[b]
22 December 1995	Revaluation of the central parity rate by 6.0 per cent
8 January 1996	Monthly rate of crawl: 1.0 per cent
26 February 1998	Monthly rate of crawl: 0.8 per cent; fluctuation band increased to ±10.0 per cent and reduction of the scale of direct foreign exchange interventions
17 July 1998	Monthly rate of crawl: 0.65 per cent
31 July 1998	Final abolition of direct interventions on the foreign exchange market by NBP
10 September 1998	Monthly rate of crawl: 0.5 per cent
13 October 1998	Public commitment by the MPC to float the zloty at a future date (press conference at which the *Medium-Term Strategy of Monetary Policy (1999-2003)* was presented)
29 October 1998	Fluctuation band increased to ±12.5 per cent
1 January 1999	New currency basket (EUR – 55 per cent, USD – 45 per cent)
25 March 1999	Monthly rate of crawl: 0.3 per cent; fluctuation band increased to ±15.0 per cent
7 June 1999	Abolition of fixing transactions (indirect interventions)
Floating exchange rate regime (since April 2000)	
12 April 2000	Formal introduction of the floating exchange rate regime

[a] Direct interventions were typical, market-based central bank interventions.
[b] Indirect interventions resulted from the NBP's legal obligation to effect foreign exchange transactions with commercial banks during fixing sessions.
Source: Own compilation based on the National Bank of Poland's information.

conditions that additionally protected Poland against a typical speculative attack, which was likely, given the size of the current account deficit and the pronounced interest rate disparity between Poland and other countries.

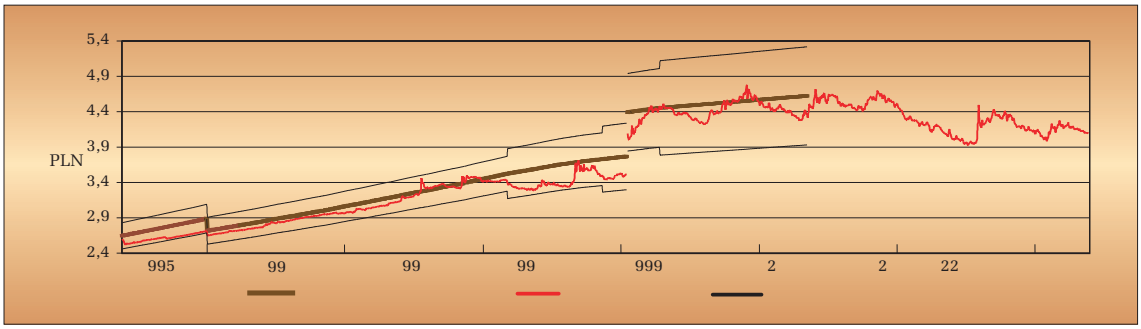
Table 5 shows that there were also other factors preventing a speculative attack from happening, in particular the noticeable role of foreign direct investments (FDIs) in financing the current account deficit (another important factor being low short-term external indebtedness, partly resulting from the preservation of administrative controls for short-term capital flows until September 2002). However, as confirmed by Figure 3, the gradual floatation of the zloty allowed for the emergence of an important stabilizing mechanism. Since the middle of the second half of the 1990s, the floating exchange rate proved to be a self-correcting device, which acted as a shock absorber when shocks of a different nature were taking place[29].

Increased freedom achieved by monetary policy was the second important outcome of exchange rate floatation. Over time, monetary policy-makers could increasingly concentrate on domestic developments when setting interest rates, paying less attention to international interest rates differentials.

Poland has not suffered from "fear of floating" and clearly benefited from the flexibility of the exchange rate regime and the pure float. However, many observers claimed that by floating, the zloty had been allowed to

[29] It is worthwhile stressing P. Krugman's opinion that a floating exchange rate can act as a self-correcting mechanism only when investors consider a country as having a „solid" economy (Krugman 2000, pp. 108-110). Habib (2002) presents econometric evidence showing that during 1997-2000 the exchange rate played a role of a shock absorber in Poland (contrary to the situation in the Czech Republic and Hungary).

Figure 3 *Zloty Basket Exchange Rates, 1995-2002 (April)*



Note: The "fixing rate" is a close approximation of market exchange rate developments. (All data underlying the graph refers to developments of "basket" magnitudes, i.e. of the composite of 5 currencies (1995-98) or 2 currencies (since 1999). See Table 4.)

Source: National Bank of Poland.

appreciate too strongly, especially in the period until 2002. To consider this assertion let us have a look at Figure 4.

It is easy to notice that using different deflators to calculate the real exchange rate leads to very different outcomes. When the CPI is considered strong appreciation results, whereas when unit labor costs are applied stability or even depreciation of the real rate is obtained. The latter outcome was often used to argue that zloty's nominal appreciation of the early years of the present decade was offset by the productivity growth of Polish manufacturers resulting mostly from the strong investment activity of the second half of the 1990s, stimulated to a large extent by an inflow of FDIs. This offsetting mechanism seems to be confirmed by the fact that despite the nominal appreciation of the exchange rate, the Polish exports sector was performing relatively well, being one of the factors behind the reduction of the current account deficit after 1999[30]. Obviously, more recently, the increased international value of the euro, coupled with the weakness of the zloty resulting from Poland's fiscal and political problems, added positively to these tendencies.

Such observations lead to the well-known Balassa-Samuelson hypothesis implying that the real exchange rate appreciation in catching up countries is an equilibrium phenomenon and should not be a major concern for policy-makers (IMF 2002). Polish research on the Balassa-Samuelson effect, based on the 1995-2002 data, suggests that its role in the CPI can be estimated in the magnitude of 1-2 percentage points annually (Chmielewski 2003). This is consistent with another study, which shows that the effect under discussion in 5 EU accession countries (the Czech Republic, Hungary, Poland, the Slovak Republic and Slovenia) did not exceed 2 per cent per annum (Kovács 2002)[31].

These studies also argue that such factors as price liberalization and other structural reforms influenced inflation and exchange rate developments. Therefore, we face here a similar situation as was the case with the estimates of the natural rate of interest. Since research on the equilibrium real exchange rates largely refers to unobservable variables, the results of the

[30] The other factor being the deceleration of imports growth resulting from economic slowdown.

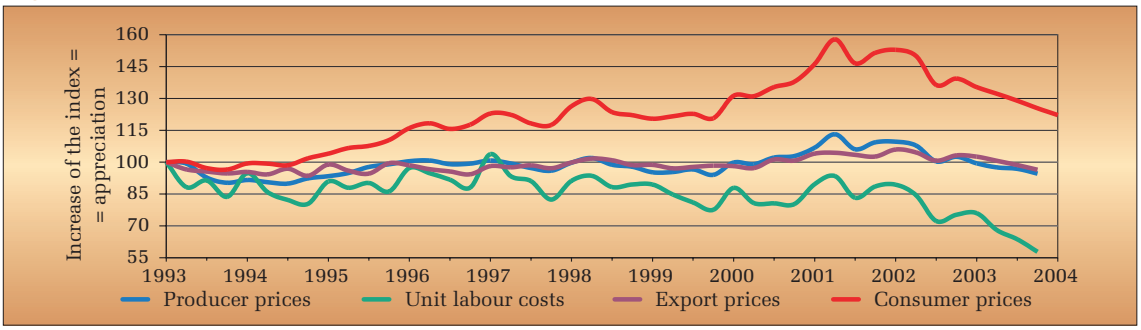
[31] For similar estimates see CEPS (2002) and Mihaljek and Klau (2003).

Table 5 *External Imbalances and Safety Indicators, 1996-2003*

Year	Current account to GDP (per cent)	Foreign official reserves (months of imports)	FDIs to current account deficit (per cent)
1996	-1.0	6.6	202.7
1997	-3.0	6.4	70.8
1998	-4.3	7.5	74.8
1999	-7.6	7.5	55.9
2000	-6.3	8.0	82.2
2001	-3.9	7.7	96.9
2002	-3.6	7.5	54.9
2003	-1.9	7.0	92.1

Note: Balance of payments on a cash basis data.
Source: National Bank of Poland and Central Statistical Office.

Figure 4 *Real Effective Exchange Rate of the Zloty, 1993-2004 (Quarter 1)*



Source: National Bank of Poland.

Balassa-Samuelson effect estimates can be easily questioned. What is crucial, however, is that they again point out to long-term structural factors underlying monetary phenomena in Poland. This is not without important consequences (discussed in part 2 of the paper) for the nominal convergence process which must take place before Poland's accession to the euro zone.

5. Final remarks

EU membership and euro adoption has been present in the minds of Polish policy-makers and economists for most of the post-communist transition period. Since 1989 Poland's policies have been increasingly geared towards EU accession, although initially some of them were implemented not because of EU accession *per se*, but because Poland was transforming her economy into a market one. Obviously this was the case with the 1989 banking reforms, the 1990 economic program or the policies followed towards the solution of the bad loans problem in the first half of the 1990s.

Poland relatively soon incorporated important elements of the *acquis communautaire* in her legal and institutional system. The impact of discussions surrounding Maastricht Treaty adoption was visible already in the 1992 amendments to the NBP Act. Since the beginning of the second half of the 1990s a growing interest in euro area membership has been clearly observed. Consequently, the 1997 laws marked a breakthrough in adopting the EU-compatible macroeconomic legal framework.

As concerns inflation control gradual convergence has taken place since the early 1990s, but inflation convergence has become an explicit monetary policy goal only since 1998. Nonetheless, despite the considerable progress achieved with respect to inflation differentials reduction, in everyday monetary policy decisions EU neighborhood was felt only indirectly – through interest rate disparity and external demand influencing net exports (Kokoszczyński 2002, p. 212).

When looking retrospectively to the described above monetary and exchange rate developments two more issues are worth stressing.

Firstly, the Polish experience suggests that at a more advanced stage of inflation reduction, long-term structural factors are increasingly important for nominal convergence. Thus, the latter will become increasingly subject to real convergence developments. These will have an important impact on further reforms to be implemented in Poland and the timing of her euro zone accession.

Secondly, although by the end of the period under consideration Polish inflation fully converged to the rates prevailing in the euro area, marking an important success for monetary (and the whole economic) policy, exchange rate evolution cannot be equally evaluated. In spite of the fact that Poland clearly benefited from the free-float mechanism, such an exchange rate regime is nevertheless incompatible with the Maastricht Treaty envisaged road to euro adoption (ECB 2003, EC 2004a).

After EU accession and during preparations for the euro zone membership the harmonization of macroeconomic policies will be a major challenge for Poland. In the next part of the paper we will elaborate in more detail on these topics and their implications.

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