

# How Poland's EU Membership Helped Transform its Economy

Marek Belka

Group of Thirty, Washington, D.C.

30

Occasional Paper 88

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**Marek Belka would like to thank Paulina Broniatowska, Agnieszka Stążka-Gawrysiak, Zuzanna Gromiec, Kamila Kuziemska and Michał Rubaszek for substantial assistance in preparing this paper.**

ISBN 1-56708-162-2

Copies of this paper are available for US\$15 from:

The Group of Thirty  
1726 M Street, N.W., Suite 200  
Washington, D.C. 20036  
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*Published by*  
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*Washington, D.C.*  
October 2013



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## Abbreviations

CAP	Common Agricultural Policy
CET	Common External Tariff
CPI	Consumer Price Index
ECB	European Central Bank
EMU	Economic and Monetary Union
ERM	Exchange Rate Mechanism
EU	European Union
FDI	foreign direct investment
GDP	gross domestic product
GII	Global Innovation Index
IMF	International Monetary Fund
MRD	Ministry of Regional Development
NBP	National Bank of Poland
NMS	new member states
OECD	Organisation for Economic Co-operation and Development
PLN	Polish zloty
PPP	purchasing power parity
REER	real effective exchange rate
SITC	Standard International Trade Classification



## Introduction

On May 1, 2004, Poland, together with nine other countries, joined the European Union (EU). This largest wave of EU enlargement to date was historic not only for political reasons (it was the first to include the former centrally planned economies from Central and Eastern Europe), but also because it fundamentally changed Europe's economic landscape. From that moment on, the economic integration between the East and the West of Europe intensified visibly, as reflected in the increased flows of goods, services, capital, and people across borders. The process of real convergence also gained momentum, as demonstrated by increasing per capita income levels and living standards in the East relative to the West.

This paper reviews selected issues related to European integration from the viewpoint of Poland, the largest of the EU new member states and arguably the biggest beneficiary of accession to the EU. 2014 will mark the 10th anniversary of Poland's EU accession and the 25th anniversary of the beginning of the transition from a centrally planned to a market economy. With that in mind, this paper reflects on the many ways in which EU membership influenced the Polish economy. The issues are complex and the space limited, so the paper presents a brief overview of those aspects of Poland's integration into the EU that are crucial to Poland's economic development.

This paper is organized as follows.

Section 1 briefly describes Poland's transition from a centrally planned to a market economy. The main focus is on monetary and

exchange rate policies, structural reforms, institutional changes, and the integration process with the EU. Section 2 presents the current state of Poland's integration with its EU partners. Issues related to foreign direct investment (FDI) flows, trade integration, labor force migration, remittances, and the impact of EU funds on the Polish economy are discussed. Section 3 presents Poland's experience during the recent financial and debt crises. Poland fared these crises exceptionally well compared to both developed and emerging European economies, avoiding a recession, a massive accumulation of private or public debt, and financial system instability. This benign influence of the global crisis on the economy was, at least to some extent, the effect of Poland's EU membership. Section 4 discusses the challenges resulting from the future euro adoption. Section 5 concludes.

## 1. The transition from a communist country to an EU member

This section briefly discusses Poland's experience transitioning from being a socialist country to becoming an EU member. The section focuses on three aspects of the transition period 1989–2004: Poland's macroeconomic performance, with an emphasis on Poland-EU linkages; changes in monetary and exchange rate policy; and selected aspects related to EU negotiations. The aim of this section is to present a general picture of the state of Poland's integration with the EU at the moment of accession in May 2004. While this paper focuses only on selected issues related to the Polish transformation, a more detailed exposition of the topic is available in numerous other studies.<sup>1</sup>

In the late 1980s, after almost a half-century of communist rule and central planning, the Polish economy suffered from deeply distorted structures, pervasive shortages, misallocation of resources, inefficient companies, and controlled prices. Polish enterprises, which were predominantly large and state-owned, were mostly unable to produce goods that were demanded abroad. The quality of "Made in Poland" products was unsuited to meeting the demand of Western European customers, whereas the demand of the other communist bloc countries was depressed. Even though labor costs in Poland were very low, during the 1980s Poland was experiencing significant external imbalances: the current account deficit stood on average at about 10 percent of gross

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<sup>1</sup> See, for example, Balcerowicz, Błaszczyk, and Dąbrowski (1997); Belka (2001); Belka et al. (1995); Berg and Blanchard (1994); and Kokoszcyński (2004).

**TABLE 1. SELECTED STATISTICS FOR POLAND, 1981–2004**

	1981–88	1989–91	1992–95	1996–2004
GDP growth rate at constant prices (% , period average)	0.4	-3.5	4.6	4.3
GDP per capita at current prices (US\$, last year of the period)	1,816	2,101	3,605	6,625
GDP per capita in PPP terms (US\$, last year of the period)	5,688	5,614	7,262	12,698
Inflation rate (% year-over-year, December of last year of the period)	58.3	60.3	21.6	4.4
Exports of goods (% of GDP, last year of the period)	20.3	18.5	16.5	29.2
Exports of goods to EU15 (% of total exports, last year of the period)	41.3	64.2	70.2	67.3
Current account balance (% of GDP, period average)	-10.1	-0.1	1.4	-4.1
Gini coefficient for income (last year of the period)	0.269	0.267	0.327	0.359

Sources: Own calculations on the basis of IMF International Financial Statistics, IMF World Economic Outlook, United Nations Commodity Trade Statistics Database, and World Bank World Development Indicators data.

Note: The values for the Gini coefficient refer to years 1989, 1992, 1996, and 2004.

domestic product (GDP). The mismatch of supply and demand was also reflected in internal imbalances in the form of serious shortages in many segments of the economy, and sluggish GDP growth, which in the 1980s was close to zero.

The ineffective structure of the Polish economy had a negative impact on the standard of living: at the end of the 1980s, GDP per capita was under US\$2,000, or around one-tenth of the Western European level (see table 1).<sup>2</sup> Moreover, at that time, the foreign debt, at almost 65 percent of GDP, constituted a serious burden on the economy. This was the backdrop of the beginning of Poland’s transformation.

The first phase of the transformation covers the “shock therapy” period of 1989–91. The first (partly) free elections in the postwar period, which took place in June 1989, made it obvious that the communist rule was no longer legitimate and that there was countrywide support for deep economic changes. The plan of reforms, which was prepared by

2 Due to lower prices in Poland, GDP per capita in purchasing power parity (PPP) terms was about four times less than in the United States.

a commission chaired by the Minister of Finance, Leszek Balcerowicz, in cooperation with the International Monetary Fund (IMF), consisted of two pillars: to stabilize the economy; and, with a longer-horizon perspective, to transform the centrally planned economic system into a market-oriented system. The plan consisted of ten Acts that promoted private ownership, integration with the global economy, central bank independence, and convertibility of the zloty.

In the initial years after the introduction of the Stabilization Plan, Poland experienced a profound reallocation of resources from the public to the private sector, and both among and within sectors. As an example of the scale of this reallocation, during 1989–91, the number of employees in large, state-owned enterprises declined by over 3 million, thereby reducing the share of employment in the public sector from about 75 percent to under 50 percent.<sup>3</sup> This was accompanied by a contraction of output: in 1991, GDP was about 10 percent lower than in 1988.

The other characteristic of this period was short-lived hyperinflation, which was triggered by the removal of subsidies and the liberalization of prices. During 1989–90, the annual Consumer Price Index (CPI) inflation rate fluctuated well above 100 percent, in some months reaching four digits. The response of the National Bank of Poland (NBP) was to fix the exchange rate of the zloty against the U.S. dollar. The fixed exchange rate was supposed to serve as a credible commitment in the fight against inflation (table 2 presents the evolution of the exchange rate system).

The fixing of the Polish zloty did contain hyperinflation, and at the end of 1991, inflation returned to levels observed in 1988, that is, around 60 percent, and was on a declining trend. However, a side effect of fixing the zloty was a deterioration of the external competitiveness of the Polish economy, which was reflected in, among other things, a declining ratio of exports to GDP. For that reason, in May 1991, the zloty was devalued and, a few months later, the crawling peg system was introduced to stabilize the real effective exchange rate (REER).

Importantly, in the context of European integration, in 1990, Poland started negotiations to sign the Association Agreement with the European Communities. The Agreement, which was signed in December 1991, in Brussels, constituted a clear signal of political reorientation from

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<sup>3</sup> See Belka et al. (1995) and Pinto et al. (1993) for an extended discussion on the privatization process.

**TABLE 2. EVOLUTION OF THE EXCHANGE RATE SYSTEM  
IN POLAND SINCE 1990**

Period	Exchange rate system	Characteristics
January 1990– October 1991	Fixed rate against US dollar and from May 1991 against a basket of five currencies (U.S. dollar, German mark, British pound, French franc, Swiss franc). Devaluation in May 1991 by 16.8%.	Exchange rate as anti-inflationary anchor.
October 1991– May 1995	Crawling peg with monthly rate of devaluation declining steadily from 1.8% to 1.2%. Two devaluations, by 12% in February 1992 and 8% in August 1993.	Attempt to reconcile disinflation objective and maintaining competitiveness of exporters in the world market.
May 1995– April 2000	Crawling band system, with fluctuation band increasing from $\pm 7\%$ to $\pm 15\%$ . Steady decrease of monthly devaluation rate from 1.2% to 0.3%. Revaluation of the central parity by 6% in December 1995.	Higher flexibility of foreign capital inflow management. Steady move to independent monetary policy framework.
From April 2000	Free floating	Inflation-targeting monetary policy framework (the first inflation target was actually set in 1999).

Source: National Bank of Poland.

the Soviet bloc toward Western Europe. This was the first important step on Poland's road to EU membership (table 3 presents the timetable of Poland's EU accession). The political reorientation toward the West was also reflected in Poland's foreign trade patterns. Between 1988 and 1991, the share of exports to EU15 countries (that is, those countries that were EU members prior to the EU enlargement of 2004) in total exports increased by more than 20 percentage points to account for almost two-thirds of Polish exports.

Poland's EU accession would not have been possible without broad public consensus. Both political elites and Polish society supported the idea of reintegration with Europe. The determination to fulfill the criteria necessary to join the EU and to adopt the *acquis communautaire*<sup>4</sup> translated into a steadfast pursuit of EU-membership-oriented policies

4 The *acquis communautaire* is the cumulative body of European Community laws.

**TABLE 3. KEY EVENTS OF THE TIMETABLE  
OF POLAND'S EU ACCESSION**

Date and place	Event
September 19, 1989 Warsaw	Poland signs the agreement on trade and economic cooperation with the European Communities.
May 25, 1990 Brussels	Poland submits an official application for the opening of negotiations for association agreement with the European Communities.
December 16, 1991 Brussels	Poland signs the Europe Agreement, thus becoming a country associated with the European Communities.
October 20, 1992 Warsaw	The President of the Republic of Poland ratifies the Europe Agreement, which comes into force in February 1994.
June 21–22, 1993 Copenhagen	The European Council officially states that EU enlargement is also the EU's goal, conditional on the candidate countries fulfilling certain political and economic criteria, known as the Copenhagen criteria.
April 8, 1994 Athens	Poland hands the formal application for accession to the EU to the representative of the Greek Presidency.
January 28/May 22, 1997 Warsaw	The Council of Ministers/Parliament adopt the National Strategy for Integration, a document that systematizes the tasks to be completed in the period preceding EU membership.
December 12–13, 1997 Luxembourg	The European Council officially invites 10 countries, including Poland, to initiate formal EU membership negotiations.
March 31, 1998 Brussels	Initiation of EU accession negotiations.
December 12–13, 2002 Copenhagen	The European Council approves the result of accession negotiations with 10 candidate countries for EU membership, including Poland.
April 16, 2003 Athens	The Accession Treaty is formally signed by representatives of 25 countries—15 EU member states and 10 candidate countries.
June 7–8, 2003	In a nationwide referendum, 77.45% of Poles vote for Poland's accession to the EU.
May 1, 2004	Poland becomes a member state of the EU.

Source: National Bank of Poland internal sources.

despite changing governments. Owing to this nationwide support for the process of EU integration, the Polish transformation effort never lost its impetus.

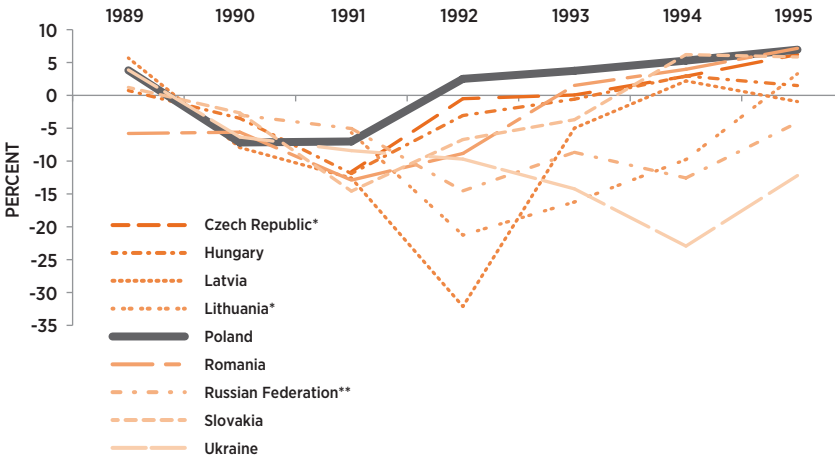
During the second phase of transformation, 1992–95, the economy was further stabilized. The GDP grew on average at almost 5 percent

per year (see figure 1). Inflation declined to about 20 percent. Foreign debt was greatly reduced as a result of agreements with the Paris Club (April 1991) and the London Club (October 1994).

This period was also important in the context of the EU integration process. In June 1993, at the Copenhagen Summit, the European Council decided that the associate countries from Central and Eastern Europe could become EU members conditional on the fulfillment of certain political and monetary criteria. In April 1994, the Polish Minister of Foreign Affairs handed the application for Poland’s accession to the EU to the representative of the Greek EU Presidency. In the meantime, in February 1994, Poland applied for membership in the Organisation for Economic Co-operation and Development (OECD).

As regards monetary policy, the crawling peg system was adjusted steadily to achieve a compromise between anti-inflationary policy and reinforcement of external competitiveness. In July 1995, owing to the reduction of foreign debt, Poland introduced the external convertibility of the zloty under the obligations of the IMF’s articles of agreement (Article No. VIII). This enabled Poland to regain access to foreign capital markets, and foreign capital started to flow to Poland. This opened the third stage of transformation, which lasted until EU accession in 2004.

**FIGURE 1. GDP GROWTH RATE IN SELECTED TRANSITION ECONOMIES, 1989–95**



Sources: IMF World Economic Outlook; World Bank.  
 Note: \*Data series starts in 1991; \*\*data series starts in 1990.



During the third period of transformation, 1996–2004, Poland became a middle-income country fully integrated into the global economy. The agreements with foreign debtors, capital account liberalization, and accession to the OECD triggered capital inflows, both in the form of portfolio capital and FDI. The latter brought about the inflow of modern technologies, which facilitated modernization of the Polish economy. This was reflected in a significant rise in the exports-to-GDP ratio in an environment of a moderate current account deficit, fluctuating at around 4 percent of GDP. Under these favorable business conditions, the economy grew at over 4 percent per year, which, combined with the appreciation trend of the real exchange rate, led to an almost doubling of GDP per capita in less than a decade (see table 1).

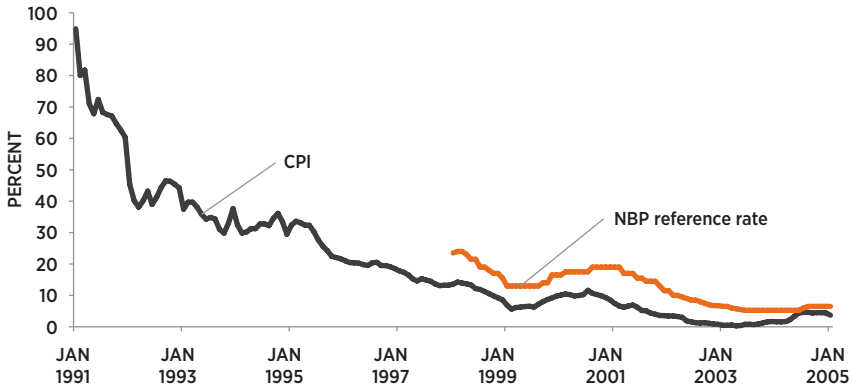
As regards monetary policy, the appreciation trend of the exchange rate, related to foreign capital inflows and improving fundamentals, was addressed by the gradual floating of the zloty. In May 1995, the Polish authorities introduced a crawling band system with  $\pm 7$  percent fluctuation bands. During the ensuing years, the fluctuation bands were widened several times and monetary policy was heading toward an inflation-targeting framework. In 1998, inflation in Poland fell to single digits for the first time since the beginning of the transformation (see figure 2). In the same year, the newly created organ of the National Bank of Poland, the Monetary Policy Council,<sup>5</sup> set the first inflation target. Subsequently, in April 2000, the exchange rate of the zloty was floated. Starting in 2004, a fully-fledged inflation targeting regime was introduced, with a permanent inflation target of 2.5 percent with a symmetrical tolerance band for deviations of  $\pm 1$  percentage point. Since then, inflation has remained within the range observed in other inflation targeters, which confirms that the NBP has been successful in delivering price stability.

The final phase of European integration encompassed 1996–2004. In May 1997, the Polish Parliament adopted the National Strategy for Integration with the EU, which specified the deadlines for the fulfillment of the EU membership criteria. By 2002, Poland had completed all thirty negotiation areas. The negotiations were officially completed during the EU Summit in Copenhagen in December 2002. In April 2003, the Accession Treaty was formally signed by representatives of 25

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5 The establishment of the Monetary Policy Council aimed at guaranteeing the conduct of an independent monetary policy, using best practices. The newly created body was successful in containing inflation.

FIGURE 2. CPI ANNUAL PERCENTAGE CHANGE, 1991–2005



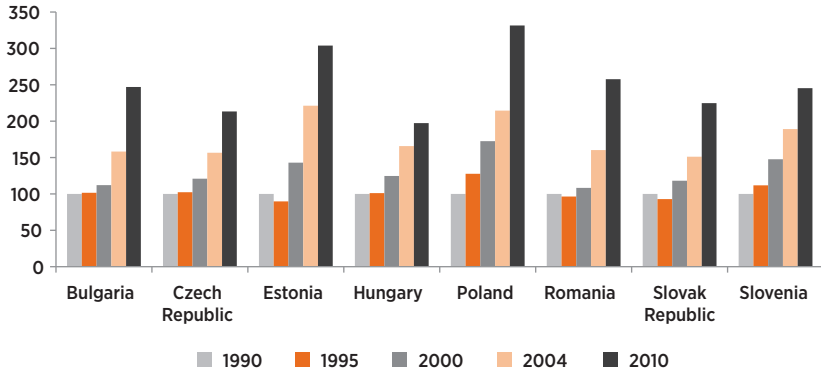
Source: National Bank of Poland.

countries—15 EU member states and 10 candidate countries. In June 2003, in a nationwide referendum, almost 80 percent of Poles voted in favor of Poland’s accession to the EU. Polish EU accession occurred on May 1, 2004.

Thus, the main goals set in 1989 for the transformation of Poland to achieve EU accession were reached. Poland transformed from a centrally planned to a market-oriented economy. In 2004, over 70 percent of total employment was in the private sector; almost 70 percent of Poland’s foreign trade was with EU15 countries; the inflation rate fluctuated around the 2.5 percent target; and the Polish zloty was a fully convertible, free-floating currency.

Moreover, the transformation has led to a significant improvement in the Polish standard of living, as measured by GDP per capita, which, during 1988–2004, doubled in PPP terms and almost quadrupled if measured at market exchange rates. It is often said that Poland’s transformation is an example of successful reforms. Compared with other countries in the region, Poland has been one of the fastest-growing economies (see figure 3). One of the side effects of the transformation, however, was an increase in income inequality: between 1989 and 2004, the Gini coefficient for income increased from 0.269 to 0.359 (see table 1).

**FIGURE 3. GDP PER CAPITA, SELECTED YEARS**  
**(US\$, IN PPP TERMS, 1990 = 100)**



Source: Penn World Tables.



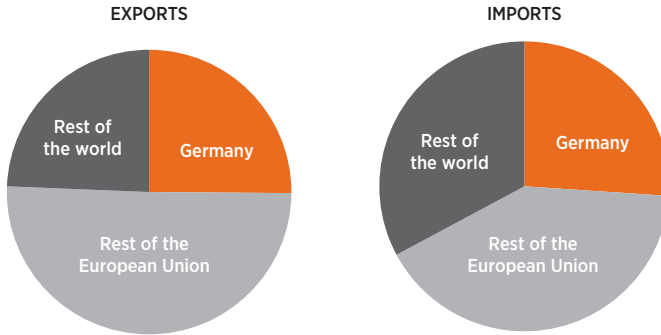
## 2. Poland in the European Union

This section discusses the effects of EU membership on the functioning of the Polish economy, with a focus on three aspects: those related to trade and financial integration, issues associated with labor mobility, and how EU funds helped modernize the Polish economy. Before elaborating on these topics, it is important to note that EU accession strengthened Poland's credibility as a country conducting a reliable macroeconomic policy mix. This is reflected in a stable sovereign debt rating over the years. Membership in the EU confirmed Poland's position as a safe destination for foreign capital, where the investor is protected by European law.

### FDI inflows and trade patterns

The free flow of goods and factors of production among EU member states established by the Treaty of Rome is an essential fundamental of the EU. The removal of tariff barriers to trade, the formation of the Customs Union with a Common External Tariff (CET) applied to imports from third countries, and the subsequent creation of the Single Market were all designed to stimulate trade among member states. In this context, Poland is highly integrated with other EU economies. In 2012, over 75 percent of total Polish exports were to EU countries, while slightly under 70 percent of imports were from EU countries. Of the EU countries, Germany, Poland's largest trading partner, accounted for over a quarter of Polish foreign trade (see figure 4).

**FIGURE 4. GEOGRAPHIC STRUCTURE OF POLISH EXPORTS AND IMPORTS IN 2012**



Source: Eurostat.

What might be surprising is the fact that, since EU accession in 2004, the share of total exports to countries outside the EU has increased by almost 5 percentage points, reaching almost 25 percent in 2012. This might be explained by two facts.

First, Poland has been steadily rebuilding its presence in the countries of the Former Soviet Union. Currently, Poland's biggest trading partner outside the EU is Russia. Moreover, it might be expected that the Russian share of Poland's trade will increase in the future, especially given the successive removing of trade barriers pertaining to Russia's joining the World Trade Organization in August 2012.

Second, productivity of Polish companies has improved, which enabled them to find customers in distant countries outside the EU (in line with the theoretical model of Melitz and Ottaviano 2008). The ability to diversify exports to countries outside the EU turns out to be very valuable in the current economic environment. By embracing new markets, Poland may cushion to some extent the consequences of the subdued growth in the EU compared to the rest of the global economy.

Also, the product structure of Poland's foreign trade is relatively well diversified. According to the estimates of Benkovskis and Rimgailaite (2011), in 2009, the variety of Polish exports to the EU, which was defined as the number of different brands, was around 75 percent of the value for Germany. This was comparable to the variety of Czech exports and significantly higher than the corresponding variety in Bulgaria, Romania, Slovenia, and the Baltic States (around 45 to 50 percent), and in Hungary and the Slovak Republic (around 65 percent).

The same types of conclusions are presented by Parteka (2013), who argues that Poland can be placed among countries with well-diversified export products.

The diversity of product structure makes Poland less vulnerable to terms-of-trade shocks. Regarding the dynamics of relative variety, Benkovskis and Rimgailaite (2011) show that between 1999 and 2009, all new member states (NMS)<sup>6</sup> significantly increased the average number of brands exported to the EU market, while the comparison of changes in variety of exports before and after EU accession shows a significantly faster increase in the second period. This indicates that integration into the EU market accelerated the process of product differentiation of Polish exports.

The product diversification of Polish trade according to the Standard International Trade Classification (SITC) is illustrated in table 4, about which a few comments.

First, the table shows that the main exports are machinery and transport equipment, where road vehicles, electrical machinery, apparatus, and appliances contribute the most. This can be explained by the fact that Poland is a part of the European value chain, which is represented by a high share of trade in intermediate goods in total trade, amounting to about 60 percent (see table 5).

Second, table 4 indicates that the product structure of trade remained broadly stable between 2004 and 2012. The only exceptions are food products and chemicals, for which the export's share increased by about 3 percentage points.

Third, the table points to a high share of crude oil in total imports—over 13 percent in 2012.

Another aspect relates to the quality of exports. This topic is addressed by Antimiani and Costantini (2010), who indicate that economic integration induced by the enlargement process has produced an overall positive impact on the export dynamics of the EU. This impact seems to be much greater for NMS and is much more evident for high-tech than for low-tech sectors. The authors claim that technological innovation plays a crucial role in fostering the export performance of EU countries, for both EU15 and NMS.

A gradual transformation of Polish exports and imports to technologically advanced goods is illustrated in figure 5. The figure shows that

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6 Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia.

**TABLE 4. PRODUCT STRUCTURE OF POLISH TRADE  
ACCORDING TO SITC CLASSIFICATION (% OF THE TOTAL)**

SITC product/partner	World		EU27		Germany	
	2004	2012	2004	2012	2004	2012
<i>Exports</i>						
0 – food and live animals	7.7	10.3	7.3	10.3	6.6	9.4
1 – beverages and tobacco	0.5	1.3	0.3	1.5	0.2	0.5
2 – crude materials, inedible, except fuels	2.6	2.3	2.8	2.4	3.7	3.5
3 – mineral fuels, lubricants, and related materials	5.5	5.0	6.2	5.5	5.4	3.3
4 – animal and vegetable oils, fats, and waxes	0.1	0.2	0.1	0.2	0.1	0.1
5 – chemicals and related products not elsewhere specified	6.4	9.1	5.2	8.4	3.8	7.6
6 – manufactured goods classified chiefly by material	23.4	21.1	23.1	21.8	25.1	22.7
7 – machinery and transport equipment	38.8	37.4	39.2	35.9	36.1	35.2
8 – miscellaneous manufactured articles	15.1	12.7	15.9	13.6	19.1	17.4
9 – commodities and transactions not classified elsewhere in the SITC	0.0	0.4	0.0	0.5	0.0	0.3
<i>Imports</i>						
0 – food and live animals	4.8	6.9	4.6	8.5	3.0	7.3
1 – beverages and tobacco	0.4	0.6	0.5	0.7	0.3	0.4
2 – crude materials, inedible, except fuels	3.4	3.5	2.2	2.9	1.7	2.4
3 – mineral fuels, lubricants, and related materials	9.2	13.4	2.6	2.7	1.6	2.7
4 – animal and vegetable oils, fats, and waxes	0.4	0.5	0.4	0.5	0.4	0.6
5 – chemicals and related products not elsewhere specified	14.1	14.0	16.2	17.7	15.6	17.0
6 – manufactured goods classified chiefly by material	20.8	17.3	23.8	21.3	25.3	21.4
7 – machinery and transport equipment	38.6	31.9	41.5	35.2	43.4	35.9
8 – miscellaneous manufactured articles	8.2	9.0	8.2	9.8	8.5	11.0
9 – commodities and transactions not classified elsewhere in the SITC	0.0	2.9	0.0	0.7	0.1	1.3

Source: Eurostat.

Note: SITC = Standard International Trade Classification.

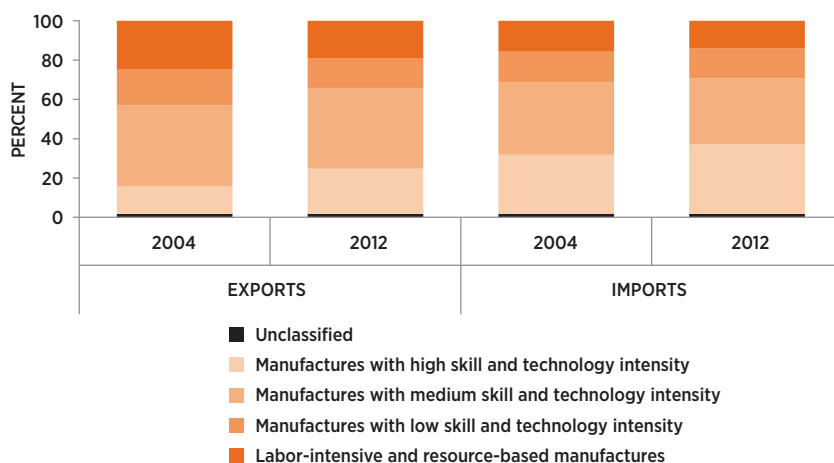


**TABLE 5. PRODUCT STRUCTURE OF POLISH TRADE  
ACCORDING TO BROAD ECONOMIC CATEGORIES  
(BEC) CLASSIFICATION (% OF THE TOTAL)**

	World		EU27		Germany	
	2004	2012	2004	2012	2004	2012
<i>Exports</i>						
Capital goods	12.4	14.0	10.7	11.4	10.3	14.0
Consumption goods	28.8	31.8	28.8	32.8	28.1	31.8
Intermediate goods	58.7	54.1	60.5	55.8	61.6	54.1
<i>Imports</i>						
Capital goods	20.0	16.6	20.7	16.6	21.6	15.3
Consumption goods	15.5	18.3	15.9	22.2	11.3	19.8
Intermediate goods	64.5	65.2	63.4	61.2	67.1	64.9

Source: Eurostat.

**FIGURE 5. EXPORTS AND IMPORTS OF MANUFACTURED GOODS  
BY INTENSITY OF MANUFACTURING, 2004 AND 2012**



Source: United Nations Conference on Trade and Development.

between 2004 and 2012, the share of high- and medium-skill and technology intensity exports in total manufactured goods exports increased by 8.9 percentage points and in 2012 amounted to 64.1 percent, while the corresponding figure for imports increased by 2.3 percentage points and reached 69.1 percent in 2012.

In addition, according to Benkovskis and Rimgailaite (2011), the quality of Polish exports was still about 50 percent lower than the quality of German exports, whereas for other NMS, this gap ranged from 45 percent to 72 percent. The quality of Polish exports should continue to improve, and these quality improvements, in turn, should lead to further growth of the Polish presence in foreign markets.

Poland's trade integration with the EU is related to the inflow of FDI. This is especially important given that the stock of inward FDI in 2011 was 41.4 percent of GDP, where over 80 percent of these investments were from the EU countries (see figure 6). Even though economic theory does not provide a simple answer to the question of whether the relationship between international trade and FDI is positive or negative (the proximity-concentration trade-off), there is some evidence that in the case of Poland, FDI contributes positively to the dynamics of international trade (see Cieřlik 2009 and box 1). This might be explained by the fact that inward FDI was well diversified (figure 6). Almost 60 percent of inward FDI accounted for services (financial and insurance activities, wholesale and retail trade, and repair of motor vehicles and motorcycles contributed the most) and over 30 percent for manufacturing (machinery products contributed the most). It could be claimed that inward FDI was both vertical and horizontal, where the high significance of vertical FDI is reflected in the high share of intermediate goods in foreign trade.

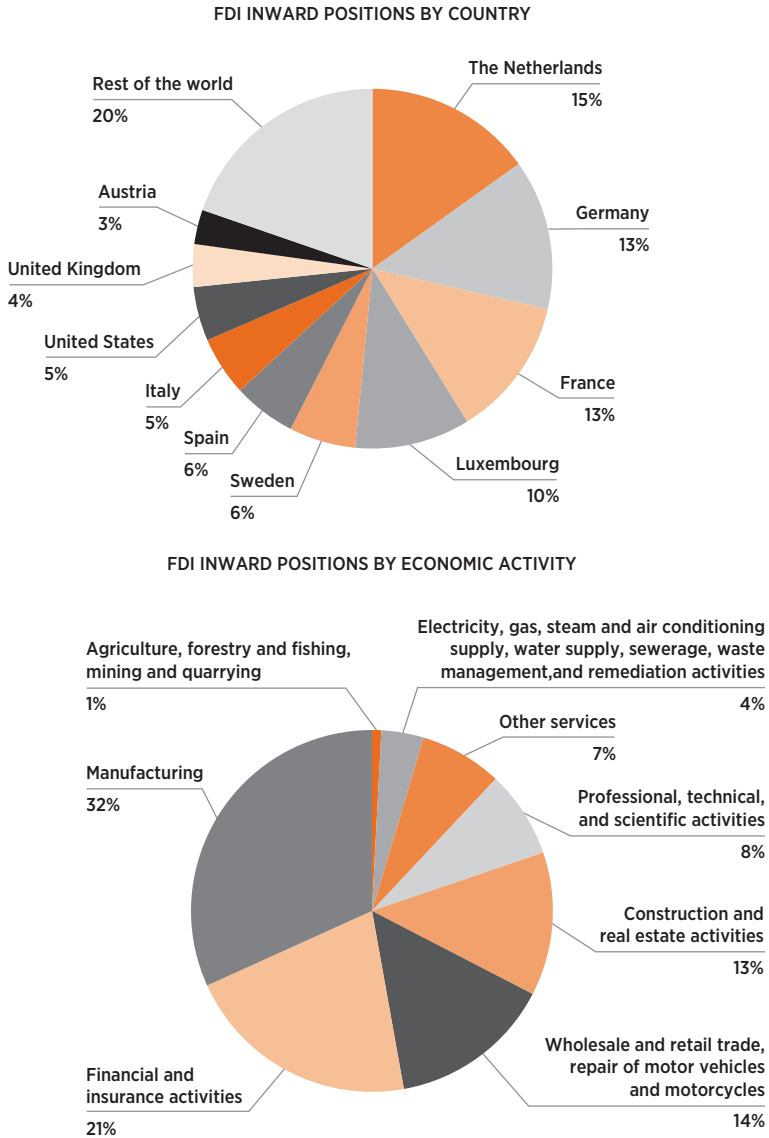
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**BOX 1. INCREASING POLISH FOOD EXPORTS  
THROUGH GLOBAL SUPERMARKET CHAINS**

The investment of global supermarket chains in Poland is an example of how horizontal FDI can stimulate international trade.

According to estimates of the Polish Organisation of Trade and Distribution (POHiD), in 2012, the value of Polish food exported via supermarket chains reached PLN 5 billion, which accounted

**FIGURE 6. FDI INWARD POSITIONS AT THE END OF 2011  
BY COUNTRY AND ECONOMIC ACTIVITY**



Source: National Bank of Poland.

for roughly one-third of total food exports. Tesco, a British super-market chain, is the most important exporter, with food exports at PLN 1.7 billion. The success of Polish food sold by Tesco on the UK market can be explained by the sizable migration of Poles to the UK after the 2004 enlargement of the EU (see subsection “Migrations and transfers,” below). In addition, Tesco signed an agreement with the Polish Ministry of Economy in 2003, under which it promotes Polish food in the UK.

Another example is Lidl, a German discount supermarket chain, whose Polish food exports to Bulgaria, Croatia, the Czech Republic, Hungary, Romania, and Slovenia reached approximately PLN 1 billion in 2012. Owing to cooperation with Lidl, around 120 suppliers have access to foreign markets.

Regarding FDI prospects, according to a United Nations Conference on Trade and Development survey conducted among transnational corporations (UNCTAD 2013), Poland is ranked 14th in the top prospective host destinations for 2013–15 (the highest position among NMS). Poland is also a source of FDI. The stock of outward FDI, however, is relatively low (at 10.4 percent of GDP in 2011).<sup>7</sup>

## Migrations and transfers

The EU enlargement in May 2004 created what was probably the biggest emigration stimulus in Poland since the end of World War II. Many Poles regarded accession to the EU as a matter of freedom—a first possibility to decide without restraint whether they wanted to work in the home country or abroad. However, initially, the EU enlargement did not enable Polish citizens to work in every EU member state.

The free movement of people between the EU15 and NMS, (except for Cyprus and Malta, and Bulgaria and Romania, which joined the EU in

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<sup>7</sup> Strategic investments abroad include the purchase of the Mažeikiu refinery in Lithuania by the Polish oil refining and distribution company PKN Orlen; and the acquisition of a Canadian copper mining company, Quadra FNX Mining, by KGHM Polska Miedź (which changed its name to KGHM International for this transaction).

2007; henceforth, the EU8<sup>8</sup>), was suspended for up to seven years. From 2004, only Ireland, Sweden, and the United Kingdom opened their labor markets to EU8 citizens, although the UK kept minor restrictions and curtailed the access of these citizens to certain welfare benefits. The remaining twelve EU15 countries decided to impose labor restrictions, which were gradually lifted.<sup>9</sup> Only Austria and Germany maintained the restrictions for the maximum allowed period, that is, until April 30, 2011. However, their labor markets were not fully closed since they allowed employment in some sectors and of a certain number of EU8 citizens under certain circumstances (for example, they agreed some quotas for seasonal workers).

Restricting employment of EU8 citizens was based on the concern that migrants could flood the EU15 labor markets, causing a rise in unemployment and putting downward pressure on wages (see box 2). However, these concerns proved wrong, and migration from the EU8 fell below expectations. What is more, the labor force migration was in many cases temporary, which was partly an effect of economic recession caused by the global financial crisis. Since the labor markets of the EU8, and especially of Poland, were less affected by the recession than the labor markets of the EU15, many of the emigrants decided to return to their home countries.

**BOX 2. THE POLISH PLUMBER (*LE PLOMBIER POLONAIS*)**

The catch phrase, “the Polish plumber,” was used in France by Philippe de Villiers, leader of the Mouvement pour la France, prior to the EU constitutional referendum. The Polish plumber was used as a symbol of the danger of cheap labor arriving from new member states, which would deprive French citizens of job opportunities. Therefore, in the EU15, the phrase became a cliché for a low-paid immigrant who profits from EU expansion.

The phrase became popular in Europe, especially after Dutch politician Frits Bolkestein said that he would like to hire a Polish

8 That is, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, and Slovenia.

9 Finland, Greece, Italy, Portugal, and Spain cancelled the restrictions in 2006 and Luxembourg and the Netherlands did so in 2007. France opened its labor market to EU8 citizens in 2008 and Belgium and Denmark in 2009.

plumber since it was hard to find a good handyman for his second house in northern France. Also, the Swiss Socialist Party used it in its campaign for the free movement of people in Europe by minting the slogan, “Plombiers de tous pays unissez-vous” (“Plumbers of all countries unite”).

Despite the fact that the connotations of this phrase were rather negative for Poland, the Polish Tourist Board turned it into something positive. In June 2005, a poster was launched picturing a different image of the Polish plumber—a handsome young man inviting foreign tourists to visit Poland. The man was saying, “Je reste en Pologne, venez nombreux” (“I’m staying in Poland, come one and all”). This advertisement generated a strong media response worldwide—it was one of the world’s best tourist-promoting campaigns. As a follow-up, a poster with a female equivalent of the plumber, a Polish nurse, was published, with the caption: “Pologne: je t’attends” (“Poland: I’m waiting for you”).

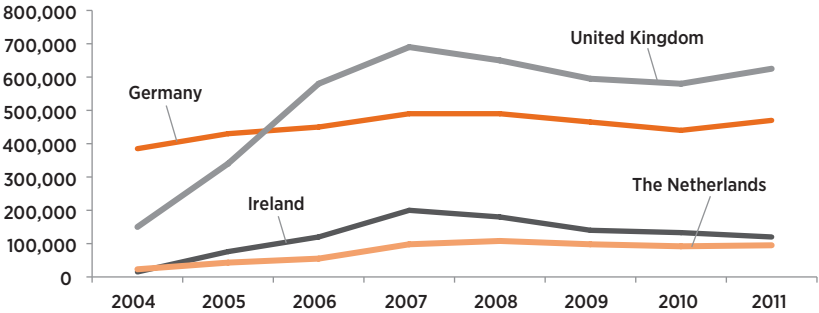
Certainly, the EU enlargement has led to increased migration from EU8 countries to EU15 countries. According to Baas and Brückner (2011), the number of nationals from the EU8 countries residing in the EU15 countries grew from 900,000 in 2004 to 2.4 million in 2010. Initially, most of the migrants were working in the UK and Ireland due to the restrictions implemented by most of the other EU15 countries, and due to the lower language barriers in the UK and Ireland. The restrictions resulted in a shift of migration flows from Germany, which was the main recipient country before 2004, to the UK and Ireland. In these two countries, the inflow of EU8 labor migration was above the levels projected earlier. However, the global financial and economic crisis hit the British and Irish labor markets especially hard, which resulted in a shift in migration flows to other EU member states, mainly former receiving countries.

Although there are at least three different sources of information concerning international migration to and from Poland, none of them can be used as a fully reliable dataset because it is almost impossible to accurately estimate how many immigrants actually live in a country. This is because migration flows are difficult to measure, especially

within the borders of the EU, where EU citizens can live abroad without a permit. The most comprehensive data are provided by the Polish population register, although it does not provide fully reliable information on the post-accession outflow.<sup>10</sup>

Despite data limitations, different studies show a similar tendency concerning long-term migration: most of the people who emigrated from Poland after the EU enlargement still live abroad. Many Poles decide to live abroad for at least a year. Depending on the data source, such longer-term migrants constitute from 66 percent (Baas and Brückner 2011) to over 75 percent (Central Statistical Office 2012a) of all emigrants. As regards the dynamics, the number of emigrants from Poland peaked in 2008 and is declining slowly due to the effects of the global crisis. This is illustrated by figure 7, which captures the main emigration trends after Poland’s EU accession.

**FIGURE 7. MIGRATION FROM POLAND TO GERMANY, IRELAND, THE NETHERLANDS, AND THE UK, 2004–11**



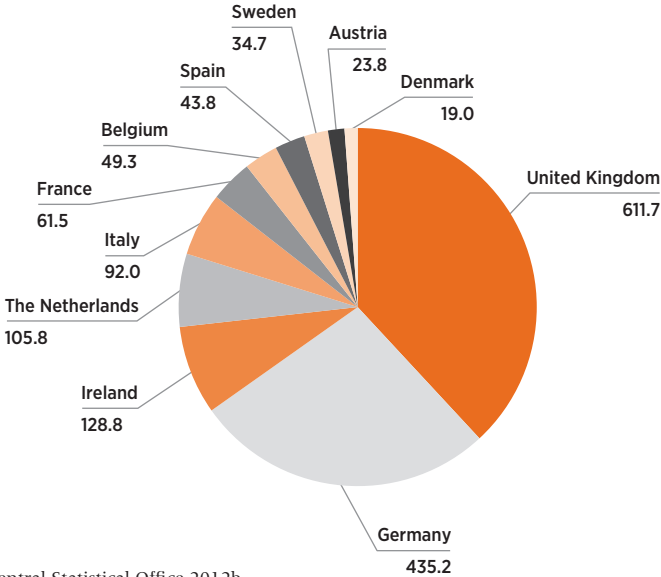
Source: Central Statistical Office, Poland.

The scale of emigration is significant. Baas and Brückner (2011) estimate that in 2010, 4.3 percent of the Polish population lived in the EU15 countries. The results of the National Census of Population and Housing, conducted by the Polish Central Statistical Office in 2011, show comparable data, stating that the number of Poles living abroad for more than three months reached 1.94 million, or about 5 percent of

10 The main reason is that after opening the borders, it is much more difficult to capture the movements between countries. Moreover, after spending some time in one country, many people decide to move to another. Since these are intra-EU movements, they are not necessarily registered in Poland. Another reason is that many people who live abroad, even for a long time, are still registered as residents in their hometowns in Poland.

the Polish population. A similar share may be observed using Eurostat data: in 2012, over 1.7 million Polish citizens lived abroad. According to the Central Statistical Office, the most popular countries among Polish emigrants include the UK, Germany, and Ireland (see figure 8). Although Germany imposed restrictions on employing EU8 citizens, it has experienced enhanced migration since 2004, which was mainly driven by the Poles. The EU enlargement has also led to legalization of many EU8 citizens who worked in the EU15 illegally prior to 2004.

**FIGURE 8. NUMBER OF POLISH RESIDENTS IN EU COUNTRIES LIVING ABROAD TEMPORARILY BUT FOR MORE THAN THREE MONTHS (THOUSANDS OF PEOPLE)**



Source: Central Statistical Office 2012b.

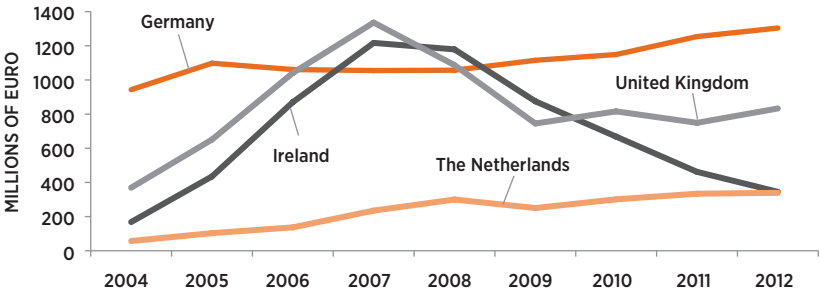
It could be that the biggest emigration wave from Poland is over, but there is still a large migration potential in the country. The 2013 data of a panel survey, “Social Diagnosis” (Czapiński and Panek 2013), conducted every two years, show that about 8 percent of Polish citizens intend to work abroad, which is about 1 percentage point more than in the 2009 survey. Over 40 percent of these people plan to move to Germany and 23 percent to the UK.



The impact of migration on the Polish economy is transmitted through three main channels: the stock of labor force, the flow of remittances, and the transfer of skills. As regards the first channel, emigration decreased the supply of labor, which has led to labor shortages in selected sectors, mainly in construction and agriculture. This decrease, however, took place in an environment of high unemployment, which in 2004 stood at 19.1 percent.

The value of remittances, the second channel, is presented in figure 9. The figure shows that remittances to Poland have risen in recent years to a noticeable share of the balance of payments. Their value (and share in Polish GDP) increased strongly after Poland joined the EU. The growing trend remained unchanged until 2008, when the global financial crisis caused worldwide decreases of remittances. In Poland, remittances constituted 1.14 percent of GDP in 2004, peaked at 1.71 percent of GDP in 2007, and have been slowly declining to only 1.09 percent of GDP in 2012. Barbone, Piętka-Kosińska, and Topińska (2012) show the positive impact of remittances on the Polish economy, mainly due to their enhancing impact on consumption, and estimate they amounted to about EUR 5 billion of GDP in 2011.

**FIGURE 9. REMITTANCES FROM GERMANY, IRELAND, THE NETHERLANDS, AND THE UK TO POLAND, 2004–12**



Source: National Bank of Poland.

Transfer of skills, the third channel, works through emigrants that acquire skills abroad and return to the sending country. However, the transfer of skills effect on the economy is difficult to assess.

Although the qualifications of the (especially young) population in Poland have improved in recent years, there is still a problem with the approval and acknowledgement of occupational qualifications abroad.

For instance, nearly 54 percent of Polish migrants to the UK claim that they hold an occupational qualification not recognized in the UK (Baas and Brückner 2011). This suggests that many migrants are employed below their educational level while outside the country and may not be gaining significant additional skills.

Certainly, working abroad requires knowledge of at least one foreign language. According to a 2012 EU survey (European Commission 2012), 33 percent of Polish citizens claim to have a sufficient command of English. It is reasonable to assume that Polish émigrés' language skills may tend to improve during a period overseas. But, in certain countries, especially in the UK, the concentration of Polish immigrants is so strong that in some cities it is possible to live and work without speaking English. The 2011 UK national census revealed that there are over 546,000 people in England and Wales whose main language is Polish. Therefore, Polish is the second-most-commonly-spoken language in the UK.

Based on this available somewhat mixed evidence, the effect of migration on the Polish economy through the transfer of skills channel remains difficult to assess and will only become clear once further academic work is done in this area.

## **Impact of EU funds on the Polish economy**

The real convergence process referred to in Section 1 has continued after Poland's EU accession. The process was underpinned by, among other things, the European convergence policy. According to article 174 of the Treaty on the Functioning of the European Union, the EU is obliged to promote "economic, social and territorial cohesion." Along with this obligation, more than one-third of the EU budget is spent on minimizing disparities among regions of the member states. This regional policy<sup>11</sup> is accomplished through structural and cohesion funds, also called instruments of the regional policy.

During the 2007–13 programming period, the main targets of regional policy were convergence and competitiveness enhancement for economic growth and employment. Another important source of the EU funds inflow is the Common Agricultural Policy (CAP), which also puts emphasis on strengthening competitiveness and supporting

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11 The terms regional, structural, or cohesion policy are often used interchangeably in the literature.

job creation and growth. Besides these targets, European funds also promote cultural and environmental values. When assessing the impact of EU funds inflow on the economy, it is important to bear in mind that the recipient countries are obliged to cofinance projects conducted within the framework of EU structural policy, which affects their investment choices.

There are three objectives of regional policy, which in previous EU programming periods were called Objectives 1, 2, and 3. Since 2007, they have become, respectively, the Convergence objective, the Regional Competitiveness and Employment objective, and the European Territorial Cooperation objective. Regions that are eligible for grants under the Convergence objective are characterized by a GDP per capita level not exceeding 75 percent of the EU average. Under the Regional Competitiveness and Employment objective, whose fundamental aim is to help the member states meet the Lisbon Strategy targets, richer regions may obtain financing in order to enhance a balanced development. The European Territorial Cooperation objective encourages interregional and cross-border cooperation. All objectives can be financed through the European Regional and Development Fund, and the first and second objectives can also be financed through the European Social Fund.<sup>12</sup>

The European Regional and Development Fund and the European Social Fund are called structural funds. The European regional policy is also conducted by means of another instrument—the Cohesion Fund—which finances environmental protection and development of trans-European transport networks in those countries where gross national income per capita is lower than 90 percent of the EU average. Financing the Common Agricultural Policy is accomplished through the European Agricultural Guarantee Fund, which makes direct payments to farmers and takes measures aimed at responding to market disturbances; and the European Agricultural Fund for Rural Development, which contributes to rural development in the member states.

The rationale for spending a considerable part of the EU budget on policy aimed at convergence has been a subject of debate since the 1990s. Although the structure of financing and the amounts spent are frequently criticized, the empirical literature shows that EU transfers accelerate the convergence of poorer regions and contribute to GDP growth, in both the short and long term.

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12 For the importance of each fund in inflows to Poland, see figure 10.

While some analyses pointed to the inefficiency of structural funds, others showed the positive effects on the convergence process in poorer regions. The results were often biased by differences in methodology and in the degree of data aggregation. The significance of EU transfers for GDP growth was confirmed for more detailed regional data. To name only a few examples, Becker, Egger, and von Ehrlich (2010) show that between 1989 and 2006, access to European funds under Objective 1 contributed about 1.6 percentage points to GDP per capita growth in the recipient regions. Positive outcomes in assessing the impact of EU financing were also asserted by Becker, Egger, and von Ehrlich (2012); Beugelsdijk and Eijffinger (2005); and Ederveen, de Groot, and Nahuis (2006). Furthermore, Mohl and Hagen (2010) show positive effects of expenditure related to Objective 1.

Some studies measure the impact of financing poorer regions on the net contributors to the European budget. The result is generally positive. Becker, Egger, and von Ehrlich (2010), for example, estimate that net contributors' returns are on average 1.2 times higher than their cost in terms of GDP, which might be associated with productivity gains from intensified investment. Bradley, Untiedt, and Zaleski (2009), however, find that net contributors gain from increased trade with recipient countries, albeit this effect is not in all cases larger than the cost of the contribution. The effectiveness of cohesion policy is also evaluated by European and national institutions, the results of which will be discussed in more detail later.<sup>13</sup>

In the case of Poland, the large scale of inflows contributed to the country's development, investment intensification, and the building of human capital. This effect comports with the aim of the National Strategic Reference Framework defining funds utilization so as to create "the conditions for the growth of competitiveness of knowledge based economy and entrepreneurship which are to assure an increase in the employment and the level of social, economic and territorial cohesion" (MRD 2007). Between 2004 and 2012, the GDP per capita (in PPP terms) in Poland rose from 51 percent to nearly 66 percent of

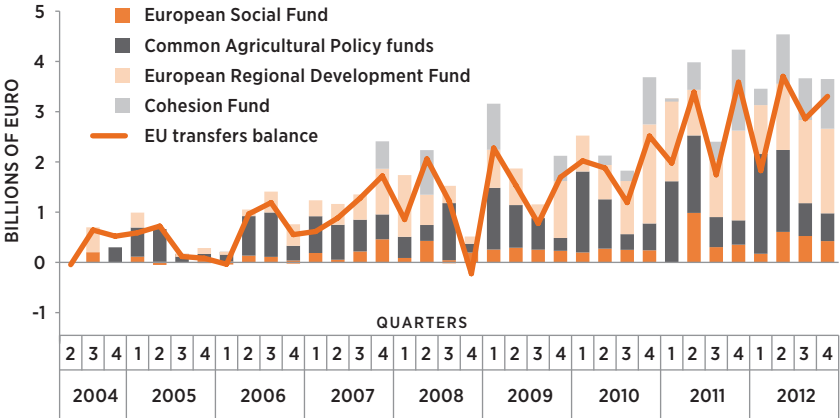
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13 Evaluations are underpinned by econometric models that basically compare the economic outcomes of two scenarios—with and without the funds inflows. This paper focuses on the results from three types of models: the Hermin model, which is used by, among others, the Directorate-General for Regional and Urban Policy (for the results for Poland, see WARR 2013); the EUImpactMod model, which is a dynamic stochastic general equilibrium (DSGE)-based model created by the Institute for Structural Research (see Institute for Structural Research 2013); and the MaMoR3 model, which is a computable general equilibrium (CGE)-type model (see Kaczor, Mackiewicz-Lyziak, and Michniewicz 2012).

the EU average, and a large portion of this growth can be attributed to the European cohesion policy.

Despite that growth, all Polish regions are still eligible for the Convergence objective.<sup>14</sup> The cumulative net sum of European funds (including the CAP) amounted to more than EUR 66 billion in the aforementioned period (for distribution details, see figure 10). For 2004–15, the Ministry of Regional Development (MRD) estimates that Poland will receive almost EUR 104 billion within the framework of cohesion policy (WARR 2013). Estimations show that these fund transfers should positively influence the GDP dynamics: the additional average annual GDP growth in Poland attained with the EU funds inflow is estimated at between 0.3 and 0.7 percentage points for 2004–15, depending on the model used (Institute for Structural Research 2013; Kaczor, Mac-kiewicz-Łyziak, and Michniewicz 2012; WARR 2013). The net effect of cohesion policy funds on the GDP level in the forthcoming financing perspective 2014–20 is estimated at 4 to 5 percent at the end of the spending period, which is similar to the outcome estimated for 2004–13.

**FIGURE 10. STRUCTURE OF THE EUROPEAN FUNDS INFLOWS**



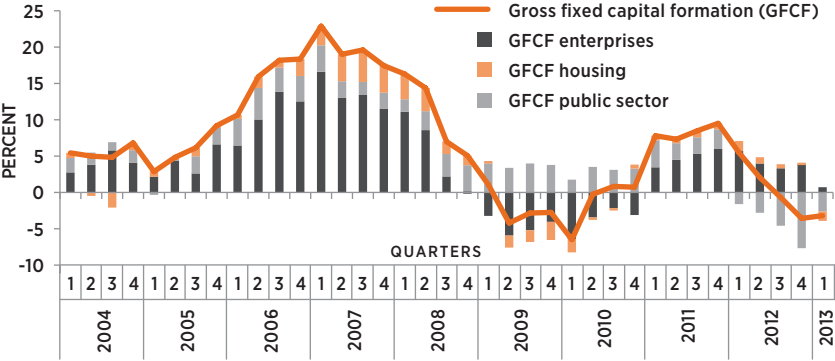
Source: National Bank of Poland.

The impact of the structural funds on the economy may differ between the short- and long-term horizon. EU funds have an impact

14 For a map of EU regions eligible for European financing under Convergence objectives and the European Competitiveness and Employment objective during the cohesion policy programming period, 2007–13, see [http://ec.europa.eu/regional\\_policy/atlas2007/index\\_en.htm](http://ec.europa.eu/regional_policy/atlas2007/index_en.htm).

on the demand side of the economy. Since EU accession, both private and public investment, enhanced by the cofinancing principle, have risen significantly (see figure 11). As shown in Bukowski, Jędrzejowicz, and Kitala (2012), while consolidating public finances, countries that absorbed the EU funds greatly cut their current expenditure and maintained higher levels of public investment than the other EU countries, which could explain why Poland maintained positive GDP growth during the recent global economic and financial crisis.<sup>15</sup>

**FIGURE 11. INVESTMENT IN THE POLISH ECONOMY, 2004Q1–2013Q1**  
**(YEAR-OVER-YEAR, NBP ESTIMATES FOR THE BENEFIT OF**  
**THE NECMOD MODEL; DATA SEASONALLY ADJUSTED)**



Sources: Central Statistical Office data; National Bank of Poland estimates.  
 Note: The NECMOD model is the new forecasting model of the National Bank of Poland.

The model-based evaluations of EU funds also support the view that the inflow of structural funds promotes investment, since it raises the investment ratio by around 2 to 4 percentage points. In turn, the elevated level of investment, especially in infrastructure, contributes to positive supply-side effects, which are revealed in the longer-term horizon. Another aspect of private sector investment relates to the developments in the labor market. Evaluations conducted for the Ministry of Regional Development (MRD 2013a) show that the overall effect of the EU funds on job creation and employment are significant—owing to cohesion policy funds, the employment ratio was higher by up to 3.5

<sup>15</sup> The performance of the Polish economy during the crisis is described in section 3.

percentage points by 2012. The estimated positive impact of the funds on the unemployment rate was also sizable, amounting to between 3.5 and 3.9 percentage points.

The inflow of EU funds, through investment in physical and human capital, led to capital accumulation and enhanced labor productivity. According to MRD data (WARR 2013), almost 60 percent of the funds were devoted to the development and modernization of basic infrastructure such as wastewater treatment plants and the road system (see table 6). Numerous investments in renewable energy projects raised the share of environmentally friendly electricity production in total energy production by 6 percentage points between 2004 and 2011. Given the fact that the Polish economy is coal based and the pace of fund use in the field of renewable energy is among the slowest, it is a step toward more balanced development.

Forty-one percent of the 2007–13 budget was devoted to transport infrastructure, which is lagging behind more developed EU member states. This is a very important aspect of European integration because it can be directly observed by households and the corporate sector. Although motorway construction in Poland proceeds slowly, seldom accelerated by events such as Euro 2012—the UEFA European Football Championships—it is worth noting that between 2004 and 2011, the total length of motorways almost doubled (see table 6). However, in the field of road construction, considerable effort is still needed given Poland’s geographic location between the East and the West. Considering that the volume of goods transported internationally by road vehicles through Poland rose by more than 230 percent between 2004 and 2011, the efficiency of the transport network requires further improvement. Advances in this area should positively influence the competitiveness of the EU by improving the connection among the EU countries and further diminishing the costs of transportation.

The second-most-important group of projects supported by the EU cohesion policy is those enhancing innovation, research and development, entrepreneurship, and human capital development. Investment in all these fields is important, especially in converging economies like Poland, because it fosters future growth and improves economic productivity. Although it is difficult to measure innovation, the Global Innovation Index (GII) report attempts to assess the ability of economies to promote future growth, taking into account the above-mentioned areas as well as the countries’ infrastructure, institutional environment,

**TABLE 6. PROJECTS ACCOMPLISHED WITH SUPPORT OF  
EUROPEAN FUNDS, 2007–13 PROGRAMMING PERIOD**

Type of projects	Number of projects
<b><i>Infrastructure</i></b>	
Road infrastructure modernization and construction (km)	10,498
including motorways and expressways (km)	1,325
Railway infrastructure modernization and construction (km)	1,593
Municipal transport carriage modernization and construction (number of units bought and modernized)	1,965
Wastewater stations	385
Renewable energy investment projects	339
<b><i>Labor market</i></b>	
Newly created jobs	290,043
Children aged 3–5 attending kindergarten	134,848
<b><i>Internet infrastructure</i></b>	
Broadband Internet network (km)	36,072
New e-services	5,205
<b><i>Research and development</i></b>	
Research centers	494
High schools and research units	1,300
Laboratories	1,618
Supported innovative ideas	1,764
Implemented technologies	2,483
<b><i>Business environment</i></b>	
Supported enterprises	24,257
Supported business environment institutions	199

Source: Ministry of Regional Development, Poland.

Note: km = kilometer.

and business sophistication (Dutta and Lanvin 2013). In the GII 2013 report, Poland ranked 49th out of 142 economies. Poland's strengths in relation to other economies are enumerated in various fields that may be associated with the effective use of the European structural funds.

First, investment in human capital contributed to raising enrollment in tertiary education and encouraged companies to offer formal training to their workers. Raising the qualifications of Polish employees increased the ability of the economy to import communication, computer, and



information services, which has a generally propitious effect on an economy's innovativeness.

Second, the high potential of Polish exporters is also confirmed by their ability to compete in the global market for creative goods. Research and development expenditures of Polish enterprises have been growing constantly, even during the crisis, which would not be possible without EU support.

Third, projects aimed at building and modernizing infrastructure, which helped to improve Poland's environmental performance, are another important area of investment supported by the European funds and mentioned in the GII report. However, the GII report also reveals some weaknesses of the Polish economy that could be eliminated if some other structural funds programs in the field of innovative economy and human capital were used more efficiently. For instance, Poland is lagging behind in spending the European funds on programs concerning the implementation of invention and property rights management, and on promoting science and engineering studies and supporting school development at the lower levels of education (MRD 2013a).

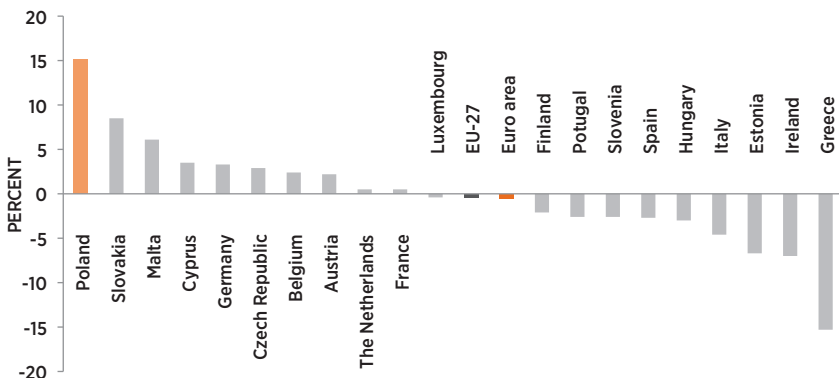
The CAP is not evaluated in the literature concerning the impact of the European funds on receiving economies. Nevertheless, it has had a positive impact on the Polish economy. Since EU accession, the scale of inflows linked to the CAP has often been higher than the value of the structural funds inflows. Polish farmers have benefited from direct payments and financing related to the regulation of the common market. Poland has also been the largest beneficiary of the European Agricultural Fund for Rural Development, which aims to strengthen competitiveness and environmental protection and enhance the economic diversity of rural areas. These funds have been used efficiently, which can be observed by the rising quality of Polish food and Poland's increasing food export share in the European and world markets. Since 2005, the efficiency of Polish agriculture has risen by almost 60 percent.



### 3. Poland's economic performance during the crisis

It was argued in the previous section that Poland is well integrated with the other EU countries, which would imply that it should report GDP dynamics similar to the other member states. However, this was not the case during the recent crisis (see figure 12). In 2009, Poland was the only EU country that registered positive GDP growth. Moreover, the comparison of GDP per capita growth rates shows that during 2007–11, the Polish economy was converging at the fastest pace among the EU member states. During the crisis, Poland avoided not only a recession, but also a massive accumulation of private or public debt and financial

**FIGURE 12. CUMULATIVE GDP GROWTH RATES  
IN SELECTED EU COUNTRIES, 2008–11**



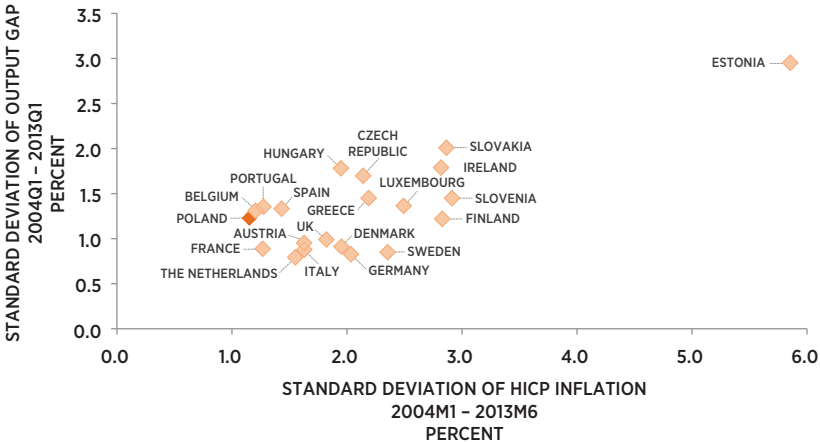
Source: Eurostat.

system instability. This section discusses selected factors that contributed to the relatively good performance of the Polish economy during that period.

In the years prior to the global crisis, the Polish economy—unlike those in countries on the periphery of the euro area and the Baltic States—did not accumulate any significant imbalances. Since Poland’s EU accession, the volatility of both inflation and the output gap has been the lowest among both NMS and OECD members (see figure 13). At the same time, the average current account deficit has been one of the lowest among NMS and substantially lower than in the euro area’s periphery countries, Greece, Portugal, and Spain. Also of note, the current account deficit has been relatively stable and, to a large extent, covered by net FDI and capital transfers from the EU.

This remarkable stability is largely the result of sound macroeconomic policies: monetary policy based on an inflation-targeting strategy and a floating exchange rate, and a generally prudent fiscal policy (see below). The good policy mix and the strong fundamentals of the Polish economy were important factors behind the IMF’s May 2009 decision to offer Poland access to the newly created Flexible Credit Line, designed to meet the increased demand for crisis-prevention and crisis-mitigation lending for countries with very strong policy frameworks and a favorable track

**FIGURE 13. VOLATILITY OF INFLATION AND OUTPUT GAP  
IN SELECTED EU COUNTRIES, 2004Q1–2013Q1**

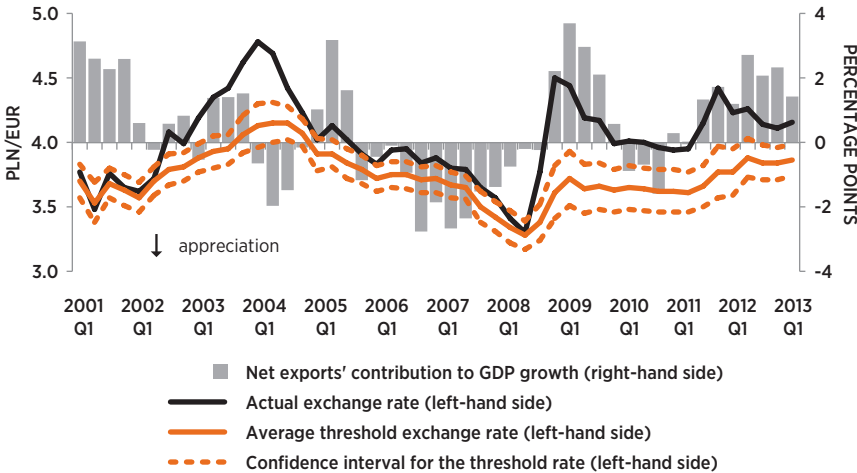


Source: Annual Macroeconomic Database, Eurostat.  
Note: HICP = Harmonised Index of Consumer Prices.

record in economic performance. The IMF decision enhanced Poland's strong standing in international financial markets.

The floating exchange rate of the zloty turned out to be an effective shock absorber. The volatility of the nominal exchange rate contributed greatly to macroeconomic stability in Poland by cushioning the external shocks. The substantial nominal and real zloty appreciation observed during the boom period of 2007–08, resulting from strong capital inflows, was conducive to easing inflationary pressure. In turn, the global financial meltdown in the aftermath of Lehman Brothers' collapse in September 2008 led to a significant depreciation of the zloty exchange rate in both nominal and real terms. However, this cushioned the impact of the global financial and economic crisis on the domestic economy (see figures 14 and 15).<sup>16</sup>

**FIGURE 14. NOMINAL ZLOTY EXCHANGE RATE AGAINST THE EURO, THRESHOLD EXCHANGE RATE OF EXPORTS PROFITABILITY AND NET EXPORTS' CONTRIBUTION TO GDP GROWTH, 2001Q1–2013Q1**

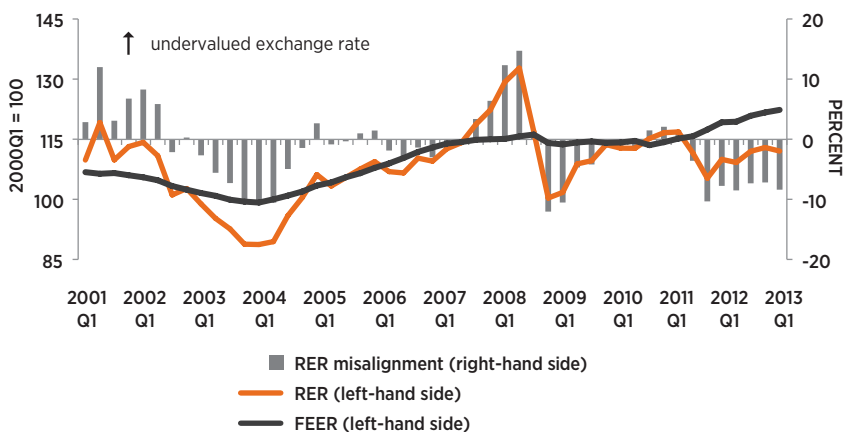


Source: National Bank of Poland data and estimates.

Note: The threshold exchange rate at which exports become profitable is determined by computing the average of responses to a question included in the NBP quick monitoring survey addressed to enterprises (Economic Climate in the Enterprise Sector). Survey question: "What is the threshold level of the foreign exchange rate at which exports will become (is) unprofitable?"

<sup>16</sup> Simulations by Brzoza-Brzezina, Makarski, and Wesołowski (2012) show that if Poland had adopted the euro in 2007, GDP growth would have oscillated between -6 percent and +9 percent (-9 percent to +11 percent under more extreme assumptions) instead of between 1 percent and 7 percent, and inflation would have been more volatile, as well.

**FIGURE 15. REAL ZLOTY EXCHANGE RATE AGAINST THE EURO (RER),  
FUNDAMENTAL EQUILIBRIUM EXCHANGE RATE (FEER),  
AND RER MISALIGNMENT, 2001Q1–2013Q1**



Source: National Bank of Poland data and estimates

The macroeconomic policy mix was promptly loosened in response to the crisis. Between November 2008 and June 2009, the NBP’s Monetary Policy Council lowered the reference rate by 2.5 percentage points to 3.5 percent, which until then was the lowest level of the main policy rate in Poland’s modern history. The reference rate remained at that level for 19 months. In October 2008, the NBP undertook some liquidity measures to address the tensions building up in the domestic financial markets and banks’ financing problems related to the global financial turmoil.<sup>17</sup> Nonetheless, these measures were limited since there was no necessity to resort to unconventional monetary policy measures.

Regarding fiscal policy, the general government deficit deepened from 1.9 percent of GDP in 2007 to 3.7 percent of GDP in 2008, and to 7.9 percent of GDP in 2010, a record high during Poland’s EU membership period. The worsening of the public finance balance was caused by a slowdown in economic growth, which triggered automatic stabilizers, leading to a decline in revenue growth and expenditure increases. Another factor behind the growing deficit was the loosening of fiscal policy, which helped smooth the economic downturn: a cut in social

17 The measures under the so-called “Confidence Pact” focused on three main objectives: enabling banks to obtain financing in the zloty for periods longer than one day, enabling banks to obtain foreign currency financing, and increasing the possibilities of banks obtaining funds in zloty by extending the list of securities acceptable in transactions with the NBP.

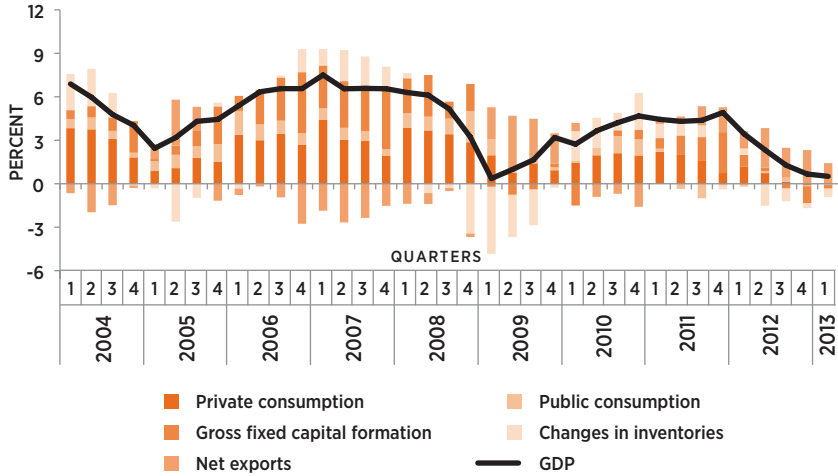
contributions diminished public revenues by about 2 percent of GDP during 2007–08, whereas the personal income tax reform enacted in 2009 lowered tax revenues by about 0.5 percent of GDP.

Importantly, the loosening of fiscal policy in Poland during the crisis was more than a mere fiscal stimulus. Rather, the increased expenditure was largely channeled to finance public investments. In 2008, alone, general government gross fixed capital formation amounted to 4.3 percent of GDP. Access to the European funds, along with the cofinancing principle, fostered public spending on various projects within the framework of the EU cohesion policy. High public investment throughout the crisis accelerated many infrastructure projects and contributed to preserving domestic demand at much higher levels than in other countries hit by the crisis. It is estimated that for the entire 2004–15 period, the ability to use the EU funding lowered the public deficit by 0.6 percent to 1.2 percent as a consequence of increasing GDP growth and extending the tax base. The high growth in public investment was not only a factor sustaining GDP growth in the short term, but also one contributing to faster growth of potential GDP in the longer term.

Another factor conducive to the relatively good performance of the Polish economy during the crisis was the relatively well-functioning labor market. The employment rate rose between 2004 and 2009, and stabilized at around 60 percent (see table 7). At the same time, the rate of unemployment declined to 7.2 percent in 2008 and, since 2010, has fluctuated at around 10 percent. The fact that employment responded comparatively weakly to the slowdown was the result of labor hoarding by Polish enterprises, that is, preserving jobs at the cost of cutting working hours and wages. This was a new tendency compared with the previous slowdown of the early 2000s, when Polish firms cut employment rather than wages. Subsequently, they were unable to respond quickly to a growing demand after the slowdown.

Maintaining relatively high employment during the recent crisis helped sustain domestic demand and underpinned GDP growth (see figure 16). Moreover, the Polish labor market is characterized by a relatively high degree of flexibility, reflected in a low coverage of collective bargaining and automatic wage indexation and a low degree of private sector employee participation in labor unions. These institutional arrangements contributed to labor productivity growth exceeding the growth of wages during almost the entire period after 2000, which fostered the increase in the Polish economy's competitiveness.

**FIGURE 16. CONTRIBUTION OF AGGREGATE DEMAND COMPONENTS TO GDP GROWTH, 2004Q1–2013Q1**



Source: National Bank of Poland calculations based on Central Statistical Office data.

**TABLE 7. SELECTED STATISTICS FOR POLAND, 2004, 2008, AND 2012**

	2004	2008	2012
Real GDP at market prices (2004 = 100)	100	162	187
GDP per capita in PPP terms (2004 = 100)	100	128	153
Final consumption expenditure (2004 = 100)	100	154	176
Gross fixed capital formation (2004 = 100)	100	198	200
Exports of goods and services (2004 = 100)	100	186	236
Imports of goods and services (2004 = 100)	100	183	211
Employment rate (aged 15–64) (%)	51.2	57.0	59.7
Unemployment rate (aged 15–64) (%)	19.7	9.7	9.8
Employment rate (aged 15–24) (%)	21.2	25.8	24.9
Unemployment rate (aged 15–24) (%)	41.4	21.7	25.8
General government balance (% of GDP)	-5.4	-1.9	-3.9
Government consolidated gross debt (% of GDP)	45.7	45.0	55.6

Source: National Bank of Poland calculations based on Eurostat data.



Another important factor behind Poland's relative resilience to the crisis was the sound condition of the banking system. In contrast to several other EU countries, during the crisis none of the domestic banks required recapitalization with public funds. This remarkable resilience is the result of several factors, including the fact that the balance sheets of the Polish banks, being traditional commercial banks, did not contain any toxic assets prior to the global crisis. Individual banks managed to maintain high capitalization ratios and profitability, and the banking system did not suffer any liquidity shortages. During the crisis, the capital adequacy ratio remained well above the Basel II threshold of 8 percent, and in the first quarter of 2013, it even rose to over 15 percent.

Moreover, since the onset of the global crisis, the sector remained profitable (see figure 17). According to the latest stress tests conducted by the NBP (see NBP 2013), the Polish banking system would remain resilient to unfavorable macroeconomic, market, or liquidity shocks.<sup>18</sup> The macro stress tests revealed that the majority of the domestic banks would have enough capital to absorb the effects of a severe economic slowdown and maintain high capital adequacy levels.

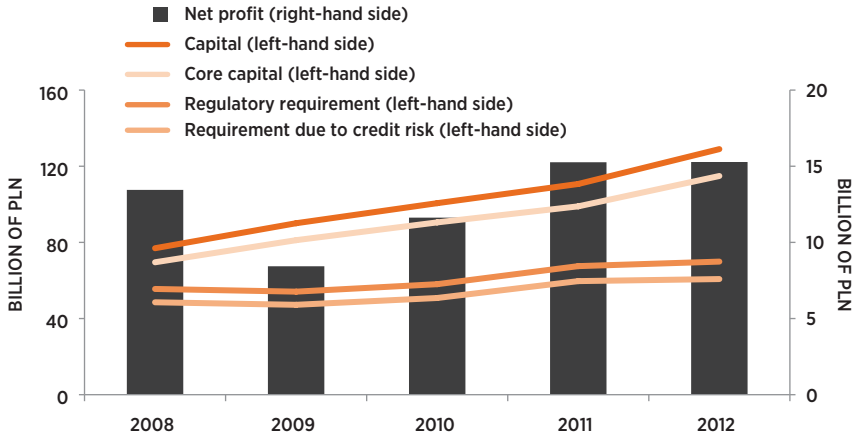
Another important factor behind the resilience of the domestic banking system is solid financial system supervision. The Polish Financial Supervision Authority has succeeded in containing the major risk to the banking system, that is, the rapid growth in foreign-currency-denominated loans observed prior to the crisis, at the time of strong zloty appreciation. The substantial exchange rate depreciation resulting from the global crisis posed a risk to the stability of the Polish financial system.

In response, the Polish Financial Supervision Authority undertook a series of macroprudential measures. So-called "Recommendation S," referring to mortgage loans, was amended in 2008 and 2010 to mitigate the risks related to mortgage loans (especially foreign currency ones). The new regulations included a requirement of maintaining additional buffers in loan-to-value calculations and the introduction of debt-service-to-net-income thresholds for foreign currency loans, as well as stress testing for currency risk impact. "Recommendation T," issued in 2010, provided a best practice guideline for managing credit

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18 The tests focused on three types of shocks. A macroeconomic shock assumed a recession in the euro area that would lead to a substantial decrease in GDP growth in Poland. In a market shock scenario, the macroeconomic shock was exacerbated by capital outflows from Poland reflected in the rise in yields on Polish Treasury debt securities and the depreciation of the zloty exchange rate. A liquidity shock assumed exchange rate depreciation, an increase in the Polish government bond yields, foreign capital outflow, and withdrawal of some deposits from the banking system (for more information, see NBP 2013).

**FIGURE 17. SELECTED INDICATORS OF THE POLISH BANKING SYSTEM, 2008–12**



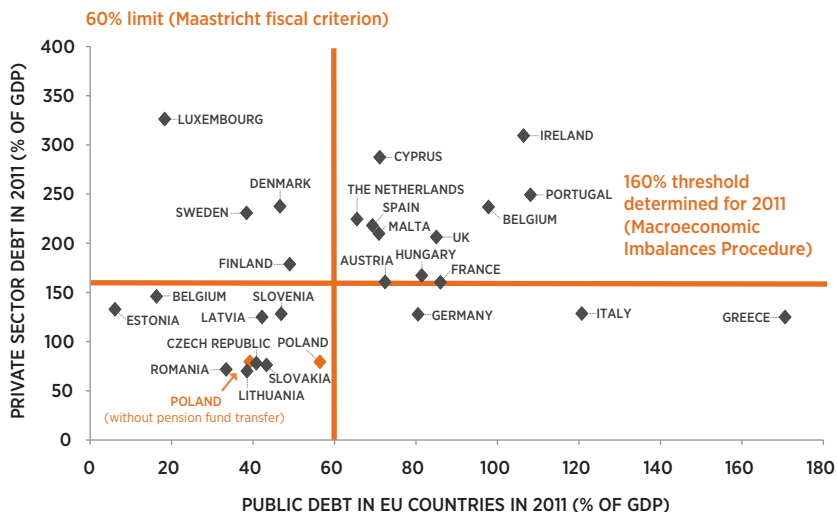
Sources: National Bank of Poland, Polish Financial Supervision Authority.

risk arising from exposure to households. Owing to those measures, the demand for new foreign exchange mortgage loans sharply decreased, and their stock has stabilized.

Finally, Poland avoided both private and public debt crises that hit several EU countries. In 2011, Poland's private debt level of 80 percent of GDP was only half as much as the threshold allowed by the Macroeconomic Imbalance Procedure (see figure 18). The relatively low private indebtedness is, to a large extent, the effect of sound financial system supervision, efficiently limiting excessive credit growth. Similarly, the overall situation of public finance in Poland can be regarded as relatively good, with the gross government debt level at 55.6 percent of GDP in 2012, that is, well below the average levels observed in the EU (85.3 percent of GDP) and the euro area (90.6 percent of GDP; see figure 18). The public debt level would be even lower, amounting to 38 percent of GDP, if the cost of future pension prefunding, resulting from the 1999 reform,<sup>19</sup> was not included.

<sup>19</sup> The pension system reform of 1999 introduced a multipillar system in which the old-age social contribution was split into two funds (pillars). The first pillar is a retained public pay-as-you-go system, while the second, newly created, pillar, is allocated in the privately funded system, the so called open pension funds. Since the reform diminished revenues of the public system, the expenditures are funded by the issuance of public debt. The net cost of the pension system reform was estimated at 2.9 percent of GDP in 2008 and 3.2 percent of GDP in 2009. The third, nonmandatory, pillar introduced by the reform assumed accumulation of additional capital in private funds.

**FIGURE 18. PRIVATE AND PUBLIC DEBT-TO-GDP RATIO  
IN THE EU COUNTRIES**



Sources: European Commission; Eurostat; Ministry of Finance, Poland.

Note: The private sector is defined as nonfinancial corporations, households, and nonprofit institutions serving households. Debt is defined as the sum of loans and securities other than shares.

The comparatively good condition of public finance results, to a large extent, from a fiscal rule contained in the Constitution of the Republic of Poland since 1997 forbidding the government to run public debt over 60 percent of GDP. This constitutional article was supplemented by a national law on public finances setting prudential thresholds of 50 percent and 55 percent of GDP, at which the government must face sanative and cautionary measures.<sup>20</sup> These solutions were further strengthened in 2009 and 2011, when an expenditure rule was promulgated to limit the growth of central government discretionary spending to 1 percent in real terms as long as Poland is subject to an Excessive Deficit Procedure.

20 If public debt is higher than 50 percent of GDP but lower than 55 percent, the draft budget for the following year must not propose a higher deficit-to-revenue ratio than in the current year (the rule was suspended for 2013). If the debt is between 55 percent and 60 percent of GDP, the draft central budget must not increase the ratio of central government debt to GDP in the following year.



## 4. The challenge of euro adoption

This section discusses the challenges ahead for Poland related to euro adoption. Since EU accession, Poland has participated in the Economic and Monetary Union (EMU) as a member state with derogation. Unlike Denmark or the United Kingdom, which negotiated opt-out arrangements before the adoption of the Maastricht Treaty in the early 1990s, Poland is obliged to adopt the euro at some point, after fulfilling the Maastricht convergence criteria. However, as exemplified by Sweden (which has fulfilled most of the convergence criteria most of the time since the 1990s), a member state with derogation can generally achieve a high degree of sustainable convergence and yet refrain from adopting the euro.<sup>21</sup> In the case of Poland, the question is thus not whether, but when, Poland should join the common currency area.

Euro adoption involves giving up national monetary policy and irrevocably fixing the exchange rate of the domestic currency against the euro. Such changes need not be fundamental: some NMS, Estonia and Latvia, for example, pegged their currencies to the euro several years before their euro adoption, so their monetary policies were in fact shadowing that of the European Central Bank (ECB). In contrast, Poland's current monetary arrangement is based on independent monetary policy (within the inflation-targeting framework) and a floating exchange rate. This regime has generally served Poland well in terms

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<sup>21</sup> Sweden does not participate in Exchange Rate Mechanism II and thus does not fulfill the Maastricht exchange rate criterion.

of macroeconomic stability, both internal and external (see Section 3), so a proper timing of euro adoption by Poland needs careful analysis.

The major challenge related to euro adoption results from the fact that Poland is a converging economy. In 2011, its GDP per capita based on PPP and its price level amounted to around 59 percent and 57 percent of the respective euro area averages. In the years to come, both aggregates are expected to increase faster, on average, than in the euro area. As long as the zloty remains Poland's national currency, the price convergence and the trend real exchange rate appreciation resulting from the Balassa-Samuelson effect can occur, to a large extent, via nominal zloty appreciation. Once Poland joins the euro area, higher average inflation will become the only channel of price convergence. Since the nominal interest rate will be set by the ECB and not the NBP, higher inflation would translate into lower real interest rates relative to more advanced euro area economies. This would be precisely the opposite of what Poland needs: as a converging economy, it has a higher natural or equilibrium real interest rate than the euro area.

This factor may hinder complying with the Maastricht criteria in a sustainable way. As demonstrated by the experience of Ireland and Spain and that of the Baltic countries, (which maintained hard pegs to the euro in the years leading up to the global crisis), a persistently low real interest rate can be conducive to the vicious boom-bust cycles. In the case of the Baltic countries, the booms were fueled by strong capital inflows into the domestic banking systems. In the case of Ireland and Spain, low real interest rates contributed to housing price bubbles and massive resource reallocation toward the construction sector. The factors contributing to housing price booms included a very low share of rental housing in total housing, which was the result of restrictive rental market regulation, policies promoting home ownership (for example, by tax exemptions), and overly flexible planning laws. Thus, the risk of boom-bust cycles could be mitigated, at least to a large extent, by sufficiently tight fiscal policy (given that national monetary policy will no longer be available), adequate banking system supervision and regulation, and policies aimed at facilitating the development of the rental housing market.

In Poland, the current supervisory arrangements have generally been quite successful at curbing excessive credit growth, but it is still uncertain how euro adoption will change this picture given that the future financial architecture of the euro area is still unknown. In turn,

the underdeveloped rental market raises the economy's susceptibility to real estate booms, and this risk should be addressed before Poland sheds its own currency.

Another major challenge connected with future euro adoption is the possibility of impaired adjustment to shocks (both symmetric and country specific). In theory, there are two opposite forces driving the adjustment of countries or regions of a monetary union to shocks: the real interest rate and the competitiveness channel.<sup>22</sup>

The real interest rate works as follows: when inflation in one country rises above the level prevailing in the rest of the union (for example, due to an asymmetric shock, asymmetric response to a common shock, or different position in the business cycle), the real interest rate drops below the union average, adding to the demand pressure and eventually fueling inflation and driving down the real interest rate even further.

The competitiveness channel works as follows: under the above-described circumstances, the elevated inflation leads to real exchange rate appreciation, worsening the country's external price competitiveness. As a result, exports weaken and the demand gap becomes smaller and inflation more subdued, as had been the case under the gold standard system.

Thus, the real interest rate channel is a disequilibrating mechanism and the competitiveness channel an equilibrating mechanism in a monetary union. Before the euro was launched, many economists expected that the latter mechanism would work against the accumulation of excessive imbalances within the future EMU. However, the first years of the common currency saw persistently high real interest rates in some member states (the "core" countries such as Austria, Finland, and Germany), and persistently low rates in some others (the "peripheral" countries such as Ireland, Portugal, and Spain). At the same time, the two groups of countries experienced, respectively, widening current account surpluses and (except for Ireland) deficits. It can be argued that the imbalances within the eurozone were largely due to the relative weakness of the competitiveness channel.<sup>23</sup>

The real interest rate channel is stronger the more heterogeneous are the economies making up the monetary union.<sup>24</sup> The euro area

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22 See, for example, Torój (2009).

23 See, for example, Enderlein et al. (2012).

24 See Deroose, Langedijk, and Roeger (2004).

countries are arguably rather different in terms of economic structures, and this is a reason why different reactions to symmetric shocks (that is, those disturbances that affect all euro area economies) turned out to be a major problem. Before the euro was introduced, the attention of economists was focused on the possibly impaired adjustment to asymmetric (that is, country-specific) shocks, but the first years of the EMU showed that common shocks as well as common monetary policy impulses can also lead to strongly divergent economic performance and cyclical positions.

Such differential developments could be mitigated if the competitiveness channel was strengthened, which can be accomplished by increasing the degree of price and wage flexibility, and thus decreasing the inflation inertia,<sup>25</sup> and by improving labor and product market regulations.<sup>26</sup> The experience of France and Italy, whose economies suffered a gradual decline in external competitiveness under the euro, shows that certain labor market characteristics (including inefficient wage negotiation systems or dismissal procedures) and inelastic product market regulations make it difficult for enterprises to adjust their costs to changing market conditions, which impairs the adjustment of economies to both unexpected shocks and cyclical upturns and downturns.

Poland's economic structures and institutions are rather different from those prevailing in the rest of the euro area. Moreover, the product market regulation is rather rigid, mainly as a result of barriers to entrepreneurship and difficulties with contract enforcement. Thus, the stabilizing function of the competitiveness channel might be relatively weak following the introduction of the common currency before structural reforms make those regulations much more elastic.

Aside from the above, longer-term considerations, there are some difficulties to overcome once the preferred date of euro adoption has been settled. Before joining the currency union, Poland will have to fulfill the nominal convergence criteria (Maastricht criteria) on price stability, government budgetary position, participation in Exchange Rate Mechanism II (ERM II), and convergence of interest rates. Arguably, fulfilling the exchange rate criterion will pose a challenge. The criterion is met if a country participates in ERM II for at least two years without severe tensions. During that period, the exchange rate of the domestic

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25 See Roubini, Parisi-Capone, and Menegatti (2007).

26 See European Commission (2006, p. 120).



currency against the euro should not deviate from the central parity by more than  $\pm 15$  percent, but—judging from the way the criterion was applied in the past<sup>27</sup>—the actually permitted range is narrower, that is,  $+15$  percent/ $-2.25$  percent (appreciation by no more than 15 percent and depreciation by no more than 2.25 percent).

“Severe tensions” include not only the breach of the permitted range or devaluation of the central parity against the euro. Rather, policy measures aimed at defending the parity, especially on its weak side (that is, strong increases of the policy interest rate or heavy central bank interventions in the foreign exchange market) also qualify as severe tensions, as demonstrated by Latvia’s negative assessment in the 2010 convergence reports of both the European Commission and the ECB. This may be challenging given the relatively high liquidity of the Polish foreign exchange market and the zloty’s high responsiveness to changes in the sentiment of global investors.<sup>28</sup>

Another related issue is the apparent asymmetry of treating the deviation of the exchange rate by 2.25 percent on the weak side of the parity as a serious tension, as opposed to the acceptable deviation by 15 percent on the strong side. The Treaty on the Functioning of the European Union does not define the width of the “normal fluctuation margins” within ERM II. Rather, the above interpretation is a result of historical changes to the ERM/ERM II setting: until the ERM crisis of 1993, when the normal fluctuation band was widened to the current  $\pm 15$  percent, for most countries it was defined as  $\pm 2.25$  percent. The asymmetric interpretation also reflects the fact that devaluation of a currency within ERM II amounts to nonfulfillment of the exchange rate criterion, whereas revaluation does not. The way the exchange rate criterion is interpreted could translate into pressure on zloty appreciation in ERM II, as in the case of the Slovak Republic in 2008. For a converging economy, which needs to adjust its economic structures before joining the euro area, symmetric bands of  $\pm 15$  percent would be more economically justified since they should help in setting the conversion rate at the level justified by fundamentals.

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27 At least biennially, the European Commission and the ECB publish their “Convergence Reports,” which analyze to what extent the EU member states with derogation fulfill the Maastricht criteria.

28 The average daily value of transactions involving the Polish zloty in the spot market is estimated at around US\$10 billion, and the dominant currency pair in the spot market (accounting for around 60 percent of all transactions in 2011) is EUR/PLN. Over 80 percent of the transactions are performed in the offshore market.

Finally, the Constitution of the Republic of Poland is the biggest formal hurdle to euro adoption. Article 227 stipulates that “The central bank of the State shall be the National Bank of Poland. It shall have the exclusive right to issue money as well as to formulate and implement monetary policy. The National Bank of Poland shall be responsible for the value of Polish currency.” Altering this article is among the many legislative changes necessary prior to euro adoption. However, neither the coalition currently ruling the country nor, most probably, any cabinet formed after the next parliamentary election (due in 2015), will have a majority in the parliament, which is necessary to change the Constitution.

All this leads to the conclusion that Poland’s euro adoption without proper preparations could involve nonnegligible costs in terms of macroeconomic stability and possibly also financial stability. The scale of such costs, however, cannot be assessed with accuracy given that joining a currency union would constitute a major structural break and that the future institutional design of the euro area is currently uncertain. In any case, those costs would be relatively small if certain conditions were met.

First, Poland’s economy should react in a similar way to shocks common to the entire euro area and to monetary policy impulses.<sup>29</sup> Second, it should be able to absorb idiosyncratic shocks in a relatively smooth way without national monetary policy and a flexible exchange rate. Third, it should be able to remain competitive without nominal exchange rate depreciation even in the event of large adverse shocks. As argued above, these goals could be accomplished by, among other things, deepening structural reforms, improving labor market institutions, enhancing product market regulations, and contributing to the development of the virtually nonexistent private rental market. The ultimate goal would be Poland’s smooth functioning—both under the euro and with its own currency. Once the Polish economy is well prepared for the common currency and Polish society well informed, the remaining obstacles, such as ERM II participation or legislative changes, could certainly be overcome.

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29 In the years before the EMU came into being, the discussion concentrated on shock symmetry; it was argued that the member states of the prospective euro area should be susceptible to similar shocks. This condition, along with the condition of symmetric reaction to shocks, would be met if the member states’ economic structures and institutions were similar. However, this is not a necessary condition of smooth functioning within a currency union, which is demonstrated, for example, by the very different labor market institutions of three core countries: Austria, Finland, and the Netherlands.

## 5. Concluding remarks

In the late 1980s, the Polish economy suffered from deeply distorted structures; pervasive shortages; misallocation of resources; inefficient, predominantly state-owned companies; and controlled prices. The quality of Polish goods was insufficient to meet the demands of foreign markets. GDP per capita was around one-tenth of the Western European level, reflecting a very low standard of living. At the beginning of the transition, annual CPI inflation fluctuated above 100 percent, the zloty was an inconvertible currency, and Poland was a highly indebted country.

Today, Poland is an established EU and OECD member with a vibrant market-oriented economy that is well integrated with its European partners in terms of trade in goods and services, capital flows, and migration. The relatively fast and steady economic growth has led to a significant increase in the standard of living. Since EU accession, GDP per capita in Poland has risen from about 50 percent of the EU average to more than 65 percent of the EU average, rising more than 15 percentage points in the last ten years. Since this increase was associated with balanced and healthy economic growth, it can be taken as a reflection of a progressing real convergence process. The zloty is a fully convertible, free-floating currency, and inflation is being stabilized within the ranges observed in other inflation targeters.

The Polish economy has generally been very stable compared to its peers. During the last decade, the volatility of both inflation and the output gap has been the lowest among NMS countries and among the

lowest within OECD members. The average current account deficit has been one of the lowest among NMS and lower than in the euro area's periphery countries. Even during the global crisis, Poland fared exceptionally well relative to both developed and emerging European economies, avoiding a recession, a massive accumulation of private or public debt, and financial system instability.

This successful transition was possible due to a number of factors. The bold reforms at the turn of the 1980s and 1990s certainly played a crucial role at the onset of the transformation process. At later stages, the continued structural reforms and the entrepreneurship of the Poles themselves contributed to the increasing international competitiveness of the economy and the growing recognition of Polish products on foreign markets. At the same time, monetary policy aimed at ensuring price stability, and generally prudent fiscal policy, played their part in providing a stable macroeconomic environment.

Poland's growth, stability, and competitiveness were fostered by the country's membership in the EU. In the 1990s, the accession negotiations had already given momentum to the necessary reforms, and the prospects of accession contributed to the reorientation of trade and capital flows toward Western Europe. From 2004 on, the steady inflow of EU structural funds cofinanced both private and public investment projects and contributed to the development of rural areas, enhancing the real convergence process. EU funds were also targeted at enhancing innovation, research and development, entrepreneurship, and the quality of human capital, which should be conducive to higher future potential growth. Finally, joining the EU confirmed that Poland is a country deeply rooted in European culture and in sharing European values and identity.

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