

A Critical Review of Unilateral Euroization Proposals: The Case of Poland

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I Introduction

The severity of recent exchange rate crises, their unpredictability and their tendency to easily spread from one country to another have given a new impetus to the long-standing and always controversial debate on exchange rate policies and regimes. In the course of this debate, there has been growing support for the view that in the increasingly integrated world economy, intermediate exchange rate regimes are intrinsically prone to disruptive speculative attacks and exchange rate crises regardless of the development of economic fundamentals. This being so, the only feasible exchange rate regimes are thought to be the so-called corner solutions, i.e. either free floats or rigidly fixed regimes (currency boards, unilateral adoption of a foreign currency, monetary union).²⁾

Although this stance has remained rather controversial,³⁾ it has managed to prompt some countries to reconsider their exchange rate strategies. In Argentina, which operates under a currency board, the government publicly pondered, in early 1999, the idea to officially dollarize the economy. Later on, however, this option was dropped again, at least for the time being. In March 2000, Ecuador officially decided to adopt the U.S. dollar as the country's legal tender, after having faced capital flight, a banking crisis and severe recession.

However, the debate has reverberated beyond the confines of Latin America, also reaching a number of transition economies in Central and East Europe. This fact, along with the successful introduction of the common European currency, has also contributed to the emergence of several voices, in particular from academia, encouraging these countries to unilaterally adopt the euro.⁴⁾ At first glance, this idea may be tempting for one or the other accession country of Central and Eastern Europe, in particular if it is (mis)perceived as a feasible and available shortcut to monetary integration with the euro area.

The European Union, in turn, has made it very clear that unilateral euroization does not constitute a viable option for the monetary integration of candidate countries. The firm position of the European Union is that the way to the eventual adoption of the euro for the candidate countries is a sequential one. Integration will proceed in three steps, namely first accession to the European Union, subsequently participation in the exchange rate mechanism of the EU (ERM II) and finally entry into the euro area. Adoption

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2 *See e.g. Mundell (1999) or Dornbusch and Giavazzi (1999). Eichengreen (1994) as well as Obstfeld and Rogoff (1995) are two important precursors proclaiming the demise of intermediate exchange rate regimes.*

3 *For an opposite view see e.g. Frankel (1999), Mussa et al. (IMF, 2000).*

4 *In the Central and Eastern European EU accession countries, most of the discussion has taken place in Poland and Estonia. Moreover, the issue has been discussed for the Western Balkans, and the Deutsche mark was introduced in Kosovo as a de facto legal tender in the fall of 1999 and in Montenegro as a parallel legal tender in December 1999.*

of the euro will be possible after the fulfillment of the Maastricht convergence criteria and the convergence examination procedure laid down in the EC Treaty.

Moreover, on initiative of the European Commission, the ECOFIN Council of the European Union explicitly stated in November 2000 that “any unilateral adoption of the single currency by means of ‘euroization’ would run counter to the underlying economic reasoning of EMU in the (EC) Treaty, which calls for the eventual adoption of the euro as the end of a structured convergence process within a multilateral framework. Therefore, unilateral ‘euroization’ would not be a way to circumvent the stages the Treaty provides for for the adoption of the euro.” The Eurosystem (the ECB and the national central banks participating in the euro area) fully shares this position.

The proponents of unilateral euroization¹⁾ have argued that successful market-oriented reforms and the perspective of EU accession make candidate countries increasingly attractive to foreign investors. This induces substantial capital inflows, which exerts upward pressure on the nominal exchange rate. The resulting strong appreciation of the real exchange rate impairs the competitive position of domestic companies, and consequently leads to a high current account deficit. This makes the economies of the candidate countries extremely susceptible to potential reversals of capital flows and thus to currency crises. The advocates of euroization argue that neither monetary nor fiscal policies can keep these developments in check. By raising interest rates, monetary policy may cause a further appreciation of the nominal exchange rate and an even more pronounced deterioration of the current account, whereas a reduction of interest rates may fuel inflation. Fiscal policy may also prove to be ineffective, since a tightening of the budgetary position designed to eliminate or contain external instabilities may make a country even more attractive to foreign investors, thus further inducing capital flows. Fiscal expansion may, in turn, stimulate aggregate domestic demand, making the current account even worse, and increase the probability of capital outflows, with all their negative consequences. Finally, imposing capital controls to contain financial inflows may be impossible, since the free movement of capital is one of the main prerequisites to enter the EU.

The second main argument of the advocates of unilateral euroization is that the accession countries would experience high growth rates driven by very dynamic productivity advances. Under such circumstances, the accession countries would find it very hard to reduce inflation to low levels, as required by the EC Treaty for the (eventual) entry into the euro area. Reining in inflation would require sizeable nominal appreciation, which would, in the presence of some nominal rigidities, harm the competitive position of these countries. Unilateral euroization, maintain its proponents, would help to avoid this supposed trap.

While the issue of unilateral euroization has induced quite a bit of intellectual ferment in the past one-and-a-half years, its economic implications have not been fully explored yet. In particular, there is a need to draw a real-

¹ See e.g. Rostowski (1999).

istic picture about the economic implications a unilateral euroization move would have and to confront the widely contended advantages with the often underrated risks, drawbacks and dangers of such a policy move. The analysis will therefore complement those lines of argumentation which are mainly based on institutional and EC Treaty-related considerations.

In this paper, the primary focus is on Poland, and this is so for a number of reasons. First, Poland is the biggest accession country, and thus its policy moves may well have tangible repercussions in and for the whole of Central and Eastern Europe. Second, Poland has experienced a high current account deficit in recent years. Even if there appears to be no immediate risk of currency turmoil,¹⁾ this external imbalance constitutes a major challenge for policymakers. Third, the discussion about unilateral euroization has been more vigorous in this country than in most other accession countries.²⁾ At the same time, like elsewhere in Central and Eastern European accession countries, the proponents of unilateral euroization have not garnered substantial official or public support for their propositions. In fact, Poland moved from a wide-band crawling peg exchange rate regime to a float in April 2000, while continuing to rely on the direct inflation targeting strategy that it had followed since the beginning of 1999.

It should not go unnoted that the analysis of the economic effects of a hypothetical unilateral euroization move poses considerable conceptual problems. Costs and benefits cannot easily be offset against each other, as they are partly of a macroeconomic and partly of a microeconomic nature and as, moreover, both short-term and longer-term factors will be at work. Moreover, they are interrelated and can only partly be quantified with some degree of certainty or plausibility. The aim of this study is modest in the sense that it tries to gauge orders of magnitudes of particular effects, while neglecting, in most instances, the interplay between these individual effects. While the study is careful about “adding up” different types of effects, it nevertheless aims at arriving at an overall assessment of how suitable the unilateral euroization proposals are.

The paper consists of four sections and is structured as follows. Section 2 concentrates on the potential benefits unilateral euroization might have for Poland, while section 3 reviews the drawbacks of such a policy move. In doing so, outright costs and potential risks will be discussed. The final part contains a short summary and the main conclusions of the study.

Before exploring these issues further, the technical feasibility of a hypothetical unilateral euroization move has to be touched upon briefly. The main technical precondition for euroization is that official international reserves cover the monetary base (currency in circulation including vault cash and commercial bank reserves at the central bank), which would have to be

1 While current account deficits in the present order cannot be sustained in the longer run, the standard indicators typically employed to assess short-term vulnerability are quite solid (*M2/official reserve ratio 257% in March 2000, official reserve/short-term foreign debt ratio 345% at the end of 1999*). Poland's sovereign ratings have been stable, and Standard & Poor's even raised its sovereign rating for long-term foreign obligations of Poland from BBB to BBB+ in mid-May 2000.

2 See Rostowski and Bratkowski (1999 and 2000); Orłowski, Rybinski (1999); Rosati (1999); Wójcik (1999); Wójcik (2000); Lutkowski (2000); Kowalewski (2000); Gomulka (2000).

exchanged for euro.¹⁾ In the case of Poland, foreign exchange reserves are quite substantial and, from a purely technical point of view, unilateral euroization would thus seem possible. At the end of 1999 gross official reserves amounted to USD 25.5 billion, twice the size of the monetary base (M0).²⁾ Even after such a hypothetical unilateral euroization move, the Polish authorities would still retain half of their foreign exchange reserves.³⁾

2 The Potential Benefits

The main benefits that are claimed to be associated with unilateral euroization are lower interest rates, higher monetary stability in terms of low inflation and a reduction of transaction costs and of exchange rate volatility, which could positively influence foreign trade, and finally a potentially catalytic role of euroization on structural reforms. This section goes through these issues in turn.

2.1 Reduction of Interest Rates

According to the proponents of euroization, the most “tangible” advantage of unilateral euroization would be a rapid and substantial reduction of Polish interest rates. The argument goes as follows: The risk premium in domestic interest rates is usually assumed to consist of two components, the currency risk and the default risk. Euroization would effectively reduce currency risk almost to zero, and hence, *ceteris paribus*, the overall risk premium in domestic interest rates could substantially diminish. The risk premium would be reduced only to the extent that it is not related to nondevaluation default risk, which would clearly continue to exist. Based on this line of reasoning, one may quantify the potential fall in interest rates and its potential influence on both economic growth and the fiscal position.

During the last three years, the risk premium on Polish domestic interest rates has varied substantially and on average stood at 7.1%, as figure 1 shows.

A rough approximation of the default risk may be presented as the spread of Poland’s dollar-denominated eurobond over the comparable U.S. Treasury bond.⁴⁾ The development of the default risk is depicted in figure 2, which shows that on average it stood at about 1.4%.

At first glance, the average values for the overall interest rate premium and for the default risk in the period May 1997 to October 2000 seem to imply that, *ceteris paribus*, the fall in the domestic interest rates resulting from euroization could amount to approximately 5 to 6 percentage points. This would represent a considerable reduction in nominal and also in real terms.⁵⁾

1 Obviously, this could only be done after euro banknotes and coins are officially introduced in the euro area.

2 Compared to broader monetary aggregates, official foreign exchange reserves slightly exceeded narrow money (M1) and amounted to 40% of broad money (M2). All these ratios did not change tangibly during the first nine months of the year 2000.

3 It is worth noting that the presented ratios have been calculated at an actual exchange rate at the end of the year. Obviously, authorities could choose another conversion rate, which could change the final results. However, the room for maneuver would be limited by the need to preserve equilibrium in the economy.

4 This represents the default risk on Polish foreign currency-denominated securities, which is taken as a proxy here for the risk of default on local currency-denominated debt.

5 As of mid-2000 three-month interest rates in Poland stood at about 7% to 9% in real terms.

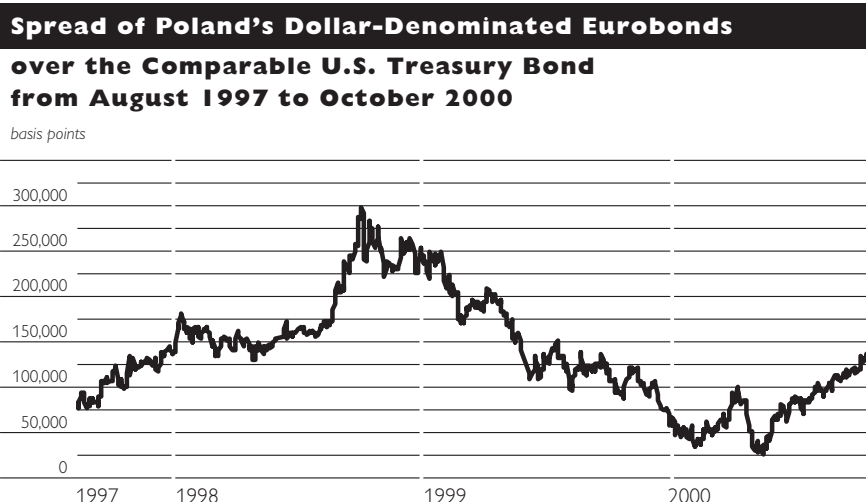
Figure 1



Source: National Bank of Poland, own calculations.

Note: The risk premia have been calculated on the basis of three-month money market interest rates less the expected depreciation of the currency less the three-month foreign interest rate. The preannounced depreciation rate under the crawling peg was taken as a proxy for expected depreciation, while for the floating-regime period which began in April 2000, the crawl rate in effect before flotation was retained unchanged. The foreign interest rate is a weighted average of anchor currency interest rates; for the period of floating, the weights of the foreign currencies were retained unchanged from the preceding period. Clearly, this measure is only a rough quantitative approximation, in particular with regard to capturing expectations, both under the wide-band crawling peg and even more so under the float thereafter (for an in-depth discussion of this issue see Darvas and Szapáry, 1999).

Figure 2



Source: Bloomberg.

However, several qualifications have to be added to these very simple and mechanistic calculations based on *ceteris paribus* assumptions.

First, the calculated impact refers to short-term interest rates. The impact on long-term interest rates does not have to be the same. A characteristic feature of transition economies, or more broadly, countries undergoing a credible disinflation process, is the inversed slope of the yield curves, which is opposite to the circumstances normally prevailing in euro area countries. Thus, inasmuch as euroization would produce a reduction of inflation (see below), the yield curve would not only shift downward, but it would also change its slope. This implies that, in a scenario of falling inflation, the reduction of medium- and long-term interest rates would be lower than that of short-term interest rates.

Second, default risk and exchange rate risk are interrelated in several ways. For instance, if the external debt of a given country and/or banking system liabilities are to a large extent denominated in a foreign currency (which is not the case in Poland)¹⁾, a substantial devaluation could impose a heavy financial burden on the fiscal deficit. In such a case relinquishing the possibility of devaluation could help to reduce sovereign risk. On the other hand, a devaluation may also prove beneficial for the domestic economy, spurring growth and improving the fiscal position, which could also lead to the reduction of sovereign risk.²⁾

Effects on GDP

By how much would the calculated fall in the interest rates spur Polish GDP? One way to approach this issue in a preliminary manner is to look at calculations of interest rate elasticities of investments and the possible effect of interest rate changes on GDP. Such calculations³⁾ suggest that a reduction of interest rates by 5 to 6 percentage points could increase Polish GDP by about 1.8% to 2.2%. It should be noted, however, that these results are based on a static model, so that the presented impact on GDP is of a one-time character. To estimate long-run effects, a dynamic approach would yield more suitable results. Moreover, euroization would presumably change the overall operational framework in the economy, and to a large extent affect economic agents' behavior, which could considerably influence the ultimate outcome.

Fiscal position

Lower interest rates would also have a positive impact on Poland's fiscal position, as the costs of servicing the domestic public debt would decrease. At the end of June 2000, the domestic debt of the state budget amounted to about PLN 143.7 billion, which represented about 20% of Polish GDP in 1999. If the average interest rate on the domestic public debt fell by 5 to 6 percentage points, fiscal expenditures would decrease by around 1.0% to 1.2% of GDP. These potential expenditure reductions would, however, not be achieved immediately. A large part of Polish domestic debt consists of fixed rate bonds, of which many are long and medium term. Besides, a portion of the domestic public debt is not fully market determined.⁴⁾

Would interest rates be poised to fall?

The question remains whether unilateral euroization would really represent a quasi "automatic" mechanism leading to a significant lowering of interest rates.

1 *As of the end of 1999, the total external debt of the Polish banking system amounted to only 7.9% of total banking liabilities, and the share of foreign currency deposits of the nonfinancial sector in total banking deposits to about 7.2% of total banking liabilities. At the same time Poland's total external debt amounted to about 41% of GDP, within which short-term external debt stood at 7% of GDP.*

2 *See Berg and Borensztein (2000).*

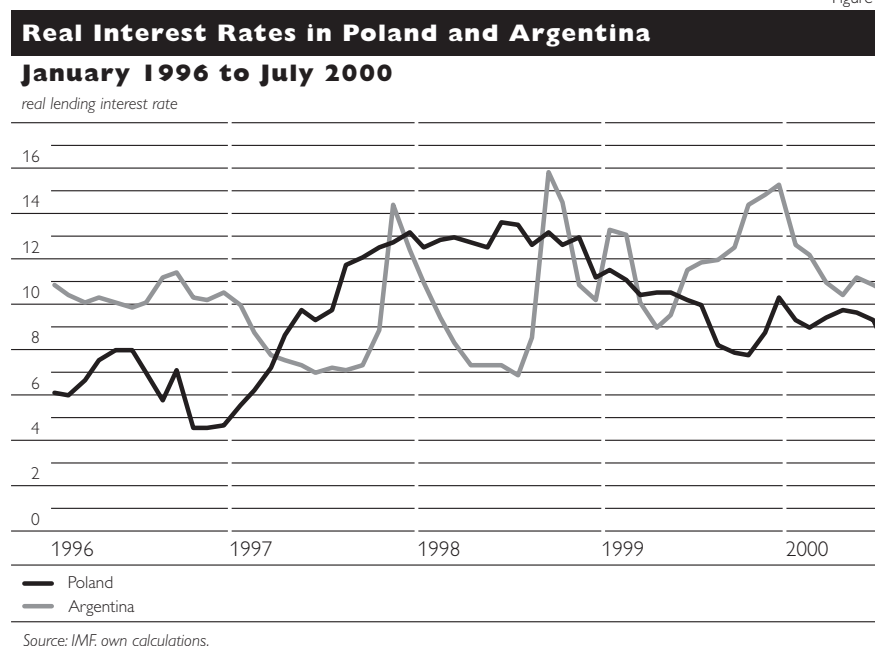
3 *See Fidrmuc and Fidrmuc (1999), and Backé and Fidrmuc (2000).*

4 *At the end of 1999, the share of "nonmarketable" debt was 11% of overall domestic public debt.*

One way to approach this question is to consider again that the calculated fall in interest rates was done under a strict *ceteris paribus* assumption. However, unilateral euroization may well invalidate this strong assumption, as it would bring about a complete regime change in the functioning of the economy. Unilateral euroization would “fix” short-term interest rates, which would be determined by the monetary policymaking process in the euro area. Second, it would fix the price of foreign exchange, i.e. the exchange rate. This would mean that if a disequilibrium between aggregate demand and aggregate supply built up in the economy, the entire adjustment would have to proceed through wages and prices, which often display downward nominal rigidities. At the same time, it should be underlined that unilateral adoption of the euro would not fix long-term interest rates, which would still be determined mainly by real factors, such as the propensity to save and the marginal productivity of investments as well as various risks, default risk probably being the most prominent of them. The crucial point here is that unilateral euroization, by raising questions about the smooth functioning of the adjustment mechanism when the effects of exchange rate misalignments and/or asymmetric real shocks persist, may add to the default risk, and thus to nominal and real interest rates. If external imbalances build up over time and if the adjustment mechanism indeed does not work properly, the risk premium will increase over time, since no country can accumulate foreign liabilities indefinitely without consequences in the form of higher borrowing costs. In other words, the fall in the exchange rate risk which clearly results from unilateral euroization may be partly or even fully offset (in an extreme case even overcompensated) by a rise in the default risk at subsequent stages.

A case in point is Argentina, which operates a currency board, while the U.S. dollar is widely used as a parallel currency. Still, real interest rates in

Figure 3



Argentina are at almost the same level as in Poland; at mid-2000, they stood at about 9% to 10% (see figure 3). Unlike in Poland, this is mainly due to high default risk, as currency risk, although rising recently, has been fairly low. The overall result in terms of interest rates is, however, very similar in both countries.

The issue of the interlinkages between default risk, exchange rate misalignment and external imbalances will be taken up again in section 3.2.2 and later in the study. Now, it is important to add that beyond the concrete developments in the real economy that may contribute to the increase in default risks, there are several factors which would cause a “structural” upward bias in the interest rates on credits advanced in a unilaterally euroized Polish economy. The most important reasons why this would be the case are the following:

First, a denomination of prices and wages in euro would still mean that international investors may perceive an economy as a separate and therefore probably less credible area. This is likely to make investors much more sensitive to the financial position of the country, especially if the fiscal position is not fully consolidated and transparent, as is the case in Poland. This would also add to the premium on interest rates.

Second, the lack of an effective lender of last resort (see below) may also add to financial fragility and, relatedly, to higher interest rates.

Third, it is not possible to completely rule out the devaluation risk, as a euroized country could, at least theoretically, always reintroduce its currency. A non-zero probability of such an exit option would probably be discounted by investors and reflected in domestic interest rates.

Moreover, the assessment of country risk would also be affected by the degree of political and general public support the unilateral euroization move would be able to garner. Poland has achieved a considerable level of macroeconomic stability and has been the most successful transition economy in Central and Eastern Europe in terms of GDP growth performance. Therefore, it is unlikely that society would be willing to accept any kind of extraordinary policy experiments involving the risk of derailing the dynamic catching-up process. The lack of a broad consensus both within society and the political elite could undermine the credibility of a hypothetical regime change towards a unilaterally euroized economy. This would add considerable uncertainty, which would have to manifest itself in a higher risk premium.

2.2 Reduction of Transaction Cost and Elimination of Exchange Rate Risk Volatility

A second supposed advantage of unilateral euroization relates to the claim that the elimination of exchange rate fluctuations as well as the reduction of transaction costs could provide a more favorable environment for international trade and thus for growth.

Reducing foreign exchange transaction costs

Foreign exchange transaction costs generally consist of two components: financial costs (bid-ask spread, commission fees, and other administrative

costs) and “in-house” costs – resources tied up in accounting and treasury departments to deal with foreign exchange management, payment delays and the like. The potential effects of unilateral euroization on financial foreign exchange transaction costs may be approximately measured as:¹⁾

$$T = p \frac{Y}{GDP} \quad (1)$$

where T denotes transaction costs (as percentages of GDP), p denotes the average charges for EUR/PLN conversion (expressed in percentages), and Y denotes the volume of EUR/PLN transactions.

The volume of EUR/PLN transactions may be estimated as a sum of Poland's gross flows of the current, capital and financial accounts of the balance of payments. As data on the currency structure of capital and financial transactions are lacking, the volume of EUR/PLN transactions is estimated here as the sum of Polish foreign trade of goods and services (exports and imports) with the euro area countries. If the average charges for EUR/PLN conversion are assumed to be 0.35% (which is the upper level of the European Commission's estimates of average conversion costs of current account transactions within the EU)²⁾, the foreign exchange conversion costs (their financial component) could amount to about 0.1 percentage point of Polish GDP annually.³⁾

Eliminating exchange rate volatility

It is much more difficult to calculate the impact of a reduction of exchange rate volatility on international trade than to calculate the reduction of foreign exchange transaction costs. Most of the literature states that the potential effect, if any, is not large, and that the reduction of currency fluctuations may have only small trade gains. However, in a recent paper, Rose (2000) finds that trade between common-currency countries is almost three times higher than between countries with different currencies. Furthermore, he finds that a common currency is not equivalent, as regards trade, to reducing exchange rate volatility to zero, which has a considerably smaller effect on trade creation than a common currency does. Lowering the standard deviation of the exchange rate around its mean by 1 would increase trade by close to 1.8%.

One may take Rose's (2000) findings as the upper limit of the potential trade gains. In doing so, unilateral euroization should be treated as a reduction of exchange rate volatility to zero, not, however, as corresponding to Rose's common currency variant, for the simple reason that unilateral euroization does not constitute a currency union and, moreover, that there is not even a common market between the euro area and Poland in the preaccession period.

1 See Anthony and Hallet, 2000.

2 Taking the upper bound of average costs appears justified, since the Polish banking system and financial institutions are relatively less efficient than their counterparts in the EU, and may therefore charge higher conversion costs.

3 The figure estimated by the EU Commission (1990) for the average European country is 0.4%.

In the period January 1997 to October 2000, the standard deviation of the PLN/EUR exchange rate around its mean amounted to 5.9. Based on Rose's findings, a reduction of exchange rate volatility to zero would imply an increase in Poland's trade with the euro area countries by about 10.5%. At the end of 1999, the GDP share of Polish trade (exports and imports) with euro area countries stood at about 27%. Thus, a calculated 10.5% increase in trade would raise the Polish openness ratio by about 2.7 percentage points.

How would this increase in openness add to the growth of Polish GDP? There is no consensus in the literature about the relationship between openness and growth. Some authors emphasize that this relationship is strongly nonlinear (e.g. Baldwin and Sbergami, 1999), which makes potential estimates very difficult and uncertain. On the other hand, Frankel and Romer (1999) find that growth is positively related to openness (as measured by the share of imports and exports in GDP), and that this relationship is relatively strong: They estimate that increasing the ratio of foreign trade to GDP by 1 percentage point raises income per capita by between 0.5% and 2%. Frankel and Romer's results, which again can be taken as an upper level, would indicate that – all else being equal – the calculated 2.7 percentage point increase in the openness ratio resulting from the elimination of exchange rate volatility could lead to a one-time rise of Polish GDP by between 1.4% and 5.4%.

Once more, it has to be added that the size of this effect is highly uncertain, as both the link between exchange rate stability and openness and the relationship between openness and growth are doubtful and contested in the literature. Therefore, this very uncertain effect should not enter any serious cost-benefit balance of unilateral euroization.

2.3 Low Inflation

In a certain sense, unilateral euroization can conceptually be treated as an anti-inflationary strategy akin to a fixed exchange rate. By adopting the euro, the domestic component of money supply would be eliminated by definition. At the same time, money supply growth would decelerate substantially, even though the rate of monetary expansion may typically remain above the euro area average due to capital inflows associated with the catching-up process. This slowdown in the growth rate of money supply would result in lower inflation. If inflation is inertial (as will be argued below), real money supply will be dampened further, with (temporary) negative effects on domestic demand and thus on growth and employment. On the other hand, greater monetary stability could improve business conditions in the domestic economy, making a country more attractive to foreign investors and leading to higher foreign investment.

2.4 Euroization as a Catalyst for Macroeconomic Discipline and Reform?

Finally, unilateral euroization, by imposing a straitjacket on the economy, could also play a catalytic role for fiscal prudence and structural reforms in transition countries.

However, these are only *potential* effects, and cannot be taken for granted. As Lebaron and McCulloch (2000) recapitulate Panama's experi-

ence, "... (the) dollar can indeed provide a stable monetary base for a country, giving it a low inflation anchor, but it cannot assure model policies to promote growth and development."

Furthermore, it seems that in the case of Poland (but also of other advanced applicant countries), the prospective integration into the EU already represents a very important stimulus for institutional and structural reforms as well as for macroeconomic prudence. It is highly indeterminate whether changes in the exchange rate regime and, in particular, euroization would add to the already existing powerful incentives for reform and sound macroeconomic policies.

3 The Drawbacks

3.1 The Costs

This section reviews the outright costs of euroization. These include forgoing seigniorage revenues and relinquishing the lender-of-last-resort function. Moreover, stabilization costs arise if unilateral euroization occurs in an inflationary environment.

3.1.1 The Loss of Seigniorage

One of the most apparent quantifiable costs that goes along with the demise of a currency is the loss of seigniorage revenues accruing from the issue of legal tender. While euro area countries which have introduced the euro according to the procedures foreseen in the EC Treaty participate in sharing seigniorage revenues that derive from issuing the euro, this clearly does not apply in the hypothetical case of unilateral euroization.

There are many definitions of seigniorage. In this study, seigniorage revenues are calculated as the annual change in the monetary base, which simply represents the actual wealth transfer the private sector has to make in order to receive base money from the central bank.¹⁾

Analytically, one can distinguish between stock and flow seigniorage revenues. The stock cost of seigniorage relates to the cost that is associated with the withdrawal of domestic currency from circulation and its exchange for the newly adopted foreign currency, utilizing official foreign exchange reserves. Thereby, the authorities would return to the public the seigniorage that had accrued over time.

The loss of stock seigniorage resulting from a hypothetical euroization of the Polish economy may be represented as a share of the monetary base in GDP. Between 1995 and 1999 the monetary base (M0) amounted to about 8.5% of GDP in Poland; at the end of 1999 it stood at 8.8% of GDP. This figure may be assumed as an approximation of the cost of the loss of stock seigniorage.

The flow cost, in turn, would be associated with the forfeiture of future seigniorage revenues. The loss of flow seigniorage can be calculated as the annual change in the monetary base as a share of GDP. In the period between

1 Berg and Borensztein (2000) show that the increase in the volume of the monetary base is equivalent to the resulting central bank profits in present-discounted-value terms.

1995 and 1999 the average change of M0 as a proportion of GDP in Poland amounted to 1.5%.

For the sake of precision, some observations should be added on the calculation of the figures presented. First, the formula used to calculate flow seigniorage revenues presupposes that there are no remunerated legal reserve requirements. If commercial banks, however, do earn interest on their obligatory reserves held at the central bank, the magnitude of seigniorage revenues is reduced by the amount of the remuneration. Up to now obligatory reserves in Poland have not been remunerated. However, this may change in the future, resulting in a change in seigniorage revenues.¹⁾

Second, the figures for seigniorage revenues presented above do not take into account the costs of money production. However, the costs of money production in Poland are very low, so they make no perceptible difference.²⁾

Third, the calculations do not take into account the operational costs of the central bank, as supposed unilateral euroization would not reduce them substantially. Moreover, as Poland will become a member of the ESCB when acceding to the European Union and, later on, after meeting the Maastricht convergence criteria and passing the convergence examination laid out in the EC Treaty, a member of the euro area and the Eurosystem, the country could not simply liquidate its central bank, as some dollarized countries have in which the central bank is virtually nonexistent.

To estimate this value for future periods, one has to make various assumptions about the time path of the monetary base, nominal GDP and the ratio of the monetary base to GDP.³⁾ This, however, would go beyond the scope of this study. An alternative approach is to take past magnitudes as an indication of future flow seigniorage revenues, at least for a time horizon of the next few years.

First, past revenues have been fairly stable in relation to GDP. Second, these figures are broadly in line with what empirical work on other countries would suggest. Several studies estimate seigniorage revenues in advanced economies to range between 0.5% and 1.5% of GDP. Cukrowski and Janecki (1998) find that, for the period 1993 to 1997, total gains from money creation in Poland amounted to around 2% of GDP annually.

Furthermore, it should be mentioned that the NBP has been steadily conducting open market operations since the mid-1990s, with the aim to limit the excess liquidity of the domestic banking system, stemming from the strong capital inflows and the simultaneous central bank interventions on the foreign exchange market to avoid an appreciation of the domestic currency. The costs of these operations have considerably reduced the amount of seigniorage revenues in the past years. The costs of open market

1 Up until September 1999, the following reserve ratios were in force: zloty demand deposits 20%, zloty time deposits 11%, all foreign currency deposits 5%. However, in September 1999 reserve ratios were lowered to 5% for all eligible deposits. The funds released due to the lowering of reserve requirements were used by 67 banks to purchase 6-, 7-, 8-, 9- and 10-year bonds issued by the NBP.

2 In 1997 (most recent data available), these costs constituted less than 2% of total expenditure of the National Bank of Poland, and about 0.001% of the flow seigniorage accrued in that year.

3 See Anthony and Hallet (2000).

Table 1

Open Market Operations in Poland as a Proportion of GDP¹⁾

	%
1997	0.79
1998	0.96
1999	0.46

Source: NBP, Central Statistical Office, own calculations.

¹⁾ In recent years, about 90% to 95% of all open market operations have been conducted by issuing NBP money market bills to contain the liquidity on the Polish money market.

operations have varied over time; in the period 1997 to 1999, they ranged roughly between 0.5% and almost 1% of GDP (see table 1).

The NBP has largely succeeded by now in eliminating the excess liquidity and, under the current floating exchange rate regime, there is much less scope for endogenous money creation through the foreign exchange market.¹⁾ Thus there will be less need to conduct sterilization operations in the future. This is important for gauging future seigniorage revenues. While falling inflation will presumably have a dampening effect on flow seigniorage revenues in the medium run, the phasing out of sterilization operations will, *ceteris paribus*, exert an upward effect on these revenues. In an overall perspective, this may produce fairly steady flow seigniorage revenues over the upcoming years.

3.1.2 The Lender of Last Resort

In a unilaterally euroized country, the monetary authorities cannot act as a lender of last resort, i.e. banks cannot ask the central bank for any rescue loans to avoid a crisis in the banking system. Such an arrangement can severely limit the room for maneuver for dealing with banking sector crises. This tends to be particularly problematic if the banking system, or some of its segments, are not yet fully strong and sound.

Poland is one of the few transition countries which has not experienced a banking system crisis during the transformation process. The country has made substantial headway in reforming its banking system, and a number of weaknesses in the sector have been removed or mitigated over the past ten years. However, although a lot has been achieved, the Polish banking system is still not fully developed and exhibits several inefficiencies. More concretely, the level of financial intermediation in Poland is still relatively low. Regulation of the sector is advanced, but enforcement is not yet fully ensured despite considerable progress. Bank privatization has proceeded far, but the sale of the last two remaining fully state-owned banks, Poland's largest retail banks, PKO BP and BGZ Bank, which are burdened by large amounts of nonperforming loans, is still at an early stage. Table 2 gives a short overview of some key indicators of the Polish banking system.

Some propositions are usually made on how to deal with not having a lender of last resort.

¹ The zloty was floated in April 2000, and there have been no central bank interventions on the foreign exchange market since. Indeed, the NBP had not intervened on the foreign exchange market in the two years before the flotation either while operating a wide-band crawling peg regime.

Table 2

The Banking Sector in Poland: Some Key Indicators

	1999
Combined balance sheet of credit institutions as a share of GDP	59.5
Total equity capital held by foreign investors, %	56.0
Ratio of nonstandard assets to gross claims of the nonfinancial sector, %	13.2
Average risk-weighted capital adequacy in the banking sector	12.4
ROA (net earnings to average total assets), %	1.0
ROE (net earnings to average core capital), %	14.2
Net profitability (net earnings/total expense), %	4.8
Cost/income ratio (total expense/total income), %	93

Source: National Bank of Poland, General Inspectorate of Banking Supervision.

First, this problem could be resolved by having the domestic banking system owned by foreign institutions. Foreign subsidiaries would generally be indifferent to whether euro transactions are made abroad or in the domestic economy, since their budget constraints would not be related to foreign exchange considerations, but to their overall balances.¹⁾ Hence, the foreign headquarters of international banks could provide funds to finance local operations if there is any shortage of resources.

Although the share of foreign ownership is significant in the Polish banking system (see table 6), the integration of the Polish banking sector with its Western counterparts is not yet complete, in particular because in a number of important cases foreign investors still do not possess majority shares in the banks and thus do not exert full control. It is therefore far from obvious that, at present, a foreign institution could effectively replace the central bank in exercising the lender-of-last-resort function.

Moreover, eliminating the central bank as a lender of last resort could give foreign banks operating in the respective economy a competitive advantage. While domestic banks would be cut off from emergency liquidity, foreign ones would not. This could build a certain asymmetry into the banking system, allowing domestic banks to be perceived as potentially more fragile and less attractive than their foreign counterparts. This, in turn, could lead to shifts of savings from domestically owned to foreign-owned banks, which could further aggravate the unevenness in the sector.

A second possibility, as put forward by Rostowski and Bratkowski (2000), could be the use of the remaining international reserves to create a special fund to be tapped if individual banks experience serious liquidity problems or during a systemic crisis.

As presented above, the foreign exchange reserves of the NBP are quite high in terms of balance of payments considerations, but at the same time, they are limited when one compares the amount of foreign exchange reserves that would remain at the disposal of the monetary authorities in the case of a hypothetical unilateral euroization to deposits in the Polish banking system. These remaining foreign exchange reserves would cover 56% of sight deposits (M1) and only about 20% of all deposits (M2) in the Polish banking system. Whether this would be sufficient to cope

1 This is essentially the case in Panama, one of the few long-standing instances of dollarized economies (see Moreno-Villalaz, 1999).

with a crisis depends on the nature and the scope of such turbulences. Of course, the reserve fund could be supplemented by opening euro-denominated credit lines at foreign private commercial banks. While this may of course enhance the system's efficiency and credibility, it would be at a cost, a cost which should be also taken into account when drawing an overall cost-benefit balance of a hypothetical unilateral euroization.

A third option would be to introduce high liquidity requirements with a view to reducing the banks' vulnerability to adverse changes in liquidity and profitability, thereby reducing the need for lender-of-last-resort mechanisms. This option, too, comes at a cost. The costs of financial intermediation would rise and thus have negative effects on investment and growth. While it is next to impossible to quantify these costs, they must not be neglected in an inclusive analysis.

In general terms, enhancing the effectiveness of the banking sector, improving its supervision and bringing regulation in line with international standards is of crucial importance. However, measures to this end should constitute a fundamental part of any policy package irrespective of the choice of exchange rate regime.

3.1.3 The Cost of Initial Monetary Stabilization

As argued above, unilateral euroization may have a dampening effect on inflation. While this would, in principle, be a welcome development, the associated (temporary) costs in terms of output and employment should not be overlooked.

In an economy which has experienced persistent inflation, inflation expectations are higher and more deeply entrenched than in countries with a low-inflation record. The presence of formal or informal indexation mechanisms, which are pervasive in the Polish economy, provides solid evidence of the existence of strong and presumably cemented inflation expectations. In fact, inflation in Poland is hovering around 10% and has exhibited a great deal of inertia over the past years. Under such circumstances, a move to an extremely tight pegged exchange rate regime may have highly contractionary effects.

The magnitude of this cost would primarily hinge upon how fast economic agents' expectations adjust, while other factors, e.g. structural characteristics, would also play a role. The speed of expectation adjustment, in turn, would depend on the credibility of the regime change. While it is difficult to assess the credibility of a hypothetical adoption of the euro, two points seem to be obvious. First, the unilateral nature of such a move can make it difficult to build up the necessary credibility very quickly. Second, the degree of credibility would depend closely on the accompanying measures that would be taken, in particular in the areas of fiscal policy as well as structural and institutional reform.

Against this backdrop, it is not very likely that expectations would change immediately, that inflationary inertia would disappear overnight and that low inflation would come at no cost. Moreover, there is ample general evidence that reducing moderate inflation takes time, and even

if fiscal policies are sound, inflation developments respond only gradually to a tight nominal anchor like a fully fixed nominal exchange rate.¹⁾

All this suggests that unilateral euroization does not constitute a miracle (costless) cure for an inflationary bias. The adjustment costs could still be substantial.

3.2 Risks

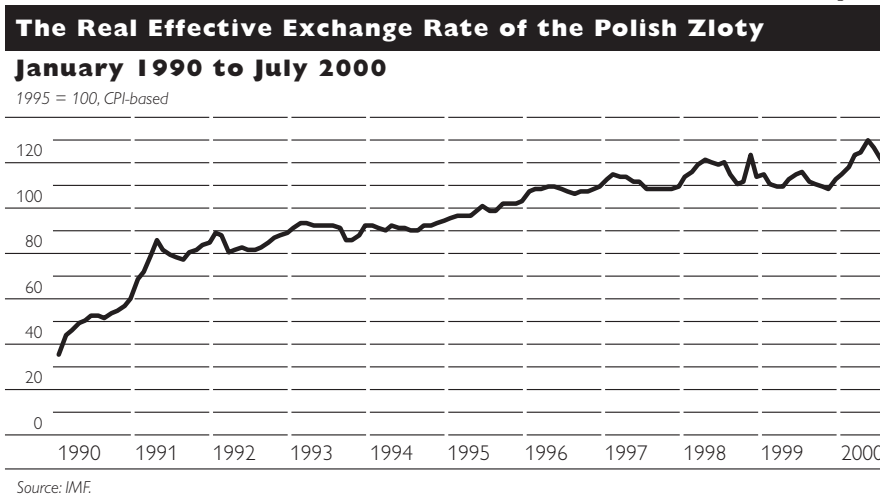
3.2.1 Real Exchange Rate Developments

in the Process towards Eventual Nominal Convergence

One of the arguments Rostowski and Bratkowski (2000) put forward in favor of euroization in Poland and other accession countries states that in the framework of a flexible exchange rate it will be very difficult for these countries to reduce inflation to low levels, as required by the EC Treaty for the eventual entry into the euro area. Rostowski and Bratkowski suppose that Poland will experience high growth rates driven by very dynamic productivity advances before and beyond EU accession. Consequently, meeting the Maastricht inflation criterion would require a rapid appreciation of the nominal exchange rate, which is said to be detrimental to an economy's competitiveness, as nominal rigidities would slow or limit the needed fall in the price of tradables and/or in the unitfactor costs of these goods. Under the Treaty provisions, a major adjustment recession would be needed to fulfill the inflation criterion and thus qualify for participation in the euro area. Along this line of argument, unilateral euroization would allow a country to avoid such a negative development.

However, this reasoning is not convincing. There no persuasive evidence that real appreciation will continue at the high speed witnessed during the past stages of the transformation process. If this basic presumption is relaxed, the situation turns out to be much less dramatic than suggested. Moreover, it should not be overlooked that the fulfillment of the Maastricht convergence criteria is an issue that will have to be tackled at a very advanced stage of the overall integration process, years after EU accession. From today's view-

Figure 4



1 See Sahay and Végh (1995), Krzak (1996).

point, there are no cogent arguments why Central and Eastern European countries should not eventually be able to qualify as successfully and smoothly for participation in the euro area as the incumbent catching-up economies of the European Union.

Undoubtedly, almost all Central and Eastern European transition economies have witnessed a substantial appreciation of their real exchange rates in the course of the last ten or eleven years. The Polish zloty does not constitute an exception. Between 1990 and the beginning of 2000, it appreciated by about 237% in real terms on a CPI basis (see figure 4).

The phenomenon of real exchange rate appreciation has usually been explained by the Balassa-Samuelson effect.¹⁾ Undoubtedly, productivity developments can explain a good deal of the observed pervasive appreciation of real exchange rates in Central and Eastern Europe. However, this is not the whole story. Moreover, it is far from obvious that real appreciation will continue at the same high speed in the next few years. Two considerations in this respect are important.

First, productivity developments at the beginning of the transition process have been influenced, to some extent, by specific factors that have made for one-off productivity growth. The main such factor is a better allocation of existing resources under the new economic system.²⁾

Second, not all of the real appreciation has been due to the Balassa-Samuelson effect. At the same time, real appreciation has, to a significant extent, also been attributable to sizeable devaluation and thus undervaluation at the onset of stabilization programs, which created room for a corrective appreciation later on.³⁾ Moreover, a fair share of the relative price changes resulted from the adjustment of the administrative prices of many utility services, such as energy, heating, rent and public transportation, which have been raised more progressively than nonregulated prices.⁴⁾

As these effects are likely to gradually fade, real exchange rate appreciation will probably slow down substantially in the years to come. This assertion is confirmed by the historical development of the Polish real exchange rate. As figure 4 shows, after initially shooting up, the pace of real

1 This effect results from differential productivity developments between tradables and nontradables, while wages develop uniformly across sectors and wage increases are driven by the productivity increases in the tradables sector. Consequently, nontradables inflation is higher than tradables inflation, leading to a trend appreciation of the (equilibrium) real exchange rate. However, the applicability of this concept to Central and Eastern Europe has been contested by some authors. Grafe and Wyplosz (1997) formulated the hypothesis of the Balassa-Samuelson effect in reverse, where an increase in labor productivity is a consequence of real appreciation, and not the driving force behind it.

2 See Gotz-Kozierkiewicz (1999). This phenomenon is known as the so-called "simple reserves." Productivity growth is achieved through better allocation of resources under the new economic system and not necessarily through upgrading of obsolete technologies. A closely related concept is the X-efficiency improvement concept, which refers to the difference between the actual production level and the maximum level of production, with a given stock of resources. For the application of this theory to the analysis of the transformation process, see e.g. Rosati (1998).

3 Grafe and Wyplosz (1997).

4 See Gotz-Kozierkiewicz (1999). This argument is closely related to the so-called cost-recovery hypothesis (see e.g. Koen and De Masi, 1997).

appreciation of the Polish zloty has been steadily decreasing over time, with the trend stabilizing in the last two years.

As a result, Poland may well be able to achieve inflation convergence without experiencing detrimental nominal appreciation, just like the catching-up economies of the European Union that have successfully managed to qualify for participation in the euro area without major turbulences.

3.2.2 The Monetary and Exchange Rate Policy Instrument

Another risk associated with euroization is the complete removal of monetary and exchange rate policy as tools of macroeconomic policy-making. At the same time, the monetary policy of the euro area will not take into account, not even at the margin, the economic situation in Poland.

Whether monetary policy can be used as an instrument to smooth cyclical fluctuations or not is controversial. A devaluation of the nominal exchange rate usually has only temporary effects on the real exchange rate and on international competitiveness. Moreover, a frequent use of the exchange rate instrument will influence inflationary expectations and therefore be even less effective in achieving even temporary changes in the real exchange rate and in economic activity. Furthermore, long and mostly uncertain lags of monetary transmission and their impact on the exchange rate, output and employment make the usefulness of this instrument even more questionable. The notion of the autonomy of monetary policy is also arguable. In the era of globalization, capital mobility increases substantially, and money becomes more and more endogenous. As a result, domestic interest rates are increasingly determined by external factors, and the room for maneuver of national monetary authorities is becoming ever narrower.¹⁾

However, even in the contemporary globalized world, monetary and exchange rate policy, provided they are generally credible, may still act as shock absorbers. Large, idiosyncratic real shocks require adjustments in the real exchange rate. If the nominal exchange rate is fixed, a large negative shock will require wages and prices to fall during the adjustment process. If wages and prices do not adjust instantaneously, the economy will experience a recession or at least a slowdown in growth. Unilateral euroization (and rigidly fixed exchange rates in general) may produce swings in countries' growth performance. In a comprehensive analysis, euroization should thus be presented in the context of the potential tradeoff between monetary stability and real variability.

The standard approach that is applied to analyze the feasibility of unilaterally adopting a foreign currency (and, more generally, a fixed peg) is the theory of Optimal Currency Areas (OCA theory). The OCA theory considers the adoption of a foreign currency beneficial and sustainable for countries exposed to the same shocks as the foreign country or currency area which has mechanisms for the adjustment to asymmetric shocks. According to the OCA theory, wage and price flexibility, factor mobility and/or fiscal

1 See e.g. Buiters (2000).

transfers are some such mechanisms.¹⁾ The smaller the exposure to asymmetric shocks, the less need there is to resort to such adjustment mechanisms. In order to lower the probability of asymmetric shocks, it is crucial that a country's foreign trade be highly integrated with the foreign country or currency area and that its exports be well diversified in terms of the structure of exported goods and services, which in turn will help foster business cycle synchronization.

At first glance, Poland does not seem to fulfill the OCA criteria sufficiently yet, although it has clearly made substantial progress over the past decade. The structure of the Polish economy still differs, in several ways, from that of the euro area and its members. Industry still accounts for a comparatively large share of GDP, whereas services are underrepresented; in terms of employment, agriculture takes a very high share. Unlike the other Central and Eastern European EU candidate countries, Poland is not a very open economy. In 1999, its exports amounted to only 17.6% of GDP, while overall trade stood at 47.5% of GDP; 56.8% of total trade is directed to euro area countries. The goods structure of exports has changed, as Poland has moved upwards in the international division of labor, but it is still fairly distinct from that of the euro area countries: Exports are still dominated by unprocessed goods, and the degree of diversification is still rather low.

Several studies have applied the OCA theory to Poland and other EU applicant countries from Central and Eastern Europe within a more formal analytical framework.²⁾ While these studies do not come to fully the same conclusions, Poland's economy does tend to be less in line, in overall terms, with the OCA criteria than some other advanced transition economies.

The inconclusiveness of these empirical studies calls for some caution and is indicative of the risks a premature unilateral adoption of the euro would involve for Poland. Against the backdrop of structural differences, the existence and smooth functioning of adjustment mechanisms to asymmetric shocks is very important. However, the Polish labor market is fairly inflexible,³⁾ which means that the major domestic adjustment mechanism is not fully functional. Cross-border movement of labor between Poland and the euro area does not exist either as an adjustment mechanism. Preaccession transfers from the EU budget will help foster structural convergence, which, in turn, will make asymmetric shocks less likely over time, but only gradually. Under these conditions, it could turn out to be very costly to relinquish the monetary and exchange rate instrument altogether ahead of time and without any genuine fallback or exit option.

1 *It is an open issue whether a high degree of cross-border labor mobility is also an important condition for the smooth functioning of a common currency area. It can be argued that the cross-border mobility of labor is less important if regional and intersectoral mobility of labor is coupled with sufficient wage flexibility.*

2 *See e.g. Boone and Maurel (1999), Frankel and Schmidt (1999), Cincibuch and Vavra (2000), Fidrmuc and Schardax (2000).*

3 *See e.g. Pujol and Griffiths (1996) and, more recently, ING Barings (2000).*

3.2.3 Exchange Rate Misalignment

Unilateral euroization, like any rigidly fixed exchange rate regime, involves the risk of exchange rate misalignment. In the case of unilateral euroization, this risk is aggravated by the lack of a standard exit strategy. Any lasting deviation of the real exchange rate from its equilibrium level will therefore very likely be costly in terms of interest rates, output and employment. This section examines three aspects which could lead to an appreciation of the exchange rate beyond its equilibrium level, namely an inertial appreciation of the exchange rate, demand-side factors and cost factors.

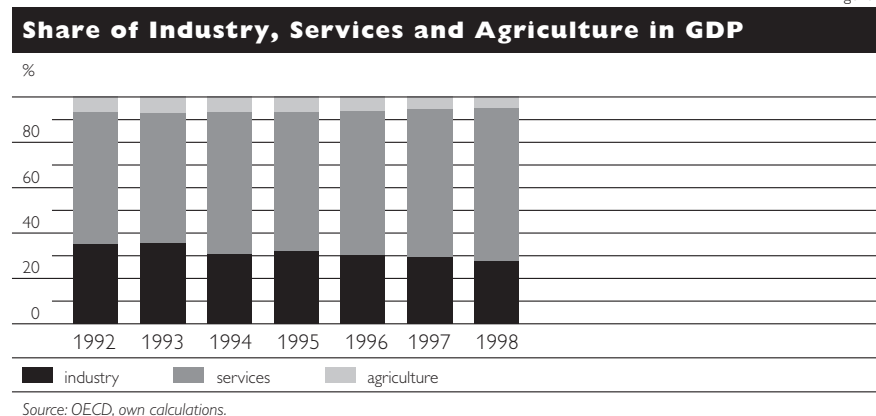
Inertial appreciation of the exchange rate

As mentioned above, euroization may cause inflation to fall. However, the disinflation process would, in all likelihood, not be accomplished immediately, as has been argued above. In the intermediate time period, an inertial upward shift in the price level and thus a real appreciation of the exchange rate would occur. Rostowski and Bratkowski (2000) argue that this problem could be resolved by an upfront devaluation of the domestic currency at the moment of conversion. However, fixing the exchange rate at a devalued level is not a convincing solution, as wage and price inflation would probably be more stubborn and difficult to contain.

Demand-side factors

Looking at past developments, one can observe that in Poland industrial output (industry can be taken as a proxy for the tradables sector) has declined as a share of GDP while the GDP share of services (a proxy for the nontradables sector) has increased continuously (see figure 5). This phenomenon has also been observed in other advanced transition countries (with the notable exception of Hungary), which suggests that supply-side factors and, in particular, the Balassa-Samuelson effect, have not been at work alone. Had this been the case, the share of the tradables sector in total output would have steadily risen, as higher productivity growth in the tradables sector would have had induced labor and capital to move out of the nontradables sector, reducing the supply of nontradables and increasing the supply of tradables (IMF, 2000).

Figure 5



In light of this evidence, it seems that the analysis should also take into account possible demand-side effects which can be important for exchange rate developments and the competitiveness of the economy.

In Poland and in many other transition countries, services, which account for the greater part of the nontradables sector, were underdeveloped and also underconsumed during the pretransformation period, even taking into account the lower income level in these countries. As transition began, consumption started to converge towards western patterns of higher shares of services in consumption. This fact is reflected in relatively high income elasticities of demand for services in Poland as well as the majority of other transition countries, as compared to western countries (see table 3).

Table 3

**Income Elasticities of Selected Services
in Poland, Germany and Austria in 1993**

	Poland	Germany	Austria
Gross rent	1.59	1.35	1.43
Fuel and power	0.87	0.77	0.77
Medical care	1.28	1.17	1.21
Purchased transport services	0.94	0.85	0.86
Communications	1.63	1.25	1.26
Recreation and education	1.14	1.14	1.15
Miscellaneous goods and services	1.34	1.27	1.21

Source: Podkaminer (1998).

Thus, increasing income levels in transition countries induce a shift in expenditure towards the nontradables sector and services in particular. These changing demand patterns then translate into a changing structure of the economy, and the share of services in overall output starts to increase.

This process is also very important for real exchange rate movements and the competitiveness of the tradables sector over time.

As demand for services surges, the price of services rises (in absolute and relative terms). This attracts new investment, which augments capacities in the sector. As capacities become larger, the relative price of services falls again. Besides, if supply is very flexible, firms may anticipate increases in demand and may make necessary investments in line with their expectations in advance. Thus, when demand materializes, the necessary capacity may already be there to meet consumers' needs. In this case, the impact of the shift in demand on actual prices is less visible in the behavior of relative prices (i.e. it does not have long-term implications on nontradables prices).¹⁾

Nevertheless, the internal terms of trade in the economy change in favor of the nontradables sector. In a two-sector economy, capital flows to the nontradables sector. If capital is scarce (a widespread problem in transition countries, where savings are usually too small to generate enough domestic capital), capital flows to nontradables are partly at the expense of the tradables sector, so that productivity developments in this sector are constrained. Under *ceteris paribus* conditions, this may then be reflected in a relatively weaker current account.

¹ A number of econometrics studies (e.g. IMF, 2000) confirm this.

A great part of investment in transition economies has been financed by foreign direct investment. Thus, the effect described above should manifest itself in a relatively large share of the nontradables sector in the sectoral distribution of FDI flows. In fact, in Poland, slightly more than half of the foreign direct investment made since the beginning of the transformation process up to the end of 1999 has been directed to the nontradables sector, which suggests the relative importance of this effect in this country.

FDI flows into the nontradables sector cause the exchange rate to appreciate in real terms, but they do not generate future inflows of foreign exchange, which will be needed to pay future dividends to the foreign owners. This means that the exchange rate appreciates beyond its equilibrium level; this is the exchange rate which ensures that the current account will be balanced in the long run.¹⁾

Table 4

**Distribution of Foreign Direct Investment in Poland,
as of December 31, 1999**

	Capital invested	Distribution
	USD million	%
Tradables (manufacturing and agriculture)	17.416	49.5
Nontradables	17.753	50.5
thereof: financial intermediation	7.861	
Trade and repairs	3.398	
Construction	1.930	
Transport, storage and communications	1.891	
Community, social and personal services	1.585	
Total	35.170	100

Source: PAIZ (Polish Agency for Foreign Investments).

The demand-side effect may simultaneously go through the labor market as well. Rising demand and prices in the nontradables sector boost this sector's business perspectives. As turnover and profits rise, wages in nontradables may increase to attract new labor. Assuming that the law of one price holds on the labor market, it may cause additional wage pressures in the tradables sector and as such influence its unit labor costs and/or profit margins, and thus its competitive position. As a further consequence, the lower return on capital in the tradables sector may stimulate a shift of investment out of this sector and towards the nontradables sector, which typically tends to be exposed to less intense competition and, in addition, sees swiftly rising demand.

Unilateral euroization may strengthen these demand-side effects further, as it would effectively eliminate exchange rate fluctuations (risk) and presumably facilitate access to foreign capital. Obviously, easier access to capital should be seen as an advantage, but there is a substantial risk that it could also lead to loose lending practices and a credit boom financing excess consumption activity.

¹ Panagiotis (1999) also stresses the importance of the sectoral distribution of FDI inflows for the real exchange rate and current account balance.

Cost factors

Other factors that may cause exchange rate overvaluation relate to cost-push inflation arguments.

First, there is still a need to free the administered prices of many goods and services or adjust them to cost-recovery levels. In many transition economies, these goods and services still constitute a large part of the consumer baskets that are used to calculate CPI indexes. The resulting inflation may lead to a real appreciation of the currency beyond the equilibrium exchange rate (Gotz-Kozierkiewicz, 2000).

Second, some goods from the nontradables sector may constitute inputs for the production costs of tradables. Thus, the rising price of such intermediate goods will, *ceteris paribus*, adversely affect the tradables sector by reducing profit margins, and hence the competitiveness of the economy.

Third, it cannot be excluded that wage developments in the tradables sector exceed productivity developments. Again, such rises in production costs will, *ceteris paribus*, adversely affect the tradables sector by reducing profit margins and hence will affect the competitiveness of the economy.¹⁾ In Poland, wage inflation led to a loss of competitiveness in the period 1992 to 1998, as Fidrmuc and Schardax (2000) show. The system of wage bargaining appears to be an important explanatory determinant for wage developments. Poland has an unorthodox mix of centralized and enterprise-level wage bargaining, which may facilitate wage inflation. On the other hand, wage dynamics have become much more moderate in 1999 and 2000. It remains to be seen whether this is evidence of a structural change in wage determination or only a temporary phenomenon.

The demand-side and cost factors depicted above call for retaining some flexibility in the exchange rate policy, at least for some time to come. This flexibility may allow Poland to mitigate output and employment losses resulting from a potential deviation of the real exchange rate from its equilibrium level.

3.2.3 Balance of Payments Concerns and Interest Rates

The Polish current account deteriorated sharply over the past few years. Recently, the deficit has come to about 7.5% to 8% of GDP. In the medium term, such current account gaps are not sustainable and corrective action will have to be taken, preferably fiscal measures and measures to foster corporate restructuring. While the currently high and mainly privatization-induced FDI flows provide for a certain breathing space and appear to ensure smooth financing, there is no room for complacency.

It is important to understand that unilateral euroization would not constitute a miracle cure for the external imbalances of the Polish economy. Unilateral euroization does not eliminate concern about current account deficits. A permanently unbalanced trade position does not lose its economic significance and may cause a structural deficit of aggregate demand, turning an economy into a constantly depressed region. In an extreme situation, a kind of hysteresis effect may even arise. Persistent deviation of actual output

¹ See Cincibuch and Vavra (2000), and Fidrmuc and Schardax (2000).

from capacity output may also reduce the latter, thus further weakening a country's position on international markets and its attractiveness for foreign investment. Argentina, operating under a currency board, constitutes a good example: an overvalued real exchange rate makes the country's production uncompetitive, while nominal rigidities forebode a lengthy and painful adjustment process. All this has a negative impact on Argentina's attractiveness as an investment target and forces whole industrial branches to leave the country.

The case of Argentina is, to some extent, a combination of exceptional factors.¹⁾ Such an extreme situation does not have to occur in a euroized Poland. However, in the case of Poland, a slowdown in economic activity may deliver some other threats: it could incite problems in the banking system and in the fiscal realm, which is already under strain. Such a combination of a current account deficit and the resulting fiscal problems would imply the necessity to accumulate foreign liabilities. This, in turn, may make the country more vulnerable to potential shifts in market sentiment.

Admittedly, unilateral euroization could stimulate deeper integration with international financial markets and promote easier access to foreign financial resources, which would probably facilitate the financing of potential external imbalances, making the problem less imminent. Authorities would be granted more room for maneuver and more time for corrective action. However, no country can accumulate foreign liabilities indefinitely without running into a debt trap. At some point, international investors will demand a higher premium, as the default risk rises. At this stage, the potential benefit of euroization from lower interest rates would be reduced or completely eliminated.

3.2.4 The Risk of Crisis

This issue is directly related to the problem of external crisis. The proponents of unilateral euroization argue that the unilateral adoption of the single currency would effectively insulate Poland from any speculative attack, as there would be nothing to speculate against. This is too good to be true. It is plausible that unilateral euroization would to a large extent protect an economy against currency crises which are driven by contagion unrelated to a change in underlying fundamentals. But it would not guard an economy against other crises, like recessions or banking crises, nor would it make an economy immune to swings in market sentiment and external crises in the form of sharp capital outflows. An unsustainable fiscal deficit or a weakening position of the private sector in general and the financial system in particular may still provoke investors to escape the country by selling off government securities or other domestic assets.²⁾

Capital outflows need not be induced only by foreign investors. Even stronger pressure may come from domestic residents, who may choose to

1 In the case of Argentina, one of the most important factors is the substantial appreciation of the U.S. dollar, to which the peso is nominally pegged, and the simultaneous drastic devaluation of the currency of the country's main trading partner, Brazil.

2 See Berg and Borensztein (2000).

invest their savings in international capital markets and in foreign banks abroad instead of at home. As recent cases of external crisis in many emerging economies have shown, such capital flight may be an important source of total capital outflows. This has also been evidenced by the cases of currency turmoil the Czech Republic and Slovakia experienced in 1997 and 1998, respectively. In a crisis situation, nothing can prevent the public from transferring all its liquid assets from domestic banks to foreign banks abroad (or to hoard cash in cookie jars).¹)

Another argument often advanced by the proponents of unilateral euroization is the ineffectiveness of macroeconomic policies, which would inevitably lead to a crisis situation in a non-euroized accession country. While the role of monetary and exchange rate policy issues has been dealt with at length in earlier sections of the paper, it is worthwhile mentioning that this line of argument is not persuasive with respect to fiscal policies either. This is especially true of fiscal tightening. Fiscal restraint will not necessarily, by making a country more attractive to foreign investors, induce capital inflows, by contrast to what Rostowski (1999) states. In fact, such a move is likely to lead to lower interest rates and thus to less attractive yields for foreign capital, which should reduce the upward pressure on the exchange rate. The question is which of these two effects will then dominate.

4 Conclusions

Unilateral euroization has been proposed by some academics as a solution to the alleged ineffectiveness of macroeconomic policies in the run-up to European Union accession and, furthermore, as a device to bypass the fulfillment of the Maastricht inflation criterion. The European Union, in turn, has made it very clear that unilateral euroization does not constitute a viable option for the monetary integration of candidate countries and that it would run counter to the underlying economic reasoning of EMU in the (EC) Treaty.

This study has attempted to shed some light on the economic issues involved and thus to contribute to the discussion, focusing on the case of Poland. The following main conclusions emerge from this study.

The often cited benefits of unilateral euroization are much less clear-cut than they would appear to be at first glance, while the costs and risks are considerable indeed. The most tangible effect of unilateral euroization would be a perceptible reduction of interest rates, perhaps on the order of 5 to 6 percentage points. While this effect may have a positive impact on growth and also on the fiscal balance, its magnitude would remain uncertain, both in the short run but even more so in the longer term. While unilateral euroization would reduce exchange rate risk substantially, an increase in other types of risk, in particular default risk, would probably mitigate these gains from the outset and, if imbalances built up over time and the adjustment mechanism did not function properly because nominal

1 In the case of euroization, economic agents would be able to transfer their money holdings to foreign banks abroad without any conversion costs. Unlike in any other regime, there would be virtually no opportunity costs of keeping money abroad. This may, in turn, add to the variability of capital flows.

rigidities persisted, risk premia would increase and could wipe out the initial benefits. Likewise, gains from lower interest rates in terms of GDP growth and the budget balance could well prove to be temporary.

Unilateral euroization would reduce conversion costs, but the gains are relatively minor. Whether the reduction of exchange rate volatility accompanying unilateral euroization would have positive effects on trade and whether trade gains, if they materialized, would feed into added growth remains a largely open question.

Whether inflation would be sustainably reduced is another unresolved issue. On the one hand, the slowing growth of money supply in the initial phase would dampen inflation. Moreover, if inflation is inertial, this would also inflict temporary costs on growth and employment. On the other hand, after the initial stabilization period is completed, inflation may accelerate above the average in the euro area, and may prove to be difficult to contain unless very tight fiscal policy is pursued.

Some analysts mention that unilateral euroization could act as a catalyst for macroeconomic discipline and reform. However, the perspective of EU accession already represents a very important stimulus for macroeconomic prudence as well as for structural and institutional change.

The clearcut costs of unilateral euroization are the loss of seigniorage (one-off stock cost: about 8.5%; flow cost: up to 2% of GDP annually) and the elimination of the monetary authorities' lender-of-last-resort function, which could have adverse consequences, as the Polish banking system, despite having made remarkable progress in the past decade, is not yet fully transformed and developed.

Exchange rate misalignment is another potentially grave risk that would be associated with unilateral euroization. Poland does not fulfill the OCA criteria sufficiently yet to do without a certain degree of nominal exchange rate flexibility. Inertial appreciation of the exchange rate, demand-side factors and cost factors may cause the exchange rate to deviate from its equilibrium level, a circumstance which might not be easy to correct under a hypothetical unilateral euroization. Moreover, unilateral euroization would effectively eliminate exchange rate risk and presumably facilitate access to foreign capital, which may be an advantage, but which also harbors the substantial danger of loose lending practices and a credit boom that would, in turn, finance excess consumption.

The risk of exchange rate misalignment appears to be particularly momentous against the backdrop of the already large current account deficit. Unilateral euroization would not constitute a miracle cure for the external imbalances of the Polish economy. In fact, it may facilitate the evolution of a structural deficit of aggregate demand, which would turn the country into a depressed region for a long time, just because of the minimal flexibility it leaves for corrective policy action.

A unilateral adoption of the euro is clearly premature for Poland both on institutional and economic grounds. At present, too early a unilateral adoption of the euro may prove to be a fairly crisis-prone arrangement, even if it does provide a certain protection against currency crises that are not related to changes in underlying fundamentals.

Finally, the main arguments advanced by the proponents of unilateral euroization are not convincing. Macroeconomic policies can be effective tools to cope with the policy challenges of preaccession. This is particularly true of fiscal policy. Furthermore, there are good reasons to believe that real appreciation will tend to lose speed as the catching-up process advances, so that the eventual meeting of the inflation criterion for participation in the euro area may turn out to be much less problematic than is sometimes argued.

In the final analysis, hypothetical unilateral euroization would be a risky venture for Poland, with no viable exit option in a crisis situation. This may delay the real convergence of the Polish economy, which in turn would rather slow than accelerate accession to the European Union and eventually preparation for full participation in Economic and Monetary Union.

References

- Anthony, Myrvin L. and Andrew Hughe Hallet.** 2000. Should Argentina Adopt the US Dollar: Center for Economic Policy Research Discussion Paper 2412, (March) London.
- Backé, Peter and Jarko Fidrmuc.** 2000. The Impact of the Russian Crisis on Selected Central and Eastern European Countries. In Tuomas Komulainen and Liikka Korhonen (eds.) Russian Crisis and its Effects. Helsinki: Kikumora Publications.
- Baldwin, Richard and Federica Sbergami.** 1999. Non-Linearity in Openness and Growth Links. Theory and Evidence. Graduate Institute of International Studies, Geneva.
- Berg, Andrew and Eduardo Borensztein.** 2000. The Pros and Cons of Full Dollarization. IMF Working Paper: WP/00/50. (March) Washington D.C.
- Buiter, Willem H.** 2000. Optimal Currency Areas: Why Does the Exchange Rate Regime Matter? Center for Economic Policy Research Discussion Paper 2366. (January) London.
- Bratkowski, Andrzej and Jacek Rostowski.** 1999. Zlikwidować złotego. In Rzeczpospolita. (March) Warsaw.
- 2000. Unilateral Adoption of the Euro by EU Applicant Countries: The Macroeconomic Aspects. Paper presented at the sixth Dubrovnik Economic Conference. (June) Dubrovnik.
- Cincibuch, Martin and David Vavra.** 2000. Towards the EMU: A Need for Exchange Rate Flexibility? Czech National Bank. mimeo.
- Council of the European Union.** 2000. Conclusions of the Council of Economics and Finance Ministers meeting on November 7, 2000. Section on exchange rate strategies for accession countries. <http://ue.eu.int/newsroom/main.cfm?LANG=1>.
- Cukrowski, Jacek and Jarosław JANECKI.** 1998. Financing Budget Deficits by Seigniorage Revenues: The Case of Poland 1990–1997. Center for Economic and Social Research Studies and Analysis. Warsaw.
- Darvas, Zsolt and György Szapáry.** 1999. Financial Contagion Under Different Exchange Rate Regimes. NBH Working Paper 1999/10. Budapest.
- Dornbusch, Rudi and Francesco Giavazzi.** 1999. Hard currency and sound credit: A financial agenda for Central Europe. mimeo.
- Eichengreen, Barry.** 1994. International Monetary Arrangements for the 21st Century. Brookings Institution. Washington D.C.
- European Commission.** 1990. One Market, One Money. European Economy.
- 2000. Enlargement Strategy Paper: Report on progress towards accession by each of the candidate countries. November 8. Brussels.

- Frankel, Jeffrey A.** 1999. No Single Currency Regime is Right for All Countries or at All Times. NBER Working Paper 7338 (September).
- Frankel, Jeffrey A. and David Romer.** 1999. Does Trade Cause Growth? In *American Economic Review*, 89 (3) (June).
- Fidrmuc, Jarko and Jan Fidrmuc.** 2000. Macroeconomic Development in the Czech Republic and the European Union Accession. *Prague Economic Papers* (3).
- Fidrmuc, Jarko and Franz Schardax.** 2000. More "Pre-Ins" Ante Portas – Euro Area Enlargement, Optimum Currency Area, and Nominal Convergence. *Focus on Transition*, Vienna: Oesterreichische Nationalbank (2).
- Gomułka, Stanisław.** 2000. Czy program oficjalny nie jest optymalny? In *Magazyn Finansowy*. (January) Warsaw.
- Gotz-Kozierkiewicz, Danuta.** 2000. Exchange Rate Policy in Transition Economies: Controversial View on the REER Developments. mimeo.
- 1999. Kurs walutowy a parytet siły nabywczej w gospodarce transformowanej. mimeo.
- Halpern, Laszlo and Charles Wyplosz.** 1998. Equilibrium Exchange Rates in Transition Economies: Further Results. Center for Economic Policy Research. (November).
- IMF.** 2000. The Impact of Productivity Differentials on Inflation and the Real Exchange Rate: An Estimation of the Balassa-Samuelson Effect in Slovenia. In *Republic of Slovenia – Selected Issues*. (February) Washington D.C.
- ING Barings.** 2000. Polish Economics – Capital and Money Markets Report. (June) Warsaw.
- Koen, Vincent and Paul Masi.** 1997. Prices in the Transition: Ten Stylized Facts. IMF Working Papers WP/97/158. Washington D.C.
- Kowalewski, Paweł.** 2000. Nie ma drogi na skrót. In *Magazyn Finansowy PG*. (January) Warsaw.
- Krzak, Maciej.** 1996. Persistent Moderate Inflation in Poland and Hungary. *Focus on Transition*. Vienna: Oesterreichische Nationalbank (2).
- Lutkowski, Karol.** 2000. Od złotego do euro. In *Magazyn Finansowy PG*. (January) Warsaw.
- Moreno-Villalaz, Juan Luis.** 1999. Lessons from the Monetary Experience of Panama: A Dollar Economy with Financial Integration. In *Cato Journal*. 18 (3).
- Mundell.** 1999. The Priorities for Completing the Transition and the Model for the Future. Paper prepared for the fifth Dubrovnik Conference on Transition Economies. June 23 to 25. Dubrovnik.
- Mussa, Michael, Paul Masson, Alexander Swoboda, Esteban Jadresic, Paolo Mauro and Andy Berg.** 2000. Exchange Rate Regimes in an Increasingly Integrated World Economy. IMF. (April) Washington D.C.
- Nuti, Mario D.** 2000. The Cost and Benefits of Euroisation in Central-Eastern Europe Before or Instead of EMU Membership. Paper presented at the sixth Dubrovnik Economic Conference. (June) Dubrovnik.
- Obstfeld, Maurice and Kenneth Rogoff.** 1995. The Mirage of Fixed Exchange Rates. NBER Working Paper 5191. (July).
- Orłowski, Witold and Krzysztof Rybiński.** 1999. Recepta na kryzys walutowy. In *Rzeczpospolita*. (May) Warsaw.
- Panagiotis, Liargovas.** 1999. An Assessment of Real Exchange Rate Movements in the Transition Economies of Central and Eastern Europe. *Post Communist Economies* 11 (3).
- Podkaminer, Leon.** 1998. Income Elasticities of Demand for Consumer Goods in Transition Countries. In *WIIW Monthly Report* 7.
- Pujol, Thierry and Mark Griffiths.** 1996. Moderate Inflation in Poland: A Real Story. IMF Working Paper WP/96/57. Washington D.C.

- Rosati, Dariusz.** 1998. Polska droga do rynku. PWE. Warsaw.
- 1999. Jeszcze nie czas na likwidację złotego. In Rzeczpospolita. (May) Warsaw.
- Rose, Andrew K.** 2000. One Money, One Market: The Effect of Common Currencies on Trade. In Economic Policy: A European Forum. Center for Economic Policy Research. (April) London.
- Rostowski, Jacek.** 1999. Adopting the euro. In Financial Times (August).
- Szapary, György.** 2000. Maastricht and the Choice of Exchange Rate Regime in Transition Countries During the Run-Up to EMU. NBH Working Papers (October).
- Wójcik, Cezary.** 1999. Zbyt wczesnie na wprowadzenie euro. In Prawo i Gospodarka. (June) Warsaw.
- 2000. Śpiesz się powoli. In Magazyn Finansowy PG. (March) Warsaw.