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The Role of the Exchange Rate Regime in Systemic Transition and Economic Integration. The Example Form Poland's Economy

Abstract. The choice of the exchange rate regime is one of the top issues in international economics. This article presents the evolution of the exchange rate regime adopted in Poland over a span of thirty years. It reviews the role of exchange rate arrangements in the transition process from a planned to a free-market economy, and during the membership in the EU. The main conclusion is that Poland actively adjusted the exchange rate system to its macroeconomic goals. Nowadays, a maintenance of free floating is determined by a lack of full economic convergence of the Poland's economy with the Eurozone countries, and a preference of Polish monetary policy for inflation targeting.

Key words: exchange rate regime, transition of Poland's economy, European integration, euro.

Introduction

The year 2019 was a time of celebrating two crucial events in the history of Europe. The first one related to the 30th anniversary of the fall of a socialist regime in Central and Eastern Europe, and the second one was the 15th anniversary of the big European Union enlargement. Both of these historical episodes entailed in far-reaching economic, political and social changes in Europe, as a whole. Thirty years that passed since the beginning of the systemic transition in Central and Eastern European countries, as well as a span of fifteen years of their membership in the European Union, had become occasions to review these events from a long-term perspective.

In 2004 eight European post-socialist countries joined the European Union. Complying with the EU regulations, the membership requires to fulfill several criteria, including a respect for the human rights and fundamental freedoms, a capacity of adoption of so-called “*acquis communautaire*”, and the rules of a free-market economy. In practice, the accomplishment of the EU admission requirements means the adherence to the rules of democracy and the implementation of high-quality institutions in public and private sector. A systemic transition that started in 1989 was a milestone in a process of the European integration. It enhanced a pivotal political and economic changes, that put post-socialist countries on the track of economic reforms based on the rules of democracy and free-market economy. Although, systemic reforms, including legal changes, like constitutional and business regulations, were introduced relatively fast, the real effects of the transformation revealed themselves in the subsequent years.

The aim of this article is to demonstrate how an exchange rate regime was used to support the systemic transition and integration processes of Poland's economy. The analysis of the arguments behind the choice of the exchange rate regime in Poland accounts for macroeconomic objectives, including monetary policy targets. The study covers the period between 1990–2019, i.e. since the implementation of the Balcerowicz's plan, till the latest available data. The evolution of the exchange rate regime in Poland over a span of thirty years allows to review its effectiveness in achieving macroeconomic goals, like stable prices, trade competitiveness and sustainable growth.

This article is divided into four sections. The first presents a brief overview of the classification of exchange rate regimes. The second section characterizes exchange arrangements introduced in Poland in the decade of the 1990s and analyses the reasons behind policy-makers' decisions on switching the regime of Polish currency from a hard peg to a free floating. Section three discusses arguments for keeping zloty in a free-float regime during Poland's membership in the European Union. Section four presents conclusions.

I. A classification of exchange rate regimes

The choice of the exchange rate regime is one of the top issues in international economics. Its relevance seems to increase in times of currency crises, balance of payments turbulences or when the new institutional arrangements, for example, a euro-zone, are established. Traditional approach to the exchange rate systems assumes that the choice is between fixing and floating. Such alternative is a useful simplicity, which underlines major features of these two extremes. In fact, a bi-polar classification helps to emphasize the differences between completely fixed and floating exchange rates, however it does not allow considering an option of any intermediate regime, like crawling pegs, pegs with horizontal bands, or managed floating.

According to the International Monetary Fund (IMF), the classification of the exchange rate arrangements should be based on the assessment of real exchange rate fluctuations and countries' de facto policies. In 1998, the IMF revealed that countries' declarations on their exchange rate regimes did not comply with what happened in practice, i.e. how policy-makers behaved in the forex markets. Since then, the economists have intensively elaborated the methods of exchange rate typology, that could range countries in terms of their real exchange rate arrangements. In this context, two key questions emerged: how to measure and aggregate the exchange rate flexibility, and how to establish the ranks of the exchange rates (Gosh et al. 2002, Shambaugh 2004, Levy-Yeyati and Sturzenegger 2005, Reinhart and Rogoff 2004). Implementing the rules of de facto classification, the IMF has revised the exchange rate regimes accounting for central bank's interventions and currencies flexibility. Table 1 presents the IMF classification of the exchange rate regimes, ranging from hard pegs, that comprise no separate legal tender and currency board, through soft pegs, like: conventional pegged and stabilized arrangement, pegged exchange rate with, crawling peg, crawl-like arrangement, to the market-determined exchange rates: floating and free floating.

Table 1 presents the IMF classification of the exchange rate arrangements in 2018. It covers 189 countries and three territories (Aruba and Curacao, Saint Martin, and Hong Kong). Looking at the broad categories we see, that soft pegs dominate (46.4%) over floating exchange regimes (34.4) and hard pegs (12.5%). Despite a prevailing popularity of soft pegs, it cannot be claimed that this system is universal. When the narrow categories are considered, the evidence reveals how countries differ in terms of the exchange rate arrangements. This evidence can be concluded with a quote of J. Frankel, who argued that "*no single currency regime is right for all countries or at all times*" (Frankel 1999).

Table 1. Exchange rate regimes in 2018

Exchange Rate Arrangement	Percent of IMF members as of April 30, 2018	Number of IMF members as of April 30, 2018
Hard peg:	12.5	24
No separate legal tender	6.8	13
Currency board	5.7	11
Soft peg:	46.4	89
Conventional peg	22.4	43
Stabilized arrangement	14.1	27
Crawling peg	1.6	3
Crawl-like arrangement	7.8	15
Pegged within horizontal band	0.5	1
Floating:	34.4	66
Floatig	18.2	35
Free floating	16.1	31
Residual: Other managed arrangements	6.8	13

Source: ANNUAL REPORT ON EXCHANGE ARRANGEMENTS AND EXCHANGE RESTRICTIONS 2018, International Monetary Fund, 2019.

II. Exchange rate arrangements in Poland's economy during the transition process

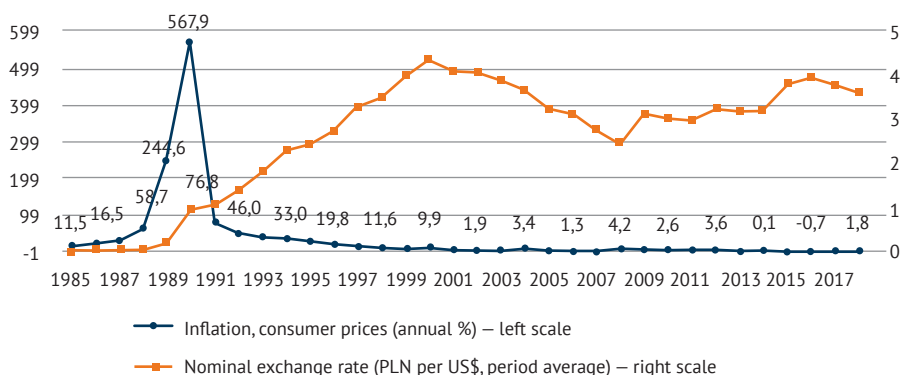
This section characterizes exchange arrangements introduced in Poland in the decade of the 1990s and analyses the reasons behind policy-makers' decisions on shifting the regime of Polish zloty from a hard peg to a free floating.

The transition from a centrally planned to a market economy resulted in new institutional and legal framework. It comprises a free access to the market, i.e. domestic agents were allowed setting up their firms and running business activity. Moreover, a removal of public subsidies and privatization of the state-owned enterprises increased market competitiveness. Another pivotal transition reform introduced market-determined prices of goods and services, that started to be set as a result of combination of a supply and a demand side factors. A characteristic feature of post-socialist countries were shortages in meeting consumer satisfaction. Price liberalization, associated with the abolition of trade and financial barriers, led to a sharp increase in inflation (figure 1). Higher prices resulted also from more expensive imports. As domestic supply shortages were met by foreign production, trade balance deteriorated and Polish currency depreciated. A substantial depreciation was caused by the so-called "run-out of money" syndrome, which refers to the domestic agent behaviour. As high inflation reduced real value of domestic

money, the households intensively exchanged the domestic weakening currency for a foreign one, regarded as safe and stable. Such behaviour is typical for high-inflated economies. When in 1990 a yearly rate of inflation reached almost 600% (figure 1), a radical therapy was introduced by Polish government. Its crucial element was a rigid fixing of the Polish zloty to the US dollar, which constituted a nominal anchor in monetary policy. On the one hand, this hard peg arrangement eliminated a substantial channel of inflation. On the other hand, fixing to the US dollar increased credibility of the National Bank of Poland, whose status inherited from the centrally planned economy, was rather poor. It was a consequence of a pressure from the socialist government to monetize public deficits.

Additionally, anti-inflation policy was supported by new regulations, including the Constitution of Poland, which was adopted in 1997. It provided legal rules which enforced the position of the National Bank of Poland by implementing the fiscal rule (art. 216), according to which public debt cannot exceed 3/5 of the GDP. Moreover, the new Constitution guaranteed a high level of independence to the central bank, i.e. the National Bank of Poland (NBP). Art. 227 stipulates that the NBP “has the exclusive right to issue money as well as to formulate and implement monetary policy”. The constitutional act enforced strategy of monetary policy by introducing provisions which stipulated that “The National Bank of Poland shall be responsible for the value of Polish currency” (art. 227 of the Constitution of the Republic of Poland). A primary objective of the Polish central bank strategy, which was price stability, as well as many other regulations on a banking sector, were embedded in the Banking Law Act enforced in 1997.

Figure 1. Rate of inflation and nominal exchange rate of Polish currency



Source: Data from OECD database

It should be noted, that hard peg to the US dollar was performed from January 1990 till May 1991. Despite a sharp decline in inflation in 1991, prices continued growing at the two-digit pace (Figure 1). Such trend was registered till the end of the 1990s. As prices grew, Polish products became less competitive and exports deteriorated. Under a fixed exchange rate regime, trade deficit could not be offset by nominal depreciation. Thereby, the National Bank of Poland realigned its currency by devaluating it against the US dollar. A devaluation by 46.2% was not enough to improve competitiveness related to the European trade partners, therefore Polish zloty was pegged to the basket of currencies composed of the US dollar (45%) and four European currencies: German mark (35%), British pound (10%), French franc (5%), and Swiss franc (5%). Moreover, the upholding two-digit inflation caused that hard peg was shifted to crawling peg with a 1.8% monthly rate of devaluation. A strategy of monthly devaluations (crawling exchange rate realignments) was continued till April 2000, when Poland shifted to free floating (Table 2).

Table 2. Evolution of the exchange rate regime in Poland

Date	Changes in exchange rate regime	Reasons justifying the changes in the exchange rate regime
January, 1990	Hard peg of the Polish zloty to the US dollar (1USD = 9500 PLN). Devaluation of PLN by 46.2%.	Anti-inflation policy. Fixed parity to the US dollar as a nominal anchor in monetary policy.
May, 1991	Fixed exchange rate of the PLN to the basket of 5 currencies (45% USD, 35% DM, 10% GBP, 5% FRF, 5% SFR). Devaluation of the PLN by 16.8%.	Growing prices and loss of trade competitiveness, trade deficit
October, 1991	Crawling peg with 1.8% monthly rate of devaluation	Loss of trade competitiveness, trade deficit
February, 1992	Devaluation of the PLN by 12%	Growing prices and loss of trade competitiveness
August, 1993	Devaluation of the PLN by 8%, reduction of monthly rate of devaluation to 1.6%	Growing prices and loss of trade competitiveness. Reduction of the rate of inflation.
September, 1994	Reduction of monthly rate of devaluation to 1.5%	Reduction of the rate of inflation
December, 1994	Reduction of monthly rate of devaluation to 1.4%	Reduction of the rate of inflation
February, 1995	Reduction of monthly rate of devaluation to 1.2%	Reduction of the rate of inflation
May, 1995	Peg with crawling bands (+/-7%)	More freedom for monetary policy. Reduction of costly interventions at the forex market.

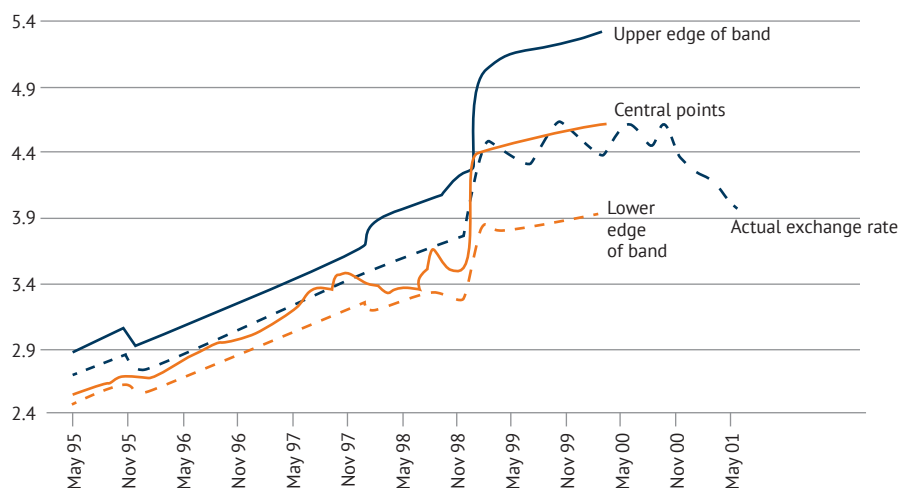
Table 2. Continued

Date	Changes in exchange rate regime	Reasons justifying the changes in the exchange rate regime
December, 1995	Revaluation of the PLN (6%)	Realignment of the nominal fixed exchange rate of PLN to the market exchange rate
January, 1996	Reduction of monthly rate of devaluation to 1.0%	Reduction of the rate of inflation
February, 1998	Reduction of monthly rate of devaluation to 0.8%. Extension of the fluctuation bands to +/-10%.	Reduction of capital inflows.
July, 1998	Reduction of monthly rate of devaluation to 0.5%	Reduction of the rate of inflation
October, 1998	Extension of the fluctuation bands to +/-12.5%.	Adoption of monetary policy strategy oriented to inflation targeting
January, 1999	Revision of the composition of currency basket (45% US, 55% €)	Establishing the Economic and Monetary Union in Europe and conversion 11 national currencies to the euro
March, 1999	Reduction of monthly rate of devaluation to 0.3%. Extension of the fluctuation bands to +/-15%.	Reduction of the rate of inflation. Reduction of speculative capital inflows.
April, 2000	Free floating	Reduction of speculative capital inflows. Ensure high level of instrumental independence to the central bank, that pursued inflation targeting

Source: own elaboration

To sum up, it can be concluded that the anti-inflationary policy, implemented in Poland in the decade of the 1990s, was supported by a fixed exchange rate regime. Pegging Polish currency, first, to the base foreign currency — the US dollar, and then, to a basket of foreign currencies composed of strong and stable money (US dollar, British pound, Deutsche mark, Swiss franc, and French franc) improved inflation performance. The commitment of the National Bank of Poland to exchange domestic currency for foreign one at a fixed price disciplined Polish central bank and prevented from issuing the excessive money supply. It is worth noting, however, that there is also a downside of the coincidence of high inflation and a fixed exchange regime. It relates to the deterioration of trade competitiveness. The empirical evidence confirms that such an unfavorable effect occurred in Poland. Ergo, in October 1991 Poland adopted a crawling peg, originally, with a 1.8% rate of monthly devaluation. Then, having succeeded a disinflation process,

Figure 2. Poland's crawling band



Source: Baldwin, Wyplosz (2012)

the rate of monthly devaluation was consequently reduced: to 1.6% (August 1993), 1.5% (September 1994), 1.4% (December 1994), 1.2% (February 1995), 1% (January 1996), 0.8% (February 1998), 0.5% (July 1998), and 0.3% (March 1999). The subsequent monthly devaluations helped to restore trade competitiveness.

As institutional reforms consolidated and integration strengthened, Poland became an attractive place to invest. Since the mid-1990s, substantial capital inflows, to a large extent in the form of foreign direct investments, caused appreciation of Polish currency. The central bank's interventions consisting in delivering money supply started to undermine a disinflation process. Thus, in May 1995 the National Bank of Poland introduced a crawling band system with $\pm 7\%$ margins of fluctuations (Figure 2). In the subsequent years, the corridor of the Polish zloty acceptable volatility was expanded to 10% (February 1998), $\pm 12.5\%$ (October 1998), and $\pm 15\%$ (January 1999). Finally, in 2000 Poland adopted a free floating regime. The decision of Polish authorities on floating was determined by two factors. First, the central bank of Poland focused its strategy on inflation targeting, that needed instrumental independence. Second, under a fixed exchange rate regime, the immense capital flows impelled the National Bank of Poland to costly interventions, which undermined the effects of disinflation policy. Floating exchange rate arrangement by increasing a risk of exchange volatility, prevented, to a large extent, from speculative inflows.

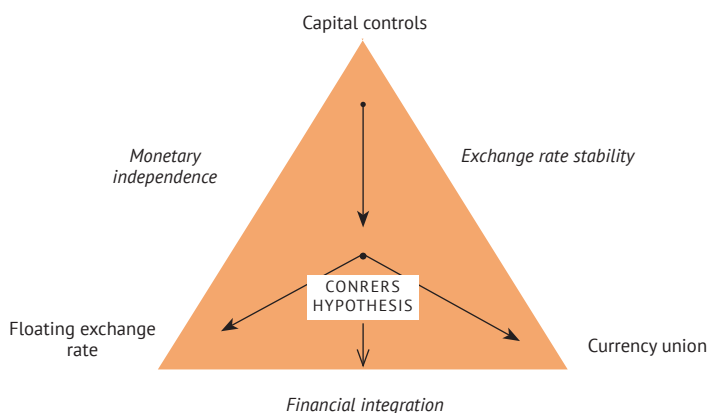
III. Free floating during the membership in the EU

Since May 2004 Poland, among other nine European countries (of which seven were post-socialist economies) has been a full member of the European Union. It is worth noting, that formal integration began much earlier, in 1991, when the Association Agreement with the European Communities was signed. It provided a 10-year transitional period, divided into two stages (each of 5 years) to complete a free trade area between Poland and EEC countries. As the majority of the integration effects is transmitted through international channels, such as trade, capital flows, and migration, the role of the exchange rate is crucial.

During the 15 years that passed since the accession to the EU, Poland performed under independently floating exchange rate regime. From a theoretical point of view, this arrangement is determined by a coincidence of the financial integration and monetary independence. A well-known scheme of the “impossible trinity” illustrates the solutions (corner hypothesis) that emerge from monetary policy preferences.

The “impossible trinity”, known also as the “inconsistency triangle”, implies that any two of the three desirable monetary policy aims (presented on the sides of the triangle) can be attained. However, the achievement of all three monetary policy goals is not possible. For example, a preference of exchange rate stability and free capital flows implies a fixed exchange rate regime (currency union). When monetary independence and financial integration is desired, an exchange rate solution is free floating. In other words, exchange rate volatility is a permanent feature of financial integration and central bank independence. The third option implies that the coexistence of

Figure 3. Impossible trinity of currency policy



Source: Frankel (1999)

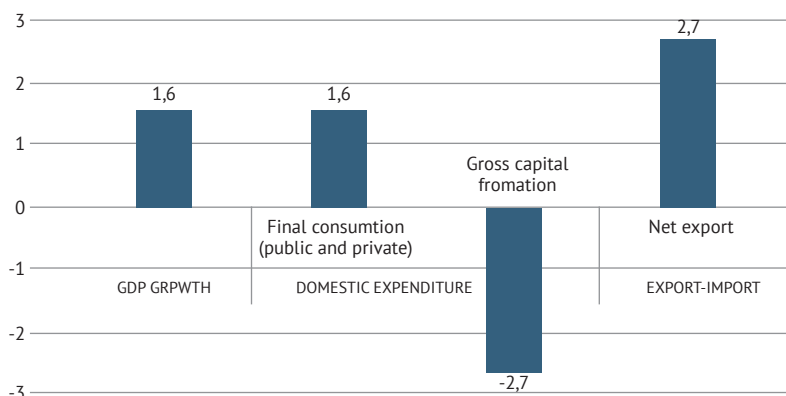
exchange rate stability and the central bank's independence is possible only if capital control is imposed. The last alternative is not feasible for the members of the common market, because of its core pillars, which are free mobility of goods, services, money, and people.

The choice to float was not only a consequence of Poland's participation in the common market, and a preference to ensure the feasibility of inflation targeting. The decision of keeping Polish zloty in a free floating regime was also determined by a weak real convergence of the Polish economy with the EU rich countries and a fear of asymmetric shocks. It should be noted, that a floating exchange rate regime allows authorities to stabilize economy with the adjustments of interest rates and money supply. Moreover, a floating exchange rate operates as an automatic stabilizer.

The global financial crisis of 2008 revealed a relatively high resistance of Poland's economy to the external shock. Poland, as the only economy in the European Union, registered a positive rate of growth during the whole crisis period. It is why it was called "a green island". This phenomenon made Poland an extremely interesting objective of the research. A breakdown of Poland's GDP growth rate in 2009 shows (Figure 4) that while a contribution of total domestic expenditures was negative (-1.1 p.p.), a positive rate of GDP growth (1.6%) was driven mainly by net exports. It contributed by 2.7 p.p. to the GDP growth.

A positive role of foreign trade in supporting economic growth of Poland in 2009 was related to the income and exchange rate factors. As an adverse shock reduced income growth, it resulted in the reduction of import expenditures, thus trade balance ameliorated. On the other hand, negative external

Figure 4. Decomposition of Poland's GDP rate of growth in 2009



Source: own elaboration based on data from Główny Urząd Statystyczny (GUS statistics).

shock weakened the value of a Polish currency, which deteriorated terms of trade, i.e. imported products become more expensive in relation to the exported goods. Assuming a complete pass-through of nominal exchange rate changes on prices, currency depreciation made exports cheaper for foreigners, thus they were expected to purchase more, whereas less competitive imports shrank.

Many studies confirm a significant role of the exchange rate in smoothing the GDP volatility in 2009 (Dąbrowski, Wróblewska 2015, Matysek-Jedrych et al. 2020). For example, Matysek-Jędrych et al. (2020) identified that a 1% real depreciation of Polish currency increases Poland's exports by 2.5%. Their findings also confirmed a statistically significant dependence of imports on exchange rate changes. A 1% depreciation of Polish zloty implies a deterioration of Polish imports by 1.8%. Such evidence explains why Poland favors its currency to float.

IV. Conclusions

This study shows that the exchange rate regime was actively used by Poland's authority, especially during the transition period. Since the exchange rate arrangement constrains the achievement of some economic policy goals simultaneously, the decision on whether currency is fixed or free floats depends on the actual policy-makers preferences. By pegging the domestic currency to a credible foreign currency, countries discipline their monetary policy and tend to reduce inflation. At the same time, a fixed exchange rate eliminates risk of fluctuation and enhances trade and foreign investments. Such priorities prevailed in Poland in the early 1990s. First, a hard peg of Polish zloty to the US dollar, and then to the basket of five international currencies, helped to curb hyper-inflation and gain, by a Polish central bank, a reputation of a credible monetary institution.

On the other hand, a flexible exchange rate allows a country to pursue an independent monetary policy, including a response to economic shocks. This solution has been preferred in Polish policymaking since the adoption of inflation targeting. Moreover, the decision on floating has been enhanced by a full financial integration effectuated in the framework of the European common market. By setting interest rates and allowing for exchange rate fluctuations, Poland's economy avoided a recession in 2009. A number of the empirical studies confirmed that Polish currency operated as an automatic stabilizer, which meant that it has offset a lot of external turbulences.

In the era of globalization, policymakers should be aware, however, that exchange rate fluctuations may cause additional economic disturbances. In other words, the ability of floating exchange rates to stabilize adverse shocks cannot be taken for granted. This argument is often used by the proponents

of the euro adoption, who claim that a common currency will stimulate GDP growth by enhancing trade and investments, whereas exchange rate volatility generates transaction costs and hampers economic prosperity. As the traditional theory of the exchange rate demonstrates, a currency union is an optimal solution for countries that are closely converged. The experience of Greece, which adopted the euro in 2001, despite its weak economic convergence with the rich EU economies, proved how big could be the scale of economic turbulence. Concerning the lessons from the last financial crisis, Polish authorities remain skeptical about joining the Eurozone. They claim, that as long as income is below the EU average, the probability that asymmetric shock occurs is high. Thus, a decision about joining the Economic and Monetary Union has not been made so far. It is very likely, that closer convergence with the high-income EU economies, as well as, full recovery and sustainable development of the Eurozone economies, will bring about a shift of Polish zloty from a free floating to a peg with the euro, and finally, to the irrevocable conversion to a common EU currency.

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Роль режима валютного курса в системном переходе и экономической интеграции. На примере формирования экономики Польши

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Аннотация. Выбор режима валютного курса—один из важнейших вопросов международной экономики. В данной статье прослеживается эволюция валютного режима, принятого в Польше на протяжении тридцати лет. Автор рассматривает роль механизмов валютного курса в процессе перехода от плановой экономики к свободной рыночной, а также в период членства страны в ЕС. Главный вывод состоит в том, что Польша активно приспосабливала валютную систему к своим макроэкономическим целям. В настоящее время сохранение свободно плавающего курса определяется отсутствием полной экономической конвергенции экономики Польши со странами еврозоны и предпочтением, которое польская денежно-кредитная политика уделяет таргетированию инфляции.

Ключевые слова: режим обменного курса, переход экономики Польши, европейская интеграция, евро.