OECD ECONOMIC SURVEYS

2000-2001

Poland

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to Article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

– to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;

– to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and

– to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971), New Zealand (29th May 1973), Mexico (18th May 1994), the Czech Republic (21st December 1995), Hungary (7th May 1996), Poland (22nd November 1996), Korea (12th December 1996) and the Slovak Republic (14th December 2000). The Commission of the European Communities takes part in the work of the OECD (Article 13 of the OECD Convention).

Publié également en français.

Table of contents

Annexes

Boxes

Tables

Annexes

Statistical annex and structural indicators

Figures

BASIC STATISTICS OF THE REPUBLIC OF POLAND
(1999 unless noted)

THE LAND

Area (sq. km)	312 690
Arable land (in per cent of total area)	59

THE PEOPLE

Population (million, mid-year)	38.7
Rural population (percentage of total)	38
Life expectancy at birth (1998):	
Male	68.9
Female	77.3
Infant mortality (per thousand)	8.9
Employment (million, 30 September 1999)	15.7
Employment by sector (percentage of total):	
Agriculture	27
Industry (including construction)	28
Services	45
Registered unemployment (percentage of labour force)	12.0
Labour force survey unemployment (percentage of the labour force)	13.9
Number of pensioners (million)	9.5

PARLIAMENT

Bicameral Parliamentary system	
Sejm membership (lower house)	460
Senate membership (upper house)	100
Number of political parties in Sejm (elections of September 1997)	6
Share of seats in Sejm held by governing party (per cent)	35

PRODUCTION

GDP (Zl billion, current prices)	616
GDP per capita (US$, market exchange rate)	4 015
Gross fixed capital formation (percentage of GDP)	26

PUBLIC FINANCE

General government budget balance (percentage of GDP)	–3.1
General government revenues (percentage of GDP)	40.9
General government expenditures (percentage of GDP)	44.0
State debt (end-year, percentage of GDP)	42.8

FOREIGN TRADE AND FINANCE

Exports of goods and services (percentage of GDP)	26
Imports of goods and services (percentage of GDP)	32
Gross official reserves (US$ billion, end-1999)	25.5
Total external debt (US$ billion, end-1999)	64.3

CURRENCY

Monetary unit: zloty
(redenominated in January 1995)

Currency units per US$:	
Average:	
1999	3.964
2000	4.345
February 2001	4.092

This Survey is based on the Secretariat's study prepared for the annual review of Poland by the Economic and Development Review Committee on 15 March 2001.

•

After revisions in the light of discussions during the review, final approval of the Survey for publication was given by the Committee on 30 March 2001.

•

The previous Survey of Poland was issued in January 2000.

Assessment and recommendations

The economic performance was strong in many respects during the second half of the 1990s…

Poland's economic performance was impressive during the second half of the 1990s. Real GDP grew on average by 5½ per cent per annum, inflation was sharply reduced and average living standards improved considerably. This outcome reflected the persistent efforts made by both the government and the private sector to lay the foundations for lasting growth. Many firms were privatised, restructured and modernised. Foreign direct investment inflows reached the equivalent of 20 per cent of GDP cumulatively during 1996-99, bringing much needed capital and know-how to large companies. Two million small and medium-sized enterprises made a remarkable contribution to economic growth. Even the traditionally bloated state enterprises appear to be stepping up their adjustment efforts – in particular the coal mining sector which is undergoing a sweeping adjustment. In many respects, therefore, Poland has been one of the most successful transition economies. Nonetheless, the unemployment rate has been for some time one the highest in the OECD and remains therefore an outstanding challenge.

… but signs of imbalances emerged, which prompted an increase in interest rates

Furthermore, after several years of strong performance, the economy showed signs of imbalances starting in mid-1999. Consumer price inflation temporarily increased above 10 per cent and ran over the targets established by the National Bank of Poland (NBP) for two years in a row. Another sign of imbalance was the increase in the current account deficit, which temporarily exceeded 7 per cent of GDP, in part due to soaring world energy prices, but also because of high real import growth. In reaction to these growing imbalances, the Monetary Policy Council (MPC) of the NBP raised its leading interest rates in several steps. These moves were initially in close parallel with inflation, but towards the end of 2000 interest rates rose in real terms and liquidity conditions tightened, restraining credit expansion and investment. Another moderating factor throughout the year was the erosion in real income growth and the downtrend in consumer confidence, which led to a sharp fall in retail sales. Output thus lost considerable momentum during the second half of 2000 and, by the fourth quarter, real GDP growth had declined to only 2.4 per cent year-on-year. Meanwhile, the unemployment rate had increased to a record high of 15 per cent. Nevertheless, these developments have helped stabilise macroeconomic imbalances. At the end of the year, inflation had fallen back to 8½ per cent and the current account deficit had shrunk to about 6 per cent of GDP.

The risk of a prolonged weakness should not be excluded

Even though the recent deceleration is sharp, the official projection is for real GDP growth of 4½ per cent in 2001, which would require a significant pick-up of activity. There is a large degree of uncertainty, nonetheless, as to the short-term robustness of activity. Real household income will be boosted by compensation payment to pensioners, transfers related to World War II forced labour, and a possible "disinflation surprise". But forces in the international economy, including in the European Union, appear to be less supportive than expected, which may affect export growth in the near future. The sharp increase in unemployment is having a negative impact on private consumption, and business surveys indicate that confidence has weakened. Import volumes have virtually stopped increasing, suggesting sluggish domestic demand growth.

A relaxation of monetary policy might be called for, but should not put the medium-term inflation goal at risk

Should the risk of prolonged economic weakness become significant, a relaxation of the monetary policy stance would be appropriate. The two cuts in official interest rate by 1 per cent each in March were justified by the emergence of several disinflationary factors: domestic demand was weak, unemployment had sharply increased, unit labour costs were growing very slowly, oil prices had fallen and the exchange rate was strong. Any further relaxation, should it become necessary, has to be cautious in order not to jeopardise the medium-term inflation goal of less than

4 per cent, which the MPC intends to achieve by 2003. Indeed, inflationary pressures are likely to keep some strength in years ahead because the convergence towards higher income levels will push wages up in the non-tradables sector. Several lessons ought to be drawn from the experience of countries that moved from moderate to low inflation levels. First, a sound fiscal policy matters. Second, central bank credibility also matters to influence inflationary expectations, which appear to have been driven by past trends. This would require that government officials refrain from making public comments on monetary policy ahead of MPC meetings, especially during the current credibility-building stage. Third, given the long and unpredictable transmission mechanisms, the MPC should increasingly focus on multi-year inflation objectives. Fourth, monetary policy should be more explicitly forward-looking. In this context the NBP's effort to foster its forecasting capacity is a welcome step. Finally, opening markets to competition is important to tame inflation – including for private services, utilities and farm products. Such reforms would facilitate the conduct of monetary policy over the medium term.

Fiscal policy should be guided by the need for medium-term consolidation

In a similar vein, fiscal policy should also be guided by medium-term objectives. Fiscal slippages occurred in the last two years, which resulted in a higher-than-expected general government deficit in 2000. These slippages resulted in part from tax revenue shortfalls and from the ongoing "teething" problems associated with the reform of the pension, education and public administration systems. Implementation of the health care reform has also been more difficult than expected, with financing difficulties widespread in the public hospital sector and growing patient discontent. These have delayed the planned consolidation of public finances. Admittedly, the state budget deficit partly reflects spending related to the new pension system, which is not inflationary because it contributes to higher individual savings. Nonetheless, the authorities should concentrate on getting the budget back on a medium-term path of consolidation and aim at a general government budget surplus by 2003. There are many good reasons to do so. First, tighter public finances should contribute to higher national savings and hence to a lower current account deficit. Although the current account deficit has declined in 2000, it remains excessively large and will become increasingly difficult to finance in the future as privatisation inflows are projected to dry up. Second, a bunching of debt service obligations will need to be faced soon when the grace period associated with sovereign debt rescheduling agreements comes to an end. Third, large public investments will have to be made in the run-up to and after accession to the EU. Hence, there is little choice other than tightening public finances. The 2001 budget, which aims at reducing the general government "economic" deficit to 1.8 per cent of GDP, would make a contribution in this direction. It is of utmost importance that the authorities avoid new slippages and keep consolidation going, not only for the state budget, but also more broadly for the general government. A greater degree of transparency in the government accounts would help in this respect, including for the social security administration (ZUS) and health care funds.

Medium-term prospects are good for growth, but poor for employment

Beyond the immediate economic slowdown, prospects for growth are bright. Over the years, the Polish economy has demonstrated its resilience and its capacity to rebound. The ongoing efforts to preserve macroeconomic stability and undertake structural reforms bode well for future output growth. The new old-age pension system, which is very close to actuarial neutrality, will substantially reduce pension liabilities overtime and contribute to improved long-term growth potential. Prospects for net job creation are unfortunately much less promising. The social model that has been promoted in the 1990s by the coalition governments has many features that are not employment-friendly. Employment protection is widespread, resulting in a rigid labour market. Wage indexation mechanisms and the non-differentiated minimum wage lead to high labour costs that crowd out the low-skilled. Generous early-retirement and disability pensions have led to huge increases in social security contributions. Policies to cut labour supply have failed to achieve their intended goal because many recipients have remained active. In addition, they have been narrowly focussed on the short-term target of reducing unemployment figures, and failed to recognise labour resources as a development factor. Finally, public employment services do not foster active job search, and there is virtually no individual follow-up of the unemployed. In the circumstances, it is likely that structural unemployment has already reached a high level. A particularly worrying feature is the low employment rate among school leavers, with inevitable social implications. Thus, without major reform in labour market policies, Poland may suffer from the chronically high unemployment that confronted other OECD countries in the past.

Labour market reform needs to be accelerated in order to foster job creation

Regrettably, little reform of labour market policies has been undertaken since the last *Survey*. Lessons should therefore be drawn from the experience of countries that have had greater success in reducing persistent and high unemployment. An important step is to lower the tax wedge, so as to reduce labour costs. The recent pension reform has helped in this respect, because it transformed old-age pension contributions from taxes to savings, and abolished widespread early retirement schemes. But it will take time for people to internalise these reforms and adjust to new incentives. In the meantime, cutting ZUS contributions at the minimum wage level and slightly above it would be particularly important in raising the employability of low-skilled workers. Disability pension contributions could also be reduced from their presently high level, with both a tightening of eligibility criteria and a shift of financing to indirect taxes, for instance environmentally-related taxes, as suggested below. Lowering the personal income tax rate would also be important to alleviate the tax burden of the low-paid and make work pay. Another important step would be to make working time more flexible, so that companies can adjust work schedules to their activity peaks and troughs and avoid paying large overtime premia. A concrete measure in this direction would be to promote the annualisation of working time. Labour offices need to become more pro-active and make the labour market function better. This would involve a greater degree of co-operation with employers to better assess their specific needs. Labour offices should also draw up individual plans with each unemployed person that would chart strategies to re-enter the labour market, including through retraining. This effort should focus first on young unemployed persons so as to leverage their human capital and encourage participation in the labour market because, for them, the transition from school to employment seems particularly difficult.

Social policy should aim at targeting benefits to the most vulnerable

Active labour market policies will however take time to work, and many persons are likely to remain unemployed in the near future. This will increase poverty which, although not widespread, is not negligible in selected areas. The authorities' decisions to establish universal coverage for the pension and health care systems were important to shelter these persons. Nonetheless, the challenge is to prevent large groups of disadvantaged persons from staying in poverty and remaining unable to adjust to the new society. For those individuals and families who are unable to adjust, social benefits will need to be better targeted to the needs.

Despite high unemployment, privatisation and restructuring need to be pursued

High unemployment should not be a reason to retain state controls over the enterprise sector. Poland has been well served by its ambitious privatisation and restructuring efforts and should continue to implement its agenda. For 2001, the government projects privatisation proceeds of Zl 18 billion, arising notably from the sales of additional blocs of shares in TPSA (telecoms), PZU (insurance) and LOT (airlines), which seem difficult to achieve. The privatisation process has been disrupted temporarily by the authorities' actions to regain control over a partially privatised company (PZU), which has created some disarray among foreign investors. To restore confidence, they should make it clear that they accept the loss of control over enterprise management after privatisation. Such a statement is all the more necessary because the state's presence in the economy remains excessively large. The share of value added generated by the private sector in Poland is among the lowest in transition economies. There is no evidence that the authorities are about to achieve their own goal of selling 70 per cent of state enterprises' assets by the end of 2001. Hence, achieving the privatisation goals remains a high priority. The authorities should also take concrete actions to move forward with privatisation in sensitive sectors, such as coal mining, steel and defence. In some of these sectors, the authorities envisage to suspend market mechanisms during the adjustment period, for instance by organising recession cartels. Such state intervention should be transparent, strictly limited in time, and adopted after receiving the published views of the Office for Competition and Consumer Policy. It should also comply with EU prohibitions against cartels, so as to ensure benefits to consumers.

The far-reaching regulatory reform of the electricity market needs to be carefully implemented

In the electricity sector, privatisation and regulatory reform are being pursued by vertically separating power plants, regional distribution companies and the transmission grid. An Energy Regulatory Authority is entitled to grant energy licences to new entrants, to approve electricity tariffs and large customers are authorised to select their suppliers. An Electricity Exchange is set up to clear next-day market transactions. Due to inherited institutional arrangements, however, long-term procurement contracts between power plants and large customers prevail at pre-established prices, which makes actual competition impracticable. As a result, at the end of 2000, only 1 per cent of the electricity trade took place on the Electricity Exchange. The government decided to implement a compensation payment mechanism to alleviate the resulting cost burden on electricity users. Steps to enhance transactions in the Electricity Exchange would indeed be useful to advance reform, including price liberalisation, and privatisation in the sector. Care is needed, however, in designing a regulatory framework that preserves incentives for long-term capacity development and supply security in the face of unpredictable prospects for demand.

Restructuring the coal and steel sectors is underway…

In the coal mining sector, restructuring programmes are well underway. They involve sizeable reductions in operating costs and should help restore some degree of financial viability. The significant employment reduction has been accompanied by a number of measures to mitigate the social impact and help facilitate the re-training of younger workers. With respect to iron and steel, downscaling and privatisation have occurred throughout the decade, but a hard core of problems remains in the two biggest production sites, which together generate more than 50 per cent of the industry's output. The government has introduced a restructuring programme for the sector, and commercial partners are actively sought to help implement it. All these operations will need to find a balance between avoiding political deadlocks and keeping budgetary costs under control.

... but railways are reformed too slowly

Another challenge for the authorities is to reform the railways sector. This is all the more important given the potential of rail transportation across the flat Polish territory, the need to relieve congestion on the road network and the desire to reap environmental benefits. Several steps are intended to restructure the railway monopoly PKP: financial rescue via guaranteed restructuring bonds; vertical separation of infrastructure, passenger and freight activities; and a gradual opening of services to competition. It is important that the reform effort just launched not be stalled again by vested interests, and that all potential participants in the long-term development of the railways be given reinforced investment incentives.

More generally, improved corporate governance is necessary

The rapid privatisation and deregulation of the economy should lead to important welfare and efficiency gains. Improved corporate governance, *inter alia* through the strengthening of scrutiny by minority shareholders, is among the key ingredients. The stock market does not yet play a significant role in the funding of the corporate sector, and domestic institutional investors (mostly pension funds) are not insisting on high standards of corporate governance. Primary equity issues are sparse, only a minority of shares are traded for most companies, and controlling stakes remain with their strategic and stable investors, including the Treasury. This ownership pattern explains the limited number of mergers and acquisitions taking place on the market. In such circumstances, certain aspects of corporate governance remain unsatisfactory with minority investor rights lacking representation commensurate with their ownership, in particular in major reorganisation decisions. A new commercial code due for application in 2001 should contribute to strengthening the stock exchange and the quality of corporate governance. The new code would ban the utilisation of stocks with multiple voting rights and increase the powers of supervisory boards and annual shareholder meetings. The take-over law also needs to be revised to promote a transparent market for corporate control. These legal efforts should be supported by collective actions from the investor community to define guidelines for desirable corporate governance practices expected from corporations listed on the stock exchange.

Agricultural reforms cannot be postponed and should be accompanied by an integrated rural development policy

The agriculture sector has to an important extent remained outside the vast efforts of restructuring and modernisation. Agricultural policy has attempted to protect farmers' incomes through price support and by limiting their exposure to international competition. This has not prevented the gradual decline in farm earnings over the past decade. High unemployment in rural areas also slowed down productivity enhancing restructuring and modernisation in farms. Agricultural policies should aim at promoting competitive activities and employment. Changes in policy will in any case be required by accession to the European Union, which will involve dismantling intra-EU trade protection – while possibly increasing import protection from third countries. Future policies should as much as possible depart from market distorting interventions and aim at an integrated, sustainable rural development strategy, which ought to be cross-sectoral and reach beyond farming. With an appropriate entrepreneurial environment and well-adapted labour and social policies, rural areas should be able to expand based on their own specific assets, including organic agriculture, rural food industries and green tourism. The focus should also be on rural education, because the present level of education puts farmers at strong disadvantage on labour markets. Pre-accession assistance available from the European Union may help promote these efforts.

A new challenge is to establish a policy framework that is both environmentally effective and market friendly

One strength of Polish agriculture is its respect for the environment. Substantial progress has also been made outside the farm sector in dealing with the heavy environmentally-unfriendly legacy from the past. Emissions released into the air by the industrial and energy sectors – especially the worst pollution from heavy industries – have been cut back. Withdrawal of water has been reduced to more reasonable levels. The situation in pollution "hot spots" that were dangerous for the population's health has improved. Although a great deal of pollution retrenchment has been achieved, the authorities now have to deal with more costly and complex tasks. The main challenge in this process will be to formulate sustainable development policies that are both environmentally effective and market friendly. This requires avoiding over-reliance on certain "command and control" solutions, such as compulsory technical standards, which would impose excessive costs on the economy. Instead, for the most ambitious environmental targets, Poland should develop compliance programmes that would focus on rapid improvement in environmental quality.

Environmental protection investment can be spurred by an appropriate mix of instruments

In addition, Poland should further develop the type of economic instruments that it has used so effectively in the last decade. For example, for certain pollutants, a system of tradable emission permits, in parallel to firm-specific integrated permits, would bring a market-friendly approach to emission reduction and would inject a dose of flexibility in the otherwise rigid permit system. In addition, the existing system of piecemeal earmarked environmental fees and product charges should be streamlined and focussed on the few really important charges. Excise taxes on energy should also be redesigned so that they provide neutral incentives in terms of carbon content, which would require the introduction of a tax on coal consumption, even though this may in the short-term add to the difficulties of the coal extraction sector. This would streamline the environmental tax system and pave the way towards a genuine system of unearmarked environmentally-friendly taxes. Such a reform should be designed in a revenue neutral way, for instance by lowering social security contributions at the same time as environmental taxes are raised. This would adequately shift the tax burden away from under-utilised resources (labour) to scarce natural resources.

Cost effective investments need to be made to clean up the rivers and lakes

Large public investments need to be made in the context of EU accession to clean up the environment. These investments are important to provide a degree of environmental protection and health safety to the entire population, but they need to be designed in a cost effective manner, which would require focussing on clear ecological objectives. For instance, the focus should first be put on improving water quality in rivers and lakes. For this purpose, the river-basin integrated management approach should be extended to encompass the management of water related financial resources. It makes sense for the installation of costly sewage systems and water treatment plants in small villages to be postponed until a later stage, as requested by the Polish government in the accession talks. These investments should be increasingly financed by raising the fees for using the environmental infrastructures, such as water and wastewater tariffs, which would also provide incentives to economise water usage. Currently, private operators are discouraged from investing in environmental protection area, unlike in other countries. Regulatory reforms are needed to encourage private sector participation in environmental protection.

A new role should be played by the Environment Funds

The role of the Environment Funds needs to be reconsidered. These funds have played an important role in the period of transition in establishing an environmental finance system. However, market-based private sources of financing are now becoming available for well-designed environmental protection investments, and Environment Funds, which receive tax resources, are therefore unfairly competing with private sources in some segments of the market. Hence, their role needs to be reconsidered. A wide range of options is available for their future, including closure or transformation into commercial institutions. Their last important public role may be to help with the implementation of investment-heavy environmental Directives of the European Union. This would require defining fewer and clearer objectives and targeting expenditure accordingly. A great deal of improvement is also needed in the area of transparency and accountability.

Summing up

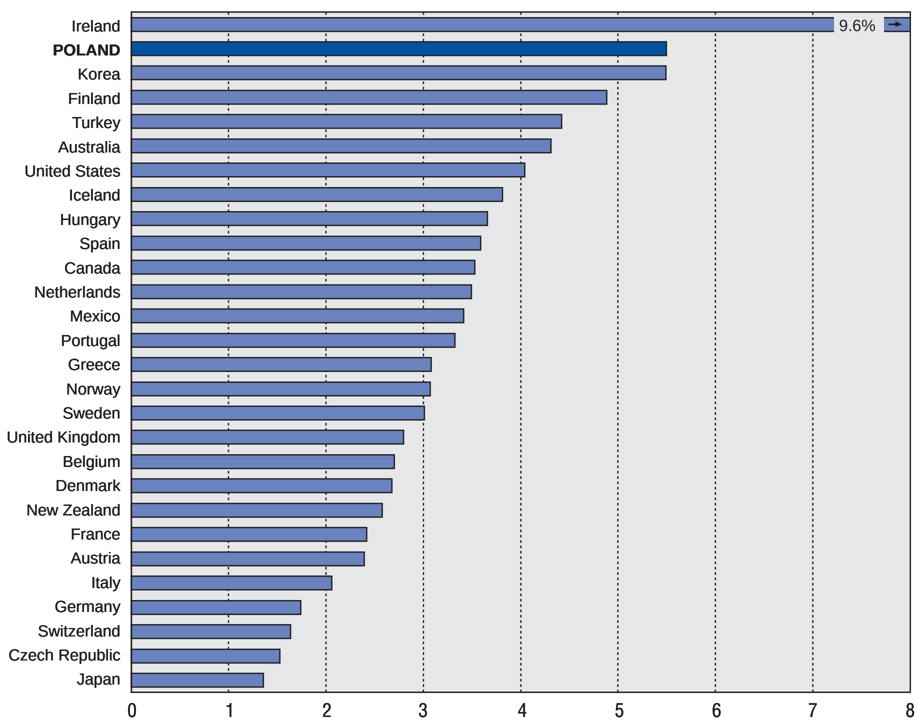
In sum, Poland has achieved an impressive economic performance in the second half of the 1990s and is well positioned for a relatively rapid output growth in the medium term. However, signs of overheating that emerged from 1999 were replaced by a rapid weakening of activity towards the end of 2000. Real GDP growth has declined severely, unemployment has surged, and inflation has declined, which set the stage for a relaxation of monetary policy. Achieving low inflation and a lower current account deficit in the medium term remain nonetheless difficult challenges. This will require that monetary policy increasingly focus on multi-year inflation objectives. It is equally important that the budget be set in a medium-term framework, a first objective being to reach a general government surplus by 2003. Implementing ambitious labour market reforms is essential to foster job creation and absorb the hugely under-utilised labour resources. At the same time, the authorities should re-affirm that they intend to relinquish the control over state enterprises through speedy privatisation, including in sensitive sectors. Regulatory reform that fosters restructuring in large network industries, such as railways, telecommunications and electricity, should be pursued in a pro-competitive way. Poland also needs to adopt a long-term strategy for structural changes in agriculture and to further integrate this sector with international markets. Despite the great progress made to reduce environmental damage from heavy industries, more needs to be done to eliminate perverse incentives. In particular, environmentally-related taxes would help achieve a higher quality of air in inner cities and reduce Poland's contribution to global warming. These reforms will be essential to achieve sustainable growth in the medium term, as well as reach the authorities' medium-term goal of an orderly integration into the European economy.

I. The changing macroeconomic landscape

Inflation is slowing down, but production growth also, and unemployment is a growing concern

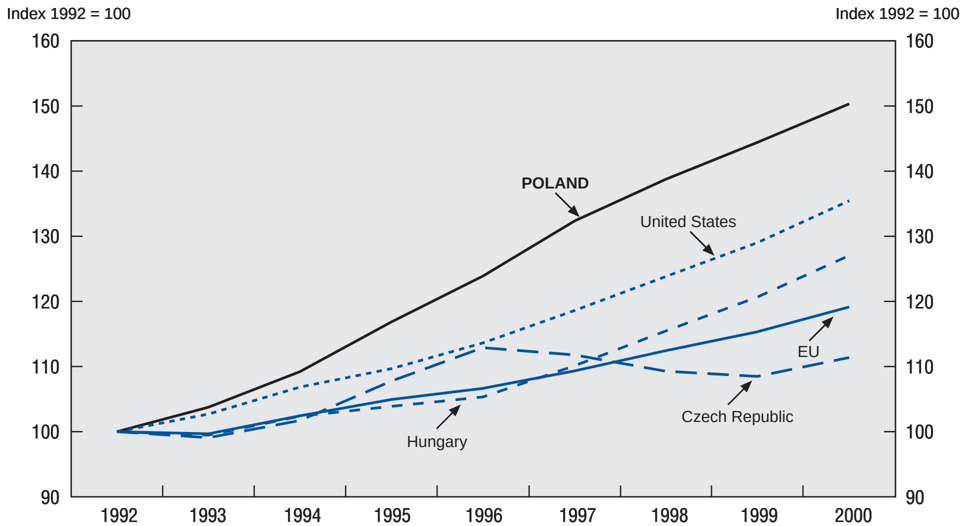
Poland displayed an impressive performance until 1998 (Figures 1 and 2). Output growth was robust, unemployment drifted down, inflation nonetheless fell

Figure 1. **Average growth of real GDP in OECD countries**
1994-2000



Source: OECD, Analytical Data Bank.

Figure 2. **Medium-term output performance**

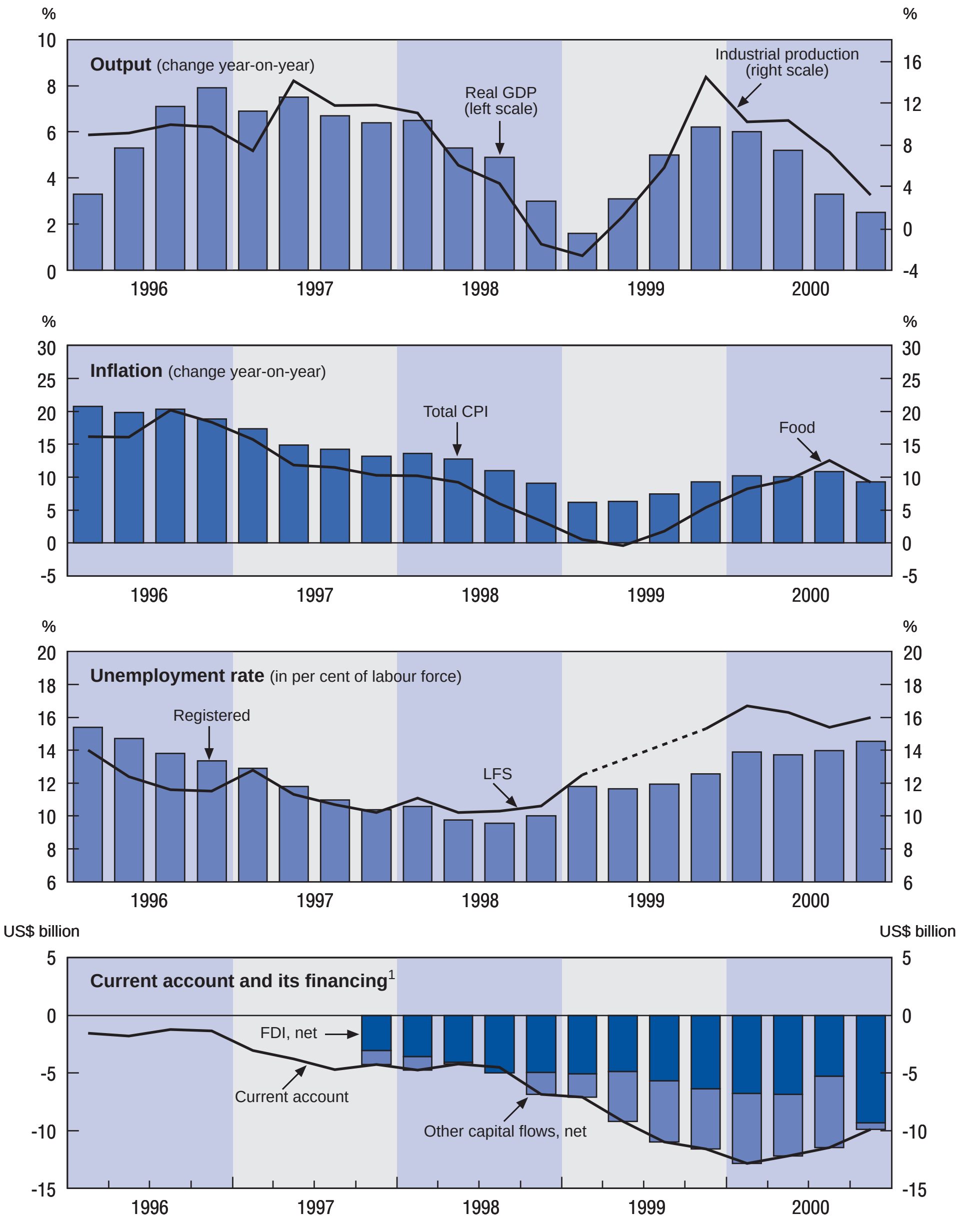


Source: OECD, Analytical Data Bank.

regularly and the foreign trade deficit was limited. This strong record owed a lot to the policies of economic stability and structural reforms undertaken since the start of the transition. Thanks to these policies, which freed up productive forces, the economy benefited from the process of catching-up to higher productivity and income levels, as observed in other OECD countries like Ireland, Korea, Portugal and Turkey (Scarpetta, Basanini, Pilat and Schreyer, 2000).

As noted in the previous *Survey*, however, symptoms of overheating emerged in 1999, with higher inflation and a wider current account deficit (Figure 3). This has been followed, since mid-2000, by a significant weakening of production growth and much higher unemployment. Thus, after several years of brisk growth, temporarily interrupted by the aftermath of the Russian crisis, the economic cycle appears to have matured. To a large extent, the slowdown was necessary, because domestic demand had outpaced output growth and resulted in high underlying inflation and an excessively fast increase in import penetration. While the symptoms of overheating have now abated, they have not yet entirely disappeared, and growth may therefore need to remain below trend for some time to eradicate them entirely. As it occurs in the context of a fast increase in unemployment, the slowdown is resulting in a painful labour market situation. How long the slowdown will last is therefore a key issue of the short-term outlook.

Figure 3. **Key indicators**



1. Cumulated over four quarters.
Source: Central Statistical Office, National Bank of Poland and OECD.

Output growth is falling below trend…

The economy has slowed since mid-2000. Real GDP growth fell from 6.0 per cent year-on-year in the first quarter to 2.4 per cent in the fourth quarter, and industrial production declined slightly within the year, led by a downdrift in manufacturing industry, notably in passenger car assembly. Value-added in construction and agriculture at constant prices decreased in absolute terms year-on-year. The production growth slowdown has been driven by a sudden weakening of domestic demand, with both consumer spending and fixed investment growth losing considerable momentum. This has been accompanied by a sharp increase in unemployment.

Table 1. **Summary economic indicators**

Annual percentage changes, unless otherwise indicated

	1995	1996	1997	1998	1999	2000 (preliminary)
Real sector						
GDP (billions of zlotys)	308.1	387.8	472.4	553.6	615.6	690.4
Real GDP	7.0	6.0	6.8	4.8	4.1	4.1
Real private consumption	3.2	8.6	6.9	4.8	5.4	2.4
Real gross fixed investment	16.5	19.7	21.7	14.2	6.5	3.1
Sold industrial production	9.7	8.3	11.5	3.5	4.8	7.1
Consumer prices	27.8	19.9	14.9	11.8	7.3	10.1
Consumer prices (end of period)	21.6	18.5	13.2	8.6	9.8	8.5
Average monthly wages[1]	32.1	26.9	21.4	16.1	11.1	12.7
Employment (level in thousand)[2]	5 883	5 845	5 915	6 025	5 949	5 444[3]
Unemployment rate (level in %, registered)[4]	15.2	14.3	11.5	10.0	12.0	14.0
Monetary indicators						
M2 (end of period)	34.9	29.3	30.9	25.2	19.3	11.8
Interest rates (averages)						
13-week T-bills	25.6	20.3	21.6	19.1	13.1	16.6
52-week T-bills	. .	. .	22.1	18.7	12.9	17.6
External indicators in billions of US dollars						
Exports of goods[5]	22.9	24.5	27.2	30.1	26.3	28.3
Imports of goods[5]	24.8	32.6	38.6	43.8	40.7	41.4
Trade balance[5]	–1.9	–8.2	–11.3	–13.7	–14.4	–13.1
Current account[5]	5.3	–1.4	–4.3	–6.9	–11.6	–10.0
in per cent of GDP	4.6	–1.0	–3.0	–4.4	–7.4	–6.2
Official reserve assets (end of period)	15.0	18.2	21.4	28.3	27.3	27.5
External debt (end of period)[6]	52.5	47.5	49.6	59.2	64.4	63.8[7]
Ratio of external debt to exports of goods (%)	229.3	194.4	182.3	196.4	244.2	. .

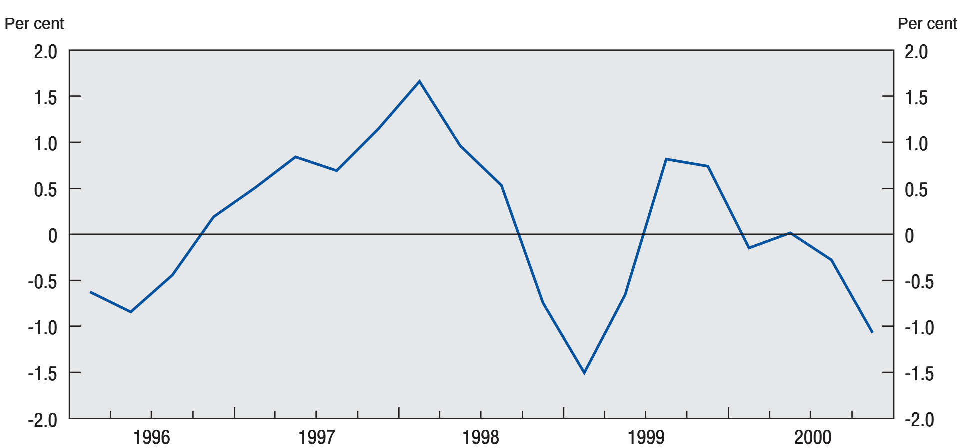
1. Gross wage in the enterprise sector of the economy adjusted for the grossing-up in January 1999 following the payroll tax reform.
2. In the enterprise sector, annual average.
3. Enterprises with more than 5 employees until 1999, and with more than 9 since 2000.
4. Annual average.
5. Balance of payments on a cash basis.
6. Consists of short and long-term debt of the state, banking sector and non-financial sector.
7. September 2000.

Source: Central Statistical Office, National Bank of Poland and OECD.

The recent slowdown was driven by several factors. First, a hike in fuel prices caused an unanticipated outburst of inflation, which eroded wage and social benefits. Second, monetary conditions tightened during the year with an appreciation of the real exchange rate and, towards the end of the year, an updrift of real interest rates. Fiscal policy was also tightened in the latter part of the year, when some public expenditures were postponed. But the most powerful factor was perhaps the maturing of the cycle. After several years of rapid growth of domestic demand, endogenous factors appear to have played a moderating role. In particular, households have increased their savings rate, cut down borrowing, and rebuilt their bank deposits. Their spending on durable goods, notably passenger cars, was also sharply reduced. At the same time, business fixed investment growth was lowered by sluggish financial conditions in private companies.

The maturing of the cycle appears to have brought output below trend and, therefore, the economy now seems to be operating below capacity (Figure 4). Admittedly, it is difficult to determine at what level the Polish economy operates above or below capacity. The OECD conventionally determines where the economy is operating by evaluating its potential output, defined as the level of activity that fully utilises labour and capital, given the level of economic efficiency and the structure of the economy. There are, however, no official estimates of potential output for Poland, and the vast transformation of the economic structure makes its

Figure 4. **Real GDP deviation from trend**[1]



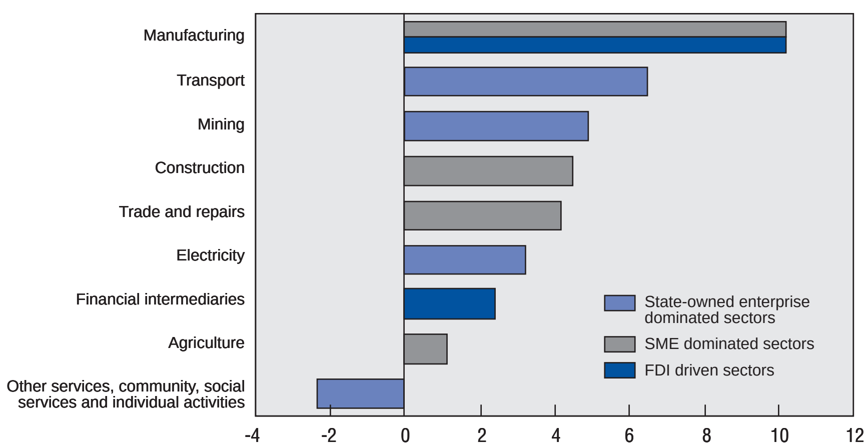
1. Real GDP trend was estimated by applying an Hodrick-Prescott filter to seasonally-adjusted quarterly data from GUS. The deviation is calculated as the percentage difference between actual seasonally-adjusted real GDP and the real GDP trend.

Source: OECD.

Box 1. Two supply-side factors of medium-term growth

Two supply-side factors have played an important role in achieving Poland's impressive output growth performance. *First*, the Polish labour force has become much more productive. The process of transition has enhanced market competition and enlarged the share of the private sector, entailing a rapid increase of labour productivity closer to levels recorded in advanced countries. In traditional sectors, the overmanning inherited from central-planning days has been sharply reduced, and productivity is high in new enterprises. Rapidly growing productivity has allowed the economy to expand with a virtually unchanged level of employment. This has also been helped by the improving quality of labour supply, with a greater proportion of skilled workers participating in the production. Business sector labour productivity accelerated in 1999 and 2000, reaching close to 7 per cent annually on average over these two years. The most spectacular gains in labour productivity were realised in the manufacturing sector, which is directly exposed to international competition and has benefited from large inflows of foreign direct investment in greenfield projects (Figure 5). Labour productivity has also increased, albeit at a slower pace in the services sector, and has virtually stagnated in the agricultural sector.

Figure 5. **Labour productivity trends in selected sectors**[1]
1995-99, annual growth



1. Gross value added, 1995 prices, over employed persons.
Source: Central Statistical Office and OECD.

Box 1. **Two supply-side factors of medium-term growth** (*cont.*)

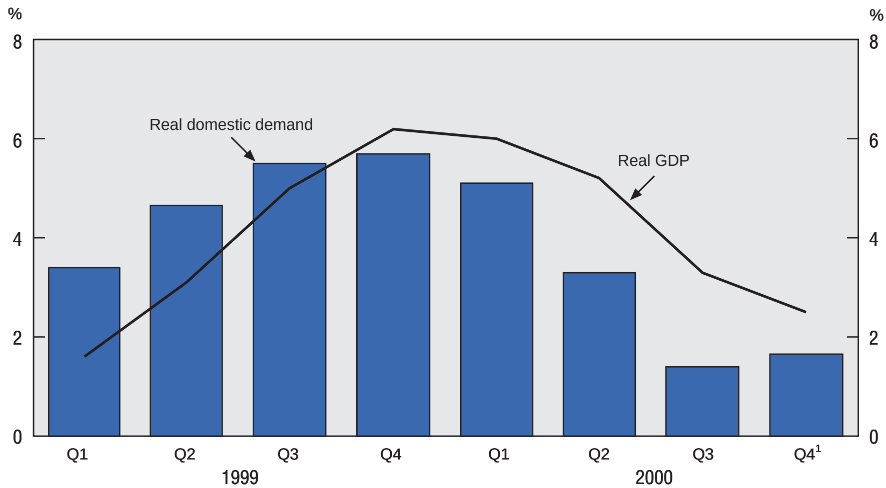
The *second* factor behind the rapid trend growth has been the expansion of capital spending. Gross fixed investment has increased at unprecedented rates over the last decade and now represents the equivalent of 26 per cent of GDP, one of the highest in the OECD. This has led to capital deepening, not only in terms of quantity of capital but also in terms of technological content, which also contributed to higher labour productivity. The privatisation and deregulation of the economy helped ensure that investment was made in appropriate sectors. More than half of investments were made by the private sector, notably to build production capacity in manufacturing industry, and the rest was made by the public sector, particularly in public utilities and in much needed transport infrastructure, where bottlenecks are a recurrent threat.

evaluation relatively shaky. Nonetheless, more than ten years have now passed since the launch of the transition programme, and it is therefore reasonable to make an attempt to measure it. A variety of methods can be used to evaluate potential output. Two of these methods are used in the present *Survey* (Annex I). One of these, a simple Hoddrik-Prescott filtering of seasonally adjusted data, suggests that real GDP has been growing along a trend close to 6 per cent per annum during the last five years, with a slight slowdown in the recent past (Box 1).

The recent slowdown of output growth has been caused by a marked weakening of domestic demand (Figure 6). In particular, *private consumption* growth has fallen drastically, reflecting the sluggishness of household real disposable incomes. Real wage earnings have increased much less than in previous years, and the purchasing power of social benefits has declined, sometimes by significant amounts like for old-age and disability pensions. Wages and social benefits are traditionally based on expected inflation but, as inflation sharply outpaced expectations in 2000, they have increased by less than foreseen in real terms (Figure 7). In addition, given the severe increase in unemployment and poor financial conditions, employers seem to have toughened their stance in wage bargaining negotiations. The deteriorating employment picture has also reduced total incomes, because 80 per cent of job seekers do not receive unemployment benefits, and this affected confidence. Borrowing has been cut back, after years of rapid growth in consumer instalment loans and credit card liabilities. The slowdown in private consumption is well illustrated by a collapse in the sales of new passenger cars by 25 per cent in 2000. Although the weakening in private consumption growth is contributing to the general slowdown, it is also a welcome development, given the overheating pressures that had emerged earlier. The

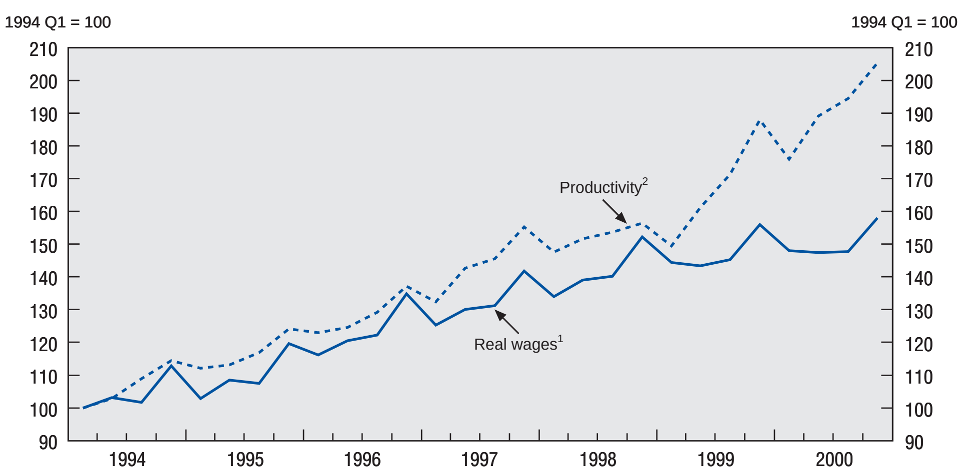
Figure 6. **Real GDP and domestic demand**

Year-on-year percentage change



1. Estimates.
Source: Central Statistical Office and OECD.

Figure 7. **Real wages and labour productivity in industry**



1. Gross wage in industry, adjusted for the grossing-up in January 1999 following the payroll tax reform and deflated by the industrial producer price index.
2. Industrial output per employee in industry.
Source: Central Statistical Office and OECD.

buying "frenzy" of the last few years had led to a huge increase in consumer credit and household indebtedness, which risked becoming excessive given the level of interest rates. Hence, the recent slowdown brings spending growth more into line with households' financial capacity.

Capital spending growth also slowed down. Both the general government and the corporate sector cut their investment over the last two years. Although little detailed information is available, it appears that central and local governments reduced their capital spending, probably under the pressure of fiscal revenue shortfalls. In the corporate sector, the slowdown seems to have stemmed from expectation of lower sales opportunities, profit erosion, reduced business confidence and the difficulties of financing capital expenditure.

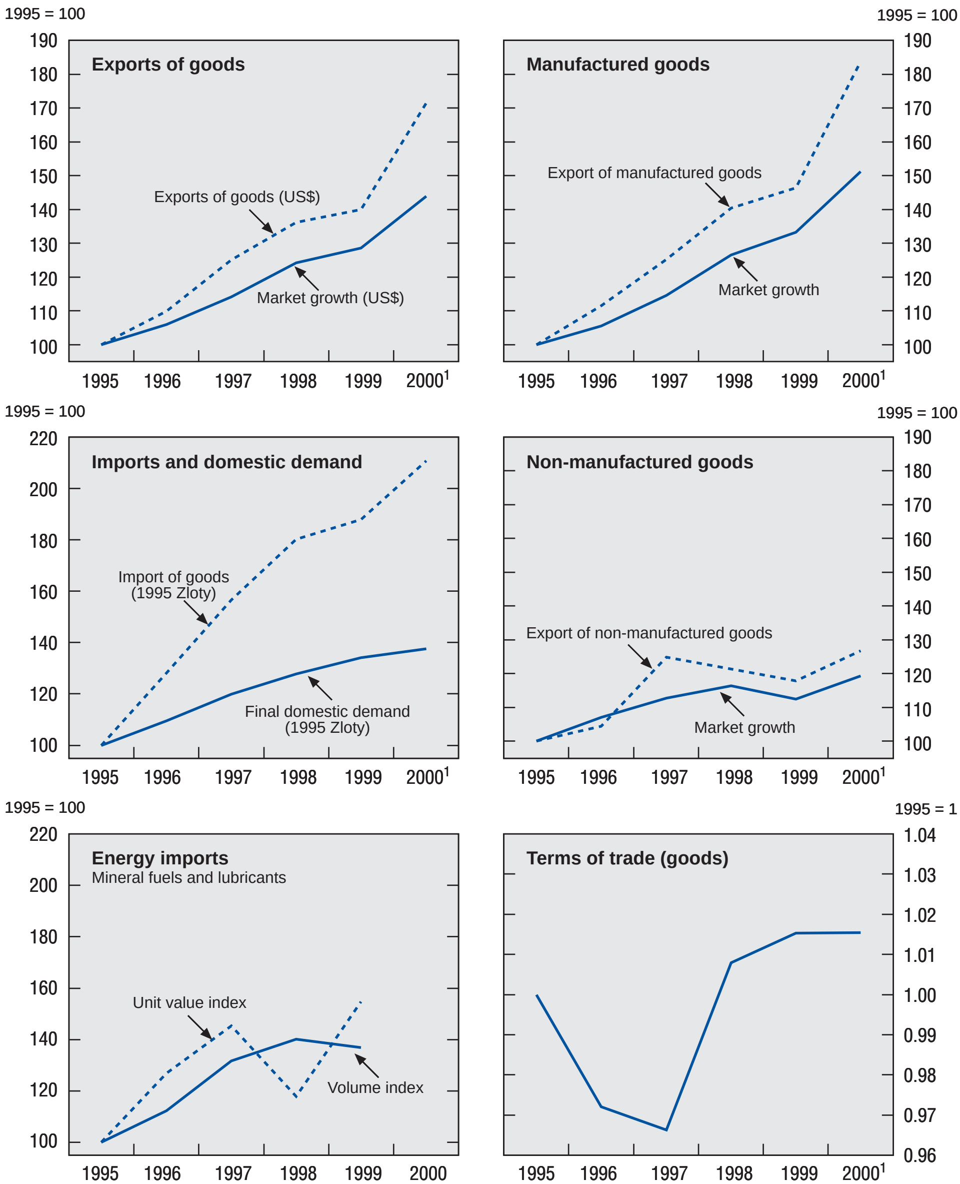
Net foreign trade has contributed less negatively to output growth than has domestic demand in 1999-2000. Between 1994 and 1998, export performance was satisfactory, with foreign sales expanding at a slightly more rapid pace than foreign markets, but import volumes were growing at annual rates of 20-28 per cent, rarely recorded in other OECD countries, except prior to financial crises (Figure 8). The brisk trend increase of import penetration is not surprising for an economy that has been deprived of foreign products for decades and is undergoing a deep restructuring. Nonetheless, it had led to a worrying deterioration of the trade balance. In 1999-2000, import trends abated, following the slackening of domestic demand growth. Exports picked up in tandem with the economic recovery in the European Union, which absorbs two-thirds of Poland's foreign sales.

… and labour market conditions are deteriorating rapidly…

Labour market conditions deteriorated severely during the last two years. On the basis of data from the Labour Office (which registers job seekers), the rate of unemployment jumped from 10 per cent at the end of 1998 to 15 per cent at the end of 2000 – close to a record high for Poland and the highest rate prevailing in the OECD area. Data from the Central Statistical Office (which measures unemployment based on a labour force survey) depict a similarly dismal picture, with the rate of unemployment increasing from 10½ per cent at end-1998 to 15½ per cent in the third quarter of 2000. Overall, the number of the jobless increased by a huge 900 000 persons in two years. A similar number of jobs was lost during the same period, according to the labour force survey (Figure 9). During the period 1998-2000, the industrial sector lost approximately 440 000 jobs, the service sector 200 000 jobs, and agriculture 190 000 jobs. Within the industrial sector, the largest losses were recorded in the manufacturing branches and the mining industry.

At the time when jobs were lost in large numbers, labour supply was being increased by dynamic demographic factors. During the last two years, the working-age population increased by about 400 000, as large groups of school-leavers were

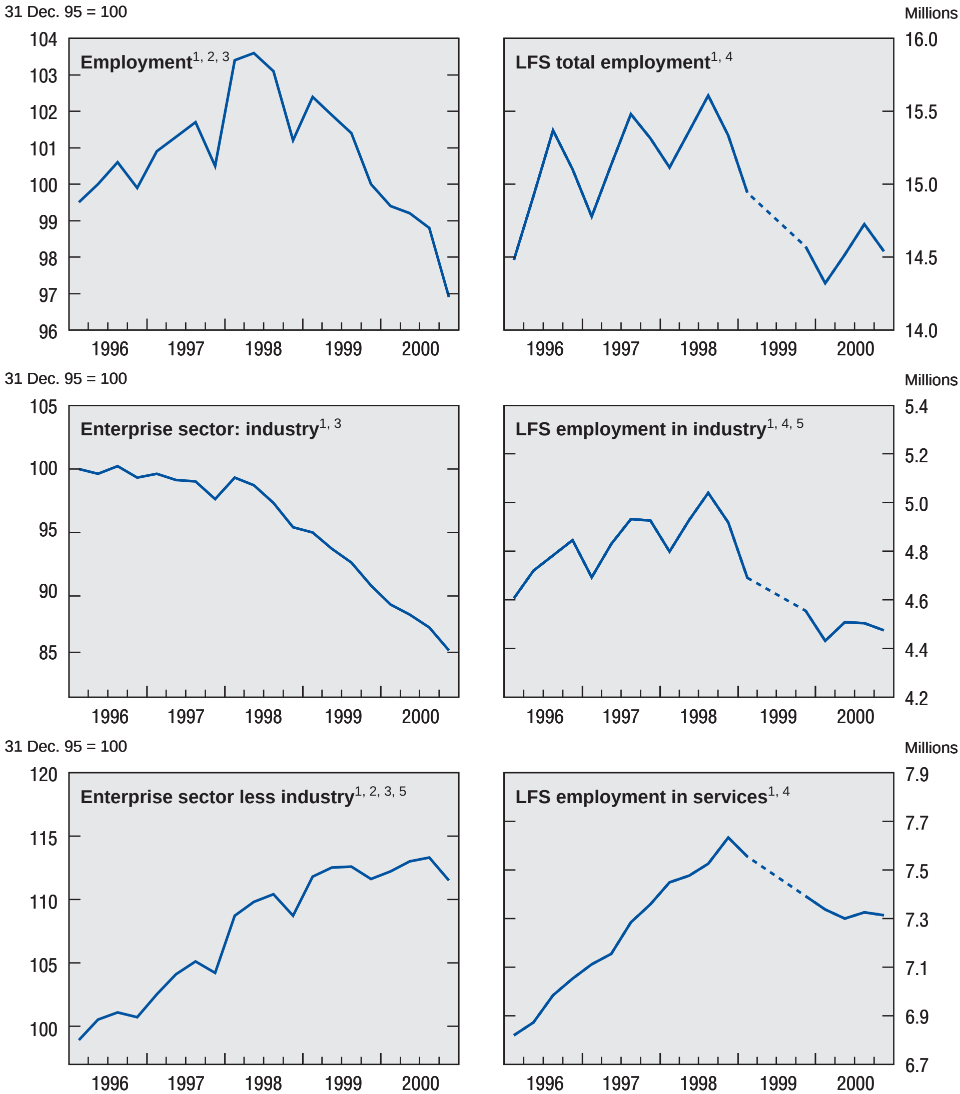
Figure 8. **External trade indicators**
At constant prices



1. Estimates.
Source: OECD, Analytical Data Bank.

Figure 9. **Employment indicators**

Not seasonally adjusted



1. Persons employed under a full-time or part-time contract and self-employed.
2. Excludes private agriculture, Ministry of Defence, and Ministry of Interior and Administration.
3. Rebased for a change in Survey methodology in January 2000.
4. The LFS Survey was not carried out in Q2 and Q3 1999.
5. Includes construction.

Source: Central Statistical Office and OECD.

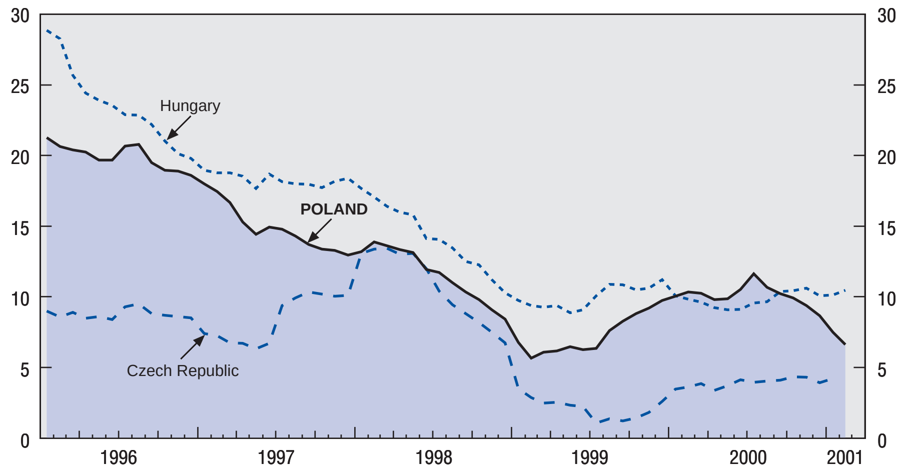
entering the labour market. The combination of a weak job market and demographic pressure encouraged large numbers of persons to exit the labour force and become inactive. Indeed, according to the labour force survey, the participation ratio has fallen continuously over the last two years, reaching a low point last year. The decline in the participation ratio is a worrying development which may impair future growth prospects.

The sharp increase in unemployment can in part be attributed to the production slowdown, but not entirely. The implementation of restructuring programmes in several loss-making state sectors (mines, steel, defence, railways) has also made large groups of workers redundant (as discussed in Chapter III). Reducing labour hoarding inherited from the past is an inevitable part of the transition process. In most circumstances, structural changes of this type takes the form of a "creative destruction", that is, of a shift of human resources from the "old" to the "new" sectors. However, the current institutional and regulatory environment remains inauspicious to job creation, and those who lose their jobs have difficulties finding new ones (Chapter III). Unsurprisingly, those losing jobs have been mainly unskilled or low-skilled workers. Persons entering the labour market with little professional experience, such as school-leavers, have also been particularly exposed, with an unemployment rate of 33 per cent of the labour force in the 15-24 age bracket. Also, a growing number of jobless people are long-term unemployed: in 1999, close to one million persons were unemployed for more than one year. Several sectors that have not been fully restructured – including railways and agriculture – are likely to lose large numbers of jobs in the near future. Thus, joblessness is and will remain a major challenge. In this context, labour market reforms are needed urgently to prevent the current high level of unemployment from becoming structural.

... helping to reduce core inflation...

After having reached a peak of 11.6 per cent in July 2000, headline inflation declined in the second half of 2000, falling to a near record low of 7.4 per cent in January 2001 (Figure 10). Indicators of future inflationary pressure also decelerated during the second half of the year: nominal business wage growth, although affected by erratic movements, appears to have moderated; money and credit expansion reached a low point; and the exchange rate appreciated in nominal terms. Hence, it appears that inflationary pressures have abated, although some uncertainty remains, including regarding future wage settlements. The magnitude of the disinflation will become clearer in the near future, after the traditional round of administered price increases and hikes in indirect taxes. There is in particular a need to revise upward natural gas retail prices, which are administratively established, following a new pricing arrangement with Russian Gazprom.

Figure 10. **Inflation in Central Europe**
Percentage change in CPI over twelve months



Source: OECD.

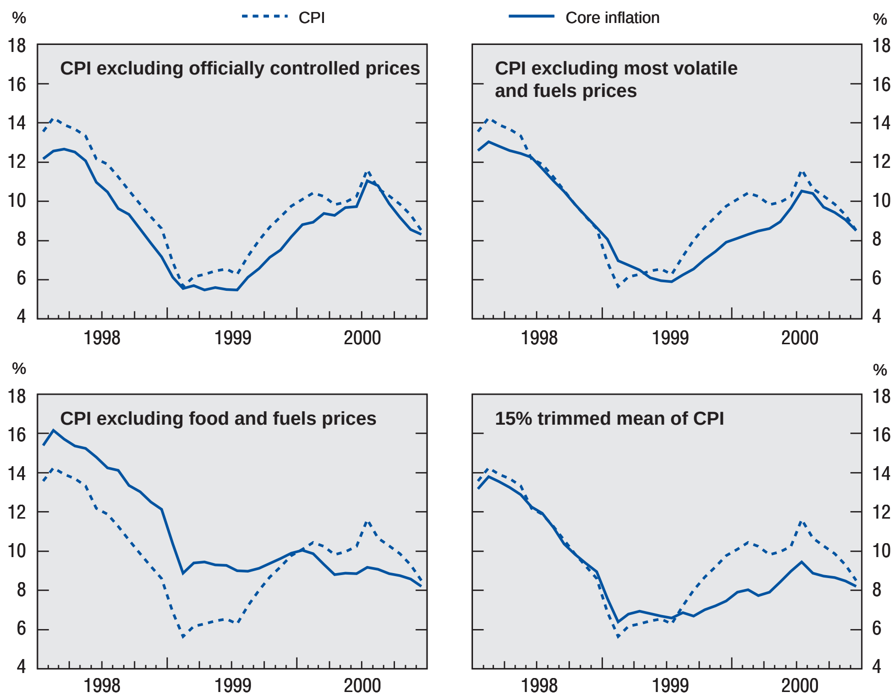
Core inflation also appears to have drifted down since mid-2000 (Figure 11). Admittedly, measuring core inflation is fraught with difficulties, especially in Poland where nearly half of the consumer price basket is made of items that are either volatile or regulated by the authorities. The National Bank of Poland calculates several measures of core inflation in the context of its quarterly "*Inflation Report*". The current list of core inflation indicators includes the CPI excluding officially controlled prices,[1] the CPI excluding most volatile prices,[2] a 15 per cent trimmed mean CPI[3] and a CPI net of food and fuel prices. All of these indicators suggest lower inflationary pressures in the recent past.

... and to stabilise the current account deficit

The current account deficit has been a source of concern during most of 1999-2000. On a cash basis, it nearly doubled to 7½ per cent of GDP in 1999. On an accruals basis, *i.e.* after reclassification of reinvested earnings and other items, the deficit was even larger. As a result, Poland had one of the largest external deficits among OECD member countries. As noted, the rapid increase of import volumes has largely contributed to the foreign trade deficit increase. The trade balance was also negatively affected by the Russian crisis, which depressed exports, and by soaring world oil prices which raised the energy import bill by $1.5 billion (crude oil account for only about 10 per cent of total imports of goods).

Figure 11. **Core inflation**

Year-on-year percentage change



Source: National Bank of Poland.

In the second half of 2000, however, the current account balance narrowed. Imports in terms of US dollars were nearly flat during the entire year, following the major slowdown of domestic demand. Exports expanded healthily in conjunction with the economic recovery in the European Union. These recent developments helped alleviate concerns about the level and the trend of the external imbalance.

The current account deficit has been financed without major difficulties in the last two years, despite its considerable level. Net foreign direct investment flows provided financing for a large part of the current account deficit, especially the privatisation sales of enterprises to foreign investors, such as the sale of a large stake of telecom giant TPSA for $4 billion. High interest rates also attracted portfolio investment into zloty-denominated treasury securities, and the Ministry of Finance floated a Eurobond issue of € 600 million in March 2000. Overall, despite the pressure stemming from the high current account deficit, the overall balance of payments recorded a surplus, and net foreign assets of the banking system increased substantially. It will, however, be increasingly difficult to finance further large current account deficits in the future. Foreign direct investment flows and EU pre-accession funds will bring significant amounts of foreign financing. But the programme of privatisation will soon run its course, therefore cutting the access to non-debt creating capital inflows. The appetite for international issues of Polish zloty securities and foreign currency bonds is strong, but contracting large amounts of relatively expensive debts is not a sustainable strategy over the medium-term. There is therefore little alternative to reducing the current account deficit.

Output growth is projected in 2001-02, but with risks of continued weakness

After the sharp slowdown of activity during the second half of last year, output growth is projected to rebound in 2001 and gather some momentum in 2002. The main driving force of this rebound would be private consumption, which has been extremely weak in the recent past, due to sluggish household real disposable incomes. The "inflation surprise" of 2000, when energy prices soared unexpectedly, sharply eroded real wage growth. In contrast, a "disinflation surprise" is projected to occur in 2001, which would revive increases in real wage income. In addition, household incomes are projected to be supported by large compensation budgetary payments made to offset the erosion of social transfers last year, in particular old-age pensions. Polish citizens who were subject to forced labour during World War II are also expected to receive a compensation payment paid by Germany for an amount equivalent to about 0.5 per cent of GDP. Finally, domestic demand may benefit from the revival of business fixed investment, which has been very weak in the past two years, although some uncertainty remains in this respect given the sluggishness of recorded earnings. All in all, the upheaval of domestic demand, together with stronger FDI-driven exports, should make it possible for an output rebound to materialise. In this context, real GDP is projected to grow by 3.8 per cent in 2001, without rekindling inflation (Table 2). With inflation safely within the target range set by the Monetary Policy Council, leading interest rates are projected to decline gradually. This would provide further impetus to domestic demand, bringing real GDP growth close to 4 per cent in 2002. This pace of growth would not be sufficient, however, to prevent a further deterioration of the labour market, but at a less dramatic rate than observed in the past two years.

An unusually large degree of uncertainty casts a shadow on this relatively positive outlook. First, for the time being, most economic indicators remain depressed: retail sales are declining, wage growth is subdued, credit expansion is limited, stagnant imports imply a flat domestic demand, and exports seem to have levelled off. Even if real wage growth recovers, there is a large degree of

Table 2. **Summary of outcomes and projections**[1]
Annual percentage changes in real terms, unless noted

	1998	1999	2000	2001	2002
GDP	4.8	4.1	4.1	3.8	3.9
Household consumption	4.8	5.4	2.6	2.7	2.3
Government consumption	1.4	1.0	1.5	1.8	2.2
Gross fixed investment	14.2	6.5	3.1	4.5	5.6
Exports of goods and services	14.3	–2.6	12.8	10.0	11.0
Imports of goods and services	18.5	1.0	9.1	6.0	7.3
Working-age population (16-64)	0.9	0.9	0.5	0.5	0.5
Labour force participation rate (per cent of WAP)	65.8	65.1	65.5	65.6	65.8
Employment (LFS)[2]	1.2	–3.9	–1.6	0.0	0.0
Unemployment (LFS, per cent of labour force)	10.7	13.9	16.1	16.6	17.3
Labour productivity (whole economy)	3.7	8.3	5.8	3.8	3.9
Unit labour costs (whole economy)	12.1	6.3	2.6	3.9	2.7
Private consumption deflator	11.5	7.2	10.2	6.5	5.0
General Government					
(national account basis, in per cent of GDP)					
Revenue[3]	41.5	41.0	39.4	38.8	38.3
Expenditure	43.8	43.7	42.4	41.3	40.5
Balance[3]	–2.3	–2.7	–3.0	–2.5	–2.2
Households					
Real wage rate[4]	5.4	3.5	0.7	1.9	1.9
Real disposable income	4.7	2.6	–0.2	3.0	2.8
Savings rate (per cent of disposable income)	13.2	10.9	8.3	8.5	9.0
Savings and investment (per cent of GDP)					
National savings rate	20.7	17.3	17.8	18.8	19.6
Investment rate	25.1	25.4	25.0	25.0	25.3
Current balance[5]	–4.4	–8.1	–7.2	–6.2	–5.7
Current balance[5] (US$ billion)	–6.9	–12.5	–11.8	–12.2	–12.4

1. Estimates for 2000 and projections for 2001 and 2002.
2. Including self-employed.
3. Privatisation receipts are excluded from revenue and treated as deficit finance. UMTS receipts and contributions to second pillar pension funds are included, in accordance with government practice.
4. Per employee in the private sector.
5. Accruals-based balance of payments.

Source: Central Statistical Office and OECD.

uncertainty concerning household behaviour and, in particular, the choice between a resumption of spending and a replenishment of savings. Second, the strength of international economic forces is also highly uncertain, especially in the European Union, Poland's main export market. The main risk for the short-term outlook is therefore that output does not revive and that the recent economic weakness be prolonged, pushing unemployment beyond record levels. Should risks become weighted in such a direction, the key challenge for policy-makers would be to take timely measures that would set the stage for an orderly rebound.

... and with unchanged policies, unemployment will rise further in the medium-term

Assuming that Poland can successfully address these short-term cyclical challenges, output growth will rebound and return to a strong trend in the medium term. The process of catching up with European average standards of living should be the main driving force in the future. Countries that have previously joined the EU with a much lower level of income per capita (Spain, Portugal, Greece and Ireland) have benefited from large inflows of foreign direct investment seeking to take advantage of attractive production costs and a fast-growing consumer market. High growth rates of private investment spending have in turn provided a boost to labour productivity, through the process of capital deepening, technology transfer and transformation of corporate governance. Large public financial transfers from Brussels have contributed to the economic transformation of new member countries, helping finance new public infrastructure and local institutions and generating externalities for the entire economy. This process has generally led to healthy patterns of growth led by exports and investment. Income levels have also been driven higher through a Balassa-Samuelson effect, with higher salaries in the tradables sector spilling over to the non-tradables sector. All in all, catching up has brought considerable economic progress in new member countries.

If Poland's membership in the European Union occurs under auspicious terms, a catching-up scenario could occur. GDP per capita is only 17 per cent of the EU level at current exchange rates, and 36 per cent at PPP exchange rate, and there is therefore a huge gap to fill. This would occur in part through real exchange rate appreciation, but the main driving force should be fast output growth on a durable basis. As in other countries before, fast growth would be supported by a continued increase in business fixed investment, with a sizeable share of foreign direct investment, and therefore by an upward trend in the capital-output ratio. Provided that adequate structural reforms continue to be put in place, production growth should also be supported by fast increases of total factor productivity. In addition, high and growing labour supply creates a potential development factor. Under propitious assumptions, real GDP could grow by 5-6 per cent per annum, well above the average in other OECD countries.

Production growth is necessary but not sufficient to reach full employment. Two scenarios can be envisaged for the labour market in the medium-term. *First*, economic growth could continue to be based on a flat employment level and huge increases in labour productivity. Current labour market policies in Poland protect skilled workers who already have a job, but at the price of driving out others. The high tax wedge, undifferentiated minimum wage and strict labour code rules are detrimental to job prospects. If these labour market policies remain in place, it is likely that employment will remain flat and that the number of job seekers will reach unprecedented levels. Under this scenario, GDP growth would fluctuate in the 5-6 per cent range with no net job creation and the unemployment rate could reach 20 per cent at the latest by the end of the decade (assuming an unchanged participation ratio).

The implementation of employment-friendly policies would produce a *second* medium-term scenario. As some European countries have demonstrated in recent years (including Spain and Ireland), audacious labour market policies can help reduce joblessness without impairing output growth. This could be achieved in Poland by job-friendly policies, such as lowering the tax wedge. A first step in this direction has been the pension reform, but more needs to be done, in particular with respect to disability pension benefits which could be financed by other revenues than payroll taxes. The labour code could also be reformed and the Labour Office better contribute to the functioning of the labour market. Such policies would help achieve full employment toward the end of the decade. This would involve a lower trend increase in labour productivity, closer to 4 per cent per annum than 6 per cent, and a growth pattern richer in jobs. In these circumstances, total factor productivity growth would be driven by increases in capital productivity (through longer hours of capital utilisation, for instance), rather than by labour productivity. The challenge of achieving full employment in Poland is further discussed in the rest of this *Survey*.

II. Macroeconomic management

Macroeconomic policy's main challenge during the past two years was to respond to growing imbalances. As discussed in the previous chapter, inflation drifted up above official targets and the current external deficit widened to an uncomfortably high level. Monetary policymakers responded to these growing imbalances by raising interest rates in several steps. Eventually, inflationary tensions abated and the external deficit stabilised in the second half of 2000, but production growth weakened markedly and unemployment jumped close to a record high. The new challenge for macroeconomic policy is therefore to set the stage for a non-inflationary rebound of the economy. The present chapter discusses these various issues.

Monetary management

The operational framework

The National Bank of Poland (NBP) pursues monetary policy in the framework of Inflation Targeting, like many other central banks in both advanced and emerging economies (Box 2). In such a framework, policymakers establish an inflation objective and, after having reviewed all factors influencing inflation, set policy instruments in order to achieve this objective. The present monetary policy strategy is to pursue a gradual disinflation path and eventually achieve price stability. This was established in the *Medium-Term Monetary Policy Strategy for the Years* 1999-2003 adopted by the Monetary Policy Council (MPC) in October 1998, which aims at lowering headline consumer price inflation to below 4 per cent by the end of 2003. This inflation target is seen as necessary for laying the foundations for long-term economic growth, and is consistent with the Polish authorities timetable for the future adoption of the euro. In addition to this medium-term goal, the MPC also adopts each September *Monetary Policy Guidelines* that establish, *inter alia*, inflation target ranges for the end of the following year. The *Guidelines* approved last September established a target range of 6-8 per cent by end-2001. To provide transparency, the MPC publishes detailed press releases after each meeting and quarterly *Inflation Reports*, in which inflationary trends, contributing factors and compliance with targets are discussed. The individual voting of each

Box 2. Inflation targeting

Inflation targeting is increasingly considered as an attractive framework for monetary policy. Several central banks have adopted it, including countries in the OECD area (Australia, Canada, Czech Republic, Finland, Mexico, New Zealand, Sweden, United Kingdom) and outside (Brazil, Chile, Colombia, Israel, South Africa). Inflation targeting is much more than simply announcing a numerical inflation target. It is a framework that generally encompasses five main elements (Mishkin, 2000): *i*) an institutional commitment to price stability as the primary goal of monetary policy, to which other goals are subordinated; *ii*) the public announcement of medium-term targets for inflation; *iii*) a decision process based on many variables to set policy instruments, and not just of monetary aggregates or the exchange rate; *iv*) a commitment to transparency, through communication with the public and the markets of plans and decisions; and *v*) increased accountability of the central bank for attaining its objectives.

The overall *apparatus* required by the framework is at least as important as the announcement of the target itself (Table 3). In particular, for the framework to deliver positive outcomes, there must be strong institutional arrangements that give the central bank the clear task of reaching the goal of price stability. The policymaking body of the central bank ought to be sufficiently *isolated* from political pressure. The central bank must also be given *full authority* over monetary policy instruments. Regular channels of communication with the public are also important to reap the benefit of inflation targets. Central banks have therefore found it helpful to publish I*nflation Reports* at regular intervals to present their views about past and *future* inflation developments.

Like other anchors (exchange rate, money aggregate), inflation targeting has the advantage of *pre-committing* central banks and therefore of avoiding the time-inconstancy trap often associated with discretionary policies. It has also the advantage of committing the central banks to a *transparent* objective, which can be easily verified by the public and therefore increase the *accountability* of the authorities. In contrast to monetary targeting rules, however, a *stable relationship* between money and inflation is not essential to its success. Also, unlike exchange rate anchors, inflation targeting enables monetary policy to focus on domestic developments and to respond to shocks to the domestic economy.

The main challenge with inflation targeting is that the authorities should be able to forecast inflation with a reasonable range of errors. This is not always easy in advanced economies, even though central banks have well-funded research departments, good econometric models and plenty of high-quality data to work with. In emerging countries, forecasting inflation is even more difficult, because consumer baskets in these countries are less diversified than in advanced economies, with a large share of spending devoted to basic items such as food and utilities (Croce and Khan, 2000). In Poland, for instance, about half of the consumer basket is made of goods and services such as food, fuels, and regulated services, which are hard to predict. Central banks in emerging countries are therefore prone to miss their inflation targets, as Poland recently experienced. Hence, central banks may have difficulties to gain credibility. This problem can be eased by adopting target *ranges* rather than fixed points, and Poland has moved in this direction by widening its range in 2000. Another solution is to adopt a multiannual goal, rather a short-term target for a precise date, because the goal is maintain price stability over time (such as the entire business cycle) rather than achieve it in a given period.

Table 3. **Inflation targeting**

Operational frameworks in selected countries

	Price index	Target	Time horizon of inflation target	Main leading interest rate	Inflation forecasts	Communication with public
Australia	Headline CPI	Between 2 and 3 per cent	Average of business cycle	Cash rate (interbank money market)	Produced by the staff	Semi-annual monetary policy statement; quarterly economic report including forecasts
Brazil	Headline CPI, measured by ICPA	6 per cent in 2000, with 2 per cent tolerance interval	Annual target	Forecast of inflation and GDP for next two years with confidence interval (fan chart)	Several models are used	Publication of minutes two weeks after meeting. Quarterly Inflation Report
Canada	Core inflation (CPI excluding food, energy, indirect taxes)	1-3 per cent	Horizon of two years	Target band for overnight interest rate	Several large and small models used. Monitoring of indicators of future inflation	Semi-annual *Monetary Policy Reports*, half-way updates, publication of monetary condition index
Chile	Both headline and core inflation (CPI excluding fuels, vegetable and fruits)	2-4 per cent	Horizon of 12 to 24 month	Daily rate paid on inter-bank loans	Forecast of inflation and factors influencing inflation for 8 quarters with confidence intervals	Monetary Policy report published three times a year. Summary of minutes of policy making meetings published within 90 days
Czech Republic	"Net" inflation (overall CPI adjusted for prices affected by administrative and tax decisions)	Long-term inflation target of 2 per cent ± 1 per cent and annual targets	Annual target and long-term target	Two-week repo tender	Forecast interval published in Inflation Report	Quarterly Inflation Reports. Minutes of Board meetings on monetary issues published within 12 days
Israel	Headline CPI, special factors taken into account (food, housing, imports)	Annual downward targets towards price stability in 2003 (1-3 per cent)	Annual and pluri-annual horizons	Very short-term rates on lending to and deposit from banks	Use of forecasts from different sources: market-based expectations, private forecasts, econometric models	Half yearly Inflation Report, annual monetary survey, communications to parliament

Table 3. **Inflation targeting** (*cont.*)
Operational frameworks in selected countries

	Price index	Target	Time horizon of inflation target	Main leading interest rate	Inflation forecasts	Communication with public
New Zealand	Headline CPI (which excludes credit services)	12-month increase in the 0-3 per cent range	Two to three years	Official cash rate	Published quarterly	Quarterly publication of forecast. Policy statements explain deviations from targets. Other publications and internet web site
Poland	Headline CPI	6-8 per cent in 2001, less than 4 per cent in 2003	Annual targets and target for 2003	Intervention rate for 28-day operations	No published forecast	Publication of quarterly Inflation Report, press releases of MPC and individual votes of members, annual statement to parliament
Sweden	Headline CPI. Impact of policy on interest expenditure, indirect taxes, and subsidies taken into account	2 per cent ± 1 per cent. Distribution forecast targeting.	Five to eight quarters	Repo rate	Distribution forecast published in Inflation Report	Minutes of policy-making body published within two to four weeks
United Kingdom	Underlying inflation (RPI excluding mortgage interest payments)	2.5 per cent at all times (symmetric)	Up to two years	Repo rate	Probability distribution for inflation ("fan chart")	Quarterly Inflation Reports. Minutes of MPC deliberations published as well as individual votes within 2 weeks

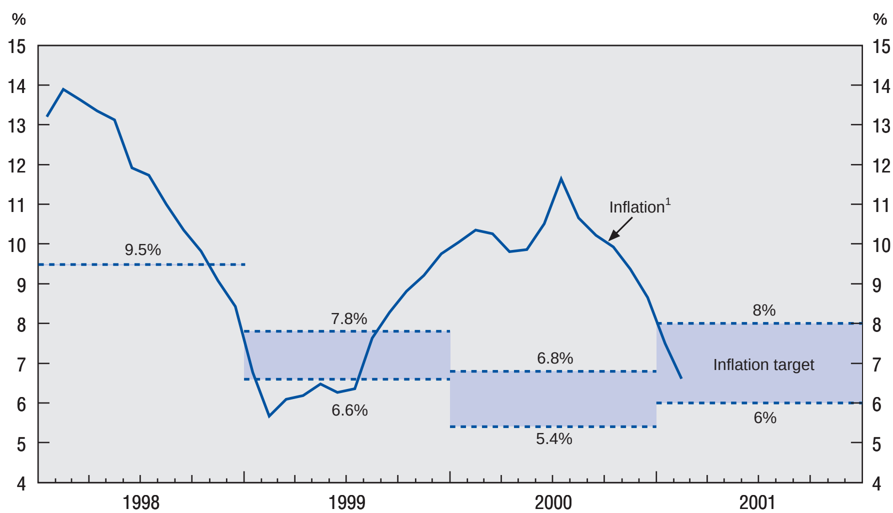
Source: OECD.

MPC member is also published in the official journal of the NBP. No inflation forecast is made available to the public, however, and the minutes of MPC meetings are not released. Also, there is no formal procedure in case inflation targets are missed, like in certain other central banks.

The initial experience with inflation targeting has been difficult. The 1998 inflation target point was undershot and, more worryingly, the target ranges for 1999 and 2000 were both exceeded (Figure 12). Supply shocks contributed to these overruns, but so did the sharp relaxation of monetary policy in 1998 and early-1999, when policymakers cut interest rates aggressively in the fear that the Russian crisis would have a deflationary impact. When the MPC realised that its policy stance had been too loose, it was too late to meet the end-of-year inflation targets for 1999 and 2000, in view of the lengthy transmission mechanisms. Three key weaknesses in the inflation targeting framework have contributed to these difficulties.

A *first* category of problem stems from the short-term time horizon of the annual inflation target ranges. In most countries, transmission mechanisms involve a variable lag comprised between one and two years. Hence, interest rate decisions normally have an impact on inflation after a lag of least one year, and with a certain degree of uncertainty on the actual timing. The MPC is therefore

Figure 12. **Inflation targets and outcomes**

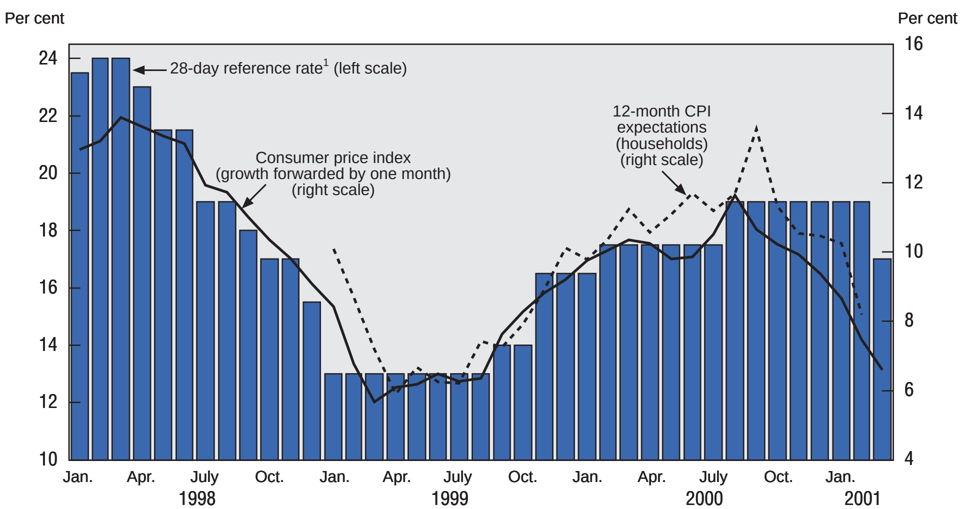


1. Consumer price index: 12-month percentage changes.
Source: Central Statistical Office.

unlikely to influence the inflation outcome within its annual horizon. This is why many central banks prefer to target inflation within a multiannual horizon and to seek to achieve price stability within 18 to 24 months or over time. Admittedly, the MPC focuses also on a medium-term target for 2003 – a horizon within its sphere of influence. Also, during a period of disinflation, annual targets can be useful to publicise the disinflation path that policymakers envisage. Announcing such a path can serve the purpose of transparency and help influence expectations. But the path should preferably be announced for several years ahead, rather than one year at a time, which is the current practice. Hence, the MPC should announce an inflation target range for 2002 as soon as possible, and increasingly focus on a multiyear target.

A *second* weakness of the current framework is that the MPC seems to have based its decision on current inflation, rather than on a forecast for the future, as suggested by the inflation targeting framework. To a certain extent, the large weight given to recent inflation in the policy-making process reflects the inertia of price expectation (Figure 13). If future inflation is driven by current expectations, the MPC has no other choice than to be guided by recent trends. Economic agents will become, however, increasingly sophisticated and expectation inertia will

Figure 13. **Inflation, expectations and interest rate policy**

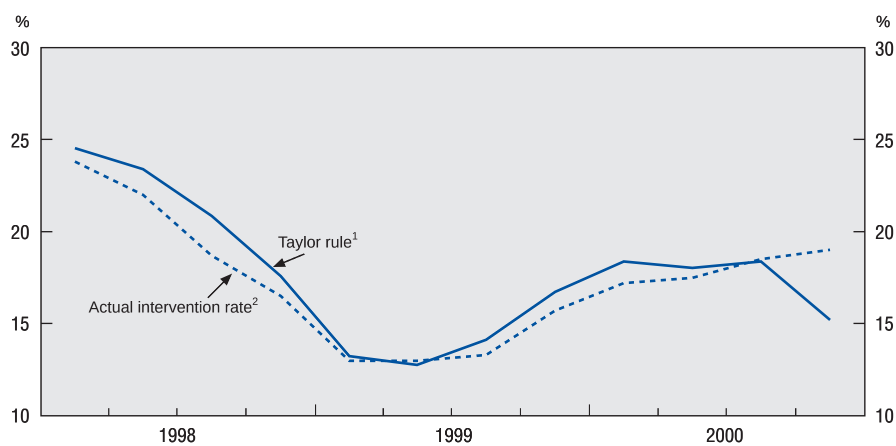


1. End of month.
Source: National Bank of Poland.

disappear over time. Thus, the MPC should increasingly focus on inflation forecasts, taking into account all influencing factors. Many central banks consider that the output gap is a key variable to forecast inflation. A Taylor rule, for instance, although a crude instrument, can be useful to integrate output gap considerations in the central bank's reaction function (Taylor, 1993). The Taylor rule shown in Figure 14 is rudimentary but, for illustrative purposes, suggests that monetary policy should have been tighter during most of 1999 and 2000, and should have been eased in the fourth quarter of 2000 in response to the pronounced slowdown of output growth.

Hence, producing good inflation forecasts is a key ingredient of a successful inflation targeting strategy. Predicting inflation is however not an easy task. It requires to decide how forecasts should be produced, whether to use models, what kind of models, how to use market expectations, and more generally how research in a central bank should be conducted.[4] This requires, if anything, a good interaction between the central bank staff and policymakers. Although MPC members should be responsible for forecasting inflation, they need to make their assessment on an informed basis through the help of the staff. Useful staff input includes timely, comprehensive and objective information on the state of the

Figure 14. **Taylor rule**



1. The Taylor rule is calculated as $\bar{R} + \omega_1 (\pi_t - \pi^*_t) + \omega_2 (Y_t - \bar{Y}_t) + \pi_t$, where real interest rate $\bar{R}$ = 7%, π^*_t is the target inflation, π_t is year-on-year consumer price inflation, $\bar{Y}_t$ is the potential output (obtained assuming that potential growth is 5.5% per annum), Y_t is quarterly real GDP, ω_1 = 0.5 and ω_2 = 0.5.
2. Intervention rate on 28-day operations.

Source: OECD.

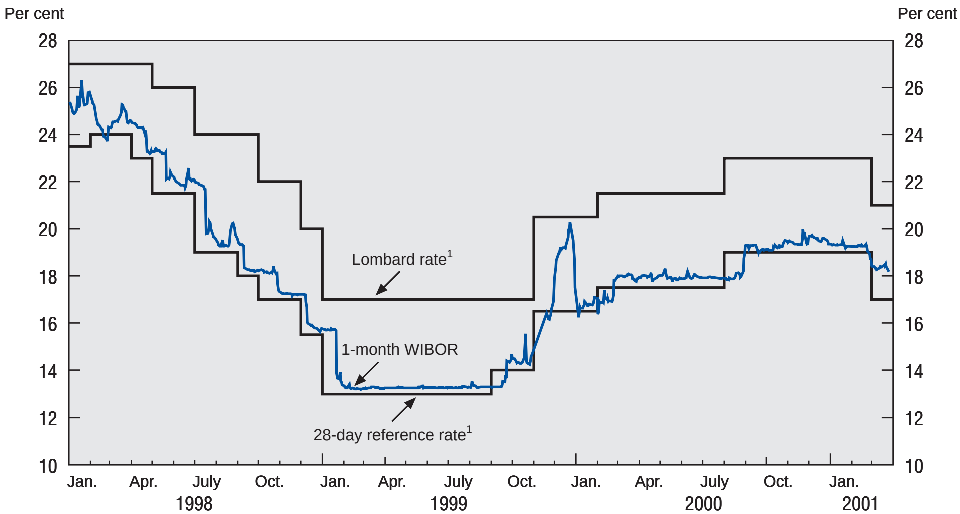
economy. This can help the MPC better forecast inflation, without relinquishing its independence. The high quality of the existing quarterly *Inflation Reports* shows that a good interaction between the NBP staff and the MPC can result in impressive achievements. Further progress in interaction is needed to improve the accuracy of forecasts, prepare *post mortem* analyses explaining the deviation of outcomes from targets, and setting a research agenda. An audit of the current process of formulating monetary policy by an external expert would also be a useful step.

The choice of an appropriate consumer price index is a *third* sensitive aspect of inflation targeting. In principle, central banks should target underlying inflation, because monetary policy is powerless against movements that result from exogenous factors such as indirect taxes and administered prices. Nonetheless, many policymakers have preferred to focus on headline inflation (with in some cases a limited adjustment to exclude interest payments). This choice is made, *inter alia*, for the sake of transparency, because the public is generally familiar with headline inflation, and could mistrust other indices that would appear as attempts to manipulate price statistics. Also, in countries with a higher degree of wage indexation, monetary policy may need to react even when supply or other exogenous inflationary factors are at play, in order to avoid price-wage spirals. In this context, there is little choice other than targeting headline consumer price inflation, while keeping indicators of core inflation under close scrutiny.

The conduct of monetary policy

The MPC was confronted with high inflation between mid-1999 and mid-2000, stemming from the rapid growth of domestic demand and jumps in energy prices. To counteract these pressures, it moved to a tightening stance in September 1999, increasing the 28-day reference rate for open market operations in several steps from 13 per cent in August 1999 to a high point of 19 per cent a year later and keeping it at that level (Figure 15). In December 2000, in view of signs of weakening of inflationary pressures and the marked slowdown of output growth, the MPC said that it relaxed its interest rate outlook to "neutral" from "tightening", but decided to wait for a clear downward trend in inflation before cutting interest rates. At the end of February 2001, the Council noted that the growth pace of consumer and producer prices had decreased, making the achievement of the inflation target range for 2001 more probable in a way that enabled achievement of the medium-term target. It lowered the intervention rate by 100 basis points to 18 per cent, but kept its neutral position in view of the uncertainties on fiscal policy, privatisation proceeds, foodstuff prices and the prospects of salary increases in the budgetary sphere and other transfers to households. At the end of March the MPC lowered the intervention rate by another 100 basis points to 17 per cent, but still kept its neutral position in view of the same uncertainties.

Figure 15. **Interest rates**

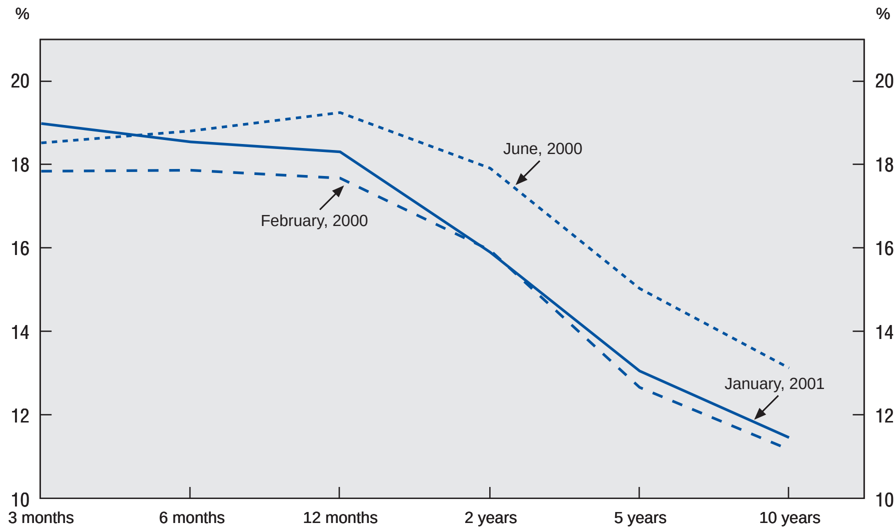


1. End of month.
Source: National Bank of Poland and Bloomberg.

Although interest rates have been raised sharply in nominal terms during the last two years, they have remained remarkably stable in real terms until mid-2000. To a large extent, the MPC has moved its intervention rate very much in tandem with consumer price inflation through most of 1999 and 2000. It is only by the end of 2000 that interest rates rose in real terms, when the Council decided to leave the intervention rate unchanged despite the decline in inflation. The yield curve has remained inverted (Figure 16), reflecting limited borrowing by the government in long-term domestic maturities and the expectation that inflation would be lower in the future.

A floating exchange rate policy was inaugurated in 2000. On 12 April, the authorities abolished the fluctuation band mechanism and the crawling central parity, and stated that it would normally refrain from intervening in the foreign exchange market. The decision to float the currency was consistent with the new monetary policy framework focussing on inflation. It was also the logical conclusion of a series of steps gradually increasing exchange rate flexibility over the last ten years (Kokoszczyński, 2001). Although it has stopped exchange market interventions, the NBP continues to make foreign exchange transactions as an agent of the government. In 2000 and early-2001, the central bank converted foreign currency resources that the government had obtained by selling stakes in state enterprises

Figure 16. **Yield curves**



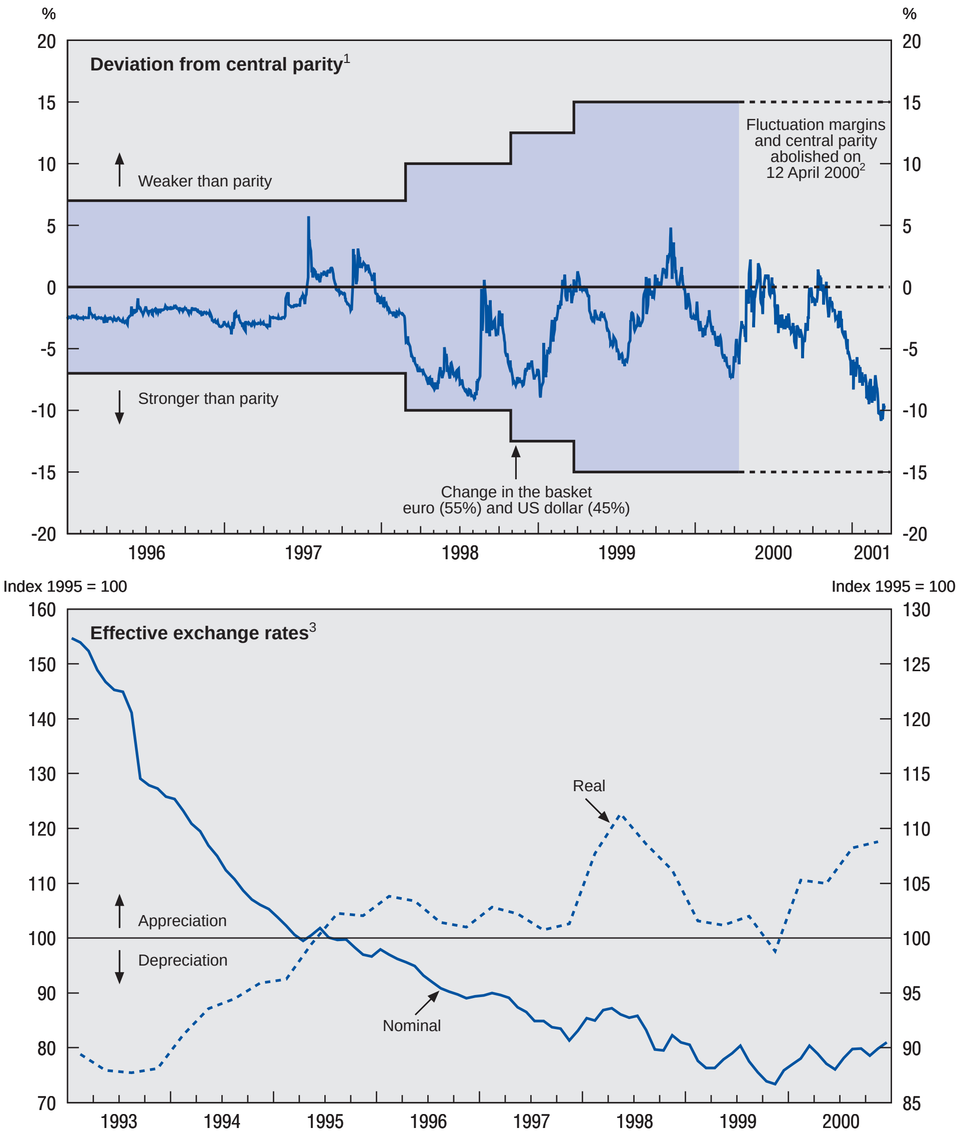
Source: Bloomberg and Citibank Poland.

to investors, floating securities on the eurobond market, or other means. These conversions were aimed at avoiding unduly large fluctuations in the exchange rate. Although they were made off market and at the prevailing rate, they had the same impact as market interventions and inflated base money.

The flotation of the exchange rate has been accompanied by a higher degree of volatility (Figure 17). Poland's new exchange rate policy was initially welcomed by market participants and the currency appreciated. Shortly thereafter, however, it depreciated sharply in the context of a "flight to quality" that followed the drop in technology stocks around the world. Worse-than-expected statistical data on the current account deficit also made market participants nervous. Subsequently, the prospect of large foreign purchases of zloty associated with the purchase of a large stake in TPSA by a foreign investor strengthened the zloty. Hence, exchange rate volatility has increased somewhat. Nonetheless, there is no evidence that it has exceeded the volatility experienced by currencies of advanced countries, such as the Euro (Figure 18).

Although interest rates were relatively stable in real terms during most of 1999 and 2000, the effective exchange rate appreciated in real terms (based on relative CPIs). As a result, overall monetary conditions tightened significantly during the period, reversing the easing of monetary conditions that followed the 1998 Russian financial crisis (Figure 19).

Figure 17. **Exchange rates**

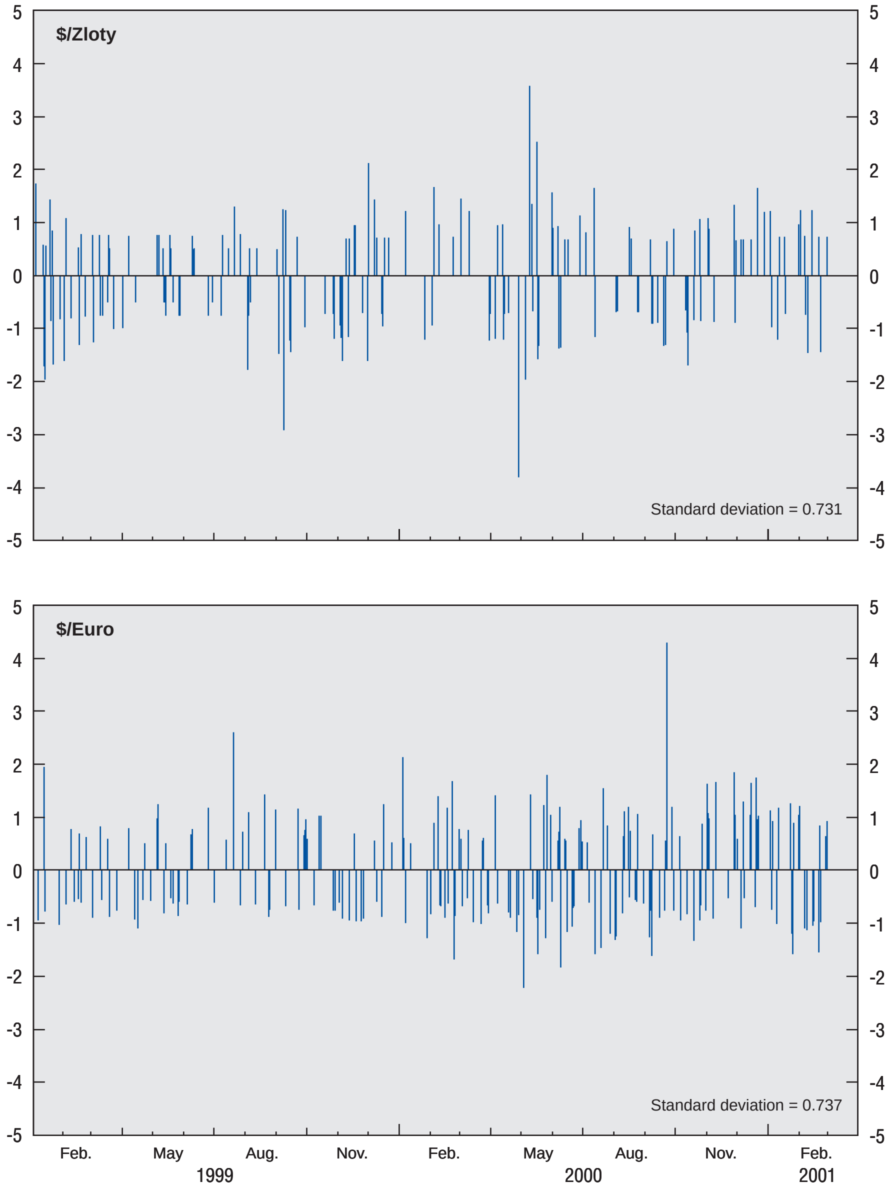


1. Based on data from the National Bank of Poland until 12 April 2000, thereafter OECD calculations.
2. From12 April 2000, the central parity and fluctuation margins were assumed to stay unchanged (crawling peg reduced to 0%).
3. As calculated by the OECD against forty other currencies. The real effective rate is calculated with unit labour costs.

Source: National Bank of Poland and OECD.

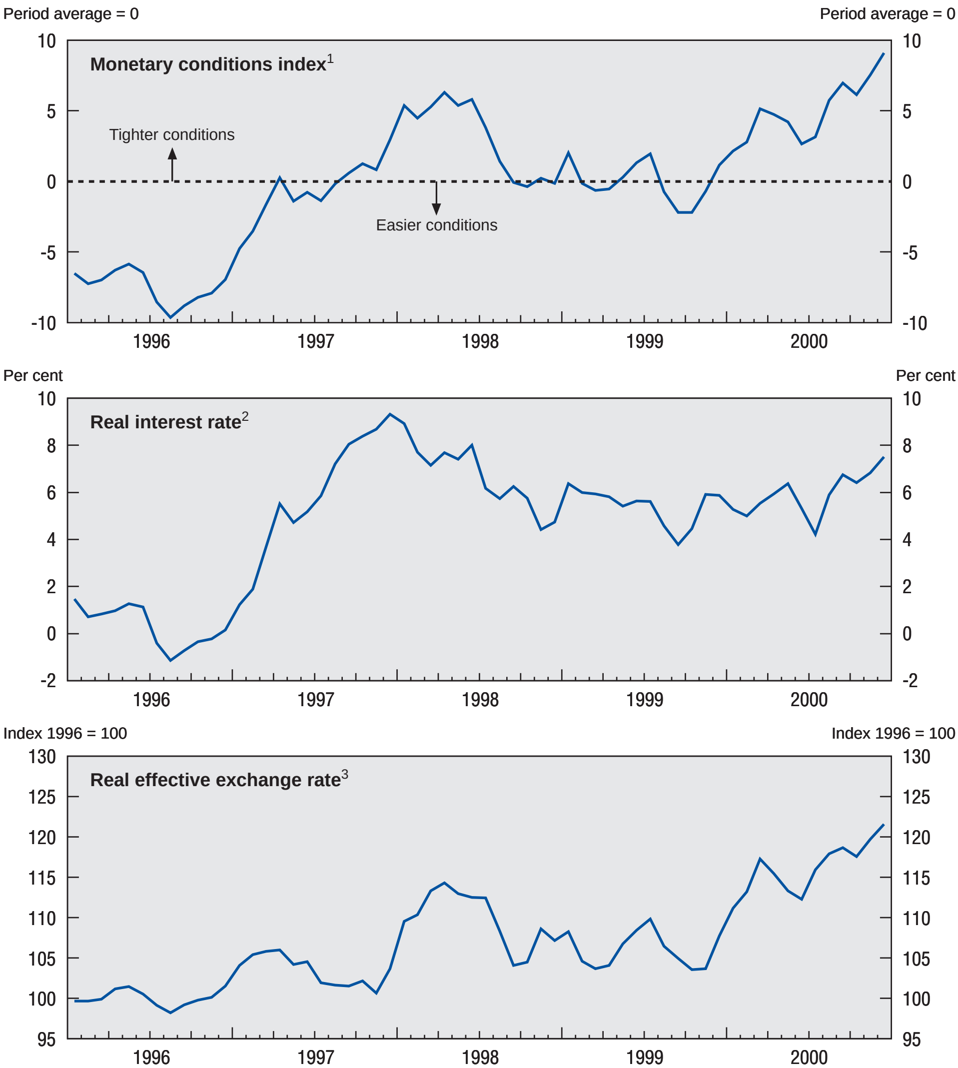
Figure 18. **High-frequency exchange rate volatility**

Daily percentage changes exceeding 0.5 per cent



Source: ECB and OECD.

Figure 19. **Monetary conditions**



1. The monetary conditions index is defined as MCI = MCI[t-1] * (1+(r-r[t-1]) + w * (e/e[t-1]-1));
r = real short-term interest rate, CPI deflated;
e = real effective exchange rate, based on CPI;
w = weight based on share of imports to GDP.
The index is shown as a percentage deviation from the period average. A value higher than zero indicates tighter conditions than on average.
2. Three-month treasury bill, CPI deflated.
3. Real effective exchange rate calculated with forty countries, based on CPI.

Source: OECD.

Money and credit aggregates

During the last two years, the NBP tried to refrain from injecting liquidity into the banking system. The reform of required reserve ratios – which unified all reserve requirements to 5 per cent – released significant amounts of bank deposits, but this liquidity was neutralised by issuing non-marketable securities that the banks agreed to hold for a prescribed period of time. The central bank also refrained from extending loans to the general government, from buying treasury bills, and from intervening on the foreign exchange market. In addition, it conducted operations to mop up liquidity, including sales of treasury securities. Under these conditions, reserve money growth has been on a declining trend since the middle of 1999, and M1 has increased only moderately (Figure 20). The foreign exchange transactions made by the NBP on behalf of the government, however, partly counteracted these efforts at containing monetary expansion.

Domestic credit expanded rapidly in 1999 and the first half of 2000, despite the sharp increase in nominal interest rates. This is in part because commercial banks raised their lending rates slowly, given the intense competition for market shares in the loan market. In addition, Polish banks have for several years been awash with liquidity, and they have therefore little incentive in cutting lending through higher interest rates. The expansion of credit was also due to the growing recourse to credits denominated in Euro, both by the household and corporate sectors, despite obvious exchange rate risks.

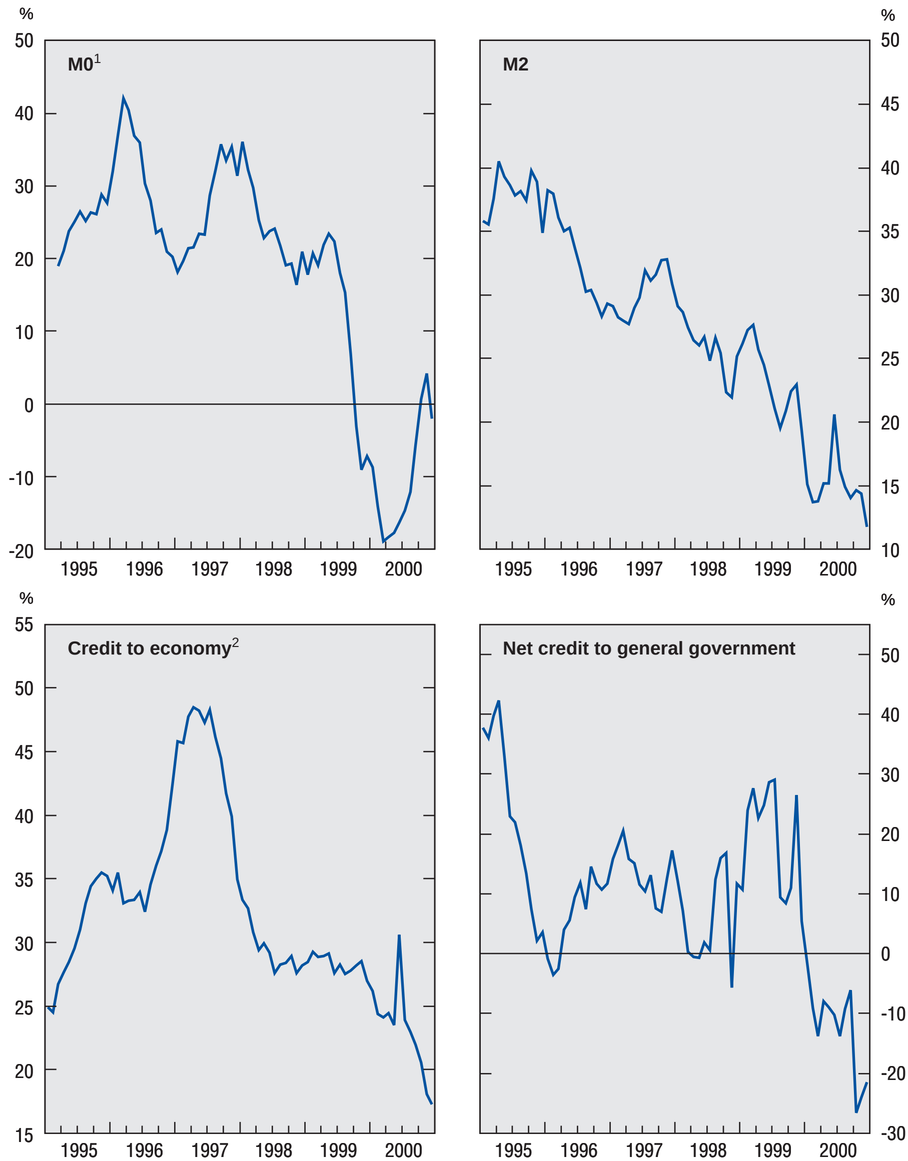
During the second half of 2000, however, the slowdown of credit expansion was more pronounced. The growth of credit to the non-financial sector (excluding credit to the general government) fell from 27 per cent year-on-year at end-1999 to 17 per cent in December 2000. The growth of credit to households dropped during the same period from 53 per cent to 32 per cent, while that to the corporate sector declined from 22 per cent to 14 per cent. In real terms, credit expansion was close to a record low. The stock of private sector debt was however fuelled by the emergence of a commercial paper market for the corporate sector. The stock of short-term commercial paper issued by enterprises (outside the private farming sector) increased from 15 per cent of short-term corporate credit in December 1999 to 23 per cent in December 2000 (both in zloty).

The fiscal stance

The budgetary framework

Poland has several fiscal rules that constrain the financial balance of the state and the sub-national governments (IMF, 2000*a*). The state budget is subject to a limit on the cash deficit that cannot be exceeded without parliamentary approval, which in practice can be difficult to obtain. The inflexibility of such a rule has led the government to exercise a certain degree of caution in preparing

Figure 20. **Monetary aggregates and credit to the economy**
Year-on-year percentage change



1. Three-month moving averages.
2. Excluding credit to general government.
Source: National Bank of Poland.

budget projections, both on the expenditure and revenue sides. It has also disciplined the execution of the budget, requiring to cancel or postpone expenditures when revenue were falling short. But the deficit rule may also have led to the occurrence of expenditure arrears and to creative accounting practices, for instance shifting imbalances to other levels of general government.

Another fiscal rule applies to the indebtedness of the public sector. The Polish Constitution prescribes that the level of public debt cannot exceed 60 per cent of GDP, and a number of monitoring devices are built in to trigger policy reactions before this level is reached. Important rules also apply to the spending and borrowing of local governments. Such rules are crucial in an environment of devolution of responsibilities to sub-national administrations to maintain a sufficient degree of fiscal discipline. Debt service expenditure of each *poviat* (counties) and *gmina* (communes) cannot exceed annually 15 per cent of total planned revenues for the year, thus limiting their borrowing. Finally, the debt of each local government cannot exceed at the end of a fiscal year 60 per cent of total revenues in that year.

These rules have been relatively helpful, but they have not prevented fiscal slippages in the recent past. This is in part because the social insurance board ZUS is not subject to clear rules and has performed poorly in terms of collecting revenue and checking the legitimacy of claims for social benefits. ZUS's recurrent financing requirements have been covered by financial bail-out plans from the central government, which can only lead to problems of weak discipline and moral hazard. Thus, although fiscal rules are helpful to exercise fiscal discipline, they have not always been effective. Preserving a sufficient degree of fiscal discipline at the various levels of general government will, in these circumstances, be a challenge in the future, at the time when Poland strives to observe the Maastricht public finance convergence criteria on the deficit and the indebtedness of the general government.

Greater transparency in the public sector accounts would bring a higher degree of fiscal discipline. This would also help explain to the public why corrective measures might be needed. A helpful step in this respect would be to improve the accuracy, timeliness and transparency of general government financial statistics. Information is already available at the central government, sub-national government and ZUS levels. It would be important to ensure that this information is released to the public at regular intervals. It would also be important to release the information currently withheld, such as financial transfers from ZUS to open pension funds, and to fill existing information gaps, such as the financial position of regional health care funds. Finally, the authorities should cease using *ad hoc* definitions of the government deficit, which can only confuse the public and policymakers (Box 3).[5] Instead, progress should be made to produce national account statistics on the general government in a timely manner and internationally compatible format (*i.e.* SNA93 and ESA95).

Box 3. What is the "economic deficit"?

The Ministry of Finance uses two definitions to measure the general government deficit. The first, which is called the *financial deficit*, simply reflects the difference between total expenditure and total revenue of the central government, local governments, health care regional funds, extra-budgetary funds and other public agencies. The objective of the second definition, called the *economic deficit*, is to show the ultimate impact of the public finance deficit on the savings level in the economy. The *economic deficit* covers the *financial deficit* of the general government increased by the amount of compensations paid to public sector employees and pensioners* and other minor items, and is reduced by the amount of transfers to the second pillar private pension funds. Pension contributions transferred to the fully-funded second pillar contribute to national savings and therefore are considered to reduce the general government economic deficit. In contrast, compensations payments to public sector employees and pensioners are a current expenditure of the government and therefore increase the deficit. These two definitions are not consistent with internationally-accepted statistical concepts. Hence, it would preferable to use the concept of general government net lending position, in accordance with national account concepts of SNA93 and ESA95. Work has been taking place in collaboration with Eurostat in this respect and the Polish authorities will be undertaking from 2001 a yearly notification of debt, fiscal deficit and related data to the European Commission. This notification will be made in the context of the pre-accession fiscal surveillance procedure, a precursor to the economic policy co-ordination procedures of the European Union.

* By the decision of the Constitutional Court, public sector employees and pensioners are to be compensated for income losses due to high inflation in early 1990s. Payments are scheduled for the period 2000-2004.

Fiscal policy in 2000 *and* 2001

The authorities are striving to consolidate the fiscal position. They have several good reasons to do so. First, they seek to bring the budget deficit in line with Maastricht convergence criteria by 2003, which they hope to be the date of accession. Second, they need to make room in the budget for large future public investments that will be required in the run-up of accession to the European Union, such as the environment clean-up (see Chapter IV) and the development of the public infrastructure network. Third, public spending has to be curtailed as a pre-condition to lower the tax burden and enhance Poland's attractiveness as a place to work and invest. Finally, the budget has to be consolidated in preparation for the sharp increase in debt service obligations during the second half of the decade, when the grace period agreed in the context of the Paris Club and London Club reschedulings comes to an end. Despite several attempts at fiscal consolidation, however, the general government budget deficit has not declined as expected. In the last two years, fiscal slippages resulted from the large costs associated with the programme of structural reforms – pensions, health care, education, devolution, industrial restructuring – which has run into "teething problems" and caused unforeseen spending. Admittedly, the recent size of the deficit is partly explained by the transfers made to cover the actuarial gap in the old pension system, which do not contribute to increased consumption and therefore are not inflationary. Nonetheless, the authorities have formulated new plans to cut the deficit in 2001, as a first step toward balancing the budget by 2003.

Outcome of the 2000 *budget*

The initial budget for 2000 aimed at reducing the economic deficit to 2.0 per cent of GDP, from 2.7 per cent in the previous year, mainly by increasing tax revenue.[6] The execution of the budget turned out to be more difficult than expected, however, due to adverse macroeconomic developments and other factors. On the revenue side of the budget, VAT collection was particularly affected by the change in the composition of growth away from domestic demand to exports. Higher-than-projected inflation raised VAT collection, but this yielded only a moderate windfall gain. Revenues from the personal income tax were also off target because taxpayers made greater-than-expected use of the tax rebates on housing renovation and housing construction, and because the tax base increased less than projected. Finally, loss-making state enterprises ran into large arrears on their tax and social contribution liabilities, in particular the coal mining, railways, defence and steel mill sectors. As a result, state budget revenues were about Zl 5 billion less than initially projected, and the social insurance board (ZUS) also suffered revenue shortfalls. Spending was also affected, but in the opposite direction, by a number of unexpected developments. Reflecting the sharp deterioration of the labour market, unemployment benefits rose rapidly. Higher interest rates pushed up the debt service burden. Finally, the state budget had to transfer larger subsidies to local governments to settle additional wage claims by teachers following amendments to the Teacher's Charter.

To keep the budget deficit within the approved limit, the government postponed several expenditure items to the 2001 budget. Hence, the central government deficit was kept within the established limit at the end of 2000 – as stipulated by the legislation. Financing requirements, however, increased in other parts of the general government, including local governments and extra-budgetary funds. In the event, the "economic deficit" reached 2.7 per cent of GDP in 2000, about 0.7 per cent of GDP more than initially expected.

Table 4. **Government revenue, expenditure and balance**
In Zl billion

	1998	1999	2000[1]	2001[2]
Revenue of the central government	**126.6**	**125.9**	**135.2**	**161.1**
Direct taxes	49.5	38.2	39.9	43.2
PIT	34.7	23.1	23.1	25.6
CIT	14.8	15.1	16.8	17.6
Indirect taxes	70.6	80.2	84.8	99.3
Other taxes and non-tax revenue	6.5	7.6	10.5	18.5
Expenditure of the central government	**139.8**	**138.4**	**150.6**	**181.6**
Current expenditure	131.9	133.4	145.0	175.4
Goods and services	55.2	47.8	48.1	56.6
Transfers and subsidies	58.8	66.8	78.9	96.6
Interest payments	17.9	18.8	18.0	22.2
Capital expenditure	7.9	5.0	5.6	6.2
Balance of the central government (cash)	**–13.2**	**–12.5**	**–15.4**	**–20.5**
Balances of other administrations				
Local governments	–1.4	–1.0	–3.3	–3.1
Health care sector (cash)	0.0	–0.8	–0.9	0.0
Extra-budgetary funds and others	0.3	–5.6	–6.5	0.6
Financial balance of the general government (cash)	**–14.3**	**–19.9**	**–26.1**	**–23.0**
1. Compensations to public sector employees and pensioners	–	–	–3.4	–2.5
2. Transfers to second pillar pension funds	–	3.1	7.6	14.4
3. Other items[3]	–3.3	–	2.9	–3.1
Economic balance of the general government (Financial balance + 1 + 2 + 3)	**–17.6**	**–16.8**	**–19.0**	**–14.2**
Memorandum items:				
Economic deficit in % of GDP	–3.2	–2.7	–2.7	–1.8
Nominal GDP (Zl billion)	553.6	615.6	690.4	781.7

1. Estimates.
2. Draft budget.Total may differ from sums because of rounding errors.
3. Includes arrears incurred by the health care sector, adjustments to FUS's balance and revenues from the sale of UMTS licences.

Source: Ministry of Finance.

The 2001 budget

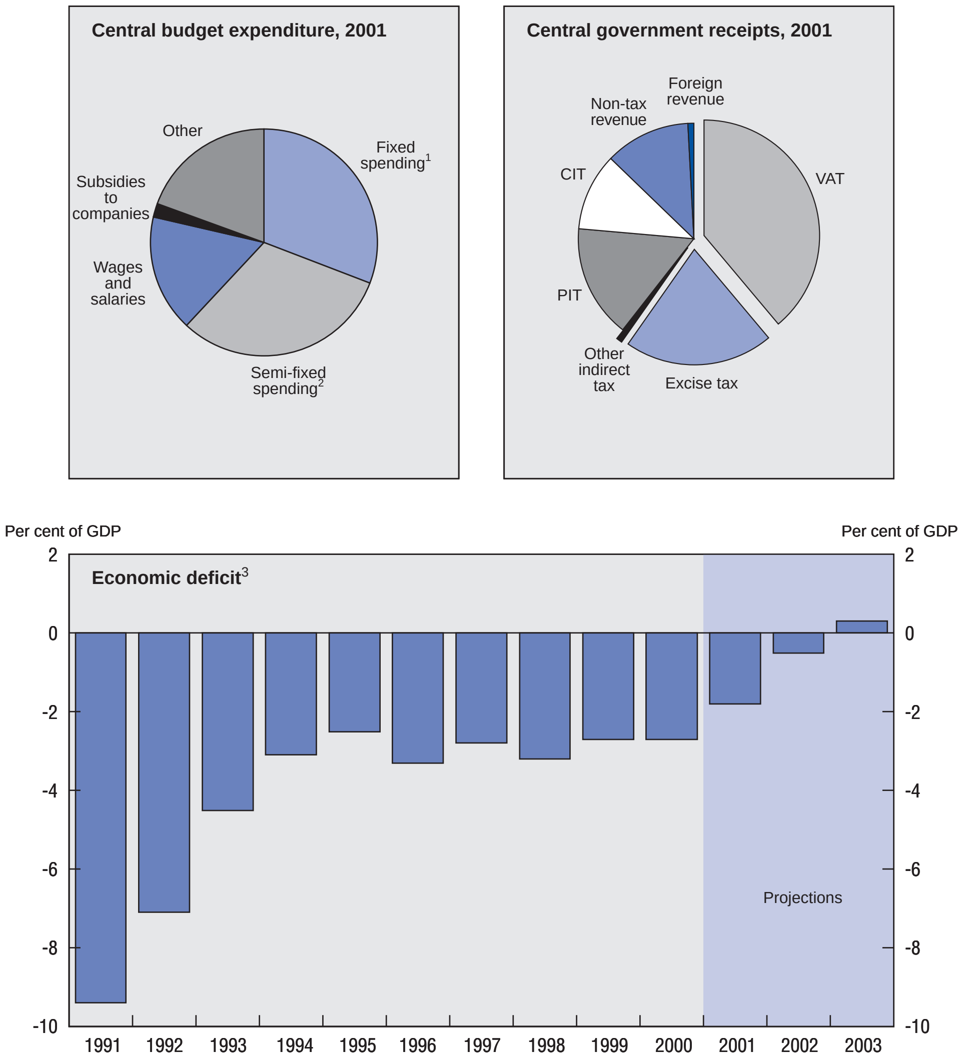
In view of the repeated fiscal slippage, the authorities made plans to cut the deficit in 2001. Central government revenue is projected to reach Zl 161 billion, an increase of 11 per cent in real terms from the previous year. This sharp increase in government revenue is underpinned by several factors. First, indirect taxes are expected to grow as a result of increases in excise tax rates on fuels, alcohol and tobacco. Second, higher profit transfers from the NBP are projected. Third, a greater efficiency of tax collection is expected to improve tax revenue. On the other hand, revenue from the corporate income tax will be reduced by the planned cut in the tax rate from 30 to 28 per cent. Central government expenditure is projected to reach Zl 182 billion, an increase of 12 per cent in real terms. Higher spending largely stems from the need to transfer financial resources to the social insurance board ZUS, not only to finance the pension fund reform, but also to make up for losses in revenues due to state enterprises' inability to pay their social contributions. Expenditure in 2001 is boosted also by the postponement of spending items from the 2000 budget, including deferred indexation of social benefits and old-age pensions. To make room for this deferred spending, the authorities decided to cut expenditure in 2001 by Zl 3.4 billion, notably by slowing the growth of teachers' wages, reducing the share of the excise duties on fuels which is being re-channelled to local governments, postponing road expenditure and increasing some stamps duties.

In view of these assumptions, the economic deficit was targeted to narrow from 2.7 per cent of GDP to 1.8 per cent in 2001. The bulk of the general government gross financing requirement would be covered by privatisation revenue (projected to reach 2.3 per cent of GDP) and the remainder by debt financing, including sales of treasury bills, placement of a eurobond floatation for € 750 million in January 2001, and sale of other assets such as US Treasury Bonds held as collateral for Brady Bonds. Submission of the draft 2001 budget to parliament has given the authorities the opportunity to re-iterate their commitment to balance the budget by 2003 (Figure 21).

Implementation of the tax reform

A comprehensive tax reform was initiated by the government in mid-1999, which included sweeping changes to the corporate income tax and the personal income tax (Lenain and Bartoszuk, 2000). As in other OECD countries, the purpose of the reform was to lower tax rates and broaden the tax base at the same time. Cutting personal and corporate income tax rates was seen as an important measure to boost economic incentives and make Poland an attractive place to work and produce, in view of the tax cuts decided in other countries. The tax reform also broadened the tax base, not only to help avoid revenue shortfalls, but also to eliminate the microeconomic distortions created by the complex system of exemptions and tax allowances. In addition, the reform aimed at modernising the tax system in view of the accession to the European Union, and to improve the coherence between the personal income tax and the corporate income tax in a country where small and medium-size enterprises constitute the bulk of the business sector. Draft amendments substantially revising the personal income tax and corporate income laws were submitted to parliament for consideration. In November 1999, these amendments were adopted, but the discussion of the personal income tax draft amendments led to considerable controversy. Eventually, the President of Poland signed the amendments to the corporate income tax into

Figure 21. **Fiscal policy indicators**



1. Includes public debt service, subsidy to local government and road financing.
2. Includes subsidy to FUS social insurance fund, ZUS' loss of contributions transferred to second tier, subsidy to KRUS farmer' social insurance fund, benefits of "uniform services", family support grants, nursing and child care benefits and subsidies to Alimony Fund, to Labour Fund and to housing credit; includes also the Supreme bodies of state authority, inspection and justice.
3. General government deficit plus wage compensation payments minus transfers to private pension funds; excludes UMTS transactions.

Source: Ministry of Finance (2001 draft budget bill) and OECD.

law, but vetoed the personal income tax amendments on the grounds that they had been adopted following an inappropriate parliamentary procedure. Amendments to the VAT law were also adopted to bring it further into line with EU requirements. They implied raising several VAT rates to above the minimum levels prescribed by the European Directives and broadened the tax base. Various decisions affecting the tax system in 2000 and 2001 are described in Box 4.

The on-going tax reform is an important structural initiative. The reform of the corporate income tax was essential in view of the high *effective* corporate tax rate in Poland compared to other countries of the region (IMF, 2000*a*). Once the reform is fully implemented – in 2004 – the effective corporate income tax rate should be closer to that in other central European countries, hence providing a further stimulus to foreign direct investment. The elimination of past distortions is a welcome step as well, in particular the elimination of allowances for investment in special economic zones, which may have constituted an "unfair tax competition" practice. Nevertheless, the failure to enact the personal income tax reform and re-submit it to parliament as originally planned will maintain or even worsen the problems that would have otherwise disappeared. In particular, the corporate income tax and the personal income tax offer incoherent alternative systems of business taxation. The tax rates, depreciation rules, and other tax allowances under the two systems are different, although they both apply to business income. Poland should therefore try to elaborate a unified system of business taxation that would remove existing discrepancies. The failure to pass the personal income tax reform also left undented the existing high taxation on labour. As noted in the previous *Survey*, the combination of personal income tax and high social security contributions results in a high tax wedge that may reduce the incentive to create jobs, make work pay less and encourage moonlighting and undeclared work. In view of the disquieting increase in unemployment and the foreseeable deterioration of the labour market, Poland should take active steps to reform the overall taxation of labour income. The reform of pension contributions enacted in 1999 is a welcome step because it transforms an unrequited transfer to the pay-as-you-go system into a form of mandatory private savings (see below), but this will take time to have an impact on participation ratios and will not be enough to reduce labour market disincentives radically.

Debt and debt service

Despite running a relatively high budget deficit, the authorities have been able to keep the state debt constant at about 43 per cent of GDP in 1999 (Figure 22). Several factors have contributed to this achievement. Large privatisation revenues have been available to finance the government's borrowing requirement, thus reducing the recourse to additional debts. Some debts have also been retired, including ahead of schedule. Hence, the relatively large debt service obligations of the Polish government have been met with few difficulties.

Box 4. Main amendments to the tax system in 2000-2001

The reform of corporate income tax enacted in 2000

- Reduces the tax rate from 34 per cent in 1999 to 30 per cent in 2000, 28 per cent in 2001-02, 24 per cent in 2003, and 22 per cent in 2004.
- Eliminates the complex system of investment allowances, subject to generous grandfathering provisions.
- Simplifies the system of capital depreciation and accelerates the rates of depreciation.
- Regularises the periodic revaluation of fixed assets.
- Eliminates tax exemptions for new investors in special economic zones starting in January 2001.

VAT was amended as follows

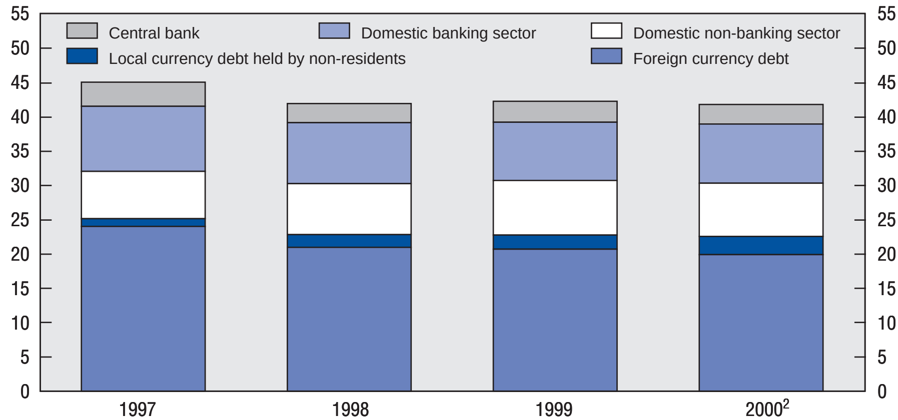
- Municipal services were made subject to 7 per cent VAT starting in January 2000.
- Agricultural goods were made subject to 3 per cent VAT in September 2000.
- The threshold above which firms must report VAT was lowered from an annual turnover of € 20 000 to € 10 000 in 2000.
- The VAT rate on construction materials and services was increased from 7 per cent in 2000 to 22 per cent starting in 2003.
- VAT rate of 7 per cent applied on books and publications, except for newspapers and magazines which will remain zero-rated until end-2003.
- Various excise taxes were raised.

For 2001, amendments to the personal income tax will

- Lower the marginal tax rate from 20 to 15 per cent on dividends and personal income from companies.
- Abolish tax exemptions on education expenditure in private schools, private pensions, and alimonies starting in 2001.
- Eliminate existing tax exemptions on investments in new rental properties, with grandfathering until 2003.
- Make capital gains on traded shares and bonds subject to 5 per cent personal income tax starting in 2003.

Figure 22. **Outstanding State debt**[1]

As per cent of GDP

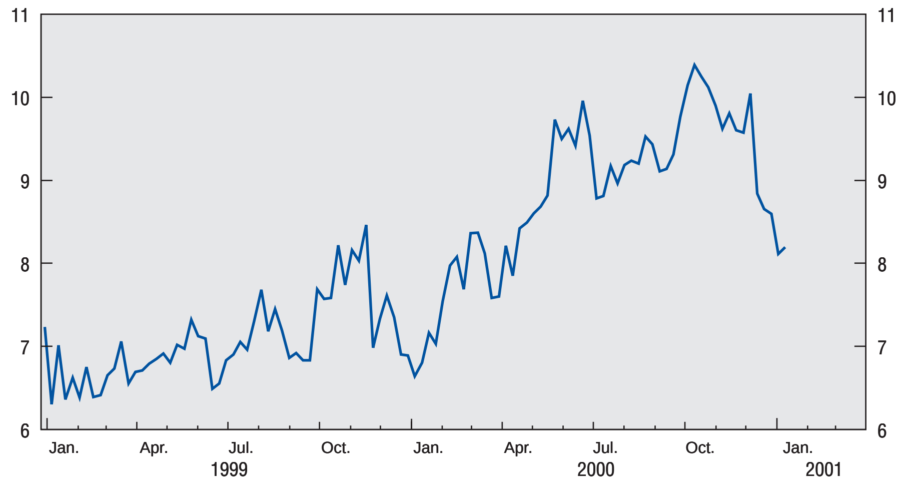


1. Annual averages.
2. For the first three quarters.

Source: Central Statistical Office, *Monthly Bulletin.*

Nonetheless, the situation is unlikely to remain the same in the future. Covering the deficit with privatisation proceeds will be less easy, as there are expected to dry up soon as the most attractive Polish state companies are privatised. In addition, as signalled earlier, the grace period granted by the Paris Club and the London Club in the context of debt rescheduling will soon be over. Principal debt payments are therefore projected to steadily increase and peak at $4.2 billion in 2008. In order to avoid an uncomfortable bunching of principal repayments on foreign debt obligations, the authorities are managing their debt stock actively. They are using opportunities to buy back market debt ahead of schedule when market terms are propitious. They are also alert to opportunities for debt rollovers and refinancing when appropriate. Less flexibility is offered, however, with Paris Club debt and credits from the World Bank, which can only be repaid as scheduled. A limited window of flexibility exists with Paris Club debt under the so-called "debt-for-environment" swaps, which can represent up to 10 per cent of such debt (see Chapter IV). More fundamentally, the debt servicing burden will be reduced by establishing the conditions for a convergence of Polish interest rates on zloty government bonds towards Euro area bonds. The spread between zloty and euro long-term rates remained large until recently (Figure 23), because investors seemed to be unconvinced by the macroeconomic picture.

Figure 23. **Bond spread *versus* Euroland**
5-year bond



Source: Bloomberg and Citibank Poland.

Recent progress in restoring non-inflationary and sustainable growth appears to have contributed to a decline in this spread since end-2000.

Pension reform after three years

As explained in previous *Surveys*, Poland has introduced a new defined-contribution mulitipillar system, consisting of a public Notional Defined Contribution, pay-as-you-go first pillar, a funded private second pillar, and a voluntary funded third pillar (Chlon, Góra and Rutkowski, 1999). The new framework covers only retirement savings, while other benefits still remain under the old defined-benefit pay-as-you-go regime. The reform was launched on 1 January 1999. As of this date, the old defined-benefit pay-as-you-go system was terminated for workers younger than 50. The new old-age system attempts to offer actuarially fair benefits, potentially creating incentives to increase compliance and postpone retirement. Minimum benefit provision out of the first two pillars for those who fall below the guaranteed level is co-financed from general revenue. Diversification of retirement savings provides greater security to the members, as labour market developments that determine the notional rate of return in the first pillar, and financial market developments that determine the second pillar rate of return are negatively correlated. This is why the reform package has been named Security through Diversity.

The first year of operation has focussed on the establishment of private pension funds and the division of the market (Góra, 2000*a*). In early 2000, there were 21 private pension funds operating on the market. For persons between 31 and 50, the decision to split contributions between two individual accounts was optional and about 60 per cent of the age group (9 million persons) decided to split their accounts. Participation was concentrated in the largest funds: 60 per cent of participants had selected one of the three biggest funds, and 90 per cent of them had selected one of the 10 largest funds. The funds managed by insurance companies have been the most successful, while those run by banks and investment funds have been the least successful. Given the share of people who have decided to split old-age contributions, it is projected that the annual flow of contributions into the private pension funds will reach approximately 1.5-2 per cent of GDP in the medium-term. In January 2001, total assets invested in pension funds had reached around Zl 12 billion (slightly above $3 billion). About 30 per cent of these assets are invested in stocks (around 3 per cent of Warsaw Stock Exchange capitalisation) and the remainder in government bonds.

Some difficulties emerged in the course of implementation. First, there were delays in the transfer of contributions from the social insurance board ZUS, which collects all social contributions, to the private pension funds. Computerisation of ZUS is still not completed, which creates delays in transferring information and creates a bad image for the entire new system. The government has decided to make its financial transfers to ZUS subject to timely transfers of contributions to the private pension funds. Another problem is the limited experience of the pension funds' supervision agency, which has been heavily criticised for being too politicised instead of professionally oriented (Góra, 2000*a*). In particular, the supervision authorities have so far prevented a necessary consolidation of the pension fund sector. Finally, the maximum share of assets that can be invested by second pillar pension funds in assets abroad has been an issue of debate. At present, only up to 5 per cent of total assets of open pension funds can be invested abroad. There are several macroeconomic reasons for a gradual relaxation of this limit. The scale of domestic financial markets in Poland is limited *vis-à-vis* the quickly growing assets of pension funds, which creates a risk of increased volatility in share prices. In addition, security of the pension system needs, *inter alia*, diversification of pensions funds' portfolios. Investing abroad is a way to achieve more diversification, hence to reduce risk (Góra, 2000*c*).

Problems with the new health care system

The last *Survey* discussed in depth the reform of the health care system launched in 1 January 1999, notably the introduction of health insurance regional funds and universal health coverage. According to the authorities, certain positive outcomes of the reform can be detected – including a shortening of hospital stays, a reduction in waiting periods, and an improvement in the quality of care. They also acknowledge that some problems have persisted (*e.g.* "informal" cash payments to providers are still often necessary to obtain access to care facilities) and new ones have emerged (*e.g.* the referral system required to consult specialists is being diluted). Public opinion that can be discerned through surveys is not favourable overall towards the working of the new system. Public dissatisfaction with the new system likely stems in part from inevitable adjustment difficulties which should ease as the main actors involved learn to run the system better. But certain problems are likely to be more fundamental and require further reform effort. It is not straightforward to diagnose a new system as the two kinds of problems, transitory and structural, interact in a complex manner. For example, financial difficulties of some regional funds could be due to poor management, inadequate risk equalisation, or simply insufficiency of overall funding.

There are three largely structural problems that need to be addressed. First, there is a problem of weak governance of regional funds. As several well-publicised episodes clearly illustrate, some regional funds suffer from political appointment of directors and the lack of transparency in their management. This problem should be tackled through improved regulation concerning the appointment of senior fund managers as well as the strict enforcement of prudential supervision by the Health Insurance Supervisory Office. Second, there is a problem of inefficient public hospitals. The basic premise of the reform – to obtain efficiency through increased competition among service providers – has been compromised by the political difficulties with closing inefficient public hospitals, a problem seen in all countries. The new system of contract has nonetheless typically resulted in a smaller amount of funds allocated to public hospitals, which in turn reduced the services available. This has been a source of public dissatisfaction with the reform but also indicates that public hospitals are now put under greater financial discipline. If the closure is excluded on political ground, public hospitals must be made more efficient through greater autonomy and accountability given to hospital administration, or privatised. Finally, there is a problem of lack of appropriate incentives in the system. This is clearly illustrated by the problem of dilution of the referral system noted above. As pointed out in the last *Survey*, such a problem was predictable in Poland where specialists are relatively abundant. If the referral system is to function properly it should be provided with incentives, as the successful experiment in some region with fund-holding primary-care doctors indicates. More generally, the system would benefit from the introduction of some co-payments, non-insurable and which would be apply to all except the poor at the point of medical service delivery. This would both reduce incentives for excessive medical consumption and raise the amount of resources available to the health-care system.

Apart from the main problems discussed above, there is a long list of improvements that are necessary. This includes a clear definition of the nationally Guaranteed Health Care Package, further technical refinement of the risk equalisation mechanism and a fully operational electronic information system. Given that so many important tasks remain to be carried out just to make the new system function reasonably well, it was wise for the authorities to have postponed opening the health insurance market to competition, as recommended in the last *Survey*. Other legislative changes are being considered to expand the coverage of the universal health insurance and to improve the flow of information, and the parliament has passed a bill to raise the health contribution rate by 0.25 per cent to 7.75 per cent. Reforming the health-care system is not a straightforward task in any country, and there is no alternative for the government to persevering with efforts to tackle the remaining problems.

III. Structural policies for employment-friendly and robust growth

Poland's growth success story owes a lot to its structural policies…

To a large degree, Poland owes its growth success story to the ambitious economic transformation policies implemented persistently over the last decade (Balcerowicz, 2000). Structural reforms have involved the restructuring and privatisation of state enterprises, an appropriate framework for encouraging SME development, a business climate that fosters foreign investment and a careful development of capital markets. All those reforms have been key elements in making output growth robust over the medium-term. Making the economic context even more business friendly will be important to keep the growth momentum. There are outstanding problems related, *inter alia*, to the tax burden, the labour code, the regulatory rigidities and corruption, that impede private enterprise development[7] and will need to be addressed. Also, Poland needs to address forcefully the challenge of the new economy and adopt policies that will foster innovation.

Policies to enhance output growth will however not be sufficient to achieve full employment and build an equitable society. An employment-friendly economic and regulatory environment is also required and, in view of the sharp deterioration of the labour market picture in the recent part, such an environment appears to be a missing key ingredient. As signalled in the previous Chapter, the prospects for employment are bleak with unchanged policies. The restructuring of low-productivity enterprises and sectors is not completed and large numbers of workers are likely to lose their jobs in the future – in particular in the coal mine, steel, railway, banking and agricultural[8] sectors. Although this is an inevitable part of the transition to a market economy, the process of "creative destruction" will succeed in the labour market only if major reforms are undertaken.

The government has recognised the need to establish a business friendly environment and has adopted medium-term strategies to address shortcomings in this area. However, the challenge of establishing an employment-friendly environment has been recognised only recently[9] and is embraced with much less fervour. A medium-term labour market reform strategy has been formulated, but drafting a strategy will not suffice. Active implementation will be crucial, which will require to make radical changes in the labour code, tax system and social protection policies. These various challenges are discussed in this chapter. First, the need for labour market reform is discussed, together with social protection policies and policies toward the rural sector. Second, enterprise transformation issues are addressed, in particular those related to privatisation, restructuring and deregulation. Third, the role of capital market development is reviewed. Finally, the establishment of an environment conducive to the emergence of a "new economy" is examined.

… but a more employment-friendly environment is needed to preserve social cohesion

Little progress has been made in labour market policies since the last examination of Poland[10] (Box 5). The 1999/2000 *Survey* reviewed labour market conditions in the light of OECD *Jobs Strategy* recommendations and identified specific problem areas which, for the most part, still constrain the functioning of labour markets. These include high labour tax wedges, the uniform determination of the minimum wage with no adjustment for regional and employee-group circumstances, regulatory obstacles to the renewal of fixed-term contracts, qualitative mismatches between skills offered and demanded in labour markets, and non-responsive wage-setting procedures in state enterprises and the public sector.[11] The authorities' effort to improve the entrepreneurial climate for SMEs are a step in the right direction, even though the labour code is ill-suited to the specific needs of small enterprises for flexibility.

In these circumstances, it is not surprising that total employment did not increase in the past five years, despite strong output growth. Given labour market rigidities, the arrival of large groups of school-leavers (200 000 yearly entrants at the turn of the millennium) gave rise to a sharp increase in unemployment. Labour market imbalances are an immense social challenge and macroeconomic burden.[12] The sobering fact is that they may worsen in 2001 and beyond, because of dormant productivity reserves in several areas of the economy[13] and strong demographic pressure. Certain sources evaluate hidden employment at 20 per cent of the effective workforce, around 700 000 – 1 100 000 being accounted for by agriculture.

Open unemployment is a source of vulnerability

Widening income differentials reflect first and foremost growing unemployment (Figure 24). The rise of unemployment is concentrated on certain groups. Among the 2.5 million job seekers, 57 per cent are women, 33 per cent have only a primary school diploma, and 30 per cent are in the 18-24 age group. Unemployment is particularly high in certain voivodships (23 per cent in Warmia-Mazuria, 20 per cent in Lubuskie, 19 per cent in Zachodnio-Pomorskie, 18 per cent

Box 5. Implementing the OECD selected recommendations on structural reforms: an overview of progress

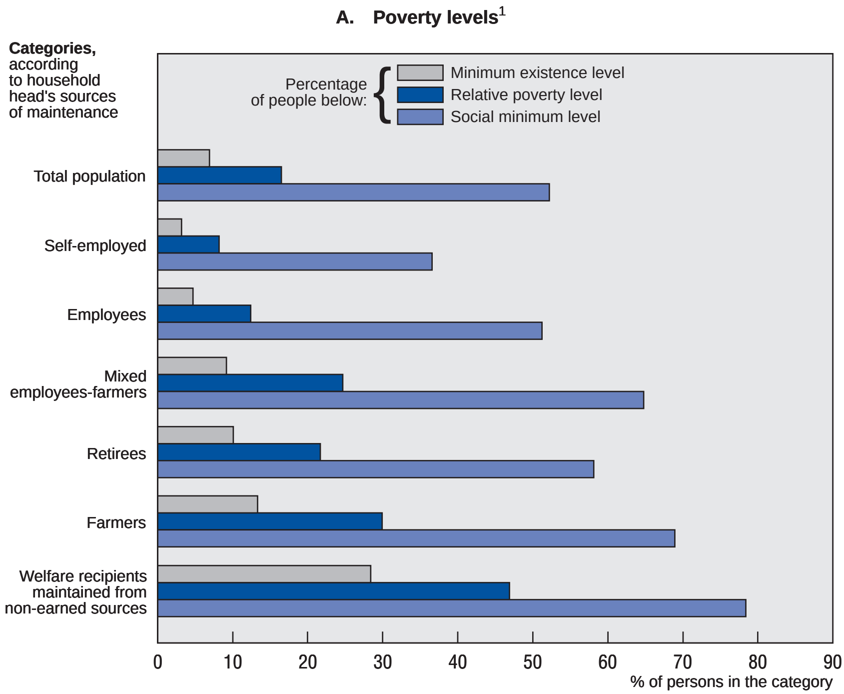
Recommendations of the last Survey	Measures since the last Survey	OECD recommendations of the present Survey
Privatisation		
Proceed with ongoing reform and speed up energy and transport privatisation.	Major privatisations included the telecommunications firm TPSA (October 2000 for a bloc sale), the airline LOT (January 2000), Warsaw Heat and Power Company (January 2000), and the insurance company PZU (November 1999).	Proceed with privatisations and reinforce the competition policy framework in network industries (telecommunications, gas, electricity). Make the electricity exchange operational by making long-term supply contracts more flexible.
Industrial restructuring		
Implement more purposefully the restructuring plans for coal mining and steel sectors – while keeping the size of the budgetary support to the programme under control. Initiate the restructuring of the railways monopoly PKP.	Downscaling progressed in coal (minus 83 000 workers in 1998-2000) and steel. Budget costs of restructurings have been significant.	Create several separate enterprises in coal and steel and start swiftly their privatisation. Separate the railway monopoly into infrastructure, passenger and freight enterprises and start their restructuring and privatisation within a carefully designed regulatory framework that, *inter alia*, preserves incentives to maintain and improve the infrastructure.
Corporate governance		
Improve corporate governance in steel and railroad sectors by making debt relief conditional to restructuring programmes.	Little progress in the governance of steel and railway companies which rely on government funding. Additional corporate governance tensions in privatised companies.	Follow recommendation on steel and railways. Permit domestic pension funds to settle corporate governance standards for the companies they invest in. Clarify corporate governance responsibilities of government, strategic investors and minority holders in privatised firms.
Employment and self-employment		
Enhance the employment creation capacity of the business sector, by reducing labour tax wedges. Encourage the activities of the self-employed, micro-enterprises and SMEs.	No progress in labour market reforms. “Law on Business Activity” guarantees free entry and fair competition for SMEs in all manufacturing, service and construction activities. Streamlined corporate tax provisions available for self-employed and micro-enterprises.	Proceed to labour market reforms. To facilitate employment in SMEs, reduce labour tax wedges; make temporary work, overtime and employee benefits more flexible. Continue financial liberalisation to facilitate the funding of start-ups and SMEs.

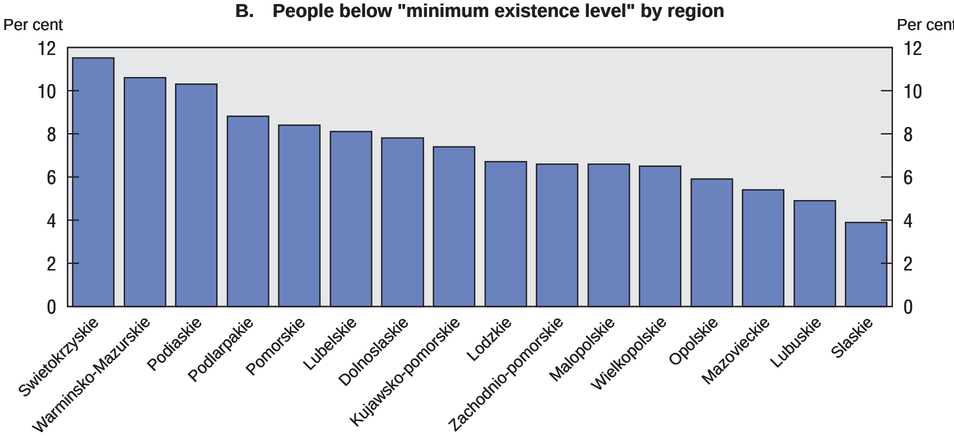
Box 5. Implementing the OECD selected recommendations on structural reforms: an overview of progress (*cont.*)

Recommendations of the last Survey	Measures since the last Survey	OECD recommendations of the present Survey
Pension reform		
Complete the implementation of the 1999 reform. Address its "teething" problems, notably the computerisation of the system. Reduce the abuse of disability and sickness pensions and of early retirement privileges.	Computerisation problems partly resolved. Disability and sickness benefits taken under improved discipline and reduced.	Improve the regulatory framework of pension funds, permit market-driven mergers, encourage the corporate governance advocacy by the funds and liberalise their foreign placements.
Health reform		
A new law on health care should consolidate the weaker elements of the recent reform: definition of a minimum package of benefits; improvement of payment arrangements which impact on the quality, quantity and cost of care; lack of hard budget constraints in regional funds.	Some positive outcomes of reforms visible (shortening of hospital stays and care waiting times). "Informal" payments are still necessary for access to services. Opinion polls reveal public frustration with reform. Draft amendment to health law still in Parliament.	Improve the governance of regional health funds by depoliticising their boards. Restructure inefficient hospitals through more autonomy, accountability or privatisation. Make the primary doctor system workable, for example by vesting referral doctors with fund-holding responsibilities. Introduce co-payments.
Tax reform		
Widen reform from corporate to personal taxes and enhance the incentives and minimise distortions for the self-employed. Make property taxes a reliable tax base for local government. Reduce administration costs of the value-added tax by granting exemptions for small-scale agriculture.	No progress in personal tax reform, local government and property tax systems.	Proceed with recommendations.

Source: OECD.

Figure 24. **Who are the poor?**
1999





1. See definitions in footnote 14.

Source: Central Statistical Office, *Living Conditions of the Population in 1999*, Warsaw 2000.

in Kujawy-Pomerania). Most job seekers do not receive unemployment benefit. Thus, joblessness is the principal cause of income shortfalls[14] and worsens them through time, as the limited duration of unemployment compensation makes the revenues of affected families unstable.[15]

Not only is the probability of being unemployed higher for those above-listed groups, their odds of resuming work are also lower. In September 2000, 30 per cent of the affected were out of work for more than a year and 16 per cent for more than two years. A survey identified the groups with *high entry to* and *low exit from* poverty as families with the following characteristics: headed by someone who has a low level of education, lives on social transfers, has more than three children; and is located in a rural area.[16] Other analyses point to low-skilled manual workers as another poverty-prone group. The hard-core long-term unemployed whose marketable human assets erode regularly find themselves in a vicious circle. Social policies are at present poorly adapted to deal with this fringe of the population.[17]

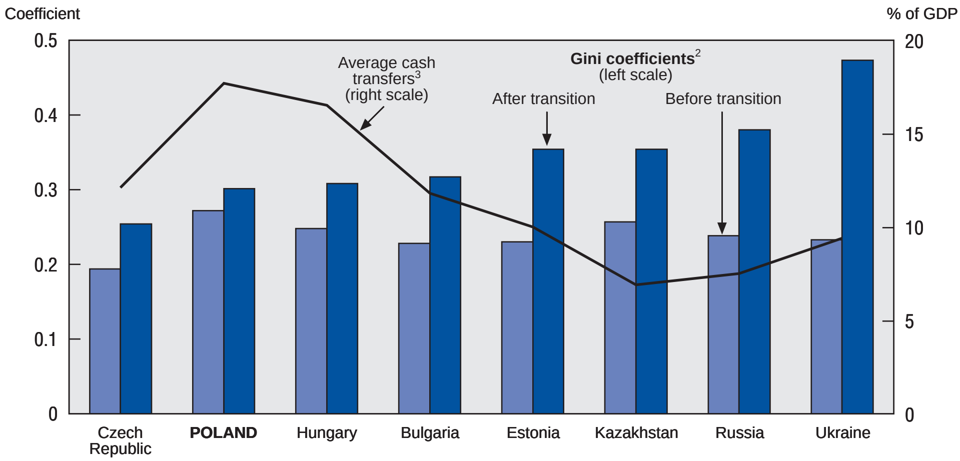
Other groups may also find themselves below the poverty line. Elderly citizens with no regular income are vulnerable, but this group is relatively small due to the availability of pensions. More worrying is the situation of the "working poor", whose earned income is not sufficient to lift family members above the poverty line. Large households headed by a single low-skill income earner find themselves frequently in this situation.

The generous income redistribution policies need to be reformed

Like in many countries, labour market and social protection policies are intimately intertwined. The main objective of social policy over the past decade has been to reduce labour supply, by inciting the relatively aged and other redundant workers to withdraw from the labour force with attractive early-pension and other benefits. This objective of preserving social cohesion seems to have been attained initially. Poland has today one of the lowest income divergences among transition countries (Figure 25). Transfers have contributed to income equality, shifting the Gini coefficient from 0.45 to 0.28.[18] Economic analysis traditionally stresses the tension between equality and growth objectives, but according to recent research, there are factors which make these two goals mutually reinforcing (Aghion *et al.*, 1999).[19] At first sight, Polish growth in the 1990s bears out this reassuring reading.

This policy has however not achieved its objective of reducing the number of job seekers commensurately, because many early retirees have become self-employed or joined the ranks of those moonlighting and working unofficially (Góra, 2000*c*). In addition, the policy has been implemented at a high cost. In 2000, old-age and disability pension payments accounted for 12 per cent of GDP and 66 per cent of expenditures from social funds.[20] The share of total

Figure 25. **Income distribution before and after transition**[1]



1. Gini coefficients and cash transfers through the first eight years of transition. The first year of transition is 1990 for Poland, the Czech Republic, Hungary, Bulgaria and 1992 for Estonia, Kazakhstan, Russia and Ukraine.
2. The Gini coefficient is a measure of income inequality: the higher the coefficient, the wider the income distribution.
3. Average social transfers as a percentage of GDP through the transition period.

Source: IMF, 2000*b*.

social transfers in GDP was one of the highest among transition countries. In addition, recent trends show both growing divergence in income distribution and the emergence of durably vulnerable groups, in part because the concentration of benefits on early, old-age and disability pensions has reduced public resources available to the less organised, more marginal and poorer members of society.

Snowballing budget costs of transfers and their inefficiency in supporting the most needy have led to a re-examination of social policy priorities at the end of the 1990s, and the government began to toughen eligibility criteria and access to benefits.[21] However, numerous challenges remain. Ongoing structural changes – notably the end of labour hoarding after grace periods in privatisation, restructuring in the coal, steel and railways sectors and pending reforms in agriculture – are heightening pressures on social policies. New social challenges are emerging in urban and rural areas, in relation to their economic adjustments, and are calling for innovations in accompanying policies.

The challenge is to fine-tune social transfers to the strains generated by structural changes and to the needs of the most vulnerable groups, with minimum distortions to economic incentives for skill adjustments and labour market participation, and with contained budgetary costs. Policy innovations should be built on the experience of other OECD countries. Perverse effects of additional social transfers, such as the erosion of work and training incentives and the distancing of families with unemployed members from the labour market, *e.g.* unemployment and poverty traps, should be minimised. Early retirement has already lowered labour participation rates and crowded out to some extent the resources available to assist the most needy. Better targeted support to deserving individuals and households, including the long-term unemployed and families with children below the poverty line, could be contemplated.[22] Such assistance could include direct provision of education and health services to poor households and their children.

Social policies should first and foremost aim at engaging benefit recipients in productive activities.[23] This has proven to be the most effective way out of poverty and toward durable employability. Policymakers have taken steps in this direction, by phasing out ineffective job creation programmes in the public sector and decentralising active labour market schemes to the regional labour offices managed by local government. Education and health policies have taken into account some of the needs of the disadvantaged groups. The reorientation and targeting of social policies would facilitate the pace of structural reforms, including still-pending agricultural reform and additional rationalisation in the difficult sectors.

Poland's income taxes and social security contributions result in a punitive tax wedge on labour. The wedge between employees' take home pay and company costs is one of the widest in the OECD area (46 per cent for the first tax bracket, higher beyond),[24] which raises the cost of labour and penalises the less productive workers, such as low-skilled and less-experienced. It also encourages the under-declaration of wages, which reportedly is a common practice to escape high social security contributions. The tax wedge will increase if the plan to introduce a new unemployment insurance scheme funded with payroll taxes was implemented. Half of the SMEs interviewed by the Polish SME Foundation[25] identified "high social security contributions" as the top obstacle to their employment growth.

The labour code should become less rigid

More employment-friendly policies would also require a reform of the labour code. The prominent role played by small enterprises in Poland's business sector activities calls for a particularly flexible labour code (Box 6). Yet the labour code was negotiated in the early 1990s between trade unions representing workers of large industrial conglomerates and the government as representative of state enterprises. Compared to large companies, SMEs have a narrower business portfolio, more project work, and lesser opportunities to balance out market fluctuations via activity diversification.[26] Hence, they need to employ more temporary workers on a multiperiod basis, but face the regulatory ban on renewing the fixed-term hiring of the same employee more than two times.[27] Adjusting working time to activity fluctuations is also exceptionally costly: the first two hours of overtime beyond the legal ceiling of 42 hours per week trigger extra allowances

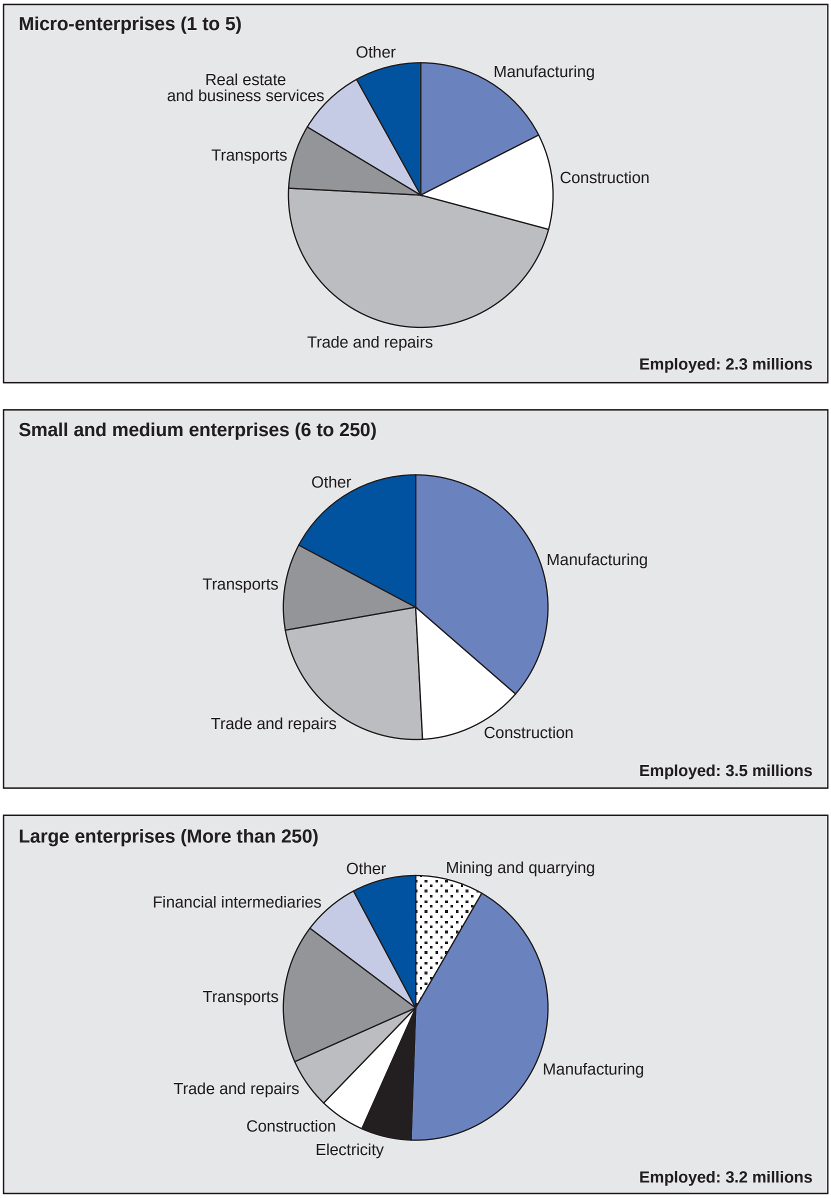
Box 6. Buoyant SMEs

Aside from salaried workers, a large number of self-employed constitutes an important share of the workforce. About 1.8 million micro-enterprises (up to five employees) were in operation in 1999, according to the national register of enterprises (REGON). Micro-enterprises employ 2.3 million employees. Together with small and medium-size enterprises (up to 250 employees), they employ a plain majority (62 per cent) of total corporate sector workforce (Figure 26). They concentrate in activities which are neither capital nor technology intensive, but where commercial incentives drive customer satisfaction and market growth – which include trade and repairs (32.5 per cent of total SME employment in 1998), hotels and restaurants, construction services, and manufacturing sub-contracting. A high proportion of firms have proven resilient under intense competition: half of active SMEs in 1999 are already more than 4 years old. Mid-size enterprises are a particularly noticeable group, showing remarkable investment activism and growth in the recent period. They engage in technological transfers and organisational development, most medium enterprises (7 out of 8 according to a recent review) having already a fraction of foreign participation in their equity capital. They constitute the bedrock of Poland's domestic corporate sector (Figure 26).

of 50 per cent, and consecutive hours allowances of 100 per cent. Rules could be better adapted to SME circumstances by facilitating the renewal of long-term temporary contracts (for example of contracts signed for longer than one year), and by establishing a legal framework for the annualisation of working time (which would give companies more flexibility in adapting to peaks and troughs in their order books and would reduce unnecessary overtime allowances).

Similarly, employee benefits were legislated in the early 1990s, when large enterprises less exposed to competition dominated the industrial structure, with little consideration to their affordability by SMEs. Among others, obligations to create health and safety commissions with extensive responsibilities in all enterprises, to write down detailed employee remuneration standards, facilitate the activities of multiple unions, secure job protections to concurrent union leaders, and guarantee generous leave rights to parents[28] are uniform obligations for large and small firms alike, if they employ more than 5 persons. On the other hand, labour offices, which were originally geared to facilitate the job searches, have been vested with wider social functions such as extending health insurance coverage and other social benefits to inactive people, tasks which taxed their efficiency in their main function.[29] In all these areas, adjustments appear necessary and possible without undermining the social objectives of benefits.[30] Practically no progress has so far been made in this regard.[31]

Figure 26. **Distribution of employment in the market sector according to firm size, 1998**



Source: Central Statistical Office.

Skill and infrastructure handicaps of regional labour markets

A distinct characteristic of SMEs is their concentration in large cities and advanced regions. Already in 1998, 20 per cent of active SMEs were located in the two agglomerations of Warsaw and Katowice (compared to 5 per cent of the population), and 37 per cent of all sole proprietorships operated from three voivodships (compared to 26 per cent of the population).[32] Several factors explain this geographic polarisation of SME activities, including the role of local labour markets, which can provide SMEs with the skilled, and when needed, fixed-term labour inputs. SME needs for highly skilled workers remain partly unsatisfied, according to all surveys, and make them cluster in areas with qualified labour pools. The opportunities for low skill and high unemployment regions to improve their situation via SME growth should not be taken for granted.

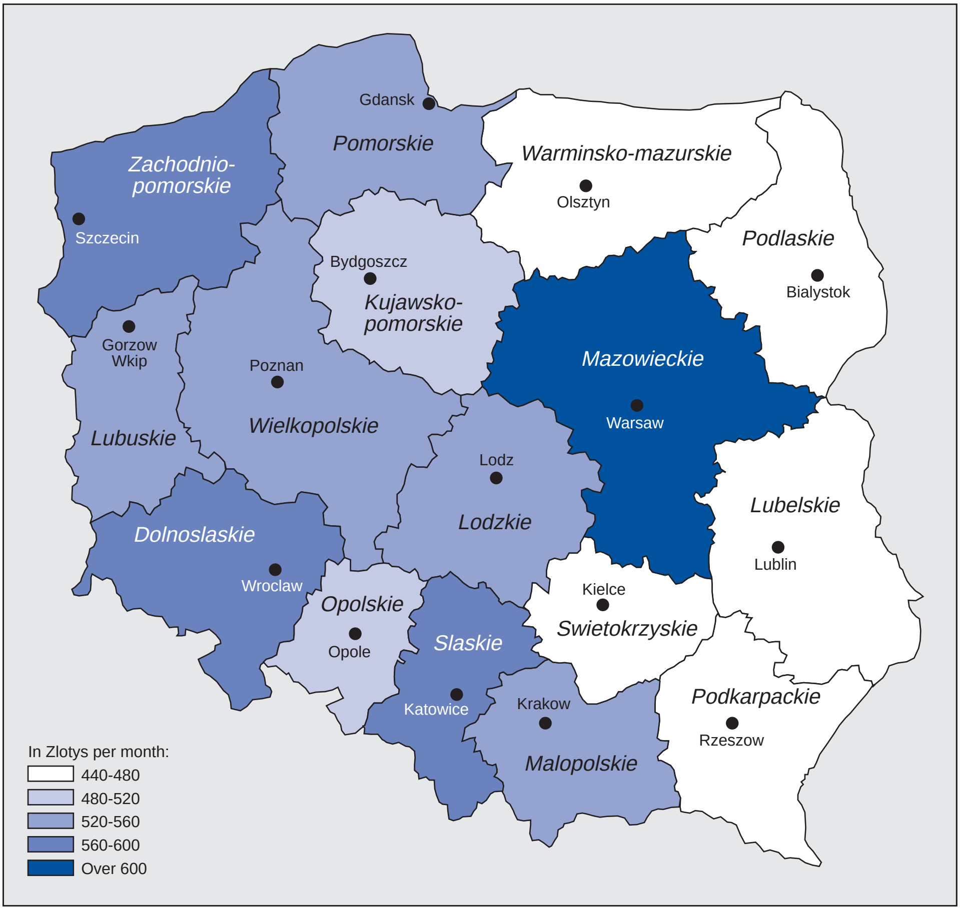
High labour mobility would then be an alternative, with more persons riding the wave of corporate sector growth in developed areas, but this has occurred only to a limited degree.[33] The pace of interregional migration actually decreased in the second half of the 1990s, partly reflecting more caution by potential migrants as regards employment prospects and serious problems of housing availability.[34] Skyrocketing property prices and rents in large cities did not trigger sufficient housing construction activity because of regulatory distortions.[35] In addition, shortcomings in transportation infrastructure do not facilitate inter-city commuting. In the future, regional labour market imbalances and strong agglomeration effects need to be dealt with through integrated policy packages of regional transportation, land development and housing reforms.

Under-employment is a source of poverty in rural areas

While urban areas are hit by open unemployment, rural areas suffer from large-scale under-employment. This inflicts economic pain to a large number of persons because, to a large extent, Poland remains a rural country, with about 38 per cent of the population living in agrarian regions. These are specialised mostly in agriculture, but non-farm activities play also a significant role. In spite of a costly agricultural policy, the low productivity in agriculture and massive hidden unemployment (regularly estimated to affect 700 000 – 1.1 million persons) have depressed household incomes throughout the last decade (Figure 27). Declining farm revenues, consumption and investment have also reverberated on local non-farm markets and rural unemployment rates attained a historical high at 16.1 per cent in 2000, together with local labour force participation bottoming at 57 per cent. Rural unemployment problems are here to stay unless relevant policy action is taken. EU accession will radically alter the market environment for Polish agriculture, eliminating obstacles to intra-EU farm trade (while creating new ones *vis-à-vis* third countries), providing farmers with larger markets, more income stability and additional revenues; and facilitating their productivity enhancing investments.[36] Hence, subsistence farming will not indefinitely play its current shelter function for

Figure 27. **Disposable income per household according to voivodships**[1]

1999



1. Gross income minus taxes plus subsidies for one person in the household.

Source: Central Statistical Office, *Living Conditions of the Population in 1999*, Warsaw 2000.

the unemployed and inactive rural family members, even if land and property sales by such farmers may facilitate during a transition period their subsistence on smaller plots. If a sharper divide between rural and urban employment and living conditions is to be avoided, facilitating higher value-added and more productive farming and non-farming activities in rural regions should be a key policy priority.

Reforming agricultural policies should be the first step. Presently, agricultural policy attempts at sheltering farmers from foreign competition – as well as from a number of distortions caused by foreign countries' production subsidies – through high import tariffs and strict quotas, and aims at supporting and stabilising their income *via* purchase interventions on product markets. Although Poland is not among the heaviest subsidisers and maintains a relatively open farm trade environment by respecting its WTO commitments, these policies distort the domestic agriculture and food markets at huge budget and consumer costs and provoke massive income transfers. Yet the poorest persons who live on subsistence farming and sell a limited share of their products on the market get little benefit from these policies. Redirecting support instruments from trade and market-distorting interventions to focused income maintenance should be considered, even if such moves are made more difficult in the context of negotiations concerning EU accession. This re-orientation would help diminish the aggregate level of subsidisation and take some of the burden out of food prices and low-income food consumers.

Fostering non-farm employment-creating activities is another necessity. New enterprises emerge in a wide range of service and manufacturing sectors, as shown by the recent growth of high-value added and high-technology companies in certain rural areas.[37] The natural attractiveness of rural regions seems to play a role in these localisations. However, infrastructures and collective living conditions should not fall behind, and social facilities (education, health etc. services) should be adapted. In this regard, innovative policies by local governments may be the driving force,[38] as facilitated by recent administrative decentralisation policies. Local initiatives should also take into account the basic economics of SME growth, and avoid unrealistic expectations from this sector – as SMEs naturally tend to cluster in market and resource-intensive urban areas. Rural regions' comparative advantages seem to be bigger in rural-resource based activities – such as organic food, wood and other natural resource processing, and green tourism. Future rural training policies should take account of these considerations.

Agricultural policies and recent reform initiatives have recognised these challenges, while concrete actions have proven difficult to launch. The *Coherent Structural Policy for Rural and Agriculture Development* approved by the Council of Ministers in 1999 and the 2000 government policy statement *Pact for Agriculture* stress the need for an in-depth diversification of activities in rural regions, hint at widespread physical infrastructure and human capital shortcomings, and advocate integrated rural development policies. Specific action plans are however not finalised. The government seeks the co-operation of EU partners, and the European Commission has already earmarked € 515 million for 2000-2002 in its pre-accession scheme SAPARD (Special Accession Programme for Agriculture and Rural Development) in support of Polish integrated rural development. European funds will be matched by government grants (€ 168 million earmarked for the co-funding of the SAPARD initiative) and completed with the resources of the Rural Development Programme of the World Bank. This programme focuses on reinforcing available facilities for food processing, technological upgrading of existing farms, improvements of rural infrastructures, and diversification of activities and training for farmers.

Three avenues of enterprise reform: privatisation, restructuring and regulatory reform

Even though the labour market picture is sombre, Poland has been able to establish appropriate structural conditions for enterprise development – and therefore for output growth, business fixed investment, and productivity. Several categories of enterprises have been under positive influences, starting from firms that have benefited from foreign direct investment, SMEs and also state enterprises that are undertaking sweeping restructuring programmes (Box 7). These positive trends owe a lot to the structural policies of privatisation, restructuring and regulatory reform.

Privatisation

Poland's privatisation programme took off more gradually than in other central and eastern European countries but, once started, it proceeded swiftly and successfully in competitive sectors[39] (Figure 28). The authorities aim at privatising 70 per cent of state-owned assets by 2001 (Table 5). The programme has avoided certain pitfalls of bolder actions in other countries, such as corporate governance deadlocks due to the sudden dilution of share ownership. It also benefited from a large degree of transparency in the process, which made claims of unfair treatment typical of other countries rare in Poland. Polish privatisation has been based on two different and complementary techniques, called *capital privatisation* and *direct privatisation*, and secondary procedures have been used to deal with particular cases.[40]

Capital privatisation transforms large state concerns into commercial code companies first, then segments their equity capital in order to sell blocs through bilateral (beauty contest type) negotiations with strategic investors, and subsequently other blocs through initial public offerings (IPOs). The sequence and proportions of sales to strategic and stock market investors are determined according to firm and market circumstances. In most capital privatisations, strategic investors sign "investment and social" packages with the Minister of Treasury and trade unions, respectively, committing them to multiyear programmes of investment, worker retention and retraining objectives. According to the provisions in force, portions of the equity capital and privatisation revenues of "commercialised" companies are earmarked for the funding of specific social goals.[41]

Box 7. Towards healthier enterprises

Three types of enterprises are becoming healthier:

- Firms dominated by large *foreign direct investment* (FDI) have benefited from new capital and modern managerial and technological know-how in several sectors.[1] The investment rate of foreign-owned firms is much above domestic enterprises (they realised 52 per cent of corporate sector investments in 1998), their labour productivity is twice the national average, they contribute to human capital formation and pay salaries higher than national averages. However, foreign firms create certain vulnerabilities for the domestic economy, as their local activities become dependent on mother companies' world-wide fortunes (such as troubled Korean car manufacturer Daewoo which reduced its workforce by one-third in its Lublin plant), and their tax contributions remain below the growth of their activities. The presence of foreign investors has become central in certain sectors: they own 60 per cent of total assets in banking, 50 per cent in insurance, 40 per cent in hotels and catering, 29 per cent in retail trade in 1998 – with additional increases since that year. Still, the low starting level and late pick up of foreign investments explain why Poland is lagging behind other Central European and OECD countries in terms of total FDI stock per capita. Privatisation purchases and greenfield investments are two parallel avenues, representing each approximately half of total FDI inflows in the past decade. By contrast, FDI by way of mergers and acquisitions play a limited role, reflecting the marginal role of these operations in Poland. Both privatisation purchases and *de novo* investments have been stimulated by government policies: the Ministry of Treasury in charge of privatisation purposefully sought qualified foreign buyers in as many sectors as possible,[2] and helped eliminate the legal obstacles to such investments, and greenfield investments were granted generous tax incentives, including in the 15 special economic zones created for this purpose.[3]

- P*ublic enterprises* are becoming healthier thanks to restructuring programmes, with a sharp acceleration in recent years. The renowned problem of Polish shipyards has for instance been resolved, with industrial success for the companies that were able to restructure and become commercially viable. The restructuring of previously bloated public enterprises has allowed a reallocation of resources: human and financial resources released from sheltered and less efficient enterprises have been invested in other more dynamic parts of the economy. State-owned firms still dominate certain traditional sectors and the future restructuring may generate further productivity gains.

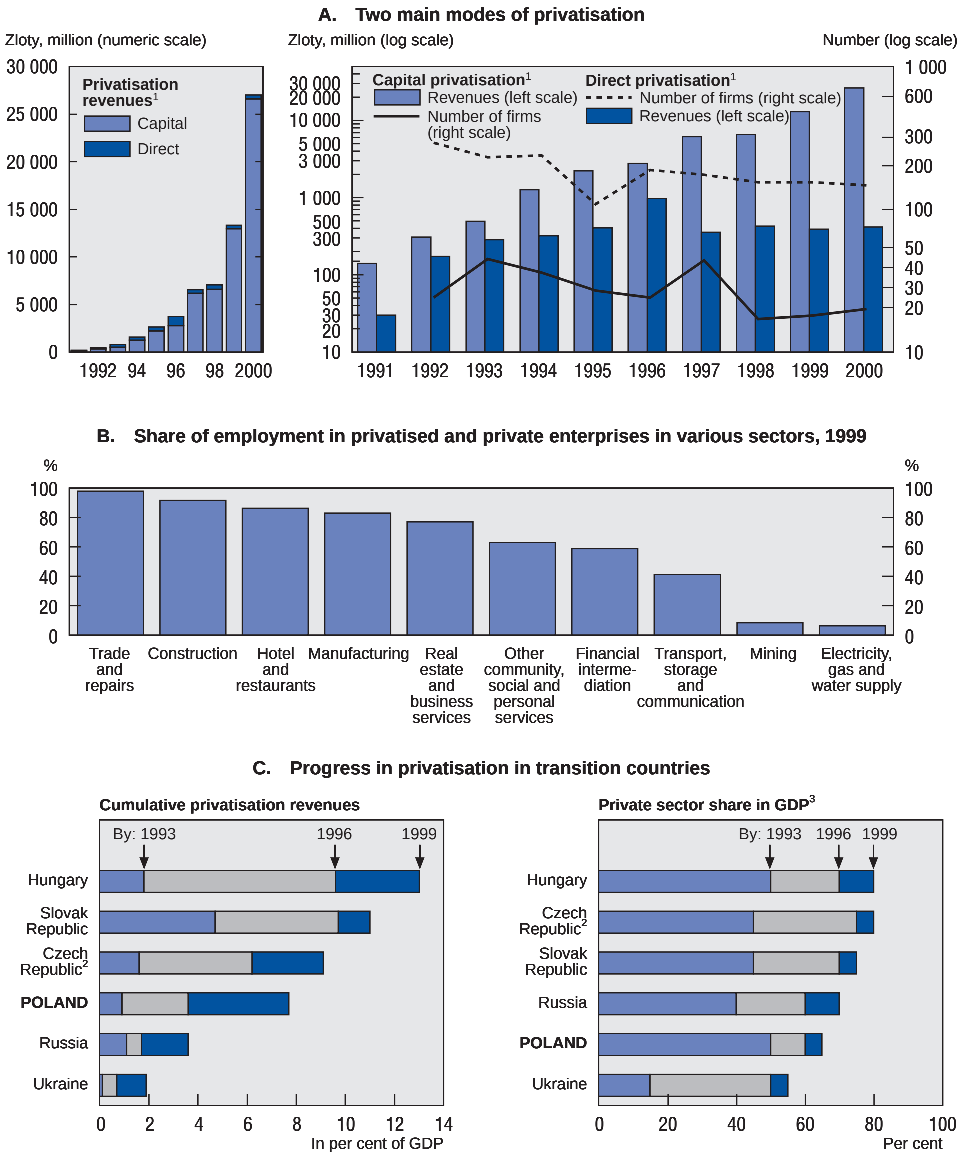
Box 7. **Towards healthier enterprises** (*cont.*)

– A large number of new start-ups and *small and medium-size enterprises* have created a vibrant entrepreneurial environment with rapid investment and employment growth. Small and medium-size firms are the most dynamic component of the Polish business sector.[4] Their upsurge and proliferation after transition, which has been more vivid than in many other transition countries, originated from three streams: family firms already under private ownership before transition (sometime for several generations), buy-outs by management or employees of state firms, and entirely new start-ups – the latter group being the largest. SMEs comprise three categories: "micro-enterprises" employing up to 10 workers often in informal and/or family relations; "small enterprises" employing up to 49 workers with more formal employment contracts, and "medium size enterprises" employing 50-249 persons.[5] All the three categories have grown in the past decade and increased the total share of SMEs in overall economic activity.

1. According to the Ministry of Treasury, FDI firms created via privatisation between 1994-1999 in manufacturing and construction sectors have realised total investments of Zl 12.9 billion against initial "investment package" commitments of Zl 7.3 billion.
2. Initially, FDI shares in the enterprises of "strategic" sectors such as telecommunications and air transport were limited to 25-50 per cent, these limits are now being waived, permitting controlling investments by France Telecom and Swissair.
3. By 2000, 15 zones had issued a total of 326 operating licences with a total investment value of Zl 8.6 billion. The regime will not be valid after January 2001, but the granted concessions will be honoured. The tax provisions of the special zones are described in Box 9 below – Curbing State Subsidies.
4. In a 1997 survey of a sample of 25 000 people from 23 countries, Poland came first in terms of the readiness of respondents to undertake work on their own account (D. Blanchflower, A. Oswald, 2000). According to another 1999 survey by the Centre for Public Opinion Polls in Warsaw (CBOS), 64 per cent of secondary school students claimed that they could consider setting up their own business.
5. These are definitions provided by the 1999 Law on Business Activity. Until 1999, micro-enterprises were defined as those employing less than five workers.

D*irect privatisation* is more adapted to smaller companies which do not lend themselves to the fragmentation of their equity capital and stock market listings through IPOs. Those are companies in which the authorities see no policy reasons to retain ownership stakes. The main idea is to achieve a swift restructuring of companies through a rapid and total transfer of ownership to motivated owners. Incumbent managers and employees are encouraged to make buyout proposals, and a leasing facility is put at their disposal. Sound enterprises with no needs for additional investment and restructuring are in principle earmarked for such

Figure 28. Privatisation indicators



1. Yearly flows, completed transactions.
2. 1994 instead of 1993.
3. Based on official GDP and estimates of income generated by private registered companies, as well as of informal private entities.

Source: Ministry of the Treasury, Central Statistical Office and EBRD.

Table 5. **Largest privatisations**

As of December 2000

Firm	Activity	Date of privatisation	Method	Strategic investor	Budget revenue (Zl million)	Ownership structure after privatisation, in per cent				
						State	Employees	Strategic investor	Institutional investors	Individual investors
Telekomunikacja Polska (TPSA)	Telecommunications	December 98 October 00	IPO Block sale	France Telecom + Kulczyk (Poland)	21 766.7	35.0	15.0	35.0	← 15.0 →	
Bank Pekao SA	Banking	June 98 June 99	IPO Block sale	UniCredito Italiano + Allianz Aktiengesellschaft	5 597.5	8.0	n.a.	53.2	40.8 EBRD (6.6)	32.2
PKN Orlen	Processing and distribution of petroleum products	November 99 July 00	IPOs		3 374.5	28.4	–	–	← 71.6 →	
PZU	Insurance	November 99	Block sale	Eureko + BIG Bank Gdanski (Poland)	3 018.0	56.0	14.0	30.0	–	–
Bank Zachodni	Banking	June 99	Block sale	AIB European Investments Ltd	2 284.8	4.3	12.7	81.6	← 13.4 →	
Bank Handlowy	Banking	July 97	IPO	Citibank[1]	1 647.2	6.9	n.a.	87.8	← 5.3 →	
KGHM	Copper mining	August 97	IPO		1 348.4	49.6	–	–	24.0	26.4
Powszechny Bank Kredytowy	Banking	October 97 June 00	IPO Block sale	Bank Austria Credit A-G[2]	1 342.5	4.0	0.8	53.7	← 41.6 → Bank of New York (7.9)	
Elektrociepłownie Warszawskie	Heat and power supply	January 00	Block sale	Vattenfall	959.5	45.0	Distribution ongoing	55.0	–	–
Polfa Poznan	Pharmaceuticals	January 98	Block sale	Glaxo Wellcome	770.3	2.7[3]	0.8	96.5[4]	–	–
Orbis	Tourism	November 97 July 99 July 00	IPO Block sale I Block sale II	Accor (20), FIC (10.4), Globe Trade Centre (5) (Poland)	669.7	6.2	12.3	35.4	15.2 Deutsche Bank	30.9

Table 5. **Largest privatisations** (*cont.*)

As of December 2000

Firm	Activity	Date of privatisation	Method	Strategic investor	Budget revenue (Zl million)	Ownership structure after privatisation, in per cent				
						State	Employees	Strategic investor	Institutional investors	Individual investors
Zaklady Przemyslu Tytoniowego Krakow	Tobacco processing	January 96	Block sale	Phillip Morris Holland	579.7	4.5[5]	–	95.0	–	–
Zespol Elektrocie-plowni PAK	Heat and power supply	March 99	Block sale	Elektrim (Poland)	359.2	50	11.5	38.5	–	–
Polaniec Power Station	Power supply	April 2000	Block sale	Tractabel	350.0	59.0	15.0	25.0	–	–
Elektrocieplo wnia Krakow	Heat and power supply	October 97	Block sale	Finelex BV	279.1	28.1	8.1	63.8	–	–
Slaska Spolka Cukrowa	Food processing	November 00	Block sale	Saint Louis Sucre	250.5	5.0[6]	–	95.0	–	–
PLL LOT	Air transport	January 00	Block sale	SAirGroup	139.5	52.0	10.4	37.6	–	–
DT Centrum	Retail trade	February 98	Block sale	Handlowy Investments Centrum SA (Poland)	106.0	3.8	15.0	80.0	–	–

1. Bank Handlowy was privatised through IPO and obtained three institutional investors (28.5%). Additionally, a stake of 22.2% was held by Bank of New York due to GDR issues. In 2000 Citibank bought form the Polish insurer (PZU) bonds convertible for shares and repurchased remaining shares from institutional investors and on the WSE and became a strategic investor.
2. Bank Austria Creditastalt built its stake gradually purchasing shares on WSE. In June 2000 it bought 10.3% of shares from the State Treasury.
3. Golden share: in case of disagreement in the general meeting of shareholders, the government has a right to sell its single golden share to the strategic investor at a price equivalent to total value of its ordinary shares at the day of privatisation. The option can be exercised also when the strategic investor does not fulfil the privatisation agreement. This right expires in December 2007.
4. Initially, the Treasury sold 80% of shares to strategic investor and 15% to employees. Later an investor purchased shares from employees and, after new issues of shares, the State Treasury stake dropped to 2.7%.
5. Golden share: in case of disagreement in the general meeting of shareholders, the government has a right to sell its share and the owner of the biggest stake has an obligation to buy it at 300% of total asset book value. This right expires in December 2005.
6. Golden share: the government has a veto right in the general meeting of shareholders concerning following decisions: changes in firm's statutes, initiation of liquidation or M&A procedures. When sold to private investors, government share loses special rights.

Source: Ministry of the Treasury and National Bank of Poland. Data on banks' ownership structure as of December 2000.

insider buyouts (the leasing arrangement cannot be activated in more demanding cases), while companies necessitating large capital and/or technology inputs are reserved to outside investors. Direct privatisations above a given size[42] need to be approved by the Council of Ministers in order to avoid controversies about discretionary sales decisions.

These two techniques accounted for the bulk of Polish privatisations until 2000. As expected, direct privatisation dominated the total number of entities sold, and capital privatisations the total value of operations.[43] Other privatisation channels included the transfer of shares in a group of mid-sized companies to the National Investment Funds (NIFs) – which are owned by the public through voucher distributions – as well as direct leasing and management contract transactions. The programme also led to the liquidation of a number of non-commercially viable concerns (776 liquidations cumulatively by end-1999).

Privatisation is generally considered as having been successful in establishing appropriate conditions for the future viability of companies. Following *capital privatisation*, strategic investors have injected substantial equity capital and know-how into their firms, as illustrated by large productivity gains and product innovation in banking. Investors also stuck to their "investment and social package" commitments, and efficiency gains have been observed in sectors such as car manufacturing, furniture production and air transportation.[44] Similar efficiency gains are also expected to stem from the large privatisation operation in 2000 in the telecommunications sector.[45] As to the smaller direct privatisations, available assessments point to similar efficiency gains and remarkable company survival rates after privatisation.[46]

Notwithstanding these broadly positive outcomes of past privatisations, there have recently been heated debates concerning privatised companies' operations. First, the validity of "social" and "investment" packages of strategic owners being time bound, employment adjustments may come to the fore upon their expiration (usually after three years). This is a normal outcome of market processes.[47] On the other hand, adjustment shocks to the local operations of certain multinational companies, which are due to a decline in parent companies' fortunes and strategies, rather than to local deficiencies, are provoking greater public discomfort. Also, in certain cases, mainstream corporate governance issues in partly privatised companies (in most capital privatisations the Treasury remains a large shareholder) have become the object of disagreements between strategic minority owners, the Treasury which traditionally played the role of majority but passive owner, and in certain instances the trade unions. These controversies point to the need for clearer rules of the game in conflictual situations (Box 8).

The authorities have established three tasks for the privatisation programme in 2001 and beyond. First, they will continue privatising the competitive sectors including banking,[48] steel, power-generation, heavy chemicals, food and

Box 8. Recent corporate governance disputes

Poland avoided most of the corporate governance troubles that typically arose from the dilution of share ownership in the absence of mature market institutions following "voucher" privatisation. Still, it has faced some corporate governance difficulties more recently, as key stakeholders entered into conflict with each other on the strategic direction of individual companies. Such tensions are not uncommon in competitive markets for corporate control, but in Poland they have taken rather sensitive forms. The smooth pursuit of privatisation, the business sector's access to international funds and the international attractiveness of the Warsaw Stock Exchange call for a better enforcement of clearer corporate governance principles.

– *Private versus public investors*. In partly privatised large-size corporations where a strategic investor holds a minority stake, and the treasury remains the majority but passive owner, any disagreement over strategic matters risks a deadlock. In 2000 this happened in the national insurance giant PZU, where parties disagreed on key management appointments, business policies and investment decisions. This led to a threat of loss of management momentum and consequently put the completion of PZU privatisation as well as its expected revenues (*ca.* Zl 5 billion in 2001) in question. Warsaw Stock Exchange also risks losing a much-expected issue. In the initial privatisation agreement of PZU, the bloc investors had agreed to pay a higher price (statedly embodying control premia over the company) to purchase a 30 per cent stake, in exchange for "more than proportional" board representation: a nine-person board was expected to comprise four investor and four treasury representatives, under the chairmanship of a "respected independent industry expert". However, this arrangement proved unworkable in the face of open conflict on key policy matters.[1] Public opinion and markets were unclear as to whose policy vision was shaping the company's actions. The case is before the court, outcomes possibly ranging from the annulment of the sale agreement to the payment of compensations to investors.[2]

– *Majority versus minority investors*. In companies where a bloc sale to majority owners is followed by initial public offerings to minority investors, there is a risk of conflict of interest between the two parties. In mature stock markets, this is handled by minority protection measures. In Poland, minority investors have expressed recurrent concerns that majority owners give priority to their mother company's interests over the shareholders'. A case in 2000 was the large Stomil tyre corporation, where the 60 per cent controlling owner was accused of transacting at excessively high prices with its home firm. Another case was the food company Agros, where the criticism was that the majority owner had self-appropriated the trademark and distribution rights of the company in international markets. In both instances, majority owners vehemently denied these allegations as resulting from misinformation. Discords hint at a need to improve the transparency of "related party transactions" in companies with heterogeneous ownership. In order to encourage the take-over of companies by their controlling investors in transparent and fair terms for minority shareholders, the 1997 Law on the Public Trading of Securities has obliged entities which jointly possess over 50 per cent of the total number of votes during the general meeting of shareholders to announce and conduct the purchase call of the remaining shares of the company.

Box 8. Recent corporate governance disputes (*cont.*)

– *Investors versus management*: The traditional corporate governance problem between entrenched professional managements and arm's-length institutional and individual owners, has been seen in Poland only in exceptional circumstances. Since most listed companies are dominated by a controlling owner, and a limited number of institutions operate on the Warsaw Stock Exchange, the classical "Berle and Means problem"[3] scarcely occurs. Yet recent market developments gave rise to such first cases, as illustrated by the corporate governance controversies in Elektrim. A conglomerate active in telecommunication, cable and energy businesses, Elektrim was owned in 2000 by many investors, among which the five biggest each controlled 5 per cent of total equity. The company's management team, whose ambitious strategy stretched Elektrim's balance sheet and financing capabilities, found themselves in tension with profit and value-creation oriented owners. The capital increase and stock option plan proposed by the management was rejected in a shareholders' meeting in June 2000, as – according to shareholders – the management failed to specify exact investment opportunities on which collected funds would be spent. A deadlock in company affairs ensued just when Elektrim was becoming a leader in Eastern Europe's information industries (its mobile communications arm PTC is the largest Polish mobile phone operator). In bitter stock market episodes certain shareholders have been accused of provoking negative market sentiments to facilitate future acquisitions. The case illustrates the need for fuller transparency of company projects, but also of the stock market operations of various stakeholders.[4]

1. The conflict arose in 2000 between the new Treasury Minister and bloc investors over a plain set of strategic and personnel matters, including the controversial development of PZU into a "bank-insurance" company and the handling of its 10 per cent share in BIG Bank Gdanski – which was itself a member of the 30 per cent investment consortium. PZU being recognised as one of the most "politically sensitive" companies in Poland because of its dominant role in the insurance market, strong cash base, widespread regional networks and strong media influence (it has a Zl 100 million communications budget) generates many benefits associated to controlling influence over it.
2. One lesson is that *implicit* understandings on corporate governance responsibilities during privatisation must be avoided, contingencies concerning the evolution of the respective preferences of the main parties must be provided for, and, more fundamentally, the ownership stakes and governance rights should be formally aligned throughout the process.
3. Termed after its first exposition by A. Berle and G. Means, Modern Corporation and Private Property, 1933.
4. Elektrim case may be revealing that in a stock market with an intermediate degree of development such as Poland's, companies facing above-normal opportunities and risks may benefit from the presence of strong owners giving unambiguous directions and signals to both the management and stock markets. Ownership structures of companies should be adapted to their strategic setting, while the legitimate interests of minority owners must be protected.

liquor, and sanatoria. Blocs of shares in TPSA (telecoms), PZU (insurance) and LOT (airlines) will also be sold. Total revenues of Zl 18 billion are anticipated in 2001, compared to actual revenues of Zl 27 billion in 2000. Second, they will pursue the restructuring in the difficult sectors of coal mining, steel and defence industry as a preliminary step to privatisation. These operations will need to find a balance between avoiding political deadlocks and keeping the budgetary cost of employment adjustments under control. The yearly cost of coal and steel restructurings is projected at Zl 1.6 billion in the 2001 budget (restructuring cost overruns were customary in earlier years). Finally, they will go forward with privatisation in partly monopolistic network industries such as electricity, telecommunications and railways, under competition policy rules reflecting those prevailing in the European Union.[49] These imply restructuring vertical links between monopolistic and competitive segments, and privatising them separately. Independent sector regulators, such as the energy and newly established telecommunications regulators, will be necessary to foster competition along with privatisation.

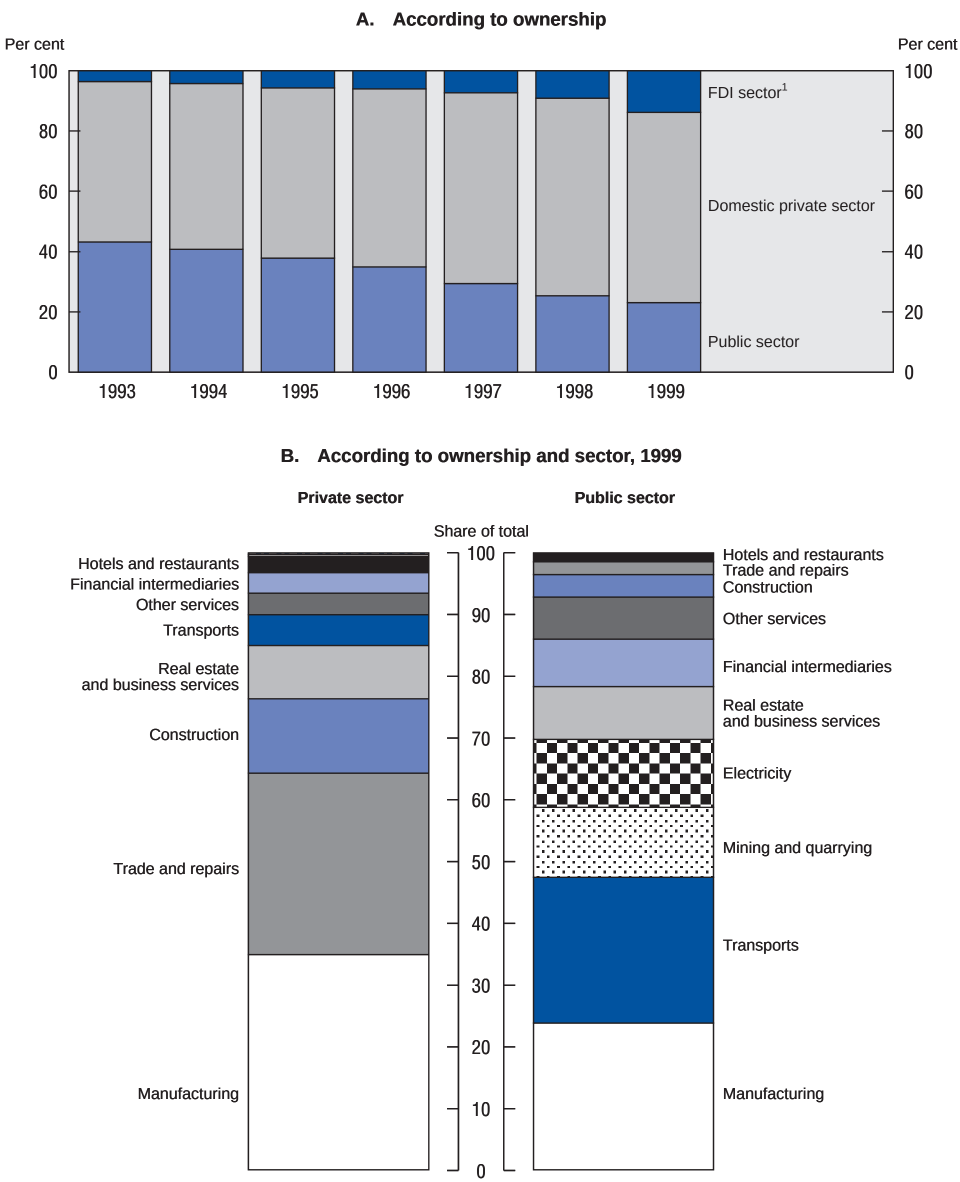
Restructuring of state enterprises

State-owned enterprises congregate in traditional sectors such as coal mining, steel and defence manufacturing, as well as in network utilities such as railways, electricity and water distribution and employ altogether around a quarter of business sector workforce (Figure 29). Traditional sectors face complex restructuring challenges due to pervasive excess employment which, in network utilities, are compounded by the pressures of new competition. In manufacturing areas traditionally more exposed to competition, such as heavy chemicals, pharmaceuticals, spirits and meat processing, privatisation goes forward more smoothly, but has not yet been completed.

State enterprises in the "core" and difficult sectors have suffered large deficits in the past three years, the two biggest loss makers being coal mines and railways. The operating deficit of coal mining amounted to Zl 3.35 billion (0.5 per cent of GDP) in 1999, while the deficit for the railways was Zl 2.3 billion (0.4 per cent of GDP). Tax and social security arrears from state enterprises constitute another huge liability. Still, the prices and tariffs charged by state monopolies in several areas, including energy and telecommunications, are high by international standards (Figures 30, 31 and 32). This "twin burden" of the state enterprise sector, in both direct budgetary deficits and higher prices paid by household and industrial customers, is an outcome of their relatively outdated technologies, and lower production and organisational efficiency. All these problems are aggravated by inadequate or non-existent competition in the relevant markets.

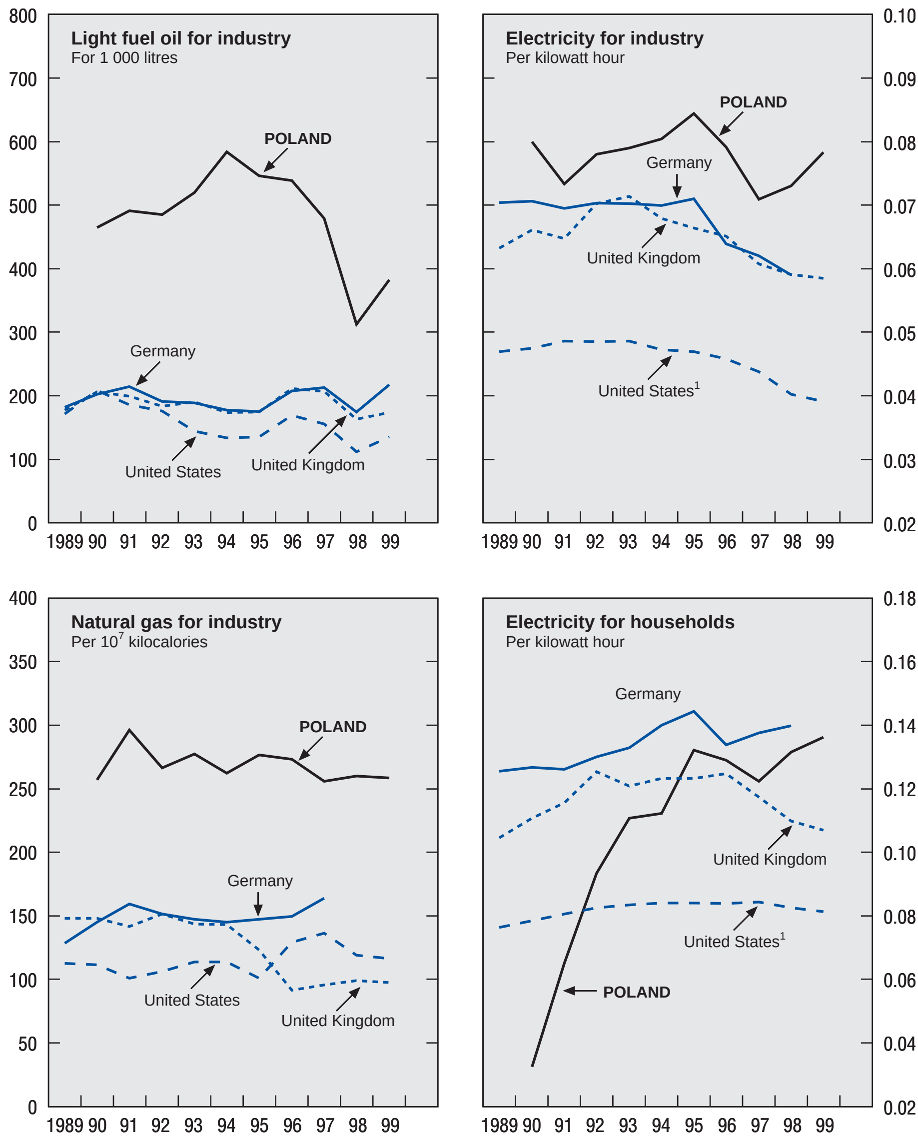
The authorities have launched broad-based restructuring strategies in coal, steel and railways, in order to restore adequate standards of financial and commercial viability. In the authorities' view, these restructuring plans are

Figure 29. **Distribution of business sector employment**



1. Estimates in 1999.
Source: Central Statistical Office.

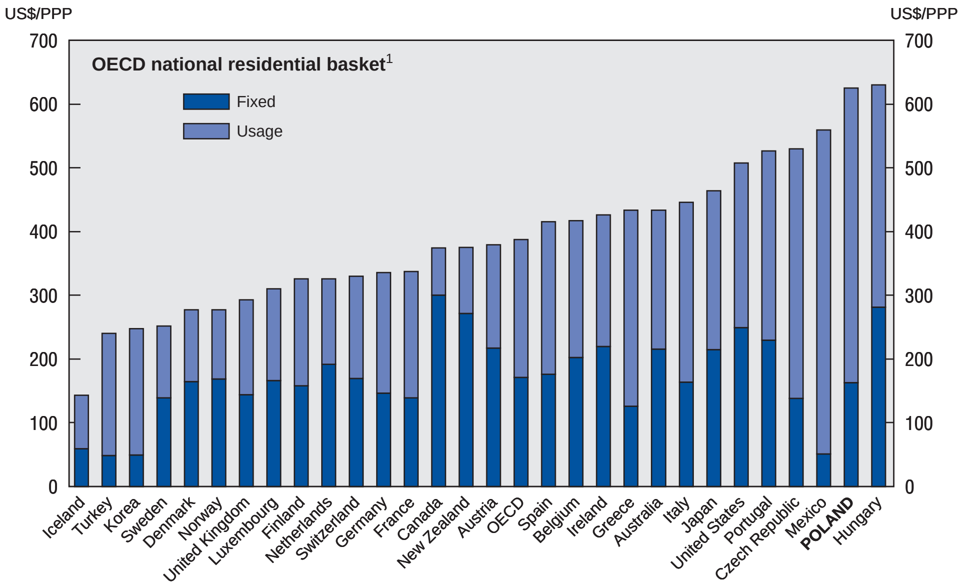
Figure 30. **Energy prices: international comparison**
In US$ using current PPP

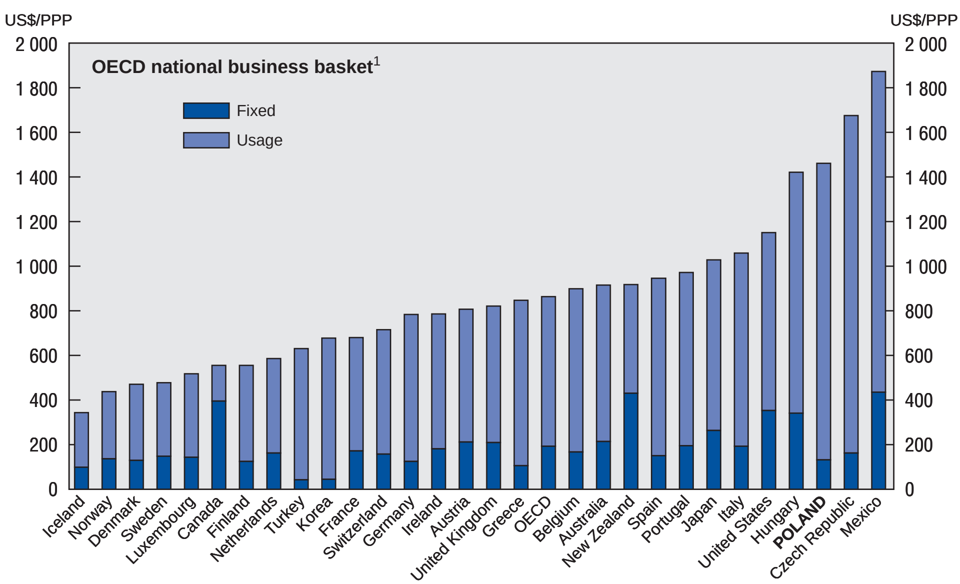


1. Excluding taxes for United States (mostly general sales taxes levied by the state, their rates are between 2-6%, but their national weighted average is unknown).

Source: IAE, *Energy Prices and Taxes.*

Figure 31. **Telecommunication tariffs**



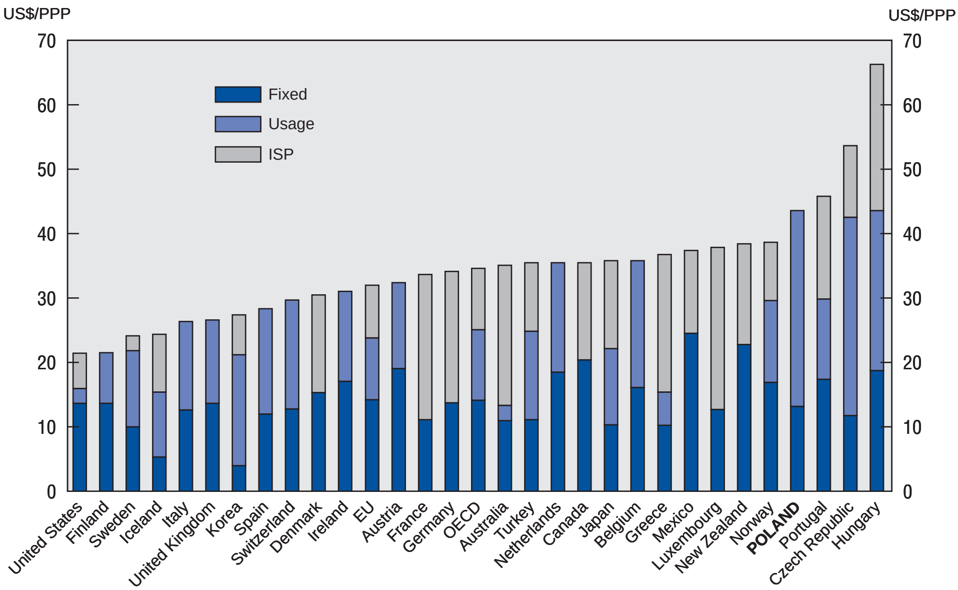


1. VAT included, calls to mobiles excluded, US$/PPP, May 2000.

Source: OECD.

Figure 32. **Internet access tariffs**

For 20 hours at off-peak times using discounted PSTN rate (include VAT) in 2000[1]



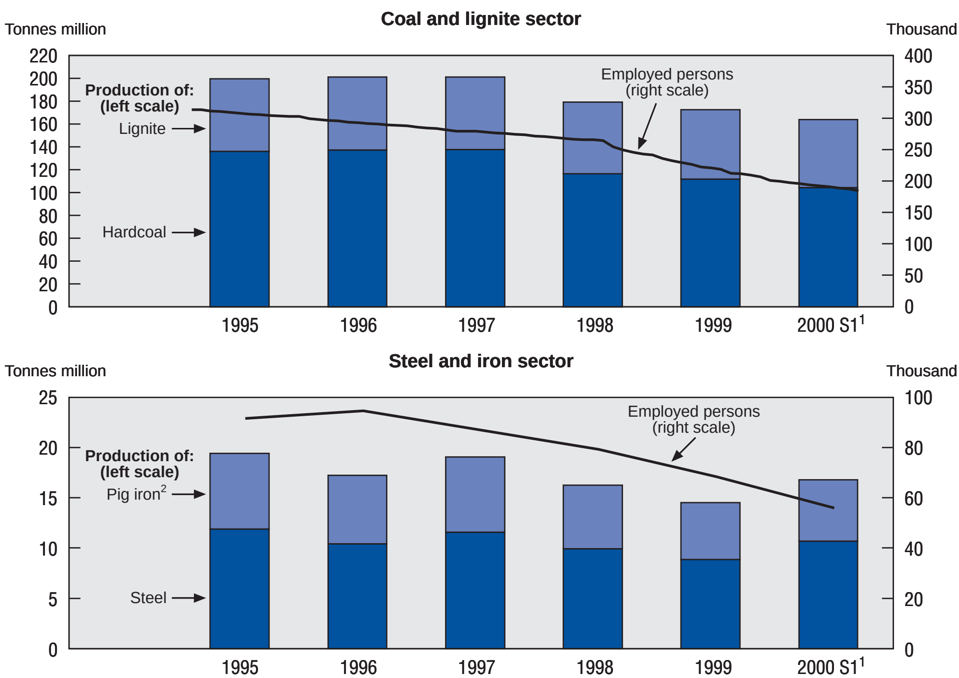
1. September 2000. PSTN (Public Service Telecommunication Network) fixed charges include monthly rental fee and additional monthly charges related to discount plans, if applicable. In France and Luxembourg, ISP (Internet Service Provider) and PSTN usage charges are bundled and included under ISP charge.

Source: OECD.

necessary steps before envisaging the privatisation of these companies. These programmes have already led to significant employment reduction in the coal mining and steel sectors (Figure 33).

Excess capacity and employment hoarding have long characterised the geographically concentrated *coal mining* sector (most mining is done in Silesia). A *Coal Sector Reform Programme* 1998-2002 was introduced for orderly mine closures, employment downsizing and the re-launch of profitable enterprises. Early retirement and severance packages,[50] retraining for younger workers, subsidies to companies hiring former miners, subsidies for physical mine closures,[51] support to hampered local governments and write-offs of tax and social security arrears of firms have been offered. The World Bank helped design the programme and supported it with a loan of $1 billion, the programme's total costs for the four years being estimated at Zl 7.2 billion (1998 prices).

Figure 33. **Production and employment of selected sectors**



1. At annual level.
2. Estimate for 1999 and 2000 S1.

Source: Central Statistical Office.

In spite of a difficult start because of decreasing world coal prices in 1999 and rising company deficits, the programme managed to trigger a sharp decrease in capacity and employment. The number of employee departures was above plan in 1999 (60 000 against 32 000 planned) and reached a cumulative 83 000 in 2000, as a result of the generosity of benefits. The following year brought better fortunes to coal companies. Their costs were reduced by the ongoing restructurings (–9.2 per cent per tonne produced in 1999 and –4.5 per cent in 2000) and their earnings improved. This was helped by higher domestic prices, even though international prices softened. This divergent price behaviour lends credence to a report appearing in the business press stating that the authorities have been setting recommended coal prices and, especially after October 1999, urging coal mines to adopt them (see Cieszewska, 2000). As a result, they recorded positive margins for the first time (estimated at Zl 2 per tonne). Employment will nevertheless be reduced by a further 28 000 jobs in 2000, 13 000 in 2001 and 7 000 in 2002.

The business reorganisation of the sector is proceeding, with the establishment of two liquidation structures responsible for closing 15 mines. Competition in the coal sector became an issue in this new setting, requiring a closer surveillance by the antitrust office OCCP (Office for Competition and Consumer Protection).

The *iron and steel sector*, partly located near to the coal regions, has been downscaling throughout the decade (147 000 workers in 1990 cut to 91 000 in 1998, and 12 smooth privatisations of mid-size steel companies by 1999). But a hard core of problems remained in the two biggest production sites, Huta Katowice and Huta Sendzimir (Krakow), which together generate more than 50 per cent of industry output. A *Steel restructuring programme* 1999-2003 has been introduced to deal with this hard core, aiming at an employment level of 38 000 in steel firms and 15-20 000 in related companies (a net reduction of 25 000).

The cost of the steel restructuring programme has been estimated by the IMF (IMF, 2000*a*) at Zl 12 billion for 1999-2003, and partial EU co-financing was made available. The benefits offered to departing workers are generous,[52] but the bulk of the costs will be due to rehabilitation investments considered necessary before privatisations (Zl 8.4 billion earmarked for new investments, Zl 2.5 billion for the recapitalisation of companies and less than Zl 800 million for severance packages). These estimates do not necessarily reflect actual commitments by the authorities. So far, only Zl 200 million has been spent during 1999-2000 on this programme by the state budget but, in addition, "hidden costs" may have been incurred, for instance in the form of arrears on taxes and social security contributions. In spite of additional investments and unlike the coal programme, steel restructuring will necessitate active participation by new strategic investors. The government is seeking such partners.

Extensive *defence industries* (more than 40 firms) were inherited from the pre-transition era. They are active in a wide range of technological and product areas, including an aircraft manufacturer and electronic systems producers, with significant engineering know-how and a skilled labour force, but are not competitive in the technologically more sophisticated and NATO-standards driven domestic and international markets. Taking into account the international arms export conventions signed by Poland, most of these industries face serious adjustment challenges.[53] They have accumulated huge tax and social security arrears, estimated at Zl 500 million in 2000. A 1999 law on the *Restructuring of industrial defence potential and the technical modernisation of the armed forces* prescribes the re-investment of privatisation proceeds in the defence sector and in the modernisation of the army, as well as a freeze on firms' arrears. However, defence privatisations planned to generate Zl 95 million in 2000 did not materialise. The authorities now aim at saving the firms from bankruptcy, by privatising 20 of them, and keeping eight under government ownership for strategic reasons. Other companies are preparing restructuring plans that they will negotiate with the government.

Regulatory reform

Network utilities provide services containing on the one hand monopolistic infrastructures and on the other hand competitive value-adding services. They operate across the national territory under public service obligations and are difficult to restructure and privatise. They suffer from technological lags, outdated business organisations, considerable excess employment, and price structures involving large cross-subsidies between consumer groups and regions. Their sales to profit-maximising investors therefore imply special problems. Still, the government is determined to pursue privatisation and regulatory reform simultaneously, according to EU recommendations and with the help of active competition policies. This effort has advanced to different degrees in the three sectors of electricity, railways and telecommunications.[54]

Power generation

The *Act on Energy Law* adopted in 1997 stated three objectives: *i*) to develop competition in energy production in order to improve efficiency and generate lower prices for customers; *ii*) to permit energy entities to finance their investments; and *iii*) to assure the security of energy supplies. Large customers purchasing more than 40 GWh annually and representing 40 per cent of total market demand are permitted to select their supplier (this right will be extended to all customers by 2005) and access the transmission grid directly, while prices remain under regulatory supervision. The privatisation of the sector is pursued by vertically separating the power plants (16 companies were created), combined power-heating plants (18 combined companies were created, including one in Warsaw), regional distribution companies (33 firms) and finally the transmission grid (a natural monopoly). Privatisations started in 1999 and, by end-2000, three plants had already been sold to strategic owners (for respectively 20, 25 and 35 per cent of their capital), 55 per cent of the combined heat-power plant in Warsaw had been taken over by Swedish Vattenfall, and eight distribution companies had been put on market. The transmission grid itself will be offered for privatisation in 2002. An independent Energy Regulatory Authority (ERA) was created to grant energy licenses, approve prices and enforce third-party access to the transmission grid, and an Electricity Exchange was set up to clear *next-day-market* transactions.

The new institutional setting of the electricity sector is a remarkable achievement, except for one overwhelming rigidity which impedes the emergence of a truly competitive market: long-term procurement contracts between power plants and large customers at pre-established prices (established in the early 1990s for 20 years as collateral for international loans, and governing 70 per cent of the market) make actual competition impracticable. At end-2000, only 1 per cent of the electricity trade took place on the Electricity Exchange. The government decided recently to implement a compensation payment mechanism, to alleviate the inherited price burden of electricity purchasers. Another option worth considering, which might assist in creating competition in the generating sector, would be to reduce the term of the existing contracts. The activation of market transactions would permit ERA to freee energy companies from the obligation to submit tariffs for approval. The May 2000 *Timetable of Power Sector Privatisation and Implementation of Power Market* issued by the government also authorised power plant mergers in the course of privatisations. Consolidations may indeed be efficiency enhancing, but close scrutiny by the ERA and the OCCP will be required to ensure mergers produce net benefits rather than net costs for consumers.

Railways

The privatisation of the railways faces a double challenge: regulatory reform of the sector and restructuring of the railway monopoly PKP. Underinvested and overmanned, railways generate huge deficits (Zl 2.3 billion in 1999, 0.4 per cent of GDP), with the exception of a few lines (*i.e.* so-called Intercity lines carrying 2.5 per cent of passenger traffic and generating 23.5 per cent of revenues, such as the Warsaw-Krakow line). The quality and speed of services is far from satisfactory. From a total of 21 000 km of tracks, as much as 6000 km (26 per cent) is considered non-viable by PKP itself and 5000 km are planned for scrapping by 2003, although this judgement is challenged by parties advocating alternative technologies (railbuses) and reorganisation (reduction of local station staff).[55] Railways are in an intractable financial situation, their debts reaching 1 per cent of GDP[56] and 25 per cent of their workforce of 167 000 being surplus to needs. This sombre situation contrasts with the potential that rail transportation should have on the flat Polish territory and its possible environmental benefits. The authorities recognise that the national transport system deserves a stronger railways component and should be stimulated with structural reform.

Three phases of reform proceeded slowly, amid controversies. First, a 1997 *Law on Rail Transport* made clear the objective of terminating the PKP monopoly, a “state within a state” with its own schools, hospitals, housing, press, etc. The law made available operating licences for new entrants, including at the local level, but only large industrial firms responded by starting their own freight operations. Second, in September 1999, a *Government Programme for Restructuring* PKP explicitly acknowledged that excess employment had reached 50 000 and recommended “multiple company reorganisations”. In parallel a *Draft Law on the Commercialisation, Restructuring and Privatisation of the Polish Rail Operator* was submitted to the Parliament, as the decisive third step. Voted in September 2000, after a year of difficult negotiations, this law goes a long way in implementing the EU principles of “vertically separating” three railway activities, into track infrastructures, passenger and freight services (the precise number of companies will be determined according to the details of the privatisation programme now under preparation). The law guarantees an "open and equal access for new entrants, including to infrastructure and government grants". It announces the restructuring of PKP's "finances, property, employment and business lines", according to plans prepared within the company itself and the Ministry of Transport. Finally, a distinction is introduced between "market only" competitive railway services and "public service obligations" supported by government grants.[57] It is to be hoped that the OCCP will provide its views on any proposed restructurings.

To help implement this vast reorganisation PKP will be authorised to issue "railway restructuring bonds" to a total value of Zl 3.9 billion in 2001/2002, together with Zl 2.3 billion of "bridge financing" under government guarantee. The *Law on Railway Commercialisation, Restructuring and Privatisation* is an important step forward, but its success will depend on many implementation details. The large additional funding (nearly 1 per cent of GDP) should be used prudently, and the government should swiftly issue the application decrees and regulations needed to trigger, in this order, effective vertical separation, restructuring, privatisation and new entries. The efficacy of the new railway regulator prescribed by the law, the Chief Rail Inspector, and continued oversight by the OCCP, will be critical in achieving the objectives of openness, competition and additional private investments.

Building on capital market reforms

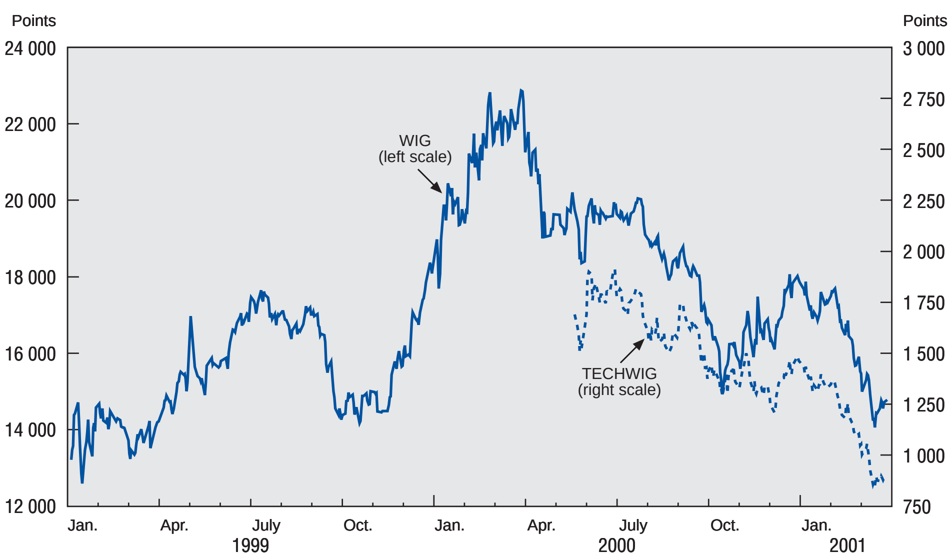
Once privatisation, industrial restructuring and competition policies are on track, an essential structural condition for corporate sector growth is the development of a supportive financial system. Poland has made a big leap forward in this area, but financial services are not equally available to all potential users (across the national territory and categories of enterprises; see Annex III – The Emergence of a Strong Banking Sector), and the stock markets do not yet yield benefits in terms of shareholder pressure for improved corporate governance. Further reforms are necessary to strengthen the contribution of the stock exchange to enterprise development, and to improve the financing of start-ups and SMEs.

Banking and stock market reforms leverage corporate financing

The growth of banking services of international quality is a factor of strength for the financial system. After successful balance sheet restructurings effected in the mid-1990s (and discussed in the previous *Survey*), the financial soundness of banks has been ensured by strict banking supervision legislation implemented in 1998.[58] The privatisation of most commercial banks has brought them the expertise and know-how of international institutions. Weaknesses remain, however, including doubtful housing loans in PKO BP bank's portfolio, uncertain agricultural loans in BGZ and the prevalence of less efficient co-operative banks in rural regions. Still, the quality of mainstream banking is of international standards. Big banks are active in the securitisation of large enterprises' borrowings, for whom they act as underwriters, security agents and dealers on domestic and international markets. Competition between banks keeps their intermediation margins narrowing. The outcome is a diversification and growth of corporate credits in the recent period, realised despite high real interest rates.[59]

Stock markets also developed briskly, under the impact of privatisations, distribution of shares to employees and pension fund reform. The near complete liberalisation of capital movements permitted the establishment of international institutions. The *Securities law* is regularly adapted to market circumstances (last revision in 1998) and the market supervisor (KPWiG) is powerful and vigilant. A project to merge two independent over-the-counter markets was launched in 2000. Total Warsaw Stock Exchange market capitalisation has reached 20 per cent of GDP, with a balanced participation by institutional and individual investors (roughly 50 per cent each). Furthermore, half of institutionals are foreign and half domestic – the latter rapidly building pre-eminence with the start of the fully-funded pension tier. A technology index features the shares of the privatised energy and telecommunications companies and IT start-ups (Figure 34). All these efforts are reflected in the remarkable growth of transactions on the stock market.

Figure 34. **Stock market indices**



Source: Bloomberg and OECD.

Activating the Warsaw Stock Exchange to improve corporate governance

Despite the development of the stock market, it does not yet play a real role in the funding of the corporate sector. Most of the listed stocks originate from Treasury IPOs in consecutive privatisations, and share redemptions by entitled employees of privatised companies. Genuine equity issues are sparse. For most companies, only a minority of shares (less than 30 per cent on average) are traded, controlling stakes remaining with their strategic and stable investors, including the Treasury. This ownership pattern is behind the limited number of mergers and acquisitions taking place on the market (respectively two and three in 1999 and 2000). IPOs in secondary markets are even rarer (three in 1998, one in 1999). In such circumstances, certain aspects of corporate governance remain unsatisfactory as minority shareholder interests lack representation commensurate with their ownership, in particular in major strategic decisions. Still, the quality of financial reporting is robust, in accordance with international standards.

Efforts to strengthen the role of the stock exchange (and the quality of corporate governance) include a new commercial code due for application in 2001. It bans the utilisation of stocks with multiple voting rights (with the exception of the Treasury, which is compensated for the consecutive loss of its "golden share" rights, with ordinary shares bearing multiple – up to five times – voting rights). The powers of the supervisory boards (the two-tier board system is preserved) and the prerogatives of the annual shareholder meetings are increased. The take-over law is also strengthened: three distinct stages of a take-over process are separately defined, investors overcoming the 50 per cent threshold are mandated to make an additional bid for 25 per cent of the remaining shares, and minority holders guaranteed a tender price not lower than the preceding year's highest trading price.

These legal efforts must be completed by market activism for improved corporate governance. Foreign institutional investors are in practice the only active parties in corporate governance matters, domestic funds (the regulated pension funds of the second pillar) which have overtaken them in total size of investments, not showing any serious activism. Pension funds are authorised to own 10 per cent of individual companies but are banned from "participating in their management" according to existing legislation. This should not be an obstacle to their advocating better corporate governance standards,[60] however. Recent proposals by the regulator (UNFE) to limit pension funds' investments in individual firms to 5 per cent of total equity and 1 per cent of voting power do not seem to go in the right direction. The corporate governance passivity of domestic funds also risks putting foreign institutional investors in positions of asymmetric and even inside information, becoming a weakness of the Warsaw Stock Exchange.

Pursuing reforms to facilitate more financing of start-ups and SMEs

Concerns about SMEs' financial disadvantages are as common in Poland as in other countries, but should not overshadow the spectacular progress achieved following financial liberalisation. Equity funding for SMEs has grown in the form of professionally managed *venture capital* investments. Led by international funds, these are estimated at US$2 billion in 2000,[61] and employment in invested firms could have reached 100 000[62] – a limited but nonetheless inspiring figure. The *leasing* industry also showed exceptional dynamism by providing hybrid debt/equity financing principally to SMEs; more than 100 leasing firms funding a fixed asset base growing at an annual rate of 20-30 per cent.[63] There is also similar progress in SME *banking*, competing institutions extending services toward the smaller firms and introducing SME-oriented and less costly loan procedures.[64] According to a recent survey, 30-40 per cent of SMEs declare that they regularly have recourse to bank credits in zloty, 5-8 per cent in foreign currencies, only 10-15 per cent reporting that their banking needs are not satisfied.[65] The cost of SME loans is not out of proportion anymore with large firms' borrowing costs,[66] notwithstanding the recent increase in real interest rates which reflects a macroeconomic imbalance rather than a microeconomic deficiency.

This encouraging picture contains some lacunas that call for reforms. The legal/judicial basis of SME loans and investments suffers shortcomings in information, collateral securing and contract enforcement. The 2000 A*ct on* N*ational* R*egistry of* E*ntrepreneurs* created a unified and computerised national registry of corporations/entrepreneurs, which will be applicable from 2001/2002, and should be available to investors, creditors and courts alike, decreasing further transaction costs and risk premia for SME loans.[67] The widening gap between the quality and cost of banking services in large cities where banking is fiercely competitive, and smaller towns and rural areas where it is dominated by co-operative banks, is also a source of concern.[68] The pursuit of banking reforms, which should address the reorganisation needs of the co-operative and regional banking system, is the appropriate structural policy response to this problem.[69]

SMEs probably face a disproportionate share of the additional costs of high quality financial regulations, dedicated primarily to the soundness and stability of the banking system and capital markets. Rules governing bank loans, as well as debt and equity issues, are rigorous and imply high fixed and variable costs.[70] As investors gain more experience with company risks, authorities appear prepared to introduce additional margins of flexibility in regulations. The re-introduction in 2000 of a second tier of the Warsaw Stock Exchange (WSE),[71] the ongoing revision of investment company rules legalising closed-end funds investing in start-ups, the creation by the new commercial code of "professional" and "limited/joint stock" partnerships opening small firms to third-party investments, and the streamlining envisaged for certain types of SME loan documents in banking supervision are all timely initiatives to facilitate SME financing. This policy stance also benefits large firms, which are allowed to issue securities in international markets such as New York, London and Vienna exchanges and the US NASDAQ.[72]

The role of government financing in enterprise development merits careful consideration. To date, extensive public subsidies have leveraged the financing of many enterprises, in rather non-transparent and usually competition-distorting ways (Box 9). The authorities have expressed a resolve to curb these practices, which conflict with the equal treatment principles of the 1999 Business Law, and the EU State Aid guidelines. At the same time, there are widespread calls for more broadly available SME supports and loan guarantees, which must be treated with caution.[73] Any additional guarantees should address specific market failures, not distort competition by removing private financings, and minimise moral hazard and adverse selection risks.[74]

Is there a New Economy in Poland?

There is a nascent but vibrant "new economy" in Poland. Supply of and demand for information and communication technology (ICT) goods and services are growing rapidly, suggesting that Poland has a significant human capital and skill base in this area. Still, ICT activities remain peripheral in the economy and society, and are constrained by the shortcomings of the telecommunications sector, where earlier reforms have only had a limited impact on the structure of the market and the price and quality of services. Government resolve to improve the innovative potential of the economy should help to advance telecommunication reforms and promote applied R&D activities more generally.

Many information technology start-ups

The total number of manufacturing, trade and service firms active in the ICT sector is estimated at 5 500. But the majority are yet small and trade-oriented concerns, and the sector does not produce more than 0.5 per cent of GDP (Polish News Bulletin Special Report, 2000). Still, a number of domestic ICT firms are among the fastest growing in Central Europe,[75] and global ICT companies have dynamic local affiliates. Domestic firms specialise in SME markets, designing cost-effective and customer-driven hardware, software and communication products for small companies. Several desktop computer manufacturers remain competitive in a fully liberalised trade environment, and provided more than 65 per cent of the personal computer units purchased by local customers in 1999.

ICT industry is supported by capital markets. Venture capital firms show special interest for the sector's potential and the largest investor launched a $300 million special fund in 2000 planning to invest slices of $1-15 million in a range of ICT start-ups. WSE's efforts to consolidate the second-tier market are mainly motivated by the growth potential offered by ICT firms. A technology index (TechWIG) lists 15 large "TMT" (technology, media and telecommunications) companies from the main market, and five of these firms provided 46 per cent of total stock market turnover in 1999.[76] TechWIG is one of the most volatile indexes

Box 9. Curbing state subsidies

Throughout the transition period, state aids have continued to finance business firms, often in non-transparent and distortive ways. Horizontally available tax concessions, to attract foreign direct investments but also available to domestic firms, gave rise to costly tax expenditures. Recently, commitments *vis-à-vis* the EU, together with budgetary pressures, incited the government to streamline these aids by enacting a *Law on the Admissibility and Supervising of State Aid for Entrepreneurs* (June 2000). Pressures linger, however, for the continuation of state aids in various forms, and aid rules need to demonstrate that they can keep potential loopholes under control.

An official inventory of state aids has surveyed the main channels of aid in the second half of the 1990s.[1] Twenty-three different schemes have been reviewed, according to a measurement methodology adapted from EU aid monitoring procedures. A total of 1-2 per cent of GDP has been found to be distributed yearly as state aid to industry, a ratio not out of line with EU practices.[2] The approach does not take account of major forms of support such as the "below-market" profitability of equity in state-owned firms and implicit government responsibility for their borrowing,[3] but provides systematic information on the more direct forms of support. It identifies case-by-case *social contribution exemptions and deferments* (32 per cent of the total aid) and more horizontal *investment tax concessions* (43 per cent of the total) as the two principal channels of aids to industry.

Negotiated social contribution concessions take the form of either temporary deferment or total amnesty of firms' liabilities to social security (ZUS), environment and disability funds. They are usually granted through bilateral negotiations which are hardly transparent. Most concessions have been granted to coal mining and steel firms, and represent sizeable subsidies, as the reduction in contributions could be up to 45 per cent of their gross labour costs.[4] The total cost of this type of support has been estimated at Zl 2.15 billion in 1998.

The tax regime included a variety of investment tax concessions to the business sector. Two main forms have been *investment tax allowances*, granted in varying rates to different types of firms and activities (up to 35 per cent of their taxable profits on the first year of investments and up to 20 per cent on the second year); and *tax holidays* granted to investors in special economic zones (where no corporate income tax was to be paid on the first 10 years of operations and only 50 per cent of profits are taxable in the remaining life span of the zone).[5] *Ad hoc* and individually-negotiated tax holidays have also been granted to firms investing in areas with high structural unemployment. Although the budget cost of investment allowances reached around Zl 1.5 billion in 1998[6] they have benefited only 2 per cent of domestic and 20 per cent of foreign firms.

Box 9. **Curbing state subsidies** (*cont.*)

Both types of subsidies, together with more secondary schemes, such as Treasury guarantees to large-size investment projects (Zl 390 million loan guarantees have been granted to 4 large agriculture, food and energy projects in 1998), and soft industrial development credits (Zl 85 million of Industrial Development Agency loans in 1998) are coming under the disciplines of the new law on state aids and of the corporate tax reform. The tax reform, applicable from January 2001, removes investment tax incentives and replaces them with a streamlined and favourable depreciation regime,[7] while maintaining the concessions granted earlier to investors in special zones. The 2000 law on state aids bans "competition-distorting" aids but permits exceptions for "rescue", "sectoral restructuring", "SME growth", "regional development" and "employment and training" purposes. Regions (voivodships) with GDP per capita below 75 per cent of EU average (hence the entire Polish territory) are eligible for regional aids. The law requires the Council of Ministers to specify maximum aid amounts and aid content measurement methodologies. An important provision is the mandate given to the competition policy authority OCCP, required to monitor all state aid programmes, check their conformity to the principles of fair competition, issue opinions on draft aid schemes, publish an annual survey of state aids, and report its analyses directly to the Council of Ministers.

1. Ministry of Economy, *Report on the State Aid in Poland Granted to Entrepreneurs in 1998*, October 1999 and Office for Competition and Consumer Protection, *Inventory of State Aid in Poland Granted in 1998*, 2000.
2. This ratio was 1.2 per cent in the EU area in 1998.
3. The profitability of state-owned enterprises is very low in aggregate (their margin over sales has been negative in 1998: –2.3 per cent in industry and –0.8 per cent in manufacturing), while they employ a sizeable part of the total equity capital of the business sector. If measurements were available, capital cost subsidies to state firms could constitute the single biggest item of state aid to industry.
4. The 45 per cent figure includes payments to the National Labour Fund (2 per cent) and excludes environmental fees. Arrears on the second are included in the state aid inventory but those on the first are not. Total social security and tax arrears of the railway monopoly PKP do not seem to be included in the inventory.
5. The legal life of special zones was capped at 12 years originally, but has been extended to 20 years in December 2000.
6. This figure does not include Personal Income Tax allowances which benefited principally the recipients of the shares distributed freely to employees.
7. Sixty-three different depreciation regimes were applicable to different asset categories and business areas prior to the reform, allowing little room for accelerated depreciation and banning the depreciation of written-off assets. The new regime provides more unified accelerated depreciation rules and permits the depreciation of assets subject to technical or economic obsolescence.

in Central Europe, and follows NASDAQ fluctuations closely, but it is popular among investors and "TechWIG futures" began trading at the end of 2000. ICT companies do not issue much stock on the market but liaise actively with foreign strategic investors, by means of joint ventures that are growing in number.[77] It is important that this stimulus of capital markets is matched by the capacity of labour markets to support the growth of ICT firms. The annual number of new graduates in ICT disciplines has been estimated at around 1000 yearly, but this may be insufficient, particularly if the mobility of these specialists across national borders is taken into account.[78]

Local ICT markets are dynamic

The growth of new economy activities is nurtured by dynamic local demand for their goods and services. Foreign direct investment firms are important purchasers, but most of their ICT needs are met by imported ICT material of international quality (total ICT imports attained $4.1 billion in 1999). Budget constraints in the government sector limit public ICT investments, and the engine of local demand is the ICT investments of SMEs, self-employed and households. Polish SMEs have been identified as active information technology users in a comparative European business survey effected in 1998.[79] A recent poll confirmed that "modern" SMEs are actively involved in e-business in spite of high connection costs and low speed of transmissions.[80] An Internet-literate population is also growing: 4 million Poles described themselves as Internet users in 1999, and 5 million by mid-2000 (13 per cent of the population). More cautious sources evaluate the proportion of regular Internet users at 3-4 per cent of the population. E-commerce and e-banking activities among households remain rather marginal: 3 per cent of Internet users reportedly practice e-shopping, and 1 per cent e-banking. Legal and safety concerns are often mentioned as sources of wariness.

New policies to enhance innovativeness

Government policies concerning technological innovation and new economy activities are developing. Two particularly important initiatives are the adoption of a new telecommunications law in 2000, and the reorganisation of innovation-related policies in an integrated government strategy.

The new *Act on Telecommunications*, which came into force in January 2001, abolishes the exclusive rights enjoyed by the public telecommunications operator TPSA. It requires that all telecommunications companies, including TPSA, operate under competitive licences granted by the Office of the Telecommunication Regulator OTR – a new independent agency. The earlier law adopted in 1990 had non-negligible pro-competition elements, and permitted the entry of 45 local operators, four mobile operators and three domestic long-distance carriers in the market. However, because international communications remained a monopoly, and new entrants faced interconnection and pricing obstacles in accessing the monopolistic parts of the network, TPSA's dominance eroded only to a very limited degree. The impact of competition on technical innovations and tariffs was visible in some segments, notably mobile communications, but the most commonly used business, household and Internet services remained excessively costly by international standards. The new law, inspired by EU telecommunications directives, clarifies the interconnection rights and access pricing principles for new entrants and is expected to trigger more vibrant competition, much larger private investments, new service introductions and lower tariffs. It also abolishes the foreign ownership restrictions which had been in place. Nationwide fibre optic networks (three of which are already in operation by TPSA, the railways and the energy grid) are expected to become more widely accessible, and further develop. The new generation of UMTS services, where Poland aimed to be a leader, is on the agenda after the attribution of three licenses at the end of 2000. For these positive trends to unfold, the independence of the regulator and its effectiveness in handling a difficult stream of connection and pricing issues will be crucial, and will determine the practical outcomes of the new law.[81] Services available in different regions of Poland are likely to differ in range and cost, but the universal service needs will be catered to by a *Strategy for the Development of Rural Telephony*, 2000-2004 which will be updated in the light of the new law.

The government approved a programme in July 2000 on *Increasing the Innovativeness of the Polish Economy Until* 2006, which set out to reformulate its ongoing and new innovation-related policies in an integrated framework. The statement observed that Poland's scientific and technical potential is comparable to several EU and CEE countries, but is biased toward basic research and direct government funding. The new policy aims at better linking the science infrastructure and the enterprise sector (Box 10). Its stated objective is to "create mechanisms and structures conducive to innovative activities and to stimulate innovative attitudes". In particular, easier and more widespread access of SMEs to national research potential, and through it to European and international resources, is targeted. Another objective is to make Polish scientific potential better known by multinational corporations, with an aim to initiate co-operative projects. Sub-programmes based on regionally managed information, training and know-how transfer organisations, including technology centres and parks, are proposed. The Government calls for a new *Law on Research and Development*, which might play a similar role to the *Business Activity Law* of 1999, to specify the roles and responsibilities of public and private non-profit organisations and enterprises in the area of R&D. It would also spell out the public resources and incentives at their disposal. The role of an effective intellectual property regime, and of other legal provisions facilitating on-line interactions (*i.e.* privacy protection and electronic signatures) are featured. The integrated programme will itself use Internet communications, for wider transparency and accessibility across the national territory. It might be supported with EU pre-accession funds.

Box 10. Government policies for the SME sector

The dynamism of start-ups after transition was a response to early liberalisation and privatisation. Many enterprises survived and became fully-fledged small or medium-size firms. They need steadier framework conditions for their operations, in the areas of research and development infrastructure, financing sources, employment relations and international outreach. Government policies at the end of the 1990s aimed at developing these framework conditions. Some of the policy measures would appear to be potentially redundant with private financial services which prove increasingly effective in funding and fostering SME growth.

– The *Business Activity Law* of November 1999 – nicknamed "Entrepreneur's Constitution" – confirmed the full freedom of entrepreneurs to initiate businesses in all manufacturing, construction and service activities. They need to seek administrative authorisation only in a small number of areas where consumer interests and workers' safety necessitate formal certification of entrepreneurs' skills.[1] The law provides for an official categorisation of small (below 50 employees) and medium-size firms (employing 50-250 workers, with revenue and asset thresholds) and foresees their recording in a national registry. Legal equality of enterprises of all sizes, ownership structures and nationality[2] is a basic principle, guaranteeing fair competition between government-owned firms, FDI firms and small and medium-size enterprises.
– The *Tax Reform of* 1999 is reducing corporate rates gradually from 34 per cent in 1999 to 22 in 2004, and simplifies the taxation of small firms.[3] It gives eligible SMEs two options: *i*) a "tax card" system (according to their location, activity and employment level, the smallest firms can pay a lump-sum tax with no consideration as to their actual revenues and costs), or *ii*) a "flat rate" system (where firms register only their revenues, not their costs, and pay a flat tax of 8.5, 5.5 or 3.0 per cent according to whether they are in the service, manufacturing or trade activities). Enterprises with annual sales below Zl 80 000 are kept exempt from VAT. These reforms have considerably reduced the tax burden and compliance costs for SMEs, and more than half of small entrepreneurs (paying personal income taxes) have already opted for either the "tax card" or the "flat rate" regime.
– *Government Policy Guidelines for* SMEs *until* 2002 is a policy statement made by the Council of Ministers in 1999 on policy principles in support of SMEs. The aim is to improve their capital formation, domestic competitiveness and export performance via technology transfers by the Technology Agency, vocational training for entrepreneurs, support to their overseas trade activities, and the introduction of an export credit insurance scheme. Additional public guarantees to SME loans have also been included; this measure should avoid interfering with the growth of market financing for SMEs by causing moral hazards and competition distortions. A new *Entrepreneurship Development Agency* will be created on the basis of the (already existing and active) *Foundation for the Promotion of* SMEs to co-ordinate these schemes. A budget of Zl 20 million in 2000, and Zl 70 million in 2001 has been earmarked for the implementation of these guidelines. The government has also presented an "Internal Trade Development Programme until 2003" to improve the competitiveness of small retail enterprises (representing 30 per cent of total SME employment) which find themselves in competition with large retail chains. It is important that future government initiatives in this area safeguard free entry, fair competition and efficiency incentives in the retail trade sector.

1. Seven such areas are designated in the law: *i*) exploration and storage of minerals and waste; *ii*) production of explosives and weapons; *iii*) production and distribution of fuels and energy; *iv*) security services; *v*) aviation and air transportation; *vi*) management of rail lines and rail transportation; and *vii*) radio-television broadcasting.
2. Provided that foreign-owned enterprises possess the required registration and residence permits granted on the basis of international reciprocity.
3. For a detailed description, see the chapter on tax reform in the OECD *Economic Survey of Poland* 1999/2000.

IV. Encouraging environmentally sustainable growth

Poland has inherited from the past an economic structure that was planned with little consideration for the environment. Industries in the sectors of coal extraction, steel and iron, and energy generation produced vast amounts of air pollutants, dust and solid waste. Little municipal equipment was available to collect and treat used waters and manage waste produced by cities and rural settlements. Faced with this unfriendly legacy from the past, environmental policies have actively sought for the last decade to reduce the pressure stemming from existing sources. Notwithstanding remarkable reductions in emissions of several pollutants, Poland's environmental indicators continue to be among the worst in the OECD area, given its state of development. In addition to remaining pressures exercised by "old" industries, there are also signs that the rapid growth of output and consumption are generating new environmental damages. The huge increase in the number of passenger cars is degrading the quality of ambient air in large cities. Construction of new roads, housing and commercial estates is competing with the desire to protect pristine natural areas. Packaging materials typical of the new consumption patterns are accumulating unrecycled in city dumps.

In these circumstances, the challenge for the future will be to achieve a socially desirable rapid growth in living standards, while at the same time reducing the pressure on environmental resources. After reviewing the existing situation, this chapter discusses policies that would be necessary to make further progress in this direction. No attempt is made here to provide a comprehensive review of environmental issues, the purpose of the last E*nvironmental* P*erformance* R*eview* (OECD, 1995*a*). Thus, a number of topics are deliberately left aside, such as the increasing amounts of industrial waste, the management of forests and biodiversity, and the environmental impact of the future modernisation of Polish agriculture. Instead, after a brief summary of environmental trends, this chapter focuses on *i*) the architecture on an institutional framework conducive to a sustainable development; *ii*) the right choice of environmental policy instruments; and *iii*) the challenges posed to environmental policy by accession to the European Union (EU). A list of concrete recommendations is provided at the end of the chapter.

Facing an unfriendly legacy from the past

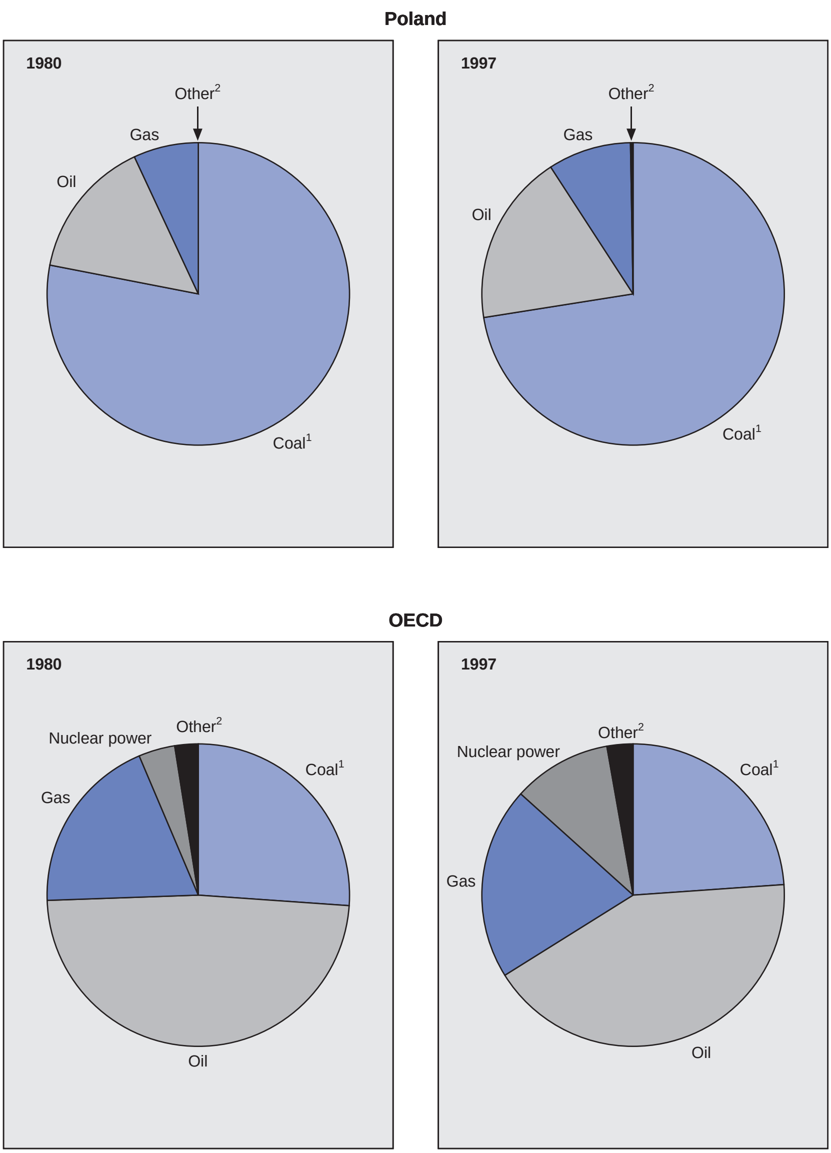
Like many other former centrally planned economies, Poland inherited from the past an environmentally unfriendly economic structure. The system of incentives did not encourage efficient and sustainable use of natural resources. Industrial policies had led to large investment in industrial structures, such as iron and steel, diverting resources away from important public infrastructures, such as sewage systems and water treatment plants.

Pressure stemming from the "old" economy

One of the most damaging inherited pressures stems from the combined industry of coal mining, electricity generation, base chemistry and metals milling. The coal industry has always been, and still is, the main source of environmental stress in some parts of the country. Although coal is one of the dirtiest fossil fuels, it is exempt from indirect taxes (except for the tax-deductible VAT), which encourages its use as a primary energy source by power generation plants, steel mills and for heating purposes (Figure 35). While OECD countries have to a large extent switched to sources of energy that release less emissions of traditional air pollutants into the air (such as nuclear power, natural gas or renewable energies), Poland still relies heavily on coal and lignite. Remarkable reductions of emissions have been achieved from the old heavy industry complex, *e.g.* steel mills. (Ministry of Economy, 1998.) However, the ecological impact of the industry is still severe due to its concentration in the southern part of the country. In addition to local pollution, the energy and industrial sectors also produces large quantities of greenhouse gases, which affect global climate. Poland ranks among the largest producers of carbon dioxide in relation to GDP (Figure 36). In 1997, Poland released into the atmosphere 361 million tonnes of CO_2, about 3 per cent of total OECD emissions, compared to the GDP share in OECD of 1.3 per cent.[82]

Over the last two decades, under strong pressure by the public, policy-makers have started to address the most compelling problems. Environmental policy has incited polluters to cut down the most dangerous emissions, lower the use of non-renewable resources and, more generally, pay more attention to negative externalities. Part of this new approach has consisted in closing down the worst sources of pollution. In the period 1992-1998, the State Environmental Inspectorate shut down the operations of 136 plants (Wajda, 2000). More constructively, environmental policy has encouraged polluters to invest in environmental protection equipment. In 1998, total investment expenditure in the area of environmental protection amounted to Zl 9 billion[83] (Figure 37). Compared to 1991, annual environmental investments increased by 1.8 times in real terms.[84] In comparison to other OECD countries, this flow of environmental protection investments is significant both in relation to GDP (1.6 per cent) and as a share of total investment expenditure

Figure 35. **Energy supply by primary source**

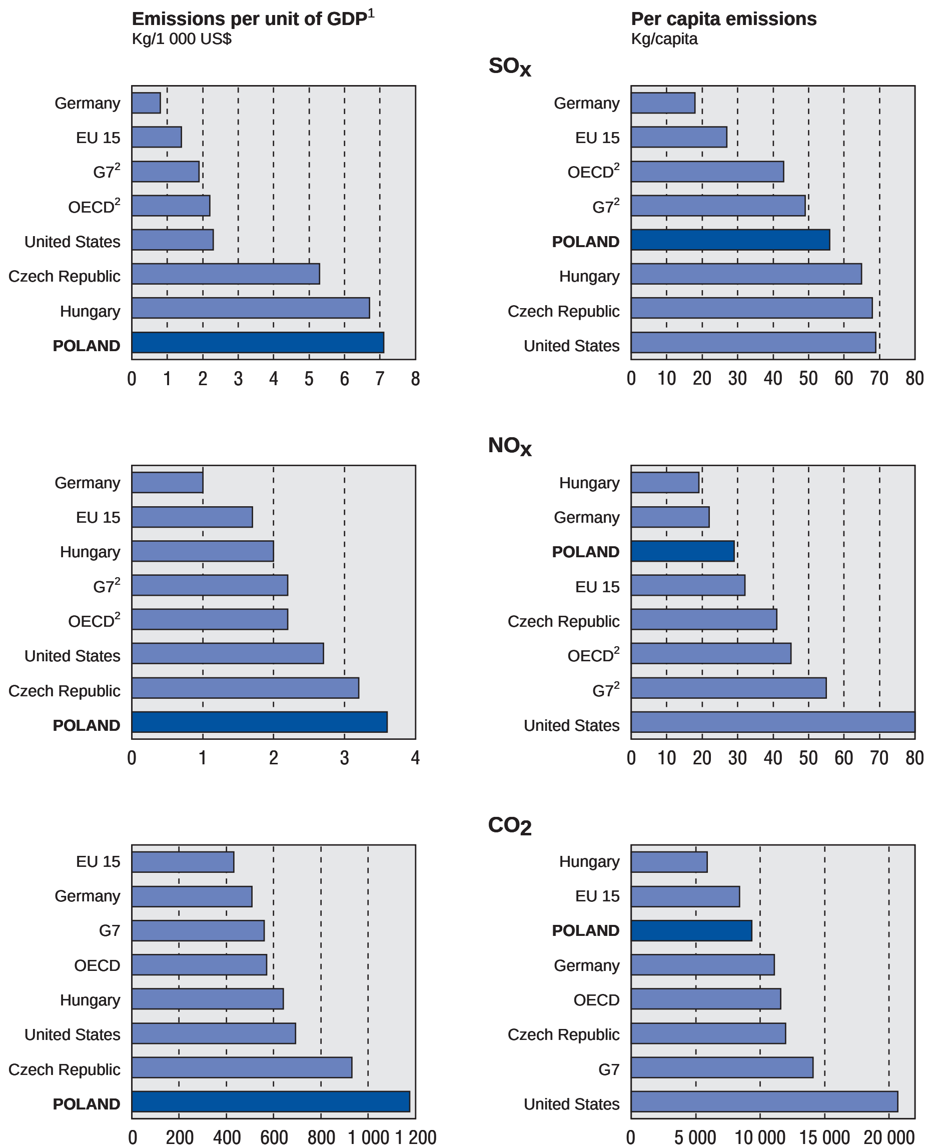


1. Also includes combustible renewables and waste.
2. Hydro, geothermal and solar energy.

Source: OECD, *OECD Environmental data*, Compendium 1999.

Figure 36. **International comparisons**

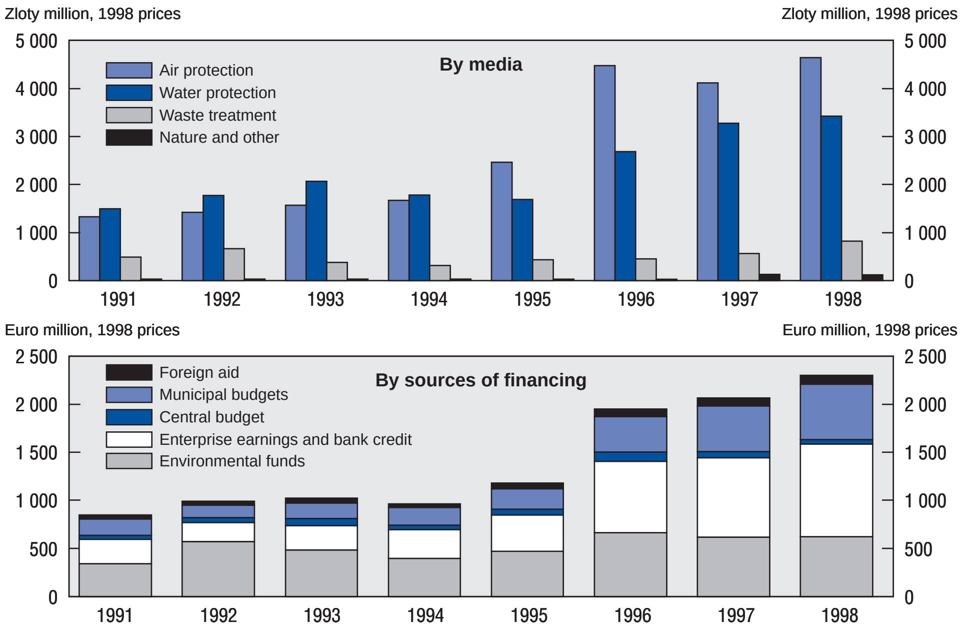
1997 or latest available year



1. GDP at 1995 prices and purchasing power parities.
2. Excluding Japan.

Source: OECD.

Figure 37. **Environmental investment expenditure**



Source: Central Statistical Office.

(8-9 per cent).[85] The largest environmental protection investments are made by enterprises to control emissions of pollutants into the atmosphere and by municipalities to reduce the discharge of wastewater.

To some extent, these efforts have been fruitful. The pressures typical of the previous regime – inefficient use of energy, obsolete technologies, disregard of environmental protection – have been somewhat alleviated. Old industries have been reduced in size, cleaner new industries have been established and environmental policy has led to large scale pollution-reducing investments. Thus, when the OECD first looked at Poland's environmental policy (OECD, 1995*a*), it found that a commendable framework had been put in place to deal with the sources of pollution inherited from the past. Nonetheless, despite this early progress, the pressure on the quality of air and water remains heavy.

Quality of air

During the last ten years, efforts have been made to reduce emissions of gases into the atmosphere. The reduction of budgetary subsidies to some of the most polluting industries, together with the shift to market-based prices, have encouraged savings in energy consumption. Environmental policy has also encouraged polluters to make use of "end-of-pipe" pollution-reducing equipment. Hence, although economic growth has been spectacular in the last decade, Poland has been able to reduce its air pollution significantly (Figures 38 and 39). For example, between 1988 and 1998 emission into the air of dust particles decreased by 74 per cent, of sulphur compounds by 55 per cent, of nitrogen compounds by 36 per cent and of the main greenhouse gas CO_2 by 34 per cent. The bulk of emissions reduction has been achieved in the beginning of the 1990s, in connection with the sharp output decline. In the second half of the 1990s, air emissions have continued to contract albeit at a slower pace or, as in the case of CO_2, have stabilised, notwithstanding vigorous economic growth.

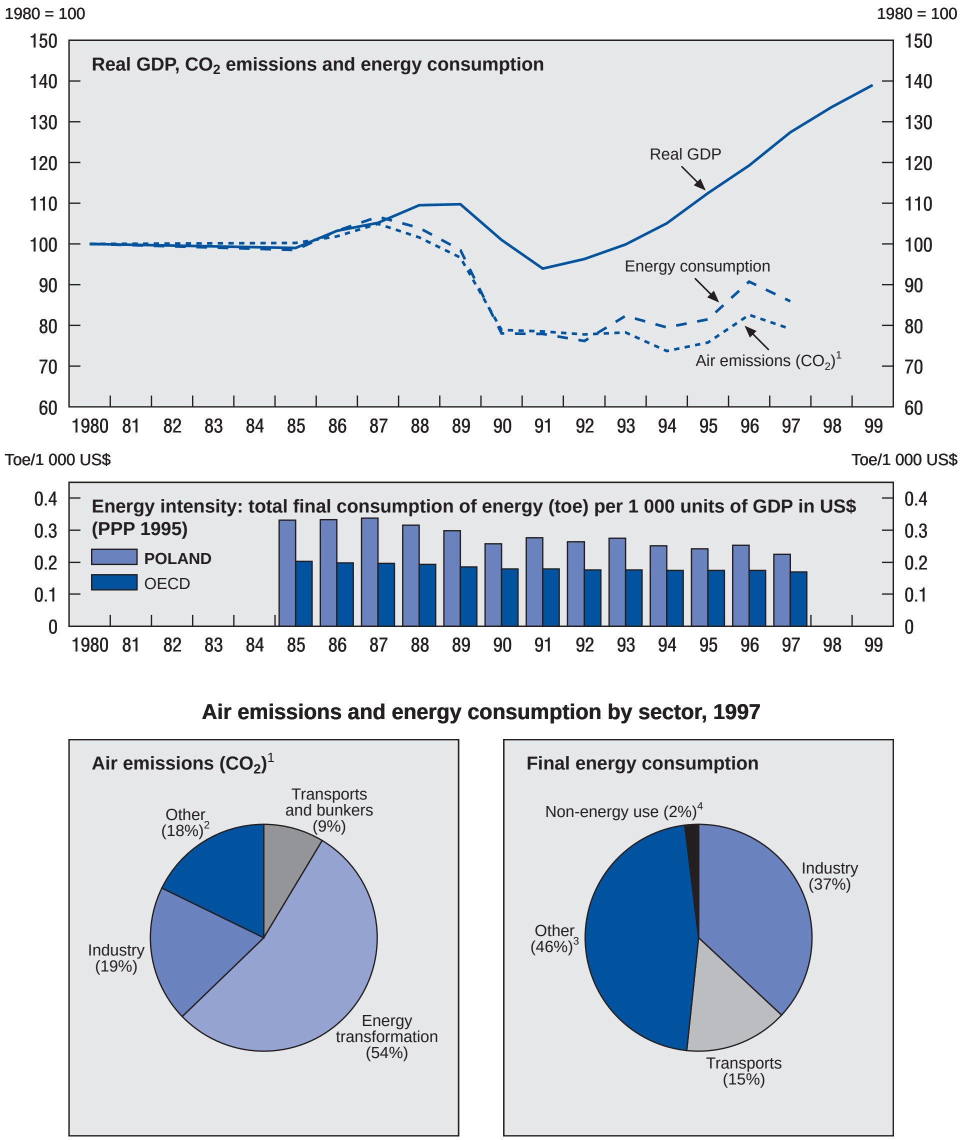
Nonetheless, local pollution remains heavy in some cities due to industrial concentration and use of low-quality coal in heating furnaces. For instance, in the Upper-Silesian coal basin, in Walbrzych, Opole and sometimes even in Krakow or Torun, excessive concentration of suspended dust and sulphur are still associated with the winter smog. This constitutes a serious health hazard for the population. The concentration of car traffic in densely-populated areas can also lead to the emergence of pollution "hot spots". Usually NO_x in urban air does not cause health hazards directly but, together with hydrocarbons, it contributes to the generation of ground level ozone and increasing incidences of so called "summer smog" typical for many OECD urban agglomerations. Thus, acute health hazards associated with ground level ozone are likely to become more common and more severe in large cities.

Quality of water

The extensive use of water for production purposes and the discharge of inadequately treated wastewater into rivers and lakes are major problems for the Polish environment. Following an initial decline, discharges of industrial wastewater have fluctuated since 1993, although the level of treatment also improved. This has led to a decrease in the total load of chemical pollution discharged to surface waters. Coal mines make extensive use of water and release saline waters into rivers imposing significant costs on industries and infrastructure downstream (Ministry of Economy, 1998).

Some progress has been made in the last decade to reduce water consumption. Total water withdrawal declined by 21 per cent between 1990 and 1998, thanks to sharp reductions in water needs for irrigation and for communal purposes. In contrast, progress towards improving the biological, physical and chemical quality of surface waters has been uneven (Figure 40). The greatest delays are in the implementation of waste water treatment plants in large agglomerations (Ministry of Environment, 2000). Only half of the Polish population is

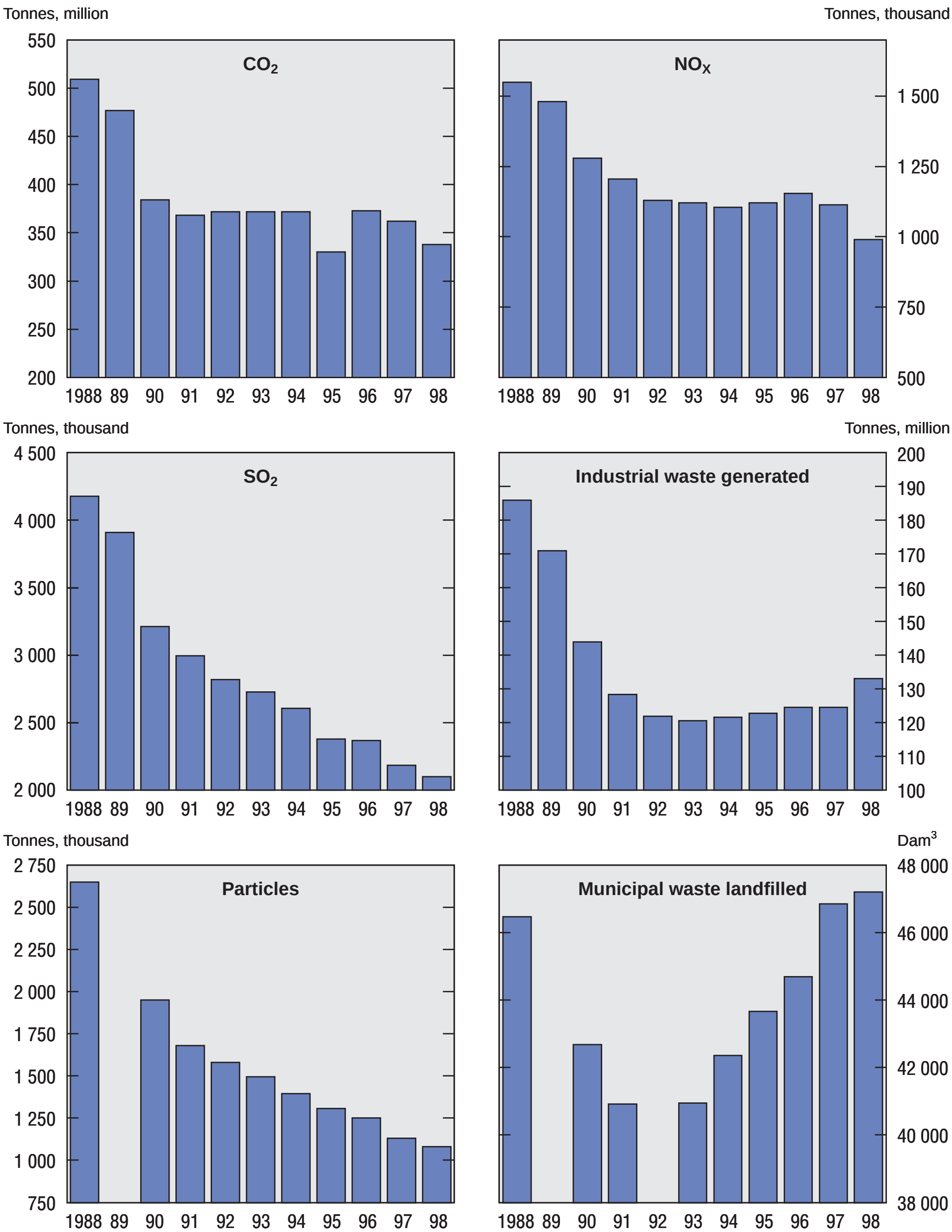
Figure 38. **Trends in growth, energy and emissions**



1. From energy use.
2. Agriculture, commerce and residential sector.
3. Agriculture, commerce, residential and public sector.
4. Includes only non-energy use of oil products and coal by all sectors.

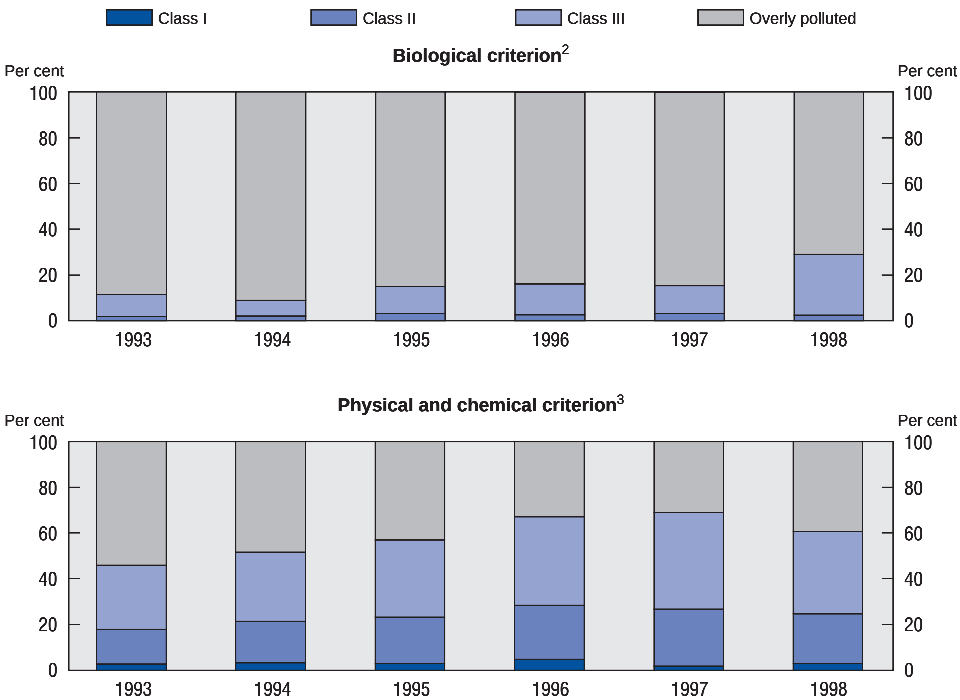
Source: OECD, *OECD Environmental data*, Compendium 1999.

Figure 39. **Main pollutants, 1988-98**



Source: Central Statistical Office, *Environmental Protection Yearbook.*

Figure 40. **Quality of Polish rivers**[1]

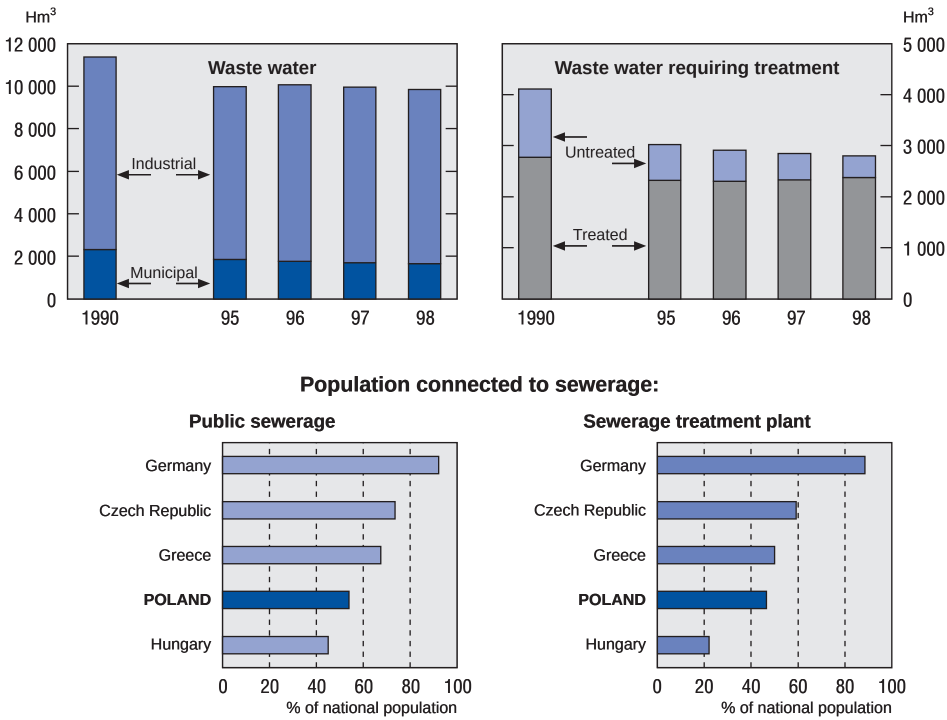


1. The evaluation of water pollution is expressed by designated sections of rivers to individual purity classes. The purity class is established on the basis of the indicator exceeding its standard value to the greatest degree. Class 1 corresponds to waters with the greatest purity.
2. Based on the results of the coli test.
3. Based on surveying 23 physical-chemical properties of water.

Source: Central Statistical Office.

connected to a sewage system or a treatment plant, far less than in other OECD countries (Figure 41). For example, Warsaw still discharges 55 per cent of its waste-water directly to the rivers without any treatment (GUS, 2000). Little is done in the agricultural sector to reduce nutrient run-off, although the volumes of fertilisers used in Polish agriculture and the intensity of livestock operations are still several times lower than the OECD average. The discharge of substances into the Baltic Sea significantly increased between 1990 and 1998, with the exception of heavy metals. In particular, increased discharges of nitrogen, phosphorus and phosphates aggravate the threat of eutrophication of the Sea waters, but this could be attributed primarily to the increased annual precipitation. Relatively high investments in wastewater treatment plants in the 1990s have not led to

Figure 41. **Water discharge and treatment**



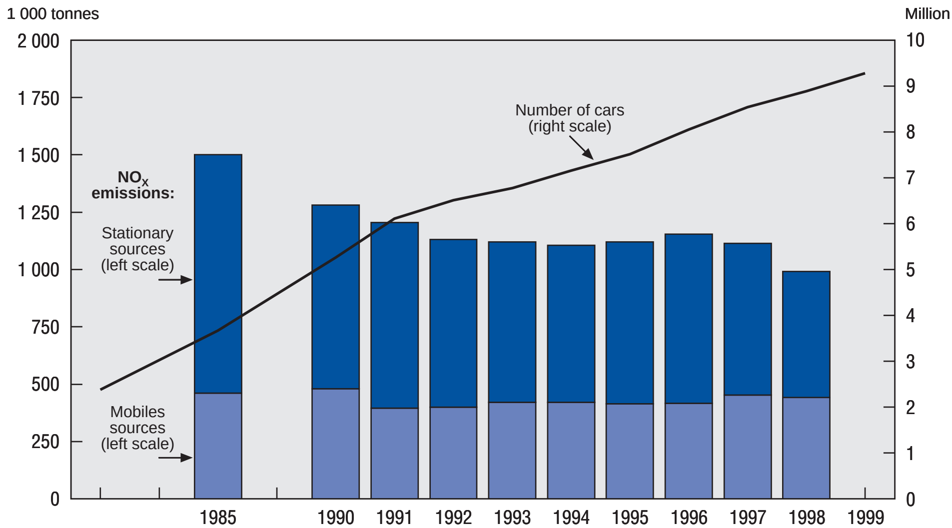
Source: OECD.

proportional improvement in quality of surface waters. This suggests that investment resources have not always been targeted at projects that bring the highest environmental benefits.

Pressures stemming from a fast-growing market economy

In addition to the sources of pollution inherited from the past, the shift to a market economy is generating new types of pressures on the environment. In particular, the number of passenger cars has increased nearly four times in the 1990s. Fortunately cars have become cleaner and the emissions of car fumes (in particular lead, soot and NO_x) have not increased commensurately (Figure 42). But the concentration of cars has nevertheless deteriorated the quality of air in inner cities, produced more noise and required new roads, sometimes in well-preserved natural areas. The use of packaging materials, modest in previous

Figure 42. **Passenger cars and NO_X emissions**



Source: OECD, *OECD Environmental data*, Compendium 1999.

times, is growing, and agricultural production will increasingly rely on pesticides and chemicals. A sound framework for sustainable development is thus very much on the agenda for the future.

Setting up institutions supportive of sustainable development[86]

Faced with a heavy legacy from the past, Polish governments have endeavoured to strengthen their environmental policy framework. Already in the early-1980s, reforms were introduced to adapt the environmental institutions and instruments. Government agencies have been created to deal with ecological issues at the national and sub-national levels. An environmental inspectorate has been established to ensure an effective implementation of environmental protection law. The reform process has gained a new impetus in the turn of the decade. Existing institutions were strengthened, new financial mechanisms were set up to foster investment. A bulk of environmental policy responsibilities, in particular for environmental infrastructure, was devolved from Warsaw to locally elected government bodies. The multiplication of public actors has however increased the risk of duplication of functions and dilution of responsibilities. The challenge is to ensure concerted actions of various public bodies and to better integrate environmental objectives in overall government policies.

Numerous environmental policymakers

The present institutional framework is composed of policy-making bodies at the central level and numerous decentralised agencies at the sub-national level (Box 11). The *Ministry of Environment* plays a prominent policy-making role: it drafts environmental laws, adjusts the regulatory framework and adapts policy instruments to evolving circumstances. For instance, the Ministry determines environmental quality standards that are binding in the whole country, and establishes environmental technical and product standards. A great deal of responsibility is devolved to *regional state administrations* and to *locally-elected governments*. For instance, the authority to issue emission permits is devolved to the Poviat[87] chief executives (*starosta*) and to the heads of the Voivodship administrations (*Voivod*). The Voivodship *Environmental Inspectors* are in charge of enforcing regulations related to emissions permits and environmental quality standards.

Currently environment agencies are well developed and rooted in a two-decade long tradition. The devolution of environmental management responsibilities to sub-national governments is consistent with the "subsidiarity principle" common among OECD countries. In most cases the decisions are taken on a "right" level, *i.e.* the level at which environmental effects are internalised. However, the division of responsibilities between many agencies with overlapping powers at the central and local levels runs the risk that no one feels accountable for achieving policy objectives. For instance, locally-elected *voivodship* authorities formulate regional environmental policies but have few instruments to implement them. On the other hand, emission permits for the most hazardous polluters are issued by the centrally-appointed Voivod Governors, who have no responsibility for the formulation and implementation of regional policy objectives and strategies. Probably the most profound institutional friction occurs in the area of water management. Protection of water resources and of quality of drinking water is the task of seven river basin agencies, while water permitting, investment programmes and financial instruments are managed within administrative borders. Such incompatibilities in the institutional framework impede the coherency and evolution of regional environmental policies. Each agency focuses on its own prerogatives, but no institution is interested in the formulation of specific targets related to the quality of water air and soil, and clearly responsible for actual achievement.

The need for policy integration

In addition to proper co-ordination between agencies, environmentally sustainable development also requires to *integrate* environmental objectives with horizontal (social, economic, fiscal) and sectoral policies. Considerable efforts have been launched recently to introduce environmental requirements into sectoral policies and strategies, with uneven degrees of success, especially in transport (Box 12). The challenge will be to review the weaknesses of these efforts and prepare for their effective implementation.

Box 11. Key government environmental institutions and their main responsibilities

	Centrally appointed	Locally elected	River basin
Central government	***Minister of Environment*** – Ambient quality standards – Technology and emissions standards – Product standards – Fee and fine rates and modalities – Rules for permitting – Control of National Env. Fund		**River basin management boards** Management of water resources
16 Voivodships (regions) Coexistence of centrally appointed governor and locally elected authorities	***Voivodship Governor*** – EIA of specially hazardous investments – Permits for specially hazardous polluters – Levying and control of water discharge and waste fees **Voivodship Environmental Inspector** – Inspections and enforcement – Halting operation of polluting facilities – Levying and negotiating non-compliance fines – Environmental monitoring	***Voivodship Parliament (Sejmik)*** – Levying and control of air pollution fees – Collection of environmental fees – Development of sustainable development plans – Control of regional environmental funds	
371 Poviats (County) Medium level of locally elected government		– Permits for small and medium polluters – EIA of investment projects – Control of Poviat environmental funds – Environmental monitoring – Development of sustainable development plans	
2 458 Gminas and municipalities Lowest level of locally elected government		– Halting operation of polluting facilities – Municipal waste management – Control of Poviat environmental funds – Environmental monitoring – Development of action plans for sustainable development	

Box 12. Attempts to integrate environmental objectives into other policies: failures and successes

Several attempts have been made in Poland to integrate environmental concerns into various sectoral policies. Only a few of these attempts have been successful.

Coal sector. The government's *Programme in the Coal Mining Sector for the Years* 1998-2002 includes an attempt to integrate environmental concerns into the restructuring strategy of the coal mining sector. The programme incorporates the target of removing salt before discharging water and decreasing the amount of waste stored on the surface. It also integrates a timetable for the payment of arrears on emission fees and fines and envisages to liquidate those mines that are unable to meet environment protection requirements. However, these targets have largely remained unfulfilled. An environmental assessment study of the hard coal sector conducted a year after the programme was launched concluded that the sector had not yet developed a coherent environmental management system. Business plans prepared by individual mines and coal companies were found to be ambiguous as regards their environmental components, with neither quantitative targets, nor specific measures or expected effects (Ministry of Economy and Ministry of the State Treasury, 2000).

Steel and iron sector. In the same vein, the *Restructuring Programme for the Polish Steel Industry* adopted in 1998 makes an attempt to include environmental objectives among other economic, financial and social priorities. The programme makes explicit reference to the need to reduce emissions into the air, and corresponding investments have been authorised. Environmental targets, however, are not specified, apart from the general reference to the need to comply with EU standards. In addition, the document proposes new subsidies to the steel industry for environmental investments, in violation of the Polluter Pays Principle. It also proposes that emission charges paid by steel mills be directly re-invested into the sector, which would adversely affect economic efficiency of allocation of abatement investments and prevent introduction of environmental taxes.

Energy policy. An attempt at integration was also made in the area of energy policy. The *Assumptions for the Energy Policy of Poland Until the Year* 2020, prepared by the government in February 2000, explicitly incorporates the goal of protecting the natural environment from the emissions of pollutants by the power generation sector. No commitment, however, is made to policies that would include environmental externalities into the energy prices. The document also refers to past and future progress in the development of renewable sources of energy, such as biomass, geothermal resources, hydro-energy and wind. However, the projected share of renewable energies in primary energy production is 5-6 per cent in 2020, half of the level recommended by the EU (12 per cent in 2010). In reaction, the Ministry of Environment has proposed a more aggressive strategy aimed at raising the share of renewable energy sources to 7.5 per cent in 2010 and 14 per cent in 2020. The formulation of these two inconsistent policies on renewable energies illustrates the difficulty of integrating environmental targets in other policies.

Box 12. **Attempts to integrate environmental objectives into other policies: failures and successes** (*cont.*)

Successful attempts. More successful progress has been achieved by the *Inter-Ministerial Task Force for the Reform of the Economic Instruments of Environmental Policy*. The group consists of officials from the Ministries of Environment, Finance and Economy, invited experts, as well as representatives of non-governmental organisations and selected business sector organisations. The group was successful, for instance, in mobilising broad support for the introduction of new product charges and deposit fees for selected environmentally harmful products (such as packaging, batteries, fluorescent lamps and tires).

Fewer efforts have been undertaken to integrate environmental issues into horizontal government policies, which is a more difficult task and one faced by all OECD countries. Some important processes have begun, however, such as the analytical work on sustainable production and consumption patterns carried out by the Ministry of the Economy, or active participation of the Ministry of the Environment in the preparation of the government strategy for SMEs. A Committee of the Council of Ministers for Regional Policy and Sustainable Development was established in 1998, although with respect to environmental sustainability its role remains very limited. The failure to more strongly integrate environmental objectives into sectoral policies frequently stems from the concern that high standards for the environment are costly for the business sector and can be harmful to international competitiveness. These fears are often exaggerated, however. Empirical data show that countries with low environmental standards are not necessarily more competitive (OECD, 1998). Moreover, emissions intensity of industrial production in other OECD countries is typically lower than in Poland, indicating that environmental externalities among main Polish trading partners are better internalised.

Are the Environment Funds still useful ?

Environment Funds were created to provide public financing to environmental projects. They comprise the *National Fund for Environmental Protection and Water Management* (*National Fund* thereafter), 16 regional Voivodship Funds, over 370 Poviat funds, about 2 500 municipal funds and one special case, the *EcoFund*,[88] which manages debt-for-environment swaps. On the national and regional levels they operate as public, independent legal entities, managed by Executive Boards under the oversight of Supervisory Councils, but with government-appointed managers and councils' members. Regional Environmental Funds are the instruments of the locally elected administration at the Voivodship level. N*ational* F*und* is controlled by the Minister of Environment. Historically, Environment Funds have played a key role in financing environmental investments, although their share has been gradually shrinking from about 50 per cent in 1992 to less than 30 per cent in 1999. They provide grants, soft loans and take equity stakes to finance a broad range of environmental projects. In addition to a fraction of pollution fees and non-compliance fines, the N*ational* F*und* and the regional Funds dispose of other resources, such as foreign assistance and earnings from their own financial operations. The N*ational* F*und* receives about one-quarter of pollution fees, the remainder being split between funds at the *voivodship*, *poviat* and *gmina* levels.

The operations of Environment Funds has been debated since the beginning of the transition period. They played an important role in the initial transition period in providing resources at a time when little financing was available from commercial sources. However, the need for official financing of environmental investments is less compelling today. Poland has commercial institutions that can offer financial products well suited to viable investments (including those undertaken by municipalities and utilities), even if projects have modest rates of return. Environment Funds therefore find themselves increasingly competing with private sector financiers, crowding them out of the environmental investment market, which could bring long-term damage to the sustainability of environmental finance.

In addition, there are acknowledged shortcomings in the practices of Environment Funds, such as lack of transparent and rigorous project selection criteria; absence of strategic objectives; and lack of accountability and, sometimes, vulnerability to a capture by different groups of interest. The St. Petersburg guidelines (OECD, 1995*b*) provide a list of criteria that should be adopted as "good practices", but few Environment Funds have adopted them. The recent analysis of the cost-effectiveness of the project portfolio of the N*ational* F*und* demonstrated that cost-effectiveness was *de facto* an irrelevant criterion in selection of projects. Several projects were found excessively costly (Warsaw University, 2000). Most environmental protection projects could today be implemented either without subsidies or with significantly smaller public support if adequate incentives and instruments were in place. Limited public support could then be focused on those projects, which are economically efficient but financially truly non-viable because of externalities involved or public good features.

The mix of environmental policy instruments

Over the last twenty years, Poland has broadened and diversified the mix of instruments used in environmental policy. As in other OECD countries, environmental policy relies primarily on administrative requirements of the command-and-control type. However, contrary to the trends prevailing in the rest of the OECD, there is no tendency in Poland to "economise" the instrument mix.

The debates on reforming policy instruments are driven by legalistic arguments related to EU accession or by the lobbying of the strongest interest groups in industry or in administration. Efficiency or cost-effectiveness considerations, if heard, are not considered seriously.

"Command and control" instruments

Emissions permits are required to discharge polluted water, emit pollutants in the air and dump waste. Polluters violating the conditions set in their permits must pay non-compliance fines, which are set at a multiple of regular emissions fees (usually 10 times) and are paid from after-tax income. Only 15-20 per cent of fines is collected, however, as environmental inspectors can defer and eventually offset fines against polluters' investments made to improve compliance. In extreme cases Voivodship Environment State Inspectors have the right to close discharging installations operating without or drastically violating permits. The air pollution permits set source-specific emissions ceilings in order to prevent excessive concentration of pollutants in ambient air. Permits are required separately for each source of pollution – that is, a plant needs separate permits for water, air and waste. As part of the transposition of the EU directive on integrated pollution prevention and control (IPPC), the new draft *Law on Environmental Protection*, pending in Parliament, introduces "integrated permits" for large polluters. Integrated permits will cover all direct and indirect discharges to any medium (air, water and soil), as well as issues such as waste minimisation, energy efficiency, resource utilisation, prevention of accidents and the restoration of sites after the industrial activity has ceased. Inst ead of existing ambient quality standards, the benchmark for new permitting system will be the technology-oriented standards following the "Best Available Technique (BAT)" approach.[89]

Another instrument that has contributed to higher compliance with permits is the publication by Environmental Inspectorates of lists of the worst polluters. The lists help focus scarce resources of enforcement agencies and the attention of environmental non-government organisations on critical sources of pollution. The list of the top 80 worst national polluters has gained influence in the last decade, when these firms found themselves under competitive pressure. Difficulties in attracting (especially foreign) investors and even raising commercial debt has prompted many of them to accelerate environmental performance efforts and attain compliance with environmental permits. At the end of 1999, already 31 of the formerly worst polluters had been removed from the list.

Market-based instruments

An ambitious system of *emission fees* was first introduced in 1980. Fees are currently imposed on the use of water, disposal and landfilling of waste, emissions of pollutants into the air and exploitation of natural resources.[90] A total of 62 air pollutants are subject to fees. Pollution fees serve two purposes. First, they raise revenues that are earmarked to Environment Funds. Second, they are used to send price signals on the true cost of using the environment, and therefore stimulate improvement in environmental performance.

The pollution fee system has fulfilled reasonably well this *first* revenue-raising function. In 1999, the fees generated revenue of Zl 1.6 billion (0.26 per cent of GDP and 1.3 per cent of state tax revenue). Collection rates are high, reaching well over 90 per cent (closer to 100 per cent outside of the coal mining sector). Important elements of this successful collection include a good design of the system, a decade long experience and familiarity with its operation and a strict elimination of discretion on the side of administration. Like for tax liabilities, the authorities are not allowed to negotiate the volumes or schedules of payments with polluters. Forgiveness and offsets of pollution charges are also strictly prohibited.

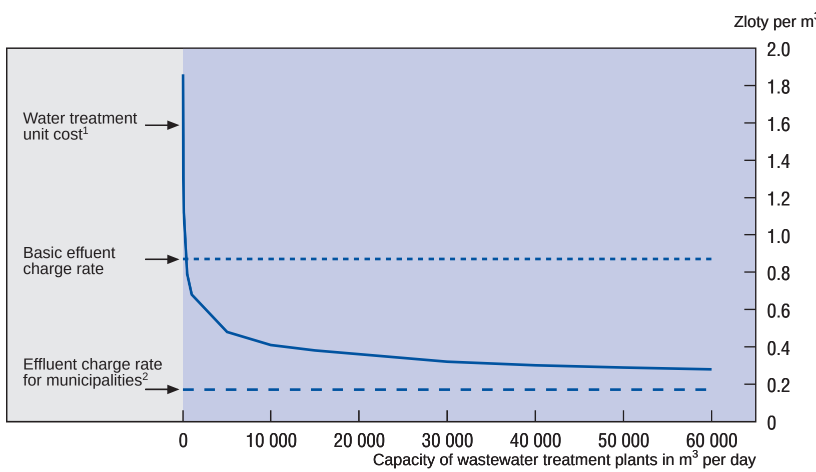
The fees fulfil their *second* function – sending adequate price signals – much less effectively. Polish pollution fees are high if compared with countries that use them for revenue raising purposes (France, United States, Japan, Netherlands), but they are several times lower than emissions fees and taxes designed for incentive purposes, such as in Sweden (SO_2, CO_2), Norway (CO_2), Germany, Slovenia and Czech Republic (water effluents). Indeed, the rates of Polish pollution fees are established on the basis of criteria unrelated to the abatement costs, implying that *de facto*, they are not designed with incentive effects in mind (Box 13). The fee rates for air emissions remain in the low range of marginal abatement costs, indicating that they provide some incentive to reduce emissions, but not enough to achieve emission reduction targets needed for EU accession (Box 14).

Left unchanged, the revenue-raising function of the emission fees is doomed to dwindle, as progress is being made to reduce pollution. The total revenues from fees and fines already declined from Zl 2 billion in 1998 to Zl 1.6 billion in 1999. In addition, the present high collection rate could decline if provisions included in the draft framework E*nvironmental* P*rotection* A*ct* were adopted. These provisions open the door for administrative discretion and individual negotiations concerning the payment of pollution fees. This could reduce the collection rate of fees to an estimated 15-20 per cent (similar to that of non-compliance fines) and may threaten an interesting and relatively successful system. Hence, a new approach is needed to clarify the objectives of the emission fee system. Reform is also needed because the air emissions fee system seems excessively complicated – there are more fees than the government can reasonably monitor. Significant reduction in the number of air emission fees would reduce the transaction costs for firms and the administration without doing much harm to revenue flows and to the environment.[91]

Box 13. Are water discharge fees too low?

Wastewater discharge fees paid by commercial enterprises are high enough to provide strong incentive to treat sewerage. In contrast, the fees applied to municipalities and water utilities are only one-fifth of those paid by enterprises, and therefore provide no such incentive. This is clearly illustrated by Figure 43. If the same fee rate was applied to households and industries, it would provide sufficient incentive to treat wastewater even in small municipalities, where unit treatment costs are very high. The current scheme also involves cross-subsidisation of municipalities by industry, which runs counter to the Polluter Pays Principle. In contrast to Poland, very high wastewater charges are imposed on municipalities in Slovenia and the Czech Republic, as part of their implementation programme of the EU Urban Wastewater Directive. It is unlikely that Poland will be able to develop the municipal wastewater infrastructure needed for EU accession if the current fee structure is maintained. A similar problem of perverse incentives affects water abstraction fees (Figure 43).

Figure 43. **Wastewater effluent fees and treatment cost**



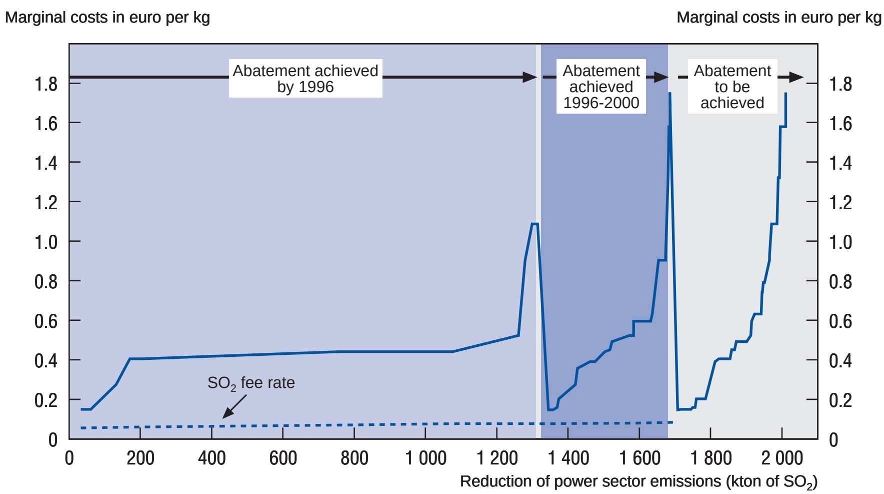
1. Operation and maintenance of water treatment plants plus depreciation cost.
2. Basic rate multiplied by 0.2.

Source: Krakow University of Economics and Krakow Technical University, 1997, Concept of the New System of the charges for the Special Utilisation of Water and Water Facilities. Study for the Ministry of Environment.

Box 14. Have air emission charges in Poland encouraged emissions reduction?

Figure 44 shows that by 1996 already more than half of the original SO_2 emissions of power plants had been abated, most of which was achieved at low marginal costs (about € 0.40/kg). However, in some cases "expensive" technologies were also applied with the maximum marginal cost of € 1.1/kg. Additional reduction of SO_2 emissions achieved in the period 1996-2000 is estimated at about 370 kt. Marginal costs of these abatement efforts were in general little higher than for the "1996 reductions". After 2000 there is still the option to reduce about 325 kt of SO_2 emissions. The potential to achieve this further abatement with inexpensive technologies still exists, but is limited as the graph shows. The marginal costs of these reductions are expected to be higher than in any period in the past.

Figure 44. Incentive effect of fees on power sector SO_2 emissions



Note: The graph refers to three subsequent periods and, for each period, the emission reductions are sorted out by the marginal costs of different abatement technologies, and not in chronological order.
Source: Jochem Jantzen (2001), TME, Marginal costs of SO_2-emission reduction, Poland and Ministry of Environment.

During the 1990s, the rates of SO_2 emissions charges were in the range € 0.07-0.09/kg and therefore did not provide significant incentives to reduce SO_2 emissions in the power sector. Actually not a single abatement technology could have been applied because of the incentive effect of SO_2 charge alone. A bulk of abatement effort in this sector could be attributed to the application of other environmental policy instruments (permits, subsidies, public lists of the worst polluters, Box 14. **Have air emission charges in Poland encouraged emissions reduction?** (*cont.*)

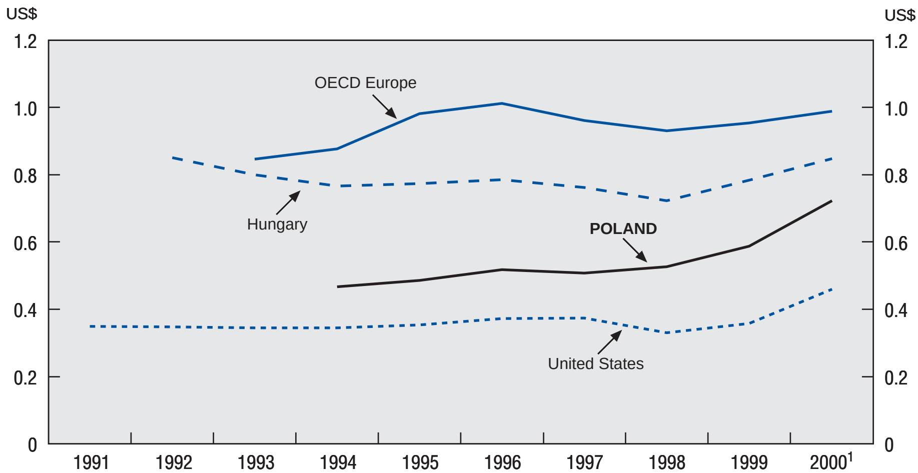
etc.) and to the "environmental dividend" of market reforms. In order to achieve further reduction of SO_2 emissions in the power sector by 50 per cent from the 2000 levels using the pollution charge as a sole instrument the rate should increase from the present € 85/tonne to about € 400 per tonne. The emissions reduction by 75 per cent would require the rate to increase up to about € 630/tonne. These estimates are for illustrative purposes only. The exact rate of an incentive charge would need to take into account the aggregated burden of different pollution charges (*e.g.* for NO_x and CO_2) and the fact that some abatement technologies reduce several pollutants simultaneously. Careful modelling (*e.g.* using tools like MOSES)* and policy analysis would be needed before incentive charges are adopted (Figure 44).

* MOSES = the Model On Sustainable Environmental Economic Scenario's, an Excel spreadsheet model developed by the Institute for Applied Environmental Economics, the Hague (*www.tme.nu*) where more information on MOSES can be obtained.

The tax system is increasingly used in OECD countries to provide ecologically-oriented incentives. Poland impose taxes on gasoline, mainly to raise government revenue, but also to encourage energy savings (Figure 45). A significant excise tax is also imposed on the purchase of new passenger cars since 2000, with an equally positive impact on the environment. On the other hand, some environmentally-harmful commodities are tax-free. For example, coal is not subject to excise taxes, although it is the dirtiest type of fossil fuel. This discourages the switch of power generation plants and heating boilers to cleaner sources of energy, such as natural gas. In other OECD countries, the new green taxes are often introduced in a revenue neutral way, as they replace existing taxes. Thus, the concept of "green tax reform" involves using additional revenue from such taxes to reduce other, distortionary taxes. For instance, the German higher taxes on energy are used to lower social security contributions. Similar approach in Poland could foster job creation.

Trading of emission permits is another interesting economic instrument that has been used effectively in some OECD countries. It is an effective way to cap emissions, but also a cost effective one. Emission trading was recommended by the government already in 1991 in the first N*ational* E*nvironmental* P*olicy*. Since that time, a successful pilot experiment has been implemented in Chorzow, where a significant environmental improvements were accelerated at the very low cost by allowing an indirect exchange of the rights to emit SO_2 between the large steel

Figure 45. **Premium unleaded gasoline price**
In US dollars per litre



1. Data for 2000 Q2.
Source: IEA, *Energy Prices and Taxes.*

and power plants. A number of studies proved the feasibility of a regional emission bubble (Atmoterm, 1996) and sectoral emission trading (Peszko, 1996; Fiedor *et al.*, 1999). The power sector has called several times for replacing plant specific permits with a sectoral cap and tradable emission quotas for base load power plants to decrease the costs of meeting the emission ceilings required by the international agreements on SO_2 and CO_2. This notwithstanding, emission trading is still not a priority for the Ministry of Environment and still has not found its way to legislation.

As noted in Chapter III, Poland grants subsidies to various sectors to mitigate the social impact of economic restructuring. Many of these subsidy schemes have a detrimental impact on the environment, and are perverse on efficiency grounds. This is particularly the case of subsidies to the coal extraction and the steel mill sectors, which are among the most polluting activities. Several environmentally perverse subsidies are also used in the agriculture and transport sectors. In addition to general subsidies to loss-making firms, Poland also provides subsidies directly targeted towards pollution abatement. For instance, soft loans and grants are provided to polluters that invest in environmental protection equipment. Most of these subsidies contradict the OECD polluter-pays-principle (Box 15).

Box 15. Subsidies and the Polluter Pays Principle

The Polluter-Pays-Principle (PPP) as adopted by the OECD implies that polluters should meet the cost of pollution control and prevention measures. In 1991, OECD countries accepted an extension to this original core meaning of PPP, and recognised that pollution damage costs should also be borne by the polluter (OECD, 1992). Nonetheless, the PPP first and foremost implies that polluters should in general not be subsidised, although exceptions to the "no subsidy" philosophy are accepted. Subsidies or soft financing are deemed to be justified exceptionally, and only under specific conditions: subsidies should not introduce significant distortions in international trade and investment; they should be limited to sectors which would otherwise have great difficulty complying with environmental requirements; and they should be limited to a well-defined transition period and adapted to the specific social and economic problems associated with the implementation of a country's environmental policy.

Would voluntary agreements be effective instruments?

At present, little discretion is authorised in the present system of environmental regulations. As signalled, however, the new draft F*ramework* E*nvironmental* L*aw* introduces an instrument of "negotiated compliance schedules" for individual firms, a form of voluntary agreement. This is intended to bring flexibility to the hitherto rigid permitting system, but may reduce the willingness to pay emission taxes and create obstacles to introducing emissions trading. An OECD assessment of "voluntary environmental agreements" in the United States, Canada, Japan and some EU countries calls for a very cautious consideration of their use (OECD, 1999). The OECD found that empirical evidence so far only weakly supports the argument of environmental effectiveness, cost-effectiveness and administrative efficiency of voluntary agreements. Agreements negotiated so far often "mandated" firms to undertake measures that they would have done anyway without any external pressures. In addition, voluntary agreements seem to have provided little incentive to innovate. Free-riding and regulatory capture sometimes seriously affected their effectiveness (*e.g.* OECD, 2000*a*). Therefore, the OECD recommends that several conditions should be in place in the design of voluntary agreements. One essential condition is a credible regulatory threat if firms just do business-as-usual. This condition is arguably yet to be developed in Poland. Economic instruments offer an effective alternative to voluntary approaches, especially emissions trading – such as the US trading approach to phase out lead used by refineries and SO_2 released by combustion plants. These instruments have proven to deliver the benefits that voluntary agreements have so far merely promised (environmental effectiveness, flexibility, cost-effectiveness, administrative efficiency). Hence they could provide an environmentally effective and efficient alternative free from the flaws of the individual negotiations.

How to undertake the environmental clean-up required by the EU?

Accession to the European Union will impose to bring the national environmental legislation in conformity with the EU laws. The main consequence of this legal approximation is that some environmental standards will become stricter than under Polish previous rules (such as for large combustion plants, landfills or large wastewater treatment plants). Hence, institutional reform and large scale investments will be needed to comply with them.

The EU legislation in the environmental field consists of some 460 pieces of legal acts that will have to be directly applied or transposed into the national legal system by the time of accession. The European Commission will also require that the Polish government ensures actual compliance with the requirements contained in this legislation. Implementation of the legal acts must be completed by the dates specified in each legal act. The European Commission has recognised that if implementation involves excessive costs, transition periods can be negotiated (European Commission, 1998). Transition periods, however, are intended to be an exception, rather than a rule. The Commission also requires that requests for transition periods be supported by convincing arguments and credible implementation strategies.

Complying with the new body of legislation implies significant investment in the case of about 15 Directives. Of these, 10-11 Directives will involve heavy public investments in infrastructure, such as water, sanitation, heat, power and waste management. A few other directives – such as on integrated pollution prevention and control (IPPC), on discharges of dangerous substances into water, on fuel quality and on nitrates – will impose adjustment costs mainly on the private sector.

The order of magnitude of the costs of compliance for Poland is well documented.[92] After being brought up to date, available estimates suggest that the investment expenditures required to comply with current accession requirements concerning the environment amount to € 25 billion under low cost scenarios, but may double in the absence of cost-effective implementation strategies (Table 6). Assuming reasonable transitional periods and cost-effective approaches, the investment expenditure would be € 2.1 billion annually, with a 12-year transition period, and € 1.6 billion with a 15-year transition period. If less cost-effective approaches were chosen, these sums would jump to € 4.3 billion per year with a 12-year implementation period, and € 3.4 billion with a 15-year implementation period.

Table 6. **Investment expenditure required for EU accession in environmental protection**
In billions of 1998 Euros

Sector	Low estimate	High estimate	Notes	Source
Waste water treatment plants	1.6	3.6	Low estimate is for towns only. High estimate includes Biol/advanced WTPS for all settlements over 2 000	TME, 1999 (low), World Bank 2000 (high)
Waste water collecting systems	4.1	10.4	–	World Bank 2000
Total for sanitation infrastructure	6.4	14.0	–	
Drinking water	3.0	8.0	Rough estimates	World Bank 2000
Long range air	1.7	4.2	Low is for compliance with existing law by existing sources. High is for compliance with draft Directive proposed by EC and includes new sources	Energoproject 2000
Urban air	3.3	4.5	–	World Bank 2000
IPCC	6.3	6.3	Additional expenditure for power sector only	TME 1999
Waste	2.6	4.1	–	TME, 1999; Berbeka, Grabowski 1999
Nitrates	2.6	3.3	High estimate assumes that a quarter (500 000) of all Polish farms will be liable for a Directive. Low estimate assumes that only 400 000 will be.	World Bank 2000
Total at the time the studies were conducted	**32**	**58**	**–**	**Best estimates**
Environmental expenditure 1997-2000	7.0	7.0	–	1997-1999 GUS. For 2000 extrapolation by OECD Secretariat
Total since 2001	**25**	**51**	**–**	**OECD Secretariat**

Source: See fifth column for various sources.

Three key factors can contribute to greater cost effectiveness and therefore reduce the overall spending expenditure associated with EU accession. *First*, spending can be reduced by using the flexibility provisions included in many directives. Directives are legal acts that do not have to be literally re-written into national laws. They need to be "transposed", although the Commission can judge if transposition meets essential requirements and the objectives of directives. For example, urban waste water directive requires to apply stringent standards for the removal of nitrogen and phosphorus from sewerage only if treated waters are discharged to water bodies sensitive to eutrophication. For other waters, lower levels of treatment are considered sufficient. Unfortunately, in the absence of thorough analysis on which water bodies are sensitive, and which are not, the government has considered the whole country to be sensitive. This is pushing up the total investment expenditure requirement by 25 per cent according to the World Bank compared to a situation where no waters would be sensitive (World Bank, 2000).

Second, costs can be reduced by choosing appropriate environmental policy instruments. As part of its transposition of the EU legislation, Poland will have to adapt its environmental policy instruments to, *inter alia*, the *Integrated Pollution Prevention and Control* (IPPC) *Directive*. The Directive mandates using BAT as a reference for abatement requirements. The experience with technology based standards has been mixed in OECD countries. On the positive side, BAT-based standards are transparent and relatively easy to monitor and enforce. On the negative, they are not cost-effective, because they imply application of similar technical solutions and similar level of abatement by all polluters, irrespective of their marginal abatement cost. They may discourage innovation and be abused as trade barriers. They may also distort competition by locking firms in technologies that their competitors have developed and registered with authorities as BAT. In contrast, economic instruments minimise total costs (to the sector, region or entire country) by allocating most of the abatement efforts to those polluters that can do it the most cheaply. The amount of expenditure required to reduce air pollution and waste has shown to be particularly sensitive to the choice of instruments. Box 16 shows how economic instruments can result in cost-effective solutions to reduce pollution from large combustion plants.

Third, costs can also be reduced focussing on *environmental quality objectives* rather than on individual technological requirements. Concentrating on ambient quality objectives encourages to formulate alternative strategies and compare their costs and benefits. This provides greater flexibility in the choice of solutions than under rigid technical requirements. In the water sector, for example, compliance costs can be reduced by using an appropriate sequencing of investments during the transition period and focusing on water quality objectives first, rather than on building water treatment facilities in each hamlet. Kindler et al (1998) have demonstrated that a few well-located water treatment plants in the Upper

Box 16. How to abate pollution from large combustion plants in a cost-effective manner?

The EU Large Combustion Plant (LCP) Directive and the Second Sulphur Protocol require that Poland reduce total emission of sulphur dioxide (substance contributing to so-called "acid rain") to meet national ceilings for 2000, 2005 and 2010 ("national targets"). The authorities must also ensure that power plants and other large combustion plants (> 50 MW_{th}) meet specific, individual emission limit values ("emission standards"). All new plants must comply immediately and existing plants by mid-2004. This can be achieved in a cost effective manner. The Protocol allows to minimise the total investment cost by concentrating the emission reduction mainly in the plants where it can be done in the cheapest way. The Protocol also explicitly allows exemptions from the "emission standards" for some existing plants where abatement costs would be excessive. In Poland, studies have demonstrated that relaxing the requirement for plant level emission standards could decrease the total investment required to meet the national SO_2 emission ceiling of the Second Sulphur Protocol by 2010 from $3.5 billion to $1.5 billion. Saving in total annualised cost would amount to $360 million a year (EnergySys, 1997). Similar exemptions from some provisions of the LCP Directive have also been granted by the EU Council of Ministers to Spain.

Odra river basin could achieve improvements in water quality similar to those that would be achieved by building water treatment plants in all towns of more than 2000 persons (as required by the EU D*irective on urban wastewater treatment plants*) at only 60 per cent of the cost. Paying an additional 40 per cent of the cost would not bring commensurate improvements in water quality One cost-effective solution is therefore to develop investment strategies for all river basins that would guarantee improvements in water quality. In this regard, Poland requested a transition period during which the EU legislation would not be complied with to the letter.

Hence, provided that these three factors of cost-effectiveness are fulfilled, the overall bill implied by accession would not be excessive. Assuming cost-effective implementation and reasonable transition periods, the current level of annual environmental investment would have to be raised by only 20-30 per cent in the years 2001-2005 (Zylicz, 1999, Berbeka, 1999)[93] to comply with EU requirements. Disregarding cost-effectiveness or significantly shortening transition period would require a much steeper increase in investment requirements. Equally important will be to re-arrange priorities for public investment expenditure. An overall reallocation of public spending away from large air polluters (which are already close to EU requirements) to low air emissions sources, as well as to waste and water pollution, seems inevitable.[94]

Thus, assuming adequate policies, financial challenges are significant, but manageable. The small increase in investment required in the near future could be financed through a combination of several actions. The most obvious source of financing is the pre-accession assistance from the EU. But all EU subsidy schemes (ISPA, Phare, SAPARD) taken together can only increase the current spending by up to 10 per cent. Much greater potential to mobilise additional finance lies in two additional sources: *first*, regulatory reforms to encourage private sector participation in environmental protection; *second*, increasing present tariffs for using the environmental infrastructure.

Private sector participation

Financing environmental investments will be all the more easier if the private sector is involved as a financier and/or provider of environmental services. The current policy and regulatory framework is evidently not adapted to attract private participation in public environmental infrastructure. For instance, at the end of 2000, only two municipal landfills and two waste-water treatment plants were partially owned and operated by strategic private investors. In stark contract, in the Czech Republic and Slovakia most of the modern landfill capacity (more than 20 projects) conforming with the EU Landfill Directive are built and operated by international private sector companies. In Hungary, seven municipal water companies and eight municipal waste management are partially owned and their investments financed by large foreign companies.[95] In Slovenia, by 1977 at least 12 municipalities had privatised communal services either through concessions or joint ventures with private companies (Mrak, 1998). This marks a tremendous difference in investment climate given the fact that Poland has more inhabitants (hence wastewater and solid waste) than all these countries taken together.

Obstacles to private sector participation include the low level of cost recovery through tariffs, and uncertainties in property rights. In addition, weak enforcement of environmental requirements with respect to public utilities, which operate depreciated and highly polluting wastewater treatment plants or landfills gives them unfair competitive advantage over private developers and operators, who are expected to comply with stringent standards and codes of conduct. This effectively discourages the latter ones from investing. Abundance of public subsidies seems also a barrier to significant private sector investments. These subsidies are usually not available on the same terms and conditions to private investors as to municipal public companies. Numerous experts and representatives of commercial banks have reported the cases where, for these reasons, city authorities rejected private financing even for projects that were commercially viable.[96]

Tariffs

Available studies suggest that a higher degree of cost recovery in expanded environmental infrastructure should not create an excessive burden for the majority of households if investment programmes are cost-effective and the implementation period is sufficiently long. For instance, the World Bank concluded that under low cost scenario, and if the investment is spread until 2015, the additional household water and wastewater bills should have a limited impact for most households.[97] Berbeka and Berbeka (1999), in a much more detailed study have concluded that if all the costs (annualised capital cost, operational and maintenance costs) were translated into higher tariffs, water and sanitation bill would become excessive for less than 10 per cent of the population. Shortening the transition period to below what Poland had requested (8-13 years for the urban wastewater treatment Directive and 8 years for the Directive on the quality of water for human consumption) would however not be affordable to many more households. Even in the most optimistic scenarios, selected vulnerable groups would need some support. The authors also noted a great difference between local water prices, and under-pricing of water and sanitation services in many municipalities. Pricing is also inefficient due to the perverse incentives conveyed through price subsidies (including reduced rates of effluent fees for municipalities). Targeted income support instead of blanket price subsidies would provide the right incentives to consumers to save water and would be more affordable to local budgets.

Costs and benefits

Poland's strategy with respect to the EU environmental requirements would be best formulated on the basis of a cost-benefit analysis. State-of-the-art techniques of economic valuation of environmental benefits are rarely used in Poland. Environmental policy proposals of the Ministry of Environment are usually not supported by robust economic arguments and often fail to require that other Ministries integrate environmental externalities in their projects and policies. Arguably, cost-benefit analysis is still in its early age and conclusions cannot always be drawn with a sufficient degree of certainty. Some economic valuation studies compatible with the international standards have been conducted on the cost and benefit of achieving different environmental objectives, although most of them have had limited sectoral and geographical coverage.[98] Recently Poland was included in a comprehensive assessment of the benefits arising from compliance with the EU Environmental *Acquis* (EDC/EPE, 1999). The authors of this study found that the quantified benefits of *air* quality improvement exceeded the costs. In contrast, the quantified benefits of improved *water* quality are slightly lower than the cost estimate. The results however are very sensitive to a number of assumptions and uncertainties. Therefore the authors have concluded that it was not possible to state conclusively whether the overall benefits of compliance with the air and water directives exceed their respective costs.

It is however clear that the cost of investments needed to reduce the release of nutrients nitrogen and phosphorus in the Baltic Sea will greatly exceed benefits. The study by Gren *et al.* (1996) analysed all Baltic bordering countries and found that all transition economies (except Russia) are likely to be net losers of the Baltic clean up programme with aggregated net losses of about € 1.2 billion. Poland will lose the most (about € 630 million net loss). In contrast, all EU member countries, in particular Sweden, will be significant winners, gaining altogether net benefits valued at € 1.3 billion. This allocation of costs and benefits would justify the transfer of financial support from EU member states to transition economies in order to share the burden of achieving common benefits. Similarly, it is clear that investments to reduce sulphur dioxide emissions from high stacks would benefit the whole of Europe, but the financial cost would have to be borne essentially by the Polish population. However, in return, the Polish population can expect benefit from similar efforts undertaken by Germany, Czech Republic and other foreign sources of acid rain that is deposited in Poland.

Concluding remarks and recommendations

Poland has achieved considerable progress over the last decade in containing the most pressing pollution problems. Nonetheless, there are signs that this early progress may fade away in the absence of far-reaching policy changes. The main challenge for the future will be to formulate sustainable development policies that are both environmentally effective and market friendly. This will require introducing a number of reforms in environmental policy.

Institutional reform would be a key step in making environmental policies more effective. The implementation of environment policies has been appropriately devolved to the right level of the government. Nevertheless, the multiplicity of actors has a price. It bears the risk of insufficient co-ordination and duplication in actions. Clarity in the mandates and objectives of the various actors as well as consistency between tasks and instruments is therefore essential. It is also crucial to integrate environmental objectives in the policies formulated by all Ministries – in particular with respect to energy, taxes, and industrial restructuring. Already, an inter-ministerial task force plays a role in fostering some environmental initiatives within the government. But the authorities need to nurture a dialogue within the government on the choice of ecological targets and the appropriate means to reach them. For instance, the role of energy policy in achieving higher air quality would need to be clarified, with a more prominent role devoted to renewable energy sources. Involving representatives of other government agencies and enterprises besides environmental experts at every step would help to build a sense of "ownership" among all actors.

Poland's progress in abating pollution owes a lot to its historically adequate *mix of policy instruments*. Evolving for about 20 years together with the market reforms and liberalisation of energy prices, it has induced large and growing investment flows in environmental protection equipment and has helped cut emissions of most pollutants in the first years of transition. Nonetheless, the present mix is now becoming less effective to address the remaining pollution, which is more costly to abate. In addition, it relies excessively on subsidies, which undermines its efficiency and may soon become unaffordable for the government budget. Except for new product charges and deposit-refund systems, there have been few innovations in environmental policy in recent years. A reform of the mix of instruments is therefore necessary.

The current mix is, in any case, likely to be challenged by the transposition of EU legislation, which relies heavily on "command and control" instruments, in particular technical standards. International experience shows that policy instruments should stay away from over-reliance on technical standards, which impose excessive costs on the economy and create distortions to trade and competition. The goal should be to find a *mix* of environmental policy instruments that achieves a delicate balance between ecological effectiveness and market friendliness. Thus, in addition to the "command and control" instruments, Poland should continue to develop well-designed economic instruments, such as environmentally-related taxes and trading of emission permits. In particular, the authorities could take advantage of their ongoing tax reform to "green" the tax system. Excise taxes on fossil fuels in particular should be harmonised in terms of CO_2 content, which would involve introducing an excise tax on coal – the dirtiest source of energy. The present system of emission fees has well served its revenue raising purpose but should be reformed, as it is complex to administer and collect. The authorities should decide which of the 62 air emission fees are really important and, in some cases, raise their rates to make them more environmentally-effective. Most others could be scrapped. It would be essential to maintain the present level-playing-field in the collection of environmental fees and avoid introducing elements of discretion, as this can only reduce arm's-length relations with polluters.

The role of *Environment Funds* needs to be reconsidered. To provide true value added to financing environmental investments the funds should be de-politicised and need to radically improve cost-effectiveness of their project portfolios. They need to follow *EcoFund* and *Krakow Regional Fund* examples and introduce transparent and rigorous project selection criteria and procedures. More strategically, as the period of transition draws to an end, market-based sources of financing are becoming available for well-designed environmental protection investments. Hence, the need for Environment Funds providing subsidised resources to polluters is much less justified. With improved financial and capital markets and strengthened enforcement of environmental regulations, environmental investments will increasingly be seen as ordinary investments requiring financing but eventually paying for themselves. Save exceptional cases, such as provision of public goods or significant external benefits, there are no reasons why environmental investments should receive a special treatment if they are considered as part of "good practices" and if people value clean environment. Hence, the Funds should be phased out within a reasonable time period. Until then, they could play a key role in the environmental protection investment effort required by accession to the European Union. This would call for targeting their mandates more narrowly on accession related investments. Funds should be vehicles for leveraging additional finance from private and foreign sources and carefully avoid substituting for and crowding-out other financing institutions.

Accession to the European Union will require large investments in order to bring water and air emissions, as well as waste disposal, in line with permissible levels. These large investments are both affordable and financeable as long as they are made *i)* in a cost-effective manner, *ii)* with greater private sector participation, and *iii)* along with higher cost recovery ratios. If these three criteria are fulfilled, a relatively small increase in present expenditure should be sufficient to achieve EU standards. Cost effectiveness requires development strategies utilising the flexibility provisions included in many directives. Appropriate use of economic instruments can also significantly decrease compliance costs, by concentrating investment efforts on those plants where abatement costs are the lowest. Wider participation of private sector in developing public environmental infrastructure will require regulatory and policy reforms enabling the entry of private investors into this market, and levelling the playing field in environmental enforcement and finance. Raising tariffs for using the environmental infrastructure – in particular municipal tariffs for consuming water and releasing wastewater – is also essential. Bringing cost recovery ratios closer to international standards would not only reduce water usage, but it would also create a necessary condition to attract private and foreign finance. This should not cause an undue burden for most households, and targeted support can be envisaged for low-income households. Alternative approaches are always possible, but they would be costly for Poland's already stretched benefits and would require to cut back other government priorities.

Box 17. Recommendations on environmentally sustainable growth

Integrate environment protection with other policies

- Review existing tax system to phase-out environmentally harmful incentives and equalise energy taxation in terms of carbon content.
- Where technically feasible, use Cost-Benefit Analysis to support appraisal of major government projects and policies (for instance in transport, energy and agriculture). Ensure adequate incorporation of environmental external effects into the analysis.
- Ensure effective integration of environmental considerations in the most sensitive sectoral policies, in particular for industry, mining, transport and agriculture through adequate policy and regulatory framework.

Box 17. Recommendations on environmentally sustainable growth (*cont.*)

Improve co-ordination and effectiveness of institutions

– Clarify roles and responsibilities of different government institutions in environmental policy in particularly at the *Poviat* and *Voivodship* levels.

– Review draft Water Law and draft Law on Environmental Protection in order to transfer responsibility of investment programmes to River Basin Management units.

Select an appropriate mix of instruments

– Review the draft Law on Environmental Protection to provide the legal basis for tradable emission permits; develop regulatory framework for rules and modalities of domestic emission trading systems.

– Streamline the environmental objectives of air emissions fees. Identify which of the 62 fees should provide genuine incentives. Phase out those fees that play neither incentive nor revenue raising role adequately.

– Phase-out reduced rates of environmental fees for selected polluters, in particular of wastewater fees for municipal waste water treatment plants.

Ensure that environmental protection investments are financed

– Introduce the Polluter Pays Principle defined according to the original OECD "no-subsidy" philosophy to key policy documents and legal acts. Review all draft laws to eliminate provisions for excessive subsidies, which starkly violate the polluter pays principle.

– Remove obstacles to and create conducive conditions for private sector participation in the development and management of public environmental infrastructure.

– Formulate a strategy for phasing-out Environment Funds, for example by tying their operations to the implementation of the most investment-heavy EU environmental Directives. Define specific and targeted eligibility criteria for projects to be supported by Funds. Establish and enforce clear criteria for the operations of the Funds, including cost-effectiveness, transparency, accountability, and others listed in St. Petersburg Guidelines. Review existing laws and new draft laws to eliminate provisions earmarking environment fees and fines within Environment Funds.

Prepare for EU accession

– Prepare realistic implementation and financing strategies for most investment-heavy directives. Pay particular attention to minimising the costs of attaining environmental quality targets, *e.g.* by incorporating economic instruments into implementation strategies where appropriate.

– For the Urban Waste Water Directive: *i)* develop least-cost investment plans using the Upper Odra plan as a reference; *ii)* identify the water bodies which are not sensitive to eutrophication in order to avoid expensive high level removal of nutrients where it is not justified by environmental and social benefits; and *iii)* avoid construction of centralised sewerage systems where the costs would be excessive compared to benefits.

– For Nitrates Directive, review and eliminate environmentally perverse incentives in the agriculture policy.

Notes

1. Officially controlled prices are defined as prices that are significantly made up of indirect taxes, those set by local authorities, and those subject to official tariff approval.
2. Volatile prices are defined as prices of fruits and vegetables, certain services (housing occupancy charges, electricity, hot water charges, telephone calls, rental charges, TV and radio license fees) and fuels.
3. Trimmed means are estimated by symmetrically reducing the weight placed on those categories where the most extreme price movements – both up and down – have occurred at any point in time, regardless of which ones these happen to be. The assumption behind this approach is that extreme price movements are always caused by temporary shocks. In practice, the approach raises the question by how much the ends of the distribution ought to be trimmed.
4. A useful discussion of these issues in the case of the Bank of England is provided in Kohn (2000).
5. Two different definitions are presently being used: the economic balance and the financial balance. In addition, the Ministry of Finance reports its accounts based on the IMF's GFS methodology (with a lag of one year) and GUS prepares general government sectoral national accounts based on ESA95 (with a lag of two years).
6. When the initial budget for 2000 was drafted, the economic deficit was not yet used. This economic deficit target of 2 per cent had therefore not been announced at that time.
7. This discomforting fact is confirmed by a 1999 Demoscop survey among SME entrepreneurs. Almost 50 per cent of interviewed managers confess that "it is not possible to conduct profitable business activity while observing all regulations and paying all required taxes and other charges". According to a National Labour Inspectorate (PIP) report in June 2000, 98 per cent of companies audited by this agency were breaking some of the regulations on employee salaries and severance payments in 1999. The issue of corruption has been raised in World Bank (1999), European Commission (2000) and Balcerowicz (2000).
8. The modernisation of Polish agriculture results in releases of excess labour force which, to date, have proceeded at a slow pace. Productivity gains did not lead to massive unemployment but to increasing underemployment in many farms. Farming has played an employment buffer role, absorbing the labour force released from other sectors such as the mining industry, and providing the unemployed with housing and food.
9. See government documents: *National Strategy for Employment Creation and Human Capital Development*, 2000-2006; *Government Policy Guidelines for SMEs Until* 2002; *Increasing the Innovativeness of the Polish Economy Until the Year* 2006.

10. Except for the tightening of sickness benefit eligibility criteria, for which widespread abuse had been common.
11. Table 9 of the OECD *Survey of Poland* 1999/2000 scrutinises labour market rules, practices and outcomes against OECD Jobs Strategy recommendations. The gaps identified in this table are still valid.
12. The total costs of unemployment compensation and health insurance premia for the unemployed, without including pension payments to the early retirees from restructuring sectors, reached Zl 4.2 billion (0.6 per cent of GDP) in 2000.
13. In SoEs, restructuring sectors, FDI firms terminating their social packages, agriculture and public administration – including education and health services.
14. To capture poverty and disadvantaged living conditions, the following "poverty lives" were adopted in the official surveys: the *minimum existence* level is the income necessary to secure basic food, shelter, most basic appliances, clothing and medecine; the *social minimum* ensures modest living conditions where 60 per cent of family expenditures go to food and shelter needs; the *relative poverty* represents an income level below 50 per cent of national average per capita expenditure. These benchmarks are calculated on a per capita basis, after adjusting for family size which creates economies of scale in the use of household assets.
15. Less than 20 per cent of the jobless received unemployment compensation in September 2000. Family allowances – and not unemployment benefits – are the principal source of social transfers to the long-term poor and account for 20 per cent of their total disposable income.
16. See Okrasa, 2000.
17. For instance, Labour Fund grants and other subsidies available for the employment and business start-ups of workers fired from declining industries are not systematically available for the long-term unemployed. Local labour funds have limited means to allocate such support to the long-term unemployed on an *ad hoc* basis.
18. Last available year: 1997. See Keane and Prasad (2000).
19. A traditional exposition is A. Okun (1975). Interaction between growth-inducing and poverty-reducing measures in developing countries are reviewed in various articles in IMF (2000*b*). See notably Rodrik (2000).
20. Transfers other than old-age and disability pensions have three components: family (child) allowances, which account for 30-40 per cent of social transfers according to recipient groups, unemployment allowances, which account for another 30-40 per cent, and local government allowances for the remaining 10-15 per cent. Setting pension payments aside, 60 per cent of households received social benefits in the second half of the 1990s, while the lowest income decile of the population obtained only 21 per cent of total social transfers (Okrasa, 2000).
21. In 1993, the Labour Fund and Social Assistance programmes were the only means-tested benefits. Subsequently, a series of measures tied some benefits to income criteria. Also, eligibility for unemployment compensation was gradually tightened and the replacement rate lowered (Okrasa, 2000).
22. The recommendations of a World Bank study in the mid-1990s, which demonstrated that more effective support can be offered to the most needy through better targeting and income-tests, without tangibly increasing the total amount of transfers, appear still valid. See Grootaert, 1995.

23. Programmes to lower the employment costs of disadvantaged groups would be the most straightforward. Support to business start-ups and self-employment by the same groups may also be contemplated.

24. See OECD *Economic Survey of Poland* 1999/2000. The total tax wedge is calculated by adding employer and employee contributions to first and second pension pillars (10 per cent and 6 per cent); disability, sickness and accident funds (11 per cent, 2 per cent and 1.3 per cent); labour fund (2.1 per cent) and the withholding of personal income tax (7.8 per cent in average workers' bracket).

25. 1999 DEMOSCOP survey of SMEs realised on behalf of the Polish Foundation for SMEs. The results are summarised in the 2000 yearly report of the Foundation.

26. Nineteen per cent of all SME employees work outside company premises, 24 per cent with fixed-term contracts. Eleven per cent of workers in micro enterprises have no employment contract, and 8 per cent work on a freelance basis (under "mandate contracts").

27. The third consecutive renewal amounts legally to signing an unlimited duration contract.

28. A possible perverse effect of existing provisions concerns the generosity of maternity leave. Companies which feel unable to meet obligations, including SMEs, may in practice be discriminating against women (25 per cent of women and 14 per cent of men with a vocational education are unemployed; women constitute 77 per cent of the long-term unemployed).

29. This supplementary social role of labour offices may help explain the fact that recorded unemployment could overstate the true extent of joblessness.

30. Poland has a tradition of dialogue between employer and worker organisations, and the participation of SME organisations in this process is now necessary. SME proposals for labour code reform appear compatible with the social priorities of the labour code.

31. Early 2001, a Joint Assessment of Employment Policy Priorities (JAP) exercise has been initiated with the European Commission, to examine labour market challenges in the framework of the EU Employment Strategy.

32. Mazovieckie (including Warsaw), Wielpolskie and Slaskie.

33. A 1999 survey revealed that in case of loss of work 70 per cent of employees are prepared to commute to another town but only 37 per cent are prepared to move.

34. Inter-urban migration rate declined from 1.1 per cent in 1995 and 1 per cent in 1996 to 0.7 per cent in 1997.

35. These include large rent distortions due to the bulky stock of subsidised housing belonging to local governments and old era co-operatives (rents charged for these dwellings are 10 per cent of the rents charged for similar apartments by private developers). This artificial price structure, together with the non-transferability of tenure rights, diminishes turnover and distorts demand in housing markets. Strong tenant rights also weaken investor incentives, as well as the collateral value of houses for mortgage financing. Legal uncertainties of claims on land from previous owners, and other red tape surrounding the zoning process are also mentioned (McKinsey Global Institute, 2000).

36. A first agreement between Poland and the EU was reached in September 2000, permitting the total phase-out of import tariffs on a comprehensive range of "non-sensitive" agricultural products as of 2001 (fruits, vegetables, horsemeat, livestock, mushrooms),

and an increase by the same year of import quotas on more sensitive products (wheat, milk, beef, pork, poultry). Parties expect a rapid trebling of the current yearly € 200 million trade in "non-sensitive" products.

37. As seen in certain southern districts of the Malopolskie region.
38. Local government initiatives should not degenerate into harmful domestic tax competition.
39. Heavy and light manufacturing, chemicals, retail trade, financial services, etc.
40. A detailed description of the procedures applied in various methods of privatisation was presented in January 2000 OECD *Economic Survey of Poland*.
41. According to the provisions in force, at least 10 per cent of revenue from the privatisation of "commercialised" companies shall be allocated to the reform of the social insurance system. Five per cent of shares held by the State Treasury in commercialised companies or the receipts obtained from the sale of such shares shall be allocated to satisfying claims of the former owners of property taken over by the State Treasury (a draft law prescribes restitution and compensation measures for the owners of expropriated/confiscated industrial and real estate properties in the pretransition period). Two per cent of the shares of sole shareholder companies of the State Treasury shall be allocated to the Foundation for Polish Science. Two per cent of the shares of these companies shall be allocated to Agencja Rozwoju Przemyslu SA (Industry Development Agency), to help restructure State Treasury companies.
42. Companies employing more than 500 workers, having € 6 million in sales or € 2 million in capital.
43. The actual value of direct privatisations is in fact understated, most operations being financed by leasing.
44. The national airline LOT initiated in a major re-equipment and commercial development program after the participation of its strategic investor Swissair.
45. The new 35 per cent owner of TPSA, France Telecom (which has an option to increase its participation to 51 per cent), aims at increasing the productivity ratio of the company (the number of customers per employee) from 145 to 220 in 5 years. It will effect no mass layoffs in the next 40 months. The company will develop new activities in mobile telephony and data communications.
46. See Annex IV, "How is life after privatisation?".
47. Unicredito Italiano, strategic investor of Bank Pekao SA, evaluates its present redundant workforce at 15 000 from a total of 20 450 – declaring nevertheless that it aims at staff redeployment rather than layoffs when its social package expires at end 2000. Goodyear cut its workforce from 4 700 to 4 300 at the expiration of its package at the Debica factory in 1999. In 2000 the Morliny meat plant, controlled by Spain's Campofrio, will have to lay off 400 employees out of 1 600.
48. The privatisation strategy which will be applied in the Bank PKO BP, the last large-size institution still in the public sector is the object of a controversy. The government may opt for a direct IPO, as a way to avoid the control of the entire banking sector by international institutions.
49. The harmonised competition rules will come into force in April 2001. Some sector-specific competition rule changes were made in sector-related statutes such as the 2000 Telecommunications Law.

50. Workers eligible for retirement within five years had the option to take a "miner's leave", equivalent to 75 per cent of the monthly salary paid up to retirement. Alternatively, all workers could opt for "social allowances" equivalent to 65 per cent of the monthly salary paid up to two years, with free retraining and a lump sum allowance at the end of training. A higher lump sum cash allowance upon resignation was also available as a third option.

51. Mine closures necessitate "exit" investments for environmental protection and ground consolidation purposes.

52. Steel workers' separation packages are similar to those of miners, but only two options are offered: workers eligible for retirement within four years can take 75-100 per cent of their normal pension immediately, or otherwise all steel workers are entitled to severance bonuses of varying amounts according to their working conditions. Free retraining is made available to all departing workers.

53. One explosives company remains highly profitable.

54. The telecommunications reform is covered in the section on the New Economy.

55. The National Association of Local Governments for the Preservation of Rail Transportation (OSSUTS), created by 70 municipalities, is of that opinion.

56. Railway debts attained Zl 6 billion in 2000, more than 3.5 billion are owed to banks and 800 million to the public treasury. They also carry on their books Zl 2 billion of uncertain receivables from coal mines and steelworks, and property assets estimated between Zl 0.6-1.5 billion, including valuable energy and telecom transmission networks across the territory.

57. Recent shortcomings in the financing of PKP's loss-making passenger transport businesses by cross-subsidies from profitable freight activities have contributed to the deterioration of the company's finances. The decline in rail freight activity made this arrangement less workable and contributed to growing bottom-line deficits. New decrees published in December 2000 recognise government budget responsibility for co-financing passenger transport. The Ministry of Transport will co-fund interregional transport and regional authorities will co-fund regional services, through contracts with PKP or other possible entrants.

58. The *Act on Banking* and the *Act on the National Bank of Poland*, adopted in 1997 and implemented in 1998, have reorganised banking supervision in accordance with EU principles.

59. New corporate loans denominated in zloty increased from Zl 6.3 billion in 1997 to more than Zl 12 billion in 2000, foreign currency denominated loans from Zl 4.1 billion to more than Zl 7 billion, issues of corporate commercial paper from Zl 2.5 billion to Zl 10.3 billion, and issues of corporate bonds from Zl 0.6 billion to Zl 2 billion. Despite this growth, according to a Polish Academy of Sciences study in 2000, only 19-20 per cent of investments in the corporate sector are financed with investment loans, against 60 per cent in the EU [Gazeta Bankowa, 20 June 2000].

60. In other OECD countries too, pension funds are banned or refrain from joining the boards of investee companies, but issue guidelines on the corporate governance norms they expect to be applied by companies.

61. Estimation of total funds committed in *private equity funds*, which engage primarily in venture capital investing.

62. More funds are directed to genuine start-ups rather than the SME privatisations that venture capital funds used to finance. Four international funds are locally active, each managing $60 million to $500 million, together with smaller local partnerships. Other private equity funds invest in Polish companies from their home bases.
63. The total amount of leasing contracts has been estimated at Zl 7.5-11 billion in 2000. The most frequently financed asset categories are industrial machinery, information technology goods and transport equipment.
64. Competition in banking forced these moves. Three large banks (Pekao SA, BIG Bank Gdanski and BRE Bank SA) created separate SME departments and many banks introduced simplified loan scoring procedures to reduce the fixed costs of SME loans. In a rather innovative move, "civil loans" initially designed for consumer lending have been extended as of 1999 to the financing of microenterprises.
65. Banking Education and Research Foundation (FEiBB) and INDICATOR survey in 2000. Only "small firms" with annual sales below Zl 3.2 million and "medium firms" with sales below Zl 30 million were covered. This amounts to a sample of smaller firms than the official SME definition (10-250 employee firms), while excluding the micro-enterprises of the informal sector.
66. Recently, the cost of short-term loans for bankable SMEs has been around WIBOR+3 while for prime corporations it is of WIBOR+1.1. Riskier SMEs may borrow at up to WIBOR+5, according to their creditworthiness.
67. At present, the court registration of new businesses in large cities such as Warsaw takes up to five or six months and is a serious embarrassment to entrepreneurs, employees and investors.
68. The margins of local co-operative banks seem to be higher in certain instances than in city banks. The gap between the quality and price of financial services is an aspect of the gap between large cities and western regions, and smaller towns and eastern rural areas.
69. Local and regional banks have long operated under the umbrella of BGZ, with cross-ownership and mutual reporting links which have complicated accountability. The Act on the Functioning of Co-Operative Banks, which came into effect on 28 January 2001, granted equal rights to all banks concerning affiliation with local co-operative banks, and ended BGZ's national apex position.
70. Demanding standards of financial history, asset composition and application procedures are required from fund raisers. Issuing securities in WSE has fixed costs up to Zl 100 000 and annual fees of Zl 60 000 [these fees amount respectively to Zl 20 000 and Zl 11 500 in the London Stock Exchange] and all secondary market transactions in commercial bonds are subject to a stamp duty of 2 per cent.
71. By merging its already existing secondary market with an independent and freer market (CeTo).
72. By end 2000, one Polish telecommunications firm, Netia, was already successfully listed on the NASDAQ.
73. There is today one national SME loan guarantee program, funded by the Fund for Credit Warranties created in 1997, and managed by the BGK Bank in cooperation with 44 commercial banks. Guarantees of a ceiling value of 30 per cent of the equity capital of borrowers are provided for fixed investments and raw material purchases by SMEs, and 514 firms among 708 applicants, for a total loan value of Zl 150 million, have been serviced up to April 2000. A subsidy programme for SMEs hiring redundant employees from restructuring sectors, funded from EU Phare funds, terminated in 2000.

74. In accordance with international best practices and disciplines, public support programmes should help market participants explore technological and geographic frontiers, in externality generating ways for the rest of the economy. This may be the case of carefully designed R&D, technology transfer, export market development and foreign investment guarantees.

75. Deloitte, Touche and Tohmatsu, "Technology Industry Survey: Fast 50 Companies in Central Europe", 2000. There are two Polish companies among the first five: Telecomm Systems, specialised in telecommunications and network services; and ComArch, an IT systems developer and designer.

76. These are the Elektrim power and communications holding, the Optimus computer manufacturer, the TPSA telecommunications operator, the Prokom software firm and Softbank, a software provider to financial institutions.

77. Two important joint ventures were finalised in 2000, between Hewlett Packard Polska, Oracle Polska and local Computerland, for the design of large systems for banks, power companies and retail chains; and another between the local Softbank and the US giant Computer Associates to develop computer services for financial companies.

78. As an example, industry representatives in neighbouring Germany mentioned their readiness to hire 20 000 foreign ICT specialists in the years to come – and the figure of 10 000 possible Polish immigrants has been mentioned.

79. Forty-two per cent of Polish SMEs employing 10 to 250 persons had 3/4 of their personnel using computers according to this survey. This ranked Polish SMEs among the top users in Europe, together with Sweden, Denmark, UK and Austria.

80. *Prawo I Gospodarka* (English translation), November 2000.

81. One topical subject is the granting of "free carrier selection", *i.e.* the freedom of customers to select the long-distance carrier they connect to spontaneously (without dialling access numbers). OTR rulings in this area are expected.

82. GDP at purchasing power parity in 1995.

83. The data mentioned in this paragraph are mostly taken from: Central Statistical Office (1999): "Environmental Protection in Poland", *in* Quarterly Statistics Volume VII, No. 3, December, Warsaw.

84. After adjusting for a change in the definition in 1996.

85. International comparisons of environmental expenditure are difficult since different countries use different coverage and different definitions, sometimes diverging from the OECD standards. For example, GUS changed expenditure classification in 1996, rendering the later data not directly comparable with those from before. Not all new investment expenditure categories are considered "environmental" by OECD definitions.

86. Assistance provided by Environmental Lobbying Support Office (*www.most.org.pl/bwle*) in facilitating access to numerous documents and analytical papers is gratefully acknowledged.

87. Poland has four-tier and two types administrative structure. Central, Voivodship (Provicial), Poviat (County), and Gmina (municipality). The first two are centrally elected. The last two are elected locally. At the Voivodship level centrally appointed administration coexist with locally-elected legislature and executive.

88. The *EcoFund* is a unique environmental finance institution in Poland, which was established in 1992 by the Minister of Finance as an independent foundation for the purposes of the management of funds obtained through the conversion of a part of the Polish foreign debt into environmental investments. The finance committed to be spent in the period 1992-2010 amounts to $545 million. The *EcoFund* is managed by an operationally independent Management Board under the supervision of a Foundation Council. The *EcoFund* offers matching grants (maximum rate of assistance of 30 per cent) for five clearly specified types of projects, mainly of global and cross-boundary significance. The OECD and the EU have conducted an in-depth performance review of *EcoFund* in 1996. International auditors have highly appraised its compliance with St. Petersburg Guidelines and concluded that *EcoFund* could serve as a model for public financing institutions in a region.
89. Under the BAT approach, experts from the European Commission determine what is thought to be the best technique for reducing a particular type of emission in a given production process. The word "technique" is used rather than the word "technology" to indicate that the regulation encompasses the role of management and operating practices, together with the choice of technologies. Installation of equipment is not considered sufficient; good management practices are also required.
90. Krakow University of Economics (1999) and Klarer, J., J. McNicholas, E. Knaus (1999), Sourcebook on Economic Instruments for *Environmental Policy in Central and Eastern Europe*. A Regional Analysis, REC, *Szentendre, Hungary*.
91. The first step towards reform has been taken. With the draft "*Law on responsibilities of producers and on product charges*", environmental surcharges on selected products and deposit-refund schemes are proposed. They are expected to substitute for the expected decline of the revenue generated by emissions fees.
92. In critical public sectors, such as sanitation, large combustion plants and drinking water, several independent studies were conducted (Krakow University of Economics, Grontmij, 1996; TME, 1999, World Bank, 2000) and results are detailed and relatively robust. In addition detailed studies of costs of compliance with Large Combustion Plant Directive were conducted by EnergySys in 1997 and recently by Energoprojekt in 2000. Estimates of costs of compliance with EU laws on waste management cast more doubts due to the uncertainties on the flows of different types of waste produced in Poland (Berbeka, and Grabowski, 1999). The Directives that will cause adjustment burden to the private sector have been studied the least. In particular, implementation of IPPC Directive can be disruptive and very costly for some industrial sectors, but the cost can be only grossly estimated.
93. This is determined as follows: assuming cost-effectiveness and a full compliance by 2015, annual investment flows of € 1.6 billion would be required. An estimated 75 per cent of the present level of investment expenditure (*i.e.* about € 1.7 billion annually) is already allocated to projects that bring compliance with EU laws, just enough on average in the entire compliance period. However, cash flow simulations conducted by Zylicz and Berbeka, who have taken Directive-specific implementation timetables, indicated that if the historical trends in investment expenditure continued there would be a temporary deficit of finance for investments in the years 2000-2005.
94. This will require some changes in the policy and legal basis of operations of Environmental Funds. For example, currently the revenue of SO_2 and NO_x emission fees, which account for a lion share of total fee revenues are earmarked within Environmental Funds for projects related to abatement of these two gasses. This provision will prevent the funds from increasing support to waste management or water treatment,

even if all EU requirements on air pollution are implemented. Some environmental laws pending in Parliament contain even more rigid provisions for such an internal earmarking.

95. Data for Poland are expert estimates by Zbigniew Grabowski (waste) and Maciej Lorek (water) and for Hungary by Zsuzsanna Lehoczki form COWI Hungary. Data for Czech Republic and Slovenia come from the presentation by company Marius Pedersen at the PEPA meeting organized by the European Commission in November 2000.

96. In addition, the national strategy for ISPA had not been agreed by the government and released to the public by end-2000, even though the first project pipeline was approved and the second was underway. This also appears to contribute to delaying investments in municipal environmental infrastructure.

97. What the households can afford, should be assessed on case by case basis. However, there are some internationally recognised benchmarks, used for example by EBRD and the World Bank in evaluating revenue risk in infrastructure projects in medium to low income countries. The maximum affordable share of water and sewerage bill in the household disposable income is considered to be 3 per cent to 4 per cent, the share of heating 5 per cent to 6 per cent and of electricity 7 per cent to 8 per cent. For a limited time individual shares can be higher, provided that the total utility bill does not exceed 15 per cent to 20 per cent of the household income.

98. Krupnick *et al.* (1995) conducted valuation of health impact of improved quality of ambient air using benefit transfer approach. Zylicz *et al.* (1994) used contingent valuation technique to investigate the willingness to pay for the improvement of the water quality in the Baltic Sea. Berbeka and Peszko (1997) applied the Contingent Valuation Method (CVA) to measure the value of benefits of restraining car traffic in the medieval centre of Krakow.

Bibliography

Aghion, Ph., E. Caroli and C. Garcia-Penalosa (1999),
"Inequality and Economic Growth: The Perspective of the New Growth Theories", *Journal of Economic Literature*, Vol. 37, No. 1.

Atmoterm (1996),
"Tradable Emission Permit System", in *Proceedings from Marketable Permit Workshop*, HIID (Harvard Institute for International Development) and (Polish) Ministry of Environment, Jadwisin (Poland), pp. 14-17.

Balcerowicz, L. (2000),
"Poland's Transformation", *Finance and Development*, Vol. 37, No. 3, Washington DC, September.

Barde, J.P. (1991),
Valuing the Environment, Six Case Studies, Earthscan Publications Ltd., London.

Berbeka, K. (1999),
Próba okreslenia ram finansowych dla Sredniookresowych Strategii Sektorowych i Narodowego Planu Rozwoju, Report submitted by The Regional Environmental Center to the Ministry of Environmental Protection under the project PHARE 4.2.

Berbeka, K. and J. Berbeka (1999),
Impact of Implementation of the Following Directives: on Urban Wastewater Treatment Plants and on the Quality of Drinking Water on Households' Budgets in Poland, Report submitted by The Regional Environmental Center to the Ministry of Environmental Protection under the project PHARE 4.2.

Berbeka, K. and Z. Grabowski (1999),
Koncepcja krajowego programu gospodarki odpadami i wdrozenia wymagan prawa europejskiego w tym zakresie. Maszynopis. Kraków.

Berbeka, K. and G. Peszko (1997),
Monetary Valuation of Benefits of Traffic Calming in the Old City of Kraków – A Contingent Valuation Study; Centre for Social and Economic Research on the Global Environment at the University College, London, UK.

Blanchflower, D. and A. Oswald (2000),
Measuring Latent Entrepreneurship Across Nations, NBER and University of Warwick, mimeo, quoted by Polish Foundation for Small and Medium Enterprise Promotion (2000).

Chlon, A., M. Góra and M. Rutkowski (1999),
"Shaping Pension Reform in Poland: Security through Diversity", World Bank Discussion Paper.

Cieszewska, B. (2000),
"Coal Prices: Government's Failure to Impose Price Caps Results in Higher Inflation", *Rzeczpospolita*, No. 204 (5674), September 1.

Commission of the European Communities (1997),
Environmental Taxes and Charges in the Single Market, Brussels, COM(97)9.

Cox, D., E. Jimenez and W. Okrasa (1997),
"Family Safety Nets and Economic Transition in Poland", *Review of Income and Wealth*, No. 2.

Croce, E. and M.S. Khan (2000),
"Monetary Regimes and Inflation Targeting", *Finance and Development*, Vol. 37, No. 3, IMF, Washington DC.

De Broek, M. (2000),
"Growth in Transition: What Are the Lessons Learned?", IMF *Research Bulletin*, Vol. 1, No. 3, Washington DC, December.

Deloitte, Touche and Tohmatsu (2000),
Technology Industry Survey: Fast 50 Companies in Central Europe, Warsaw.

EDC Ltd. and Environmental Policy Europe (1997),
Compliance Costing for Approximation of EU Environmental Legislation in the CEEC, Brussels, Belgium.

EDC Ltd. and Environmental Policy Europe (1999),
Approximation of Environmental legislation: A Study of the Benefits of Compliance with the EU Environmental Acquis. Report to the European Commission, Brussels.

Energoprojekt (2000),
Raport nt. prawnych i ekonomicznych uwarunkowan wdrozenia dyrektywy 88/609 EWG z dnia 24 listopada 1988 w sprawie ograniczenia emisji niektórych zanieczyszczen do powietrza z duzych obiektow energetycznego spalania paliw, Warszawa.

EnergySys (1997),
Compliance with the European Union Air Pollution Emission Standards. Cost of Alternative Strategies for Reducing Sulphur Emissions, Warsaw.

European Bank for Reconstruction and Development (1999 and 2000),
Transition Reports, London.

European Commission (1998),
Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee, the Committee of the Regions and the Candidate Countries in Central and Eastern Europe on Accession Strategies for Environment: Meeting the Challenge of Enlargement with the Candidate Countries in Central and Eastern Europe, COM/98/0294.

European Commission (2000),
Progress Report from the Commission on Poland's Progress Towards Accession, Brussels, November.

Foreign Trade Research Institute (1999),
Foreign Investments in Poland, Warsaw.

Fiedor B., S. Czaja, A. Graczyk and Z. Jakubczyk (2000),
Ocena efektywnosci dzialania handlu pozwoleniami na emisje na przykladzie emisji SO_2 *w elektroenergetyce i propozycje wdrozenia rozwiazan do prawodawstwa polskiego w tym zakresie*, Wroclaw Academy of Economics.

Girouard, N. and Y. Imai (2000),
The health care system in Poland, OECD Economics Department Working Paper No. 257, September, Paris.

Góra, M. (2000*a*),
Polish Approach To Pension Reform, forthcoming in OECD series "Private Pensions and Policy Issues", OECD, Paris.

Góra, M. (2000*b*),
The new Polish old-age pension system: a very brief description, Warsaw School of Economics (mimeo), forthcoming on Centre for Economic and Social Research web site (*www.case.com.pl/forum*).

Góra, M. (2000*c*),
Labour Market in Poland: Diagnosis and Selected Proposals, mimeo.

Gorka, K. *et al.* (1997),
"Wymagania ochrony srodowiska a konkurencyjnosc przedsiebiorstw", in *Szanse i zagrozenia rozwoju przedsiebiorstw w Europie Srodkowej i Wschodniej*. AE, Poznan, pp. 85-92.

Gren, I., T. Soderqvist, F., Wulff, F., Langaas, S., Sandstrom, M. and Folke, C. (1996),
Reduced Nutrient Lads to the Baltic Sea: Ecological Consequences, Costs and Benefits, Beijer Discussion Paper Series No. 83, Beijer International Institute of Ecological Economics, The Royal Swedish Academy of Sciences.

Grootaert, C. (1995),
Poverty and Social Transfers in Poland, World Bank Policy Research Working Paper No. 1440.

GUS (Central Statistical Office) (2000),
Environment 2000. Information and statistical papers, Warsaw.

IMF (2000*a*),
Republic of Poland: Selected Issues, Washington DC.

IMF (2000*b*),
"How Can We Help the Poor?", *Finance and Development*, Vol. 37, No. 4, Washington DC.

Karaczun, Z. and G. Peszko (1999),
Koncepcja krajowego programu gospodarki wodno-sciekowej i wdrozenia wymagan prawa europejskiego w tym zakresie. Maszynopis. Warszawa.

Keane, M. and S. Prasad (2000),
Inequality, Transfers and Growth: New Evidence from the Economic Transition in Poland, IMF Working Paper No. 117, Washington DC.

Kindler, J., M. Roman, A. Nalberczynski, S. Tyszewski, D. Puslowska,
H. Kloss-Trebaczkiewicz, E. Osuch-Pajdzinska and M. Gromiec (1998),
"Balancing costs and water quality in meeting EU directives (the Upper/Middle Odra case study in Poland)", *Water Policy*, pp. 283-303.

Kohn, D. (2000),
Report to the Non-Executive Directors of the Court of the Bank of England on Monetary Policy Processes and The Work of Monetary Analysis, mimeo, Bank of England.

Kokoszczyñski, R. (2001),
"From Fixed to Floating: Other Country Experiences – The Case of Poland", paper presented to the IMF seminar "Exchange Rate Regimes: Hard Peg or Free Floating?", 19-20 March 2001, Washington DC.

Kopczewski, T. (2000),
Efektywnosc technologiczna i kosztowa bankow komercyjnych w Polsce w latach 1997-2000. (Technical and cost efficiency of commercial banks in Poland, 1997-2000), NBP Working Paper No. 113, Warsaw.

Krakow University of Economics, Grontmij (1996),
Development of Cost Methodologies and Evaluation of Cost-Effective Strategies for Achieving Harmonisation with EC Environmental Standards, Phare Project EC/EPP/91, Krakow.

Krakow University of Economics (1998),
Cost assessment of implementation of EU legislation in Poland in the field of waste management. Department of Industrial and Environmental Policy, Krakow.

Krakow University of Economics (1999),
Analiza skutecznosci dzialania instrumentów ekonomicznych ochrony srodowiska w Polsce, report for the Ministry of Environment, Krakow.

Krupnick, A., K. Harrison, E. Nickell and M. Toman (1995),
"The Value of Health Benefits from Ambient Air Quality Improvements in Central and Eastern Europe: An Exercise in Benefits Transfer", *Environmental and Resource Economics* 7, pp. 307-332, 1996.

Lenain, P. and L. Bartoszuk (2000),
The Polish Tax Reform, OECD Economics Department Working Paper No. 234, Paris.

McKinsey Global Institute (2000),
Poland's Economic Performance: General Merchandise Retailing and Residential Construction, Washington DC.

Markowska, A. and T. Zylicz (1996),
Costing an international public good: the case of the Baltic Sea, paper presented at the Annual Conference of the European Association of Environmental and Resource Economists in Lisbon, June.

Ministry of Economy (1998),
Restructuring Programme for Polish Steel Industry, Warszawa, June.

Ministry of Economy (2000),
Poland's Report – Economy in 2000, Warsaw.

Ministry of Economy, Ministry of the State Treasury (2000),
The Environmental Assessment Study of the Hard Coal Sector, Katowice.

Ministry of Environment (1999),
A Concept of the National Investment Programme for Implementation of the EU Environmental Regulations in the Field of Waste Management, Berbeka, K. and Z. Graboski.

Ministry of Environment (2000),
Management of the resources in the funds of environmental protection and water management in 1998 and 1999, Ministry of Environment, Warsaw.

Mishkin, F.S. (2000),
Inflation Targeting in Emerging Market Countries, NBER Working Paper No. 7618, Cambridge, Massachusetts, March.

Mrak, M. (1998),
Communal Infrastructure in Slovenia: Survey of Investment Needs and Policies Aimed at Encouraging Private Sector Participation, mimeo prepared for the Harvard University.

National Bank of Poland (1998),
Medium-Term Monetary Policy Strategy for the Years 1999-2003, September, Warsaw.

NFOS (1998),
Strategic Directions and Methods of Development of the National Fund for Environmental Protection and Water Management , adopted by the Ministry of Environment in December.

OECD (1992),
The Polluter-Pays Principle, *OECD Analyses and Recommendations*, Paris. OECD/GD(92)8.

OECD (1995*a*),
Environmental Performance Review of Poland, OECD, Paris.

OECD (1995*b*),
The St. Petersburg Guidelines on Environmental Funds in the Transition to a Market Economy, Paris. OECD/GD(95)108.

OECD (1998),
Economic Globalisation and the Environment, Paris.

OECD (1999),
Voluntary Approaches for Environmental Policy: An Assessment, OECD, Paris.

OECD (2000*a*),
Economic Survey of Canada, Paris.

OECD (2000*b*),
Frameworks To Measure Sustainable Development, Proceedings of the OECD Expert Workshop, OECD, Paris.

OECD (2000*c*),
Towards Sustainable Development: Indicators to Measure Progress, Proceedings of the OECD Rome Conference, Paris.

Okrasa, W. (2000),
The Dynamics of Poverty and the Effectiveness of Poland's Safety Net, World Bank Policy Research Working Paper, Forthcoming, Washington DC.

Okun, A. (1975),
Equality and Efficiency: The Big Tradeoff, Brookings Institution, Washington DC.

Peszko, G. (1996),
"Emission Trading as a Potential Instrument of Compliance with the Second Sulphur Protocol by the Power Sector in Poland", in *Proceedings from Marketable Permit Workshop*, HIID (Harvard Institute for International Development) And (Polish) Ministry of Environment, Jadwisin (Poland), pp. 18-23.

Peszko, G. (1998),
Analysis and assessment of compliance of procedures and regulations of environmental funds with the EU guidelines on stste aid to environment, report for the Department of Environmental Policy and European Integration of the Ministry of Environment, Warszawa (in Polish).

Peszko, G. (1999),
"Polish Experience with Environmental Fees, Fines and Taxes, and Simulations of Some Economic Effects of Elements of Green Tax Reform Using the Computable General Equilibrium Model", in Kai Schlegelmilch (ed.), Green Budget Reform in Europe, Springer.

Polish Foundation for Small and Medium Enterprise Promotion (2000),
Report on the Condition of the Small and Medium-Size Enterprise Sector in Poland for the Years 1998-1999, Provisional Translation, Mimeo, Warsaw.

Polish News Bulletin Special Report (2000),
Poland's New Economy, Warsaw.

Rodrik, D. (2000),
"Growth versus Poverty Reduction: A Hollow Debate", *Finance and Development*, Vol. 37, No. 4, Washington DC.

Scarpetta, S., A. Bassanini, D. Pilat and P. Schreyer (2000),
Economic Growth in the OECD Area: Recent Trends at the Aggregate and Sectoral Level, OECD Economics Department Working Papers No. 248, June, Paris.

Solow, R. M. (1956),
"A Contribution to the Theory of Economic Growth", Quarterly Journal of Economics, February, pp. 65-94.

Svensson, Lars E.O. (1998),
"Inflation Targeting as a Monetary Policy Rule", NBER Working Paper N06790, Cambridge, Massachussets, November.

Taylor, J.B. (1993),
"Discretion versus policy rules in practice", Carnegie-Rochester Conference Series on Public Policy, 39 (1993), pp. 195-214.

Taylor, J.B. (2000),
"Inflation Targeting and Monetary Policy Rules: Experience and Research", paper presented at the 12th Meeting of the Latin American Network of Central Banks and Finance Ministries, Inter-American Development Bank, Washington DC.

Tinbergen, J. (1975),
Income Distribution: Analysis and Policies, North-Holland, Amsterdam.

TME (Institute for Applied Environmental Economics) (1999),
Costs of Compliance with EU Environmental Directives in Poland, Final report submitted to the Polish Ministry of Environmental Protection, Natural Resources and Forestry (Phare DISAE POL-110).

United Nations (1993),
Integrated Environmental and Economic Accounting, Sales No. E.93.XVII.12., New York: United Nations.

Wajda S. (2000),
"Harmonisation – The commitment ot Change", paper presented to the conference in Budapest, 12-13 June 2000, mimeo.

Warsaw University (2000),
Economic and Environmental Analysis of projects financed by the National Fund of Environmental Protection and Water Management, report submitted to the Department of Environmental Policy and European Integration of the Ministry of Environment, Warsaw.

World Bank (1997),
Expanding the Measure of Wealth: Indicators of Environmentally Sustainable Development, Environmentally Sustainable Development Studies and Monographs Series No. 17. Washington DC.

World Bank (1999),
Corruption In Poland: Review of Priority Areas and Proposals for Action, Warsaw Office, mimeo.

World Bank (2000),
Poland – Complying with the EU Environmental Legislation, World Bank Technical Paper No. 454, prepared by Gordon Hughes and Julia Bucknall, Washington DC.

Zienkowski, L. (2000),
"Labour and capital productivity in Poland", ZBSE Research Bulletin, Vol. 9, No. 2, Warsaw.

Zylicz, T. (1997),
Social and Economic Consequences of Approximation with the European Union (EU) in the Environmental Field, mimeo, Warsaw.

Zylicz T. (1999),
Szacunkowa ocena przeplywów finansowych w zwiazku z wdrazaniem acquis communautaire. Maszynopis. Warszawa.

Zylicz, T., I. Bateman, S. Georgiou, A. Markowska, D. Dziegielewska, K. Turner, A. Graham and I. Langford (1994),
The Baltic Drainage Basin Project: Contingent Valuation of Eutrophication Damage in the Baltic Sea Region, CSERGE Working Paper GEC 94-03.

Zylicz, T. and J. Raczka (2000),
Analysis of the compliance of the polish system for state aid to environmental measures in the enterprise sector with the EU Guidelines, report for the Department of Environmental Policy and European Integration of the Ministry of Environment, Warsaw (in Polish).

Annex I

A production function for Poland

During 1994-2000, Poland's real GDP grew on average by 5½ per cent per annum, one of the fastest among OECD member countries and in contrast to much slower growth in many other countries of Central and Eastern Europe.[1] This remarkable performance raises several important questions. Why was Poland more successful than other countries? What explains the robust growth trend? What are the prospects for the future? This annex tries to shed some light on these questions. It employs two traditional methods of separating medium-term growth trends from cyclical fluctuations. First, underlying real GDP growth is estimated using an Hodrik-Prescott filter to remove cyclical fluctuations from the time series. Second, the traditional growth accounting framework introduced by Solow (1956) is used to explain the respective contributions of production factors and total factor productivity (TFP).

Several caveats need to be kept in mind: the period of time under review is relatively short, so general conclusion should not be drawn hastily; and Poland's economic data need to be used with some degree of caution. Nevertheless, a few clear conclusions emerge from the analysis. First, Poland's *potential* output appears to be growing at an annual rate of 5-6 per cent, well above most other OECD countries. Second, the rising trend of TFP is the driving force of potential output growth, in particular labour productivity. This is consistent with the findings of the litterature on growth in transition (De Broek, 2000). The framework is then used to present alternative scenarios of potential growth in the medium term.

Underlying growth trends

Underlying growth can be estimated by separating output growth trend from cyclical fluctuations. This should not be used in periods of "structural transformation" – like the early days of Poland's transformation – when potential output growth is unlikely to be stable. Hence, the Hodrick-Prescott filter is applied here to GUS's quarterly national account data at constant prices for the period 1995-2000, which starts five years after the implementation of the "shock therapy". Real GDP data have been seasonally adjusted and filtered. This suggest an underlying growth of 6 per cent per annum during the period 1995-2000, slackening off somewhat towards the end. Actual output fluctuates around this trend within a relatively narrow range (±2 per cent). The largest output gap is observed at the turn of 1998/99 in the aftermath of the August 1998 Russian crisis.

Estimating a Cobb-Douglas production function

A growth accounting framework splits real GDP growth into the contribution of two factors of production – capital and labour – and a residual, total factor productivity (TFP). A Cobb-Douglas production function is used here to decompose the natural logarithm of real GDP into a weighted sum of the two factors of production and TFP as a residual:

$$Y = A + (1 - \alpha)\ K + \alpha\ L$$

where Y is underlying real GDP (estimated as above), K is capital stock, L is labour input, A is total factor productivity (all in logarithm), α and $(1 - \alpha)$ are the income shares of labour and capital, respectively. The labour share in Poland is close to two-thirds of national income, as it tends to be in most OECD countries. Poland has limited data on capital stocks. The Central Statistical Office conducts an annual survey,[2] but definitions used in the Survey change overtime. Hence, the Survey data for 1995 are used to measure the level of the capital stock, which suggests a capital-output ratio of 1.5 – not implausible given Poland's state of development. The capital stock time series is built using the flow of gross fixed capital formation from national accounts and an average scrapping rate of 10 per cent per annum.

L is defined as potential employment, which is obtained as:

$$L_t = R_t \bullet P_t \bullet (1 - U_t)$$

where R denotes the structural labour market participation rate (measured as trend participation rate), P is working-age population, and U is the structural rate of unemployment (measured as trend unemployment rate). These definitions are brought together to estimate the trend increase in TFP for the period 1994-99, using annual data. This yields the following results:

Table A1. **Potential output growth estimate**

	1994-99 Average change in %
Potential output (A + B + C)	5.8
Contributions from:	
Capital (A)	1.3
Labour (B)	0.0
TFP (C)	4.4

Source: OECD staff estimate.

The findings are familiar. Growth in transition is led by strong TFP growth, with relatively unimportant contribution of factor inputs. Strong investment and scrapping flows are essential to replace obsolete equipment, allow a reallocation of resources between sectors and make the productive capacity more effective – but do not necessarily lead to a larger productive capacity. There is no unique explanation for the sharp growth in TFP. Available studies find an important role for R&D, the share of private sector and the entrepreneurial climate (Zienkowski, 2000). Total factor productivity can be split between labour and capital productivity. In Poland, the recent trend of TFP has been driven by labour productivity, which has increased at an average annual rate of 6 per cent.[3] The implication is a stagnant level of employment, despite the huge increase in output, because labour hoarding has been reduced from its pre-transition level. With a flat level of employment and a growing working-age population, unemployment has stayed high and the participation rate has dropped steadily. Workers were given incentives to leave the labour market through various schemes, such as early old-age pensions and disability pensions (Góra, 2000*c*). In addition, longer periods of studies and moonlighting may have contributed to lower official participation rates.

Alternative medium-term projections

The above framework can be used to project potential growth in the medium term, using alternative sets of assumptions. The baseline scenario is built with official demographic projections[4] showing robust growth of working-age population until 2005 and slower growth after 2005. The participation rate is assumed to decline further from 66 per cent to 64 per cent, reflecting the restructuring in the farming sector. The NAIRU is assumed to drop from about 12 per cent to 10 per cent in 2010.[5] Altogether, the potential labour force would grow by close to 1 per cent per annum, which would be an asset for Poland's medium-term growth as long as adequate labour market policies are put in place. TFP increase is assumed to slow down from its recent rate to 3 per cent per annum, close to the pace estimated for the post-war experience (1950-73) of large EU countries (Germany, France, Italy) and Japan.[6] Finally, total fixed investment is projected to grow at an annual pace of 5 per cent, which would imply a slowly declining ratio investment/GDP from the present exceptionally high level.

On these assumptions, potential GDP growth is projected to continue growing at a pace of 5½ per cent per annum during the period 2000-10. This is slightly less than projected by the Polish authorities in the *Strategy of Public Finance and Economic Development – Poland* 2000-2010[7] under the "proactive" scenario (which assumes real GDP rates between 7 and 8 per cent), but more than under the "conservative" scenario (growth between 4 and 5 per cent) and the "pessimistic" scenario (growth of 3-4 per cent).

The impact of alternative assumptions is presented in Table A2. These projections show the importance of maintaining high TFP growth and therefore of pursuing structural reforms that improve the efficiency of the economy – such as privatisation and regulatory reform.

Table A2. **Alternative scenarios for potential GDP growth**[1]

Annual percentage changes for 2000-10

		NAIRU of 10 per cent In 2010			NAIRU of 7 per cent in 2010		
		TFP growth of:			TFP growth of:		
		2.0	**3.0**	4.0	2.0	**3.0**	4.0
Investment growth of:	3.0	3.8	4.8	5.8	4.0	5.0	6.0
	5.0	4.2	**5.2**	6.2	4.4	**5.4**	6.4
	7.0	4.6	5.6	6.6	4.8	5.8	6.8

1. The scenarios are based on an estimated production function of Poland.
Source: OECD.

Notes

1. During this period, real GDP growth averaged 1½ per cent in the Czech Republic and 3½ per cent in Hungary.
2. GUS, *Investments and fixed assets in national economy*, annual publication, Warsaw.
3. The fastest average growth of labour productivity takes place in the manufacturing sector, compared to services and agriculture.
4. As submitted to the OECD for the work on ageing.
5. On an LFS basis. Góra (2000*c*) estimates a steady-state rate of registered unemployment of 10 per cent in 1996-97.
6. IMF's Selected Issues of Hungary (2000).
7. Council of Ministers, Ministry of Finance, *The Strategy of Public Finance and Economic Development*, Warsaw, June 1999.

Annex II

Sources of foreign direct investments' statistics

There are two main sources of data on foreign direct investments in Poland. The institutions compiling them are the National Bank of Poland (NBP) and the Polish Agency for Foreign Investments (PAIZ). The NBP compiles the balance of payments on cash and transactions bases. Balance of payments on a cash basis is prepared monthly for monetary policy purposes. It reflects the foreign transactions made via the banking system only, hence the information provided is not fully comprehensive. Balance of payments on transactions basis, prepared annually on the basis of both banking system's and foreign investors' reports to the central bank, provides full FDI statistics concerning inflows and outflows. The scope of data covers in-cash and in-kind equity contributions, reinvested profits and credits and loans among the inter-related companies. The stock levels are presented in the document called "International Investment Position".

Table A3. **Foreign direct investments in Poland, by different sources**

In US$ million

	1994	1995	1996	1997	1998	1999
Inflow						
Balance of payments statistics (NBP)						
BoP on a cash basis	542	1 132	2 768	3 077	5 129	6 471
BoP on a transaction basis	1 875	3 659	4 498	4 908	6 365	7 270
of which:						
Purchased shares	884	1 807	2 845	2 663	4 323	6 064[1]
Reinvested earnings	382	888	244	25	–264	–453
Loans form foreign shareholders	397	666	1 095	1 767	2 025	1 256
In-kind contributions	212	298	314	453	281	403
PAIZ data investments exceeding $1 million	1 493	2 512	5 196	5 678	9 574	8 261
Stock, end-period						
International investment position (NBP)	3 789	7 843	11 463	14 587	22 479	26 075
of which:						
Equity capital and reinvested earnings	2 840	6 130	8 697	10 125	16 063	18 986
Other capital	949	1 713	2 766	4 462	6 416	7 089
PAIZ data total investments[2]	4 321	6 831	12 027	20 587	30 651	38 916
of which: Investments exceeding $1 million	4 321	6 831	12 027	17 705	27 280	35 171
Commitments	4 932	5 250	7 933	10 777	13 326	13 397

1. Of which $921 million of loans and dividends converted into shares.
2. In years 1994-1996 no estimations on investments below $1 million were conducted.

Sources: National Bank of Poland (NBP), Polish Agency for Foreign Investments (PAIZ).

PAIZ compiles its statistics twice a year by surveying the biggest foreign investors. It collects the data on the value of investment projects rather than on real investment outlays in the examined period. Due to technical reasons the scope of research is limited to firms that invested more than $1 million. The overall value of FDI presented by PAIZ consists therefore of the data provided by companies and of amounts estimated (for investments lower than $1 million). As shown in the table below, PAIZ data are significantly higher than those from the balance of payments. Focusing on the value of projects tends to overestimate actual investments.

Annex III

The emergence of a strong banking sector

Introduction

The Polish banking sector plays a small, but rapidly growing, role in the Polish economy. At the end of 1999, total bank assets (gross) stood at nearly 62 per cent of GDP, much below the average in the European Union (210 per cent) as well as the levels in some central European countries (for instance the Czech Republic and Slovakia, where the ratio exceeds 130 per cent and 100 per cent, respectively).

As in many emerging markets, the bulk of the financial system is constituted of commercial banks (Table A4). The sector consists of 77 commercial banks and numerous but tiny co-operative banks (less than 5 per cent of total bank deposits in September 2000). In addition to these main channels of intermediation, there are also credit unions whose membership mainly consists of persons with the same profession or place of residence, and credit agents. The public usually find it easier to access these institutions compared with banks. Credit unions, being non-profit organisations, have more freedom than banks to charge lower interest rates for loans and offer higher rates for deposits. They are therefore potential competitors for co-operative banks, which often target the same clientele. Credit agents usually closely co-operate with banks, are financed by them and most often act as intermediaries for banks. Eventually loans granted by credit agents show up in banks' books.

Table A4. **Structure of Polish financial system, 1999**

	Assets ($ billion)	Share in total assets	Ratio of assets to GDP	Number of institutions
		Per cent		
Commercial banks	84.1[1]	86.6	56.7	77
Co-operative banks	3.7[1]	3.8	2.5	781
Insurance companies	6.9	7.1	4.7	63
Brokerage houses	0.9	0.9	0.6	47
Investment funds	0.8	0.8	0.5	62
Pension funds	0.6	0.6	0.4	21
Credit unions	0.2	0.2	0.1	158
Total financial system	97.1	100.0	65.3	1 468

1. Net assets (gross assets minus specific reserves for classified loans).
Source: NBP.

Over the last the decade the number of banks' outlets increased considerably, from 1 436 in December 1993 to 2 371 in September 2000. Despite the banks' efforts to expand the branch network, however, the country seems to remain under-banked, with 6 branches per 100 000 inhabitants and 45 per cent of the population not having a bank account. Differences in banking services prevail between the traditionally more developed western part and the less developed eastern part of the country. Commercial banks follow new business opportunities in the Western part, whereas co-operatives are more closely linked to traditional activity in rural and agricultural areas, in the eastern part of the country.

Concentration and consolidation

The banking sector is dominated by a few large institutions. At the end of September 2000, the two largest banks (PKO BP SA and Pekao SA) held a combined share of 32 per cent of bank assets and the next ten biggest banks had 4-5 per cent each. These two banks had a large share of the deposit and consumer lending markets (42 per cent and 38 per cent, respectively), but much lower share of the corporate lending market (25 per cent). Before 1990, zloty deposits were traditionally collected by the national saving bank (PKO BP) and the foreign currency deposits by Pekao SA, which specialised in transferring foreign currency receipts from Poles living abroad. In the last decade the share of these two banks dropped, while the market became more crowded and new banks started offering competitive products. These two traditional banks themselves changed their specialised profiles and became universal. Competition intensified most particularly in the corporate loan market and in the market for deposits. The presence of foreign bank subsidiaries adds to the already high degree of competition. Initially, foreign banks dealt almost entirely with foreign companies and the best Polish firms. Nowadays, foreign banks start expanding their activities to other areas, such as retail banking. Recent developments indicate that servicing households and SME sectors is becoming an important niche for smaller banks, as they have been squeezed out by stronge r competitors taking their positions in the market for large businesses.

The overall market concentration gradually decreased over the last decade owing to the entry of new institutions striving for the new clients (see Table A5). For the immediate future, concentration is expected to increase further as a result of mergers and take-overs. The consolidation process began in the early 1990s, but it is expected to gain speed in the near future. The first mergers and acquisitions (M&As) took place during the period of bad loan problems (1993-1995), driven mainly by domestic owners of banks and with strong encouragement by the central bank. Then, some mid-sized domestic banks acquired a number of smaller banks to increase their market shares. During the second wave (1999-2000), consolidation was driven more often by foreign banks: a few domestic institutions previously privatised and sold to strategic investors were merged with subsidiaries of the same foreign bank (*e.g.* BPH

Table A5. **Herfinadahl-Hirschman Index, based on the commercial banks' assets**

1995	1996	1997	1998	1999[1]	Sept. 2000
784	764	738	675	790	761

Notes: Herfinadahl-Hirschman Index measures the average market concentration. It is calculated as: HHI = ΣP_i^2, where P_i is the percentage share in sector's assets of each of *n* banks in the economy. The higher the HH Index, the more concentrated the market. Thus HHI of 10 000 implies that there is monopoly.

1. The increase in 1999 is due to the effect of a merger of four banks within the Bank Pekao SA Group.

Source: NBP.

and HypoVereinsbank Poland, PBK and BACA, BHW and Citibank Poland). In the aftermath of M&As in the international markets, new mergers between banks operating in Poland are expected as their owners merged abroad (*e.g.* BPH and PBK). Most of past M&As did not influence the market structure significantly, however. The newly announced mergers will probably shape the institutional landscape of Polish banking in a more visible way.

Privatisation and ownership structure

A great deal of progress has been made in the privatisation of the Polish banking sector. Out of 75 commercial banks operating in the third quarter of 2000, 68 were private, four belonged to state-owned enterprises and three were fully owned by the State Treasury. The importance of the last is much greater than the number of banks would suggest (Table A6). State-owned banks control one-fifth of sector's assets and one-fourth of deposits. Among these banks, the most prominent ones are the national saving bank (PKO PB) – the largest bank in Poland till the end of 1999 – and the bank for agriculture (BGZ) – the commercial bank and the central organisation for co-operatives. The government intends to privatise them, although the details are not yet decided. Their financial situation is fragile, necessitating capital injections and further restructuring. As part of the recently agreed recovery programme for PKO BP aimed at strengthening its financial condition, the Treasury transferred to the bank at the end of 2000 shares of five listed companies and banks. The central bank will temporarily waive required reserve obligations and buy back low-interest bonds from PKO BP. In addition, the Parliament passed an Act enabling the Treasury to underwrite 90 per cent of old housing loans,[1] the deterioration of which has negatively influenced the bank's profits. The strategy for selling BGZ shares would depend on the ability and willingness of the co-operative sector to acquire it. The third state-owned bank (BGK) is quite small in terms of assets and will not be privatised. It provides funds within the confines of government supported programs.

Foreign investors currently own almost 56 per cent of the commercial banks' equity and effectively control 70 per cent of total bank assets. Foreign capital structure by country of origin is well diversified with a slight domination of US banks (15 per cent of equity) and German banks (14 per cent of equity). The active participation of foreign investors, although not free from potential problems, has exerted a positive impact on the industry's condition. Foreign banks with their modern know-hows have increased competition in the domestic market and have given an ongoing impulse to bring up Polish banks closer to international standards in global banking. The new organisational culture and enhanced risk management capacity have contributed to the sector's overall stability.

Table A6. **Banking sector's balance sheet by ownership type, September 2000**

	Directly state-owned	Indirectly state-owned	Private polish	Private foreign	Co-operative
Percentage share in:					
Total assets	21.8	1.7	3.3	69.1	4.1
Loans (net)	19.0	1.8	2.9	71.0	5.3
Deposits[1]	27.8	1.4	2.2	63.7	4.9
Equity (tier 1 and 2)	12.6	1.4	3.6	76.8	4.6

1. To/from non-financial sector.
Source: NBP.

Surveys show (Kopczewski, 2000) that overall cost efficiency usually decreases shortly after privatisation. As shown by cases of recently privatised banks, new owners employ more prudent provisioning rules for bad loans than imposed by formers owners. It results in immediately higher expenses for specific reserves and temporarily weaker profits. In the longer run efficiency improves and exceeds the pre-privatisation results.

Privatised banks rationalise employment and overhead expenses, which is necessary to secure stable profits in the long run. In the past few years the number of branches grew but the employment in the industry was almost unchanged and in the year 2000 even dropped. It clearly reflects a new approach to branch staffing, following investments in modern IT. The assets and profits per employee are remarkably higher in privatised, especially foreign, banks. Out of ten leading banks in this respect, seven are foreign institutions.

Profitability

On average, Polish banks perform well in terms of profitability. The return on assets (ROA) and the return on equity (ROE) both reached their peaks in 1996, and decreased steadily thereafter as nominal interest rates were lowered and required provisions for non-performing loans (substandard, doubtful and lost) increased. At the end of 1999 ROA exceeded 1 per cent, which is still a good result when compared with banks operating in the EU. At the same time the ROE reached nearly 15 per cent, which is significantly lower than in 1996 but still high in real terms.

Banks owe their satisfactory profitability to high interest margins. Net interest income stood at 3.9 per cent of assets in September 2000 – much higher than in the EU area. However, margins and profits in general are under pressure. The growing market competition has been squeezing the spread between loan rates and the cost of funds on the interbank market (WIBOR). This is most evident for loans extended to enterprises – the average spread for business short-term loans fell from 310 basis points in 1998 to 110 in 2000. On the contrary, retail banking has remained a source of higher margins (spread of 196 basis points on consumer loans in 2000). Greater competition in this segment however cast a doubt on the possibility of maintaining high margins in the longer run. Lower inflation in the near future would imply a decrease in nominal interest rates and, consequently also in spreads and margins.

The largest share of income for the Polish banks still comes from traditional banking activities covering taking deposits and granting loans, but banks have strived to substitute shrinking interest income by other sources. In September 2000, on average 38 per cent of gross income was generated by non-interest earning/bearing operations, compared with only 23 per cent four years earlier (Table A7). The shift from interest to non-interest sources of income reflects to some extent the impact of foreign banks' growing presence in the Polish market. More sophisticated services are offered to the public as foreign banks' subsidiaries implement the newest know-how.

The weak point of Polish banks seems to remain the relatively high level of overhead expenses – with operating cost over assets about twice those in Western Europe. For a few years the ratio has stabilised at a level close to 4 per cent. The twilight of traditional banking and growing disintermediation shift the competition in the banking industry towards the quality of services and keeping down operational costs. Without improving cost management, squeezing spreads and interest margins will decrease domestic banks' profits and make it impossible to maintain the real value of their capital. Cutting down costs while doing significant investments in modern banking technology thus seems to be one of the biggest challenges for the future.

Table A7. **Selected operating ratios, in per cent**

	1996	1997	1998	1999	Sept. 2000
Operating ratios in per cent of assets					
1. Net interest income (interest margin)	5.98	5.23	4.58	4.02	3.86
2. Non-interest income	1.81	2.04	2.01	2.48	2.32
3. Gross income (1 + 2)	7.79	7.27	6.59	6.50	6.18
4. Operating costs[1]	3.94	3.99	4.10	4.09	3.84
5. Provisions for classified loans	0.09	0.23	0.75	0.76	1.03
6. Gross profit (3 – 4 – 5)	3.76	3.05	1.74	1.65	1.31
7. Net profit (ROA)	2.56	2.11	0.76	1.03	0.88
Operating ratios in per cent of gross income					
8. Net interest income	76.7	71.9	69.5	61.9	62.4
9. Non-interest income	23.3	28.1	30.5	38.1	37.6
10. Net profit over tier 1 equity (ROE)	68.1	43.2	12.2	14.9	12.8

1. Overhead expenses, depreciation.
Source: NBP.

Quality of assets and capital adequacy

As described in the 1997 *Survey*, Poland used in the mid-1990s a decentralised way of working out bad loans in banks' portfolios. As a result, the ratio of non-performing loans (NPL) to total loans decreased steadily, reaching a low point of 10.7 per cent in 1997, which was one third of the level of 1993. The past two years have seen a new surge in bad loans, however, both in nominal and relative terms. The recent trend in bad loans reflects the impact of the Russian crisis in 1998 and the recent economic slowdown. Solvency difficulties of enterprises were coupled with some deterioration of the household loan portfolio. In the second half of the 1990s, banks started extending loans to private persons. The aggressive fight for market shares, probably followed by relaxed requirements towards clients, together with a slowdown in the growth of households' disposable income, resulted in lower quality of the portfolio. Altogether, newly granted loans have been of lower quality than in previous years.[2]

The negative impact of this deterioration in the loan portfolio on banks' capital has been limited, for the time being. Banks remain reasonably well capitalised – the average capital adequacy ratio[3] was 12.6 per cent in September 2000. Regulations require that banks in operation for less than 1 year maintain their capital adequacy ratio at a level higher than 15 per cent and those less than 2 years old at a level higher than 12 per cent. At the same time, there are a few institutions that operate with a capital ratio below the minimum 8 per cent. Most of these banks have implemented rehabilitation plans already approved by the Commission for Banking Supervision (CBS) or are in the process of negotiating such programs. All of them are subject to close oversight by the banking supervision department of the NBP, the operational arm of the CBS. The CBS encourages banks' owners to increase equity in order to meet Basle minimum standards and assure the safety of their activities.

Notes

1. Loans extended prior to 1992.
2. The other issue is the general level of non-performing loans in Poland. Around 40 per cent of them are classified as the lost category and are fully covered by the specific reserves. Lost loans are kept in banks' books for many years in the hope that some of them will be repaid in the future. This practice artificially increases the NPL ratio. If lost loans granted before 1999 were written off, the NPL ratio would decline to roughly 10 per cent.
3. For commercial banks only.

Annex IV

How is life after privatisation?

Results of the first systematic surveys of structural changes in privatised firms have been published.* They confirm most of the expected transformations but also show certain divergence from common anticipations – such as the very low actual turnover in top management. This could reflect a bias in the population of privatised firms, in that privatisation is pursued more easily if incumbent management concurs with new owners' priorities. On the other hand, there is limited evidence of massive employment adjustments in privatised firms. This may be due not only to the "social packages" signed by investors upon acquisition, which generally commit them to retain employees over a three year grace period, but also to the fact that privatised enterprises have tended to adopt growth-oriented strategies which permit productivity gains to be realised without big job cuts.

The most significant findings of the surveys are the following:

– **Self-initiation of privatisation.** Most privatisations start at the initiative of the executives of state-owned firms. After "commercialization", administrative directors usually become presidents of management boards (firms have a supervisory and an executive management board) and advocate privatisation. After privatisation, management boards are generally re-confirmed by the new investors, which may add their own representatives and marketing specialists in these executive bodies. Domestic investors changed the composition of management boards in 61 per cent of the cases and foreign investors in 57 per cent, mostly in an incremental manner. The most radical changes occurred in companies controlled by National Investment Funds where 82 per cent of senior executives were replaced. But no information is available on the rationale and impact of such turnover.

– **Role of supervisory boards.** According to available surveys, in contrast to management boards, supervisory boards have been extensively re-staffed. Privatisation seems to strengthen and activate this previously dormant layer of accountability, control and direction in the governance of firms, rather than revolutionizing micromanagement.

– **Restructuring.** Amid continuity in daily management, all capital privatisations (with no exception) have reportedly led to comprehensive restructuring. Common elements include sale of irrelevant assets, elimination of unattractive products, effectuation of market surveys, creation of marketing units, and introduction of new financial and cost controls. In about half of companies, restructuring has been accompanied with more innovative corporate strategies, involving the re-design of product and service lines, and large-scale re-training of personnel.

* The Institute of Economic Sciences of the Polish Academy of Sciences, "The Restructuring Processes of Large Enterprises", June 2000, and the Institute of Political Studies of the Polish Academy of Sciences, "Direct Privatization: Investors, Managers, Employees", May 2000 (Research projects effected for the Committee of Research of the Ministry of the Treasury – summarised and translated for OECD). See also M. Jarosz (ed.), *Ten Years of Direct Privatisation*, PAN publishers, Warsaw, 2000.

- **Role of foreign investors.** The most advanced modernization strategies and market development efforts have been pursued by companies whose strategic investors are large foreign firms – especially those operating in the same branch or in similar branches (and therefore possessing relevant experience and know-hows). In survey samples, 20 per cent of respondents have introduced new technologies and products – most of them being with foreign investors. Companies owned by Polish investors and National Investment Funds (NIFs) have been less expansive and seldom launched new lines of products.
- **Stand-by mood in treasury firms.** The firms still on the privatisation list (owned by the Treasury) limit their restructuring initiatives to operations which can be financed from own resources. They do not rely on outside inputs. Far-reaching modernisation has been inhibited by: lack of equity finance, high cost of bank credits and, perhaps most importantly an "orientation to privatization" which influences management incentives. Supervisory and executive boards in these firms are aware of the "transitional" status of their power and are mainly concerned with the terms of their privatisation. They naturally adopt risk minimisation strategies.
- **Direct privatisations.** Around 2000 entreprises have been "directly" privatised, 70 per cent of them via management and employee buy-outs financed by leasing. According to surveys, this channel has proven popular among the managerial staff and rank-and-file personnel of government-owned firms and has given insiders renewed incentives. Small and medium size enterprises reportedly gained competitive vigor. Dilution of earnings by distribution to employee-owners, as initially feared, has not occured, most firms pursuing active investment strategies and matching the high investment rates of the domestic corporate sector.
- **Strengths and weaknesses of insider control**. The downside of incentive-enhancing insider control is the limitations imposed on the prerogatives of management. Need for consensus makes restructuring decisions more difficult to implement. Yet there seems to be no evidence of excess employment in these firms, although smoothening employment adjustments remains the rule and may constrain job cuts in cyclical downturns. Consensus and continuity may also make the strategic orientation of firms more backward looking, as illustrated by weaknesses in product innovations and limited international outlook (share of exports in their sales remain lower than national averages). Some polarisation is observed among directly privatised firms, between stagnating enterprises and good performers.

Annex V

List of selected Internet resources on Poland

State administration

President of the Republic of Poland	*www.prezydent.pl*
Chancellery of the Prime Minister	*www.kprm.gov.pl*
Sejm (Lower House of the Parliament)	*www.sejm.gov.pl*
Senat (Upper House of the Parliament)	*www.senat.gov.pl*
Ministry of Finance	*www.mofnet.gov.pl*
Ministry of the Treasury	*www.mst.gov.pl*
Ministry of Foreign Affairs	*www.msz.gov.pl*
Ministry of Post and Telecommunications	*www.ml.gov.pl*
Ministry of National Defence	*www.wp.mil.pl*
Ministry of Environment	*www.mos.gov.pl*
Ministry of Agriculture and Food Economy	*www.minrol.gov.pl*

Other central institutions

Agency For Agricultural Markets	*www.arr.gov.pl*
Central Statistical Office	*www.stat.gov.pl*
National Atomic Energy Agency	*www.paa.gov.pl*
Office for Competition and Consumer Protection	*www.uokik.gov.pl*
Office of Public Procurement	*www.uzp.gov.pl*
Office of the Committee for European Integration	*www.ukie.gov.pl*
Polish Academy of Science	*www.ippt.gov.pl*
Polish Agency for Foreign Investment	*www.paiz.gov.pl*
Privatisation Agency	*www.mst.gov.pl/ap/index.htm*
Social Insurance Board	*www.zus.pl*
State Committee for Scientific Research	*www.kbn.gov.pl*

Financial markets

National Bank of Poland	*www.nbp.pl*
National Depository for Securities	*www.kdpw.com.pl*
Securities and Exchange Commission	*www.kpwig.gov.pl*
State Office for Insurance Supervision	*www.punu.gov.pl*
Superintendency of Pension Funds	*www.unfe.gov.pl*
Warsaw Stock Exchange	*www.gpw.com.pl*
Central European Rating Agency	*www.cera.com.pl*

Media

The Polish Market	*www.polishmarket.com*
The Warsaw Voice	*www.warsawvoice.com.pl*
The Warsaw Business Journal	*www.wbj.pl*

Research Institutes

Banking Education and Research Foundation	*www.feibb.org.pl*
Center for Social and Economic Research	*www.case.com.pl*
Foreign Trade Research Institute	*www.ikchz.warszawa.pl*
Institute for Labour and Social Affairs	*www.ipiss.com.pl*
The Gdansk Institute for Market Economics	*www.ibngr.edu.pl*
Transformation, Integration and Globalisation Economic Research	*www.tiger.edu.pl*

Education

Jagiellonian University	*www.uj.edu.pl*
Warsaw University	*www.uw.edu.pl*
Gdansk University	*www.univ.gda.pl*
Nicholas Copernicus University	*www.uni.torun.pl*

International organisations

OECD	*www.oecd.org*
IMF	*www.imf.org*
IMF country page for Poland	*www.imf.org/external/country/*POL*/index.htm*
WTO	*www.wto.org*
The World Bank Group	*www.worldbank.org*
World Bank office in Warsaw	*www.worldbank.org.pl*
EBRD	*www.ebrd.org*

Other

The Official Website of Poland	*www.poland.pl*
The InsidePoland	*www.insidepoland.pl*
The PolishWorld	*www.polishworld.com*

Source: Internet.

Annex VI

Chronology of principal economic and policy measures

2000

January

Ministry of Finance opened a special account in the National Bank of Poland (NBP) to retain some privatisation receipts.

President Aleksander Kwasniewski endorsed the 2000 Budget Law.

February

Warsaw Stock Exchange Index (WIG) reached its historical maximum (21 224 points).

Bank Staropolski went bankrupt due to insolvency following criminal activity of its owners. Bank Guarantee Fund started procedures to compensate depositors.

March

Government issued 10-year Eurobond (€ 600 million).

April

Monetary Policy Council and the Ministry of Finance agreed to float Polish currency.

May

Standard and Poor's raised its long-term debt rating on Poland: 1) in foreign currency – to BBB+ from BBB and 2) in zloty – to A+ from A.

June

Freedom Union (UW) left the coalition. New ministers for finance, justice and foreign affairs sectors were appointed to the minority Solidarity Election Action (AWS) government.

Treasury Committee of Sejm passed a motion to dismiss the Minister of the State Treasury. Holiday break put off the removal for two months.

July

Ministry of the Treasury sold a 35 per cent stake in the Polish telecomumications company (TPSA) to a consortium of France Telecom (25 per cent) and Kulczyk Holding (10 per cent).

August

First inflow of $200 million from privatisation of Polski Koncern Naftowy Orlen SA arrived on the NBP FX account.

Senate approved a new commercial code.

Minister of the State Treasury Emil Wasacz resigned from the office and was replaced by Andrzej Chronowski.

September

A tender for five UMTS mobile phone licences announced to be held in October.

Poland and the European Commission signed an agreement on the liberalisation of trade in food articles.

October

Government postponed the date of a draft budget presentation to parliament.

Presidential elections took place. The winner of the fist turn was incumbent President Aleksander Kwasniewski.

President of the National Bank of Poland Hanna Gronkiewicz-Waltz announced her transfer to the EBRD staring from January 2001.

November

Budget bill was presented to the Sejm.

Minister of the Treasury appealed to court to annul PZU's privatisation.

New trading system Warset, compatible with Amsterdam, Brussels and Paris bourses, was implemented at the Warsaw Stock Exchange.

December

Parliament endorsed Leszek Balcerowicz as new president of the NBP.

Unofficial restructuring programme of the state-owned saving bank (PKO BP SA) was launched.

Communications Minister annulled the third-generation UMTS mobile phone tender. Three UMTS licenses were extended to Polish GSM operators (Polkomtel, PTC and Centertel) that had placed bids.

2001

January

Government issued 10-year eurobond (€ 750 million).

February

Sejm enacted the 2001 budget bill.

STATISTICAL ANNEX AND STRUCTURAL INDICATORS

Table 1. **National accounts**
At current prices, Zl million

	1995	1996	1997	1998	1999
Gross domestic product	**308 105**	**387 826**	**472 350**	**553 561**	**615 560**
Final consumption expenditure	**240 163**	**309 040**	**376 721**	**437 560**	**492 391**
Private final consumption expenditure	188 416	245 560	301 068	352 063	397 829
Households final consumption expenditure	185 564	241 905	296 649	346 936	391 942
Final consumption expenditure of NPISH	2 852	3 655	4 419	5 127	5 887
Government final consumption expenditure	51 747	63 480	75 653	85 497	94 562
Gross capital formation	**60 705**	**84 818**	**116 003**	**145 006**	**162 285**
Gross fixed capital formation	57 405	80 390	110 853	139 205	156 690
Changes in inventories	3 300	4 428	5 150	5 801	5 595
External balance of goods and services	**7 237**	**–6 032**	**–20 374**	**–29 005**	**–39 117**
Exports of goods and services	78 172	94 192	120 408	155 874	160 787
Imports of goods and services	70 935	100 224	140 782	184 879	199 904

Source: Central Statistical Office.

Table 2. **Quarterly national accounts**
Year-on-year percentage change
At constant prices

	1997					1998				
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
Gross domestic product	**6.9**	**7.4**	**6.7**	**6.4**	**6.8**	**6.5**	**5.3**	**4.9**	**3.0**	**4.8**
Final consumption expenditure	**6.0**	**6.3**	**6.4**	**5.7**	**6.1**	**5.4**	**3.5**	**3.8**	**3.9**	**4.2**
Households final consumption	6.7	7.1	7.1	6.6	6.9	6.3	4.1	4.4	4.6	4.8
Government final consumption[1]	3.4	3.5	3.4	2.4	3.2	2.2	1.6	1.5	1.1	1.6
Gross capital formation	**18.5**	**20.3**	**20.7**	**22.2**	**20.8**	**16.9**	**14.3**	**14.0**	**12.3**	**13.8**
Gross fixed capital formation	19.6	21.0	21.2	23.2	21.7	17.3	14.6	14.2	12.9	14.2
External balance of goods and services										
Contribution to real GDP change	–	–	–	–	–2.7	–	–	–	–	–1.7
	1999					**2000**				
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
Gross domestic product	**1.6**	**3.0**	**5.0**	**6.2**	**4.1**	**6.0**	**5.2**	**3.3**	**2.4**	**4.1**
Final consumption expenditure	**4.0**	**4.4**	**4.8**	**5.0**	**4.5**	**3.9**	**2.3**	**0.9**	**..**	**2.1**
Households final consumption	4.6	5.2	5.7	5.9	5.4	4.6	2.6	0.8	..	2.4
Government final consumption[1]	1.3	1.2	1.4	1.3	1.3	1.0	0.9	1.3	..	–
Gross capital formation	**0.7**	**5.5**	**7.8**	**7.1**	**5.9**	**11.5**	**6.8**	**2.6**	**..**	**4.9**
Gross fixed capital formation	5.7	6.3	6.6	7.0	6.5	5.5	2.9	2.4	..	3.1
External balance of goods and services										
Contribution to real GDP change	–	–	–	–	–1.1	–	–	–	–	–

1. General government and NPISH's consumption expenditures.
Source: Central Statistical Office.

Table 3. **Household sectoral account**

	1996	1997	1998	1999
	Zloty billion			
Gross disposable income	277.3	341.3	399.5	440.0
Compensation of employees	123.7	153.9	181.7	235.8*
Income from self-employment	99.6	114.6	135.0	144.4
Income from property	22.3	32.4	35.7	37.5
Taxes	–35.6	–41.4	–47.5	–33.2*
Social security benefits	59.5	72.8	84.8	93.6
Transfers	7.8	9.0	9.7	–38.1*
Consumption expenditure	241.9	296.6	346.9	391.9
Gross savings	35.4	44.7	52.6	48.1
	Real growth in per cent[1]			
Gross disposable income	4.7	7.1	4.7	2.6
Compensation of employees	9.3	8.3	5.6	. .
Income from self-employment	2.1	0.2	5.4	–0.3
Income from property	–13.1	26.5	–1.4	–2.1
Taxes	1.0	1.2	2.6	. .
Social security benefits	3.8	6.5	4.2	2.9
Consumption expenditure	8.7	6.7	4.6	5.3
	Percentage of gross disposable income			
Gross savings ratio	12.8	13.1	13.2	10.9
Financial savings ratio[2]	7.5	8.6	7.7	4.9
Memorandum item:				
CPI (annual average)	19.9	14.9	11.8	7.3

* The way the employer and employee social security contributions are recorded and imputed in household account statistics was changed in 1999, causing discontinuity in the series concerning employee compensation, direct taxes and transfers.

1. Using CPI deflator
2. NBP data.

Source: Central Statistical Office, and National Bank of Poland.

Table 4. **Unemployment and participation rates (LFS)**

Annual averages, unless otherwise indicated, in per cent

	1995	1996	1997	1998	1999
Unemployment rate					
Total	13.3	12.3	11.2	10.7	13.9
By sex					
Men	12.1	11.0	9.6	9.1	12.4
Women	14.7	13.9	13.2	12.3	15.8
By place of residence					
Urban areas	14.3	13.1	11.7	11.1	14.4
Rural areas	11.9	11.2	10.5	9.7	13.2
By educational level (end of period)[1]					
Tertiary	3.0	2.9	2.0	3.0	4.8
Technical and vocational	11.3	10.1	8.9	8.6	13.0
General secondary	15.3	13.1	13.0	13.5	19.2
Basic vocational	16.4	14.1	12.0	12.5	18.4
Primary and incomplete primary	14.4	12.9	12.5	14.4	19.3
By age (end of period)[1]					
15-19	44.1	35.0	31.7	34.5	45.6
20-24	27.1	23.9	21.2	21.0	29.7
25-29	14.5	12.6	10.6	11.1	16.9
30-34	13.4	11.8	9.9	10.1	14.3
35-44	10.8	9.7	8.9	9.1	12.2
45-54	8.2	7.4	6.5	7.5	10.8
55 years and more	4.9	4.4	4.0	5.3	9.2
By duration of job search[2] **(end of period)**[1]					
6 months and less	39.8	38.9	42.4	42.8	42.9
7 to 12 months	20.3	20.8	23.5	21.8	25.8
13 to 24 months	20.6	23.0	22.5	23.0	20.3
25 months and more	19.3	17.3	11.6	12.4	11.1
Participation ratios[3]					
Total	58.8	58.2	57.7	57.4	56.7
Men	66.8	66.2	65.9	65.4	64.4
Women	51.5	51.0	50.3	50.0	49.7
Urban areas	57.3	56.6	56.4	56.2	56.3
Rural areas	61.3	61.0	60.0	59.3	57.4

1. For 1995-98, levels in November; for 1999, average of the fourth quarter.
2. In per cent of total number of unemployed.
3. Employed and job seekers in per cent of relevant population of 15 years old and over. In relation to working age population (15-64). The total participation ratio would be 66 per cent in 1998.

Source: Central Statistical Office.

Table 5. Growth of value-added, employment, and labour productivity by sectors

	Share in GDP 1999	1995	1996	1997	1998	1999
		Real growth in per cent				
GDP	**100.0**	**7.0**	**6.0**	**6.8**	**4.8**	**4.1**
Gross value-added	87.2	6.7	5.3	6.4	4.7	3.9
Agriculture, hunting, forestry	**3.4**	**10.4**	**2.4**	**1.1**	**5.9**	**–1.7**
Industry	**23.6**	**10.4**	**7.6**	**10.3**	**4.3**	**3.0**
Mining and quarrying	2.3	1.5	4.7	–4.3	–10.8	–2.6
Manufacturing	18.3	13.7	8.8	14.4	7.5	4.0
Electricity, gas and water supply	3.0	2.1	3.5	0.6	–1.2	1.0
Construction	**7.6**	**5.8**	**2.8**	**13.6**	**9.3**	**3.5**
Market services	**40.8**	**4.8**	**5.3**	**4.4**	**4.8**	**6.3**
Trade and repair of consumer goods	18.2	5.0	6.1	8.1	5.0	7.5
Hotels and restaurants	1.1	6.1	15.9	7.2	12.7	16.3
Transport, storage and communication	5.8	2.3	5.4	5.6	6.3	8.8
Financial intermediation	1.8	21.4	11.3	2.9	9.2	27.5
Real estate and business activities	10.4	5.8	0.9	–0.7	3.4	–0.4
Other	3.5	2.0	6.7	–6.1	1.3	3.9
Private households with employed persons	0.0	1.2	6.4	8.9	4.9	2.2
Non-market services	**11.8**	**2.5**	**2.6**	**2.9**	**2.3**	**0.0**
Public administration and defence	4.4	4.2	4.4	5.9	1.6	6.2
Education	3.9	1.4	1.3	0.9	4.9	3.2
Health care and social work	3.5	1.6	1.5	0.7	0.5	–11.8
		In thousands				
Employment[1]		**15 630**	**15 910**	**16 334**	**16 627**	**16 162**
of which:						
Agriculture, hunting, forestry		3 924	4 096	4 071	4 044	4 018
Industry		3 810	3 786	3 797	3 756	3 486
Mining and quarrying		375	357	336	313	272
Manufacturing		3 157	3 151	3 183	3 175	2 957
Electricity, gas and water supply		278	278	278	268	257
Construction		923	920	986	1 042	1 003
Trade and repair of consumer goods		2 093	2 144	2 295	2 414	2 342
		Growth in per cent				
Productivity						
Agriculture, hunting, forestry		. .	–1.9	1.7	6.6	–1.1
Industry		. .	8.3	10.0	5.4	11.0
Mining and quarrying		. .	10.0	1.7	–4.2	12.1
Manufacturing		. .	9.0	13.2	7.8	11.7
Electricity, gas and water supply		. .	3.5	0.6	2.5	5.3
Construction		. .	3.1	6.0	3.4	7.5
Trade and repair of consumer goods		. .	2.8	–2.5	–0.4	9.6

1. Annual average. Data include the estimated number of employees working in the "hidden economy".
Source: Central Statistical Office.

Table 6. **Direction of trade**
Customs basis, US$ million

	1995	1996	1997	1998	1999
Imports of goods					
Total	**29 050**	**37 137**	**42 308**	**47 054**	**45 911**
Developed countries	21 595	27 326	31 107	35 270	34 017
EU	18 781	23 738	26 998	31 027	29 826
EFTA	902	939	1 045	1 051	1 145
Other	1 912	2 649	3 064	3 192	3 046
Central and Eastern Europe	4 476	5 616	6 170	6 252	6 507
CEFTA	1 625	2 161	2 652	2 974	3 071
Others	2 641	3 455	3 518	3 278	3 436
Developing countries	3 189	4 195	5 030	5 532	5 387
Exports of goods					
Total	**22 895**	**24 440**	**25 751**	**28 229**	**27 407**
Developed countries	17 189	17 535	17 792	20 758	20 936
EU	16 036	16 196	16 526	19 270	19 326
EFTA	359	535	395	468	561
Other	794	804	871	1 020	1 049
Central and Eastern Europe	3 885	4 911	6 043	5 971	4 652
CEFTA	1 245	1 481	1 738	2 026	2 237
Others	2 640	3 430	4 305	3 945	2 415
Developing countries	1 821	1 994	1 916	1 500	1 819

Source: Central Statistical Office.

Table 7. **Foreign trade by commodity group**
Customs basis, US$ million

	SITC group	1995	1996	1997	1998	1999
Imports		29 050	37 137	42 308	47 054	45 911
Food and live animals	0	2 339	3 143	2 894	2 968	2 537
Beverages and tobacco	1	217	250	299	302	368
Crude materials, inedible, except fuels	2	1 562	1 737	1 762	1 655	1 419
Mineral fuels, lubricants and related materials	3	2 651	3 389	3 710	2 964	3 281
Animal and vegetable oils, fats and waxes	4	189	216	239	282	190
Chemicals and related products	5	4 340	5 120	5 839	6 405	6 584
Manufactured goods classified by material	6	6 266	7 455	8 283	9 711	9 526
Machinery and transport equipment	7	8 688	12 272	15 228	18 273	17 544
Miscellaneous manufactured articles	8	2 701	3 435	3 950	4 411	4 380
Commodities and transactions, not classified elsewhere	9	97	120	104	83	82
Exports		22 895	24 440	25 751	28 229	27 407
Food and live animals	0	2 100	2 461	3 026	2 840	2 328
Beverages and tobacco	1	164	131	103	96	101
Crude materials, inedible, except fuels	2	1 029	825	820	804	839
Mineral fuels, lubricants and related materials	3	1 870	1 675	1 719	1 546	1 377
Animal and vegetable oils, fats and waxes	4	35	38	42	38	46
Chemicals and related products	5	1 774	1 887	2 027	1 899	1 696
Manufactured goods classified by material	6	6 314	6 316	6 830	7 116	6 986
Machinery and transport equipment	7	4 828	5 719	5 560	8 022	8 278
Miscellaneous manufactured articles	8	4 772	5 379	5 611	5 861	5 750
Commodities and transactions, not classified elsewhere	9	9	9	13	7	6

Source: Central Statistical Office.

Table 8. **Balance of payments on a cash basis**

In US$ million

	1995	1996	1997	1998	1999	2000 (preliminary)
A. Current account	**5 310**	**–1 371**	**–4 312**	**–6 858**	**–11 569**	**–9 978**
Trade balance	–1 912	–8 179	–11 320	–13 720	–14 380	–13 165
Exports of goods	22 878	24 453	27 229	30 122	26 347	28 256
Imports of goods	24 790	32 632	38 549	43 842	40 727	41 421
Services, net	146	–213	305	–508	–1 624	–1 684
Income, net	–613	–356	–458	–568	–804	–796
Current transfers, net	544	1 002	1 150	1 942	1 604	1 680
General government	220	73	102	408	221	260
Others sectors	324	929	1 048	1 534	1 383	1 420
Unclassified transactions on current account	7 145	6 375	6 011	5 996	3 635	3 987
B. Capital and financial account	**3 785**	**4 334**	**4 867**	**11 707**	**8 253**	**7 745**
Capital account	285	90	90	73	47	13
Financial account	3 500	4 618	4 778	10 921	8 206	7 732
Direct investment, net	1 134	2 741	3 041	4 966	6 348	9 338
Polish direct investment abroad	2	–27	–36	–163	–123	–123
Foreign direct investment in Poland	1 132	2 768	3 077	5 129	6 471	9 461
Portfolio investment, net	1 171	241	2 098	1 330	1 449	2 769
Polish portfolio investment abroad	1	282	815	–180	12	272
Foreign portfolio investment in Poland	1 170	–41	1 283	1 510	1 437	2 497
Other investment, net	1 195	1 636	–361	4 625	409	–4 375
Polish assets	287	6 532	–872	2 213	–2 691	–2 877
Long-term credits extended	71	–22	–82	–82	–11	123
Short-term credits extended	–22	–5	–60	–16	13	28
Other assets	238	6 559	–730	2 311	–2 693	–3 028
Polish liabilities	908	–4 896	511	2 412	3 100	–1 498
Long-term credits received	–82	–5 941	416	1 669	2 056	205
Short-term credits received	88	85	592	–46	440	139
Other liabilities	902	960	–497	789	604	–1 842
C. Net errors and omissions	**720**	**486**	**2 488**	**1 766**	**3 484**	**2 643**
Overall balance	9 815	3 823	3 043	5 936	168	674
D. Financing of overall balance	**–9 815**	**–3 823**	**–3 043**	**–5 936**	**–168**	**–674**
Reserve assets (gross official reserves)	–8 432	–3 828	–3 044	–5 926	–159	–618
Credits from IMF	–1 400	–	–	–	–	–
Exceptional financing	17	5	1	–10	–9	–56

Source: National Bank of Poland.

Table 9. **Balance of payments on a transaction basis, 1995-1999**
In US$ million

	1995	1996	1997	1998	1999
A. Current account	**854**	**–3 264**	**–5 744**	**–6 901**	**–12 487**
Trade balance	–1 646	–7 287	–9 822	–12 836	–15 072
Merchandise exports, fob	25 041	27 557	30 731	32 467	30 060
Merchandise imports, fob	26 687	34 844	40 553	45 303	45 132
Services, net	3 537	3 404	3 172	4 216	1 381
Credit	10 675	9 833	8 986	10 920	8 462
Debit	7 138	6 429	5 814	6 704	–7 081
Income, net	–1 995	–1 075	–1 129	–1 178	–1 010
Credit	1 089	1 527	1 467	2 226	1 837
Debit	3 084	2 602	2 596	3 404	–2 847
Current transfers, net	958	1 694	2 035	2 897	2 214
General government	244	82	120	438	217
Other sectors	714	1 612	1 915	2 459	1 997
Current transfers, debit	1 501	1 131	665	623	684
General government	–	–	–	20	52
Other sectors	1 501	1 131	665	603	632
Current transfers, credit	2 459	2 825	2 700	3 520	2 898
General government	244	82	120	458	269
Other sectors	2 215	2 743	2 580	3 062	2 629
B. Capital and financial account	**8 149**	**6 771**	**7 479**	**13 347**	**10 517**
Capital account	285	94	66	63	55
Financial account	7 864	6 677	7 413	13 284	10 462
Direct investment	3 617	4 445	4 863	6 049	7 239
Polish direct investment abroad	–42	–53	–45	–316	–31
Foreign direct investment in Poland	3 659	4 498	4 908	6 365	7 270
Portfolio investment	1 177	304	2 110	1 697	143
Polish portfolio investment abroad	1	282	815	–130	–548
Foreign portfolio investment in Poland	1 176	22	1 295	1 827	691
Other investment, net	3 070	1 931	452	5 538	2 511
Other investment, assets	3 356	6 191	–754	2 107	–3 339
Trade credit	–119	–224	170	–94	–573
Other credits extended, long-term	75	–21	–111	–82	9
Other credits extended, short-term	–134	–6	–77	–1	10
Currency and deposits	3 793	685	–768	2 229	–2 776
Other foreign assets	–259	5 757	32	55	–9
Other investment, liabilities	–286	–4 260	1 206	3 431	5 850
Trade credit	223	703	–159	–51	1 726
Credits from IMF	–1 400	0	0	0	0
Other credits received, long-term	397	–5 420	1 437	2 632	3 079
Other credits received, short-term	–8	–12	320	19	322
Currency and deposits	508	463	–392	831	607
Other foreign liabilities	–6	6	0	0	116
Financial derivatives	–	–3	–12	–	569
C. Errors and omissions	**–571**	**321**	**1 309**	**–519**	**2 129**
Total (items A through C)	**8 432**	**3 828**	**3 044**	**5 927**	**159**
D. Foreign assets (gross official reserves)	**–8 432**	**–3 828**	**–3 044**	**–5 927**	**–159**

Source: National Bank of Poland.

Table 10. **Stock of FDI by country of origin, 1999**

	US$ million	Share (%)	Investment plans (US$ million)	Share (%)	Number of companies	Share (%)
OECD countries	**31 161**	**88.6**	**11 804**	**88.1**	**761**	**95.2**
North America	**5 412**	**15.4**	**3 010**	**22.5**	**147**	**18.4**
United States	5 153	14.7	2 973	22.2	125	15.6
Canada	259	0.7	37	0.3	22	2.8
European Union	**22 449**	**63.8**	**7 160**	**53.4**	**559**	**70.0**
Germany	6 077	17.3	2 406	18.0	180	22.5
Italy	3 208	9.1	669	5.0	67	8.4
France	3 855	11.0	1 547	11.5	67	8.4
Netherlands	3 233	9.2	702	5.2	49	6.1
United Kingdom	2 068	5.9	263	2.0	35	4.4
Ireland	814	2.3	100	0.7	3	0.4
Austria	799	2.3	180	1.3	32	4.0
Sweden	789	2.2	624	4.7	43	5.4
Denmark	541	1.5	50	0.4	30	3.8
Belgium	290	0.8	245	1.8	21	2.6
Portugal	288	0.8	324	2.4	3	0.4
Spain	259	0.7	n.a.	n.a.	6	0.8
Finland	214	0.6	46	0.3	20	2.5
Luxembourg	12	0.0	n.a.	n.a.	2	0.3
Greece	2	0.0	4	0.0	1	0.1
Other OECD countries	**3 300**	**9.4**	**1 634**	**12.2**	**55**	**6.9**
Korea	1 616	4.6	657	4.9	4	0.5
Switzerland	635	1.8	305	2.3	16	2.0
Norway	456	1.3	455	3.4	12	1.5
Japan	374	1.1	137	1.0	12	1.5
Turkey	100	0.3	58	0.4	4	0.5
Australia	68	0.2	22	0.2	3	0.4
Czech Republic	51	0.1	n.a.	n.a.	4	0.5
Non-OECD countries	**1 420**	**4.0**	**1 018**	**7.6**	**18**	**2.3**
Russia	1 112	3.2	626	4.7	2	0.3
Croatia	173	0.5	16	0.1	2	0.3
China	45	0.1	45	0.3	2	0.3
Liechtenstein	30	0.1	12	0.1	3	0.4
South Africa	25	0.1	40	0.3	1	0.1
Malaysia	11	0.0	2	0.0	1	0.1
Cyprus	7	0.0	7	0.1	2	0.3
Slovenia	6	0.0	50	0.4	1	0.1
Taiwan	6	0.0	200	1.5	1	0.1
Israel	5	0.0	20	0.1	3	0.4
Multinational enterprises	**2 589**	**7.4**	**575**	**4.3**	**20**	**2.5**
Total investment exceeding $1 million per project	**35 171**	**100.0**	**13 397**	**100.0**	**799**	**100.0**
Estimated investment of less – than $1 million per project	**3 742**					
Total stock of FDI	**38 913**					

Source: Polish Agency for Foreign Investment.

Table 11. **Stock of FDI by sector of destination**

	End 1999 (US$ million)	Investment plans (US$ million)
Production activities including:	17 319	5 836
Food products, beverages, tobacco	4 617	987
Means of transportation	4 405	1 331
Other non-metal goods	2 092	1 067
Wood and wooden products	240	26
Fabrics and textiles	237	33
Paper, printing and book-binding	1 384	412
Chemicals, chemical products	1 304	469
Electrical and optical equipment	1 270	430
Other technical equipment	536	322
Rubber and plastic products	451	254
Metals and metal product	400	243
Other	383	263
Financial services	7 862	1 096
Trade and repairs	3 398	2 508
Construction	1 930	1 168
Transportation and communications	1 892	728
Hotels and restaurants	423	187
Service and municipal activities	1 585	529
Electricity, gas and water supply	473	1 111
Real property services	190	221
Agriculture	30	8
Mining and quarrying	68	4
Total investment exceeding US$ 1 million per project	35 171	13 397
Estimated investment of less than US$1 million per project	3 742	
Total stock of FDI	38 913	

Source: Polish Agency for Foreign Investment.

Table 12. **Financial fragility indicators**

	1996	1997	1998	1999
Official reserve assets (in months of imports of goods)[1]	6.7	6.7	7.7	8.0
Current account deficit[1] to GDP (%)	1.0	3.0	4.3	7.5
FDI[2] to current account deficit[1] (%)	199.9	70.5	72.4	54.9
Total external debt[3] to GDP (%)	33.1	34.5	37.3	41.5
Total external debt[3] to exports of goods[1] (%)	194.4	182.3	196.4	244.2
Debt service ratio (medium and long-term foreign debt[4] service/exports[1]) (%)	12.2	9.8	13.0	16.3
Short-term external[4] debt to official reserve assets (%)	27.3	23.9	29.8	38.8
Total government debt to GDP (%)	47.9	46.9	42.9	42.9
Total government interest debt service to government revenues (%)	8.6	8.1	7.9	7.4

1. Balance of payments on a cash basis.
2. Annual flow.
3. Consists of short and long term debt of the State, banking sector and non-financial sector.
4. Consists of debt of the State, banking sector and non-financial sector.

Source: National Bank of Poland and Ministry of Finance.

Table 13. **Monetary survey**
End-year, in Zl million

	1996	1997	1998	1999	2000
Total money stock (M2)	**136 662**	**176 392**	**220 780**	**263 449**	**294 478**
Zloty money supply[1]	113 270	145 571	187 137	223 744	251 470
Notes and coins in circulation (excl. cash in vault)	23 564	27 256	30 225	38 083	34 113
Zloty deposits of non-financial sector	89 706	118 315	156 912	185 662	217 358
Personal	57 418	80 896	109 584	124 088	154 040
Corporate	32 288	37 419	47 328	61 574	63 317
Foreign currency deposits of non-financial sector	23 393	30 821	33 642	39 704	43 008
Personal	20 465	25 258	24 471	30 353	32 716
Corporate	2 927	5 563	9 171	9 351	10 292
Counterpart of total money stock					
Net foreign assets	**61 524**	**85 813**	**96 285**	**110 718**	**132 046**
Net domestic assets	**75 138**	**90 579**	**124 495**	**152 731**	**162 433**
Lending to non-financial sector	81 085	108 291	138 482	175 938	206 350
Personal loans	11 777	18 395	23 904	36 593	48 188
Corporate loans	69 308	89 896	114 578	139 345	158 161
Net general government debt	48 241	55 259	61 229	64 565	50 758
Excl. Treasury bonds denominated in US dollars	48 241	36 490	42 275	52 470	42 256
Balance of other items (net)	–54 187	–69 971	–75 217	–87 773	–94 675

1. Zloty money supply excludes cash in vault.
Source: National Bank of Poland.

Table 14. **Monetary policy instruments in 1999 and 2000**

End of month

Item	1999												2000											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Refinancing rate																								
Basic	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	21.5	21.5	21.5	22.5	22.5	22.5	22.5	22.5	22.5	24.0	24.0	24.0	24.0	24.0
For central investment projects	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	20.5	20.5	20.5	21.5	21.5	21.5	21.5	21.5	21.5	23.0	23.0	23.0	23.0	23.0
Rediscount rate	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	19.0	19.0	19.0	20.0	20.0	20.0	20.0	20.0	20.0	21.5	21.5	21.5	21.5	21.5
Lombard rate	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	20.5	20.5	20.5	21.5	21.5	21.5	21.5	21.5	21.5	23.0	23.0	23.0	23.0	23.0
Reserve requirement																								
Zloty deposits																								
Demand	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Time	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Foreign currency deposits																								
Demand	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Time	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Crawling peg (monthly)	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	(*)								
Reference rate																								
(rate 28-day open market on operations)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	14.0	14.0	16.5	16.5	16.5	17.5	17.5	17.5	17.5	17.5	17.5	19.0	19.0	19.0	19.0	19.0

Notes: Interest rates (including reference rate) are presented per annum.
Dates of entering into force of new provisions: 1999: January 21, March 25, September 23, November 18. 2000: February 24, August 31.
* Full floating exchange rate introduced on 12 April 2000.
Source: National Bank of Poland.

Table 15. **Monetary policy decisions in 1999 and 2000**

Date of change	Instruments
	Interest rate
January 21, 1999	The basic refinancing rate was lowered from 21 to 18 per cent. The rediscount rate was lowered from 18.25 to 15.5 per cent. The lombard rate was lowered from 20 to 17 per cent. The reference rate used for 28-day open market operations was lowered from 15.5 to 13 per cent.
September 23, 1999	The reference rate used for 28-day open market operations was increased from 13 to 14 per cent.
November 18, 1999	The basic refinancing rate was increased from 18 to 21.5 per cent. The rediscount rate was increased from 15.5 to 19 per cent. The lombard rate was increased from 17 to 20.5 per cent. The reference rate used for 28-day open market operations was increased from 14 to 16.5 per cent
February 24, 2000	The basic refinancing rate was increased from 21.5 to 22.5 per cent. The rediscount rate was increased from 19 to 20 per cent. The lombard rate was increased from 20.5 to 21.5 per cent. The reference rate used for 28-day open market operations was increased from 16.5 to 17.5 per cent.
August 31, 2000	The basic refinancing rate was increased from 22.5 to 24 per cent. The rediscount rate was increased from 20 to 21.5 per cent. The lombard rate was increased from 21.5 to 23 per cent. The reference rate used for 28-day open market operations was increased from 17.5 to 19 per cent.
	Exchange rate
March 25, 1999	The monthly pace of exchange rate crawl was lowered from 0.5 to 0.3 per cent. The crawling band was widened from 12.5 to 15 per cent.
June 7, 1999	Trading at fixing ended, and the fixing rate began to be used for reference purposes only.
April 12, 2000	Central party and crawling band abolished, exchange rate floated.
	Other
September 30, 1999	The new regulations on mandatory reserves came into force. The reserve requirements on zloty demand deposits were lowered from 20 to 5 per cent, and from 11 to 5 per cent on zloty time deposits.
September 19, 2000	The first outright sale of Treasury bonds by the NBP took place.

Source: National Bank of Poland.

Table 16. **Indicators of banks' health and performance**
Excluding co-operative banks and banks undergoing liquidation or bankruptcy

	1993	1994	1995	1996	1997	1998	1999
Number of banks	87	82	81	81	83	83	77
Solvency							
Below required 8 per cent level	18	18	13	8	8	5	9
of which: Negative solvency ratio	13	15	11	7	6	4	5
Profitability							
Number of loss-making banks	24	20	11	11	7	9	13
Gross profit/income (in per cent)							
All banks	6.0	6.0	16.9	19.4	14.7	8.3	6.4
Banks with majority state equity	5.9	5.2	15.2	18.9	12.5	5.3	6.1
of which: Directly owned by the Treasury	6.6	5.7	16.0	20.2	13.7	9.7	5.4
Private banks	6.7	9.6	21.0	20.5	17.3	10.0	6.3
of which:							
With majority Polish equity	0.5	5.8	21.0	21.3	19.8	12.0	10.4
With majority foreign equity	32.3	17.9	20.9	19.7	13.6	9.1	4.7
Non-performing loans (in per cent of total loan portfolio)							
Substandard	7.1	5.7	5.4	4.1	3.9	4.1	5.3
Doubtful	6.0	5.3	3.5	1.7	1.2	1.8	3.6
Lost	17.9	17.7	12.0	7.4	5.4	4.7	4.8
Total	31.0	28.7	20.9	13.2	10.5	10.6	13.7
Actual provisioning (in per cent of loan portfolio in the category)							
Substandard (at least 20 required)	16.3	25.8	26.1	27.0	25.9	22.2	20.9
Doubtful (50 required)	25.0	55.4	59.3	53.4	52.5	53.0	54.6
Lost (100 required)	87.1	100.1	100.2	99.7	99.7	99.8	100.8
Total	82.6	103.1	104.1	103.1	103.3	101.5	104.4
Total amount of provisions (Zl billion)	4.6	6.9	7.4	6.7	6.2	7.6	10.1

Source: National Bank of Poland.

Table 17. Commercial bank credit to enterprises and households

In Zl million, end-period

Specification	1991	1992	1993	1994	1995	1996	1997	1998	1999
State-owned enterprises	**10 379**	**11 770**	**14 252**	**16 751**	**20 327**	**24 025**	**28 612**	**31 186**	**31 352**
Short-term	6 203	5 989	6 534	6 971	8 852	9 720	10 301	10 818	10 080
Housing	759	24	13	9	6	0	24	108	327
Other long-term	3 418	5 050	6 408	8 364	10 142	13 616	17 759	19 770	20 459
Interest unpaid	0	707	1 297	1 406	1 328	690	528	490	486
Private firms	**8 249**	**11 907**	**16 679**	**21 464**	**30 262**	**44 200**	**59 343**	**77 707**	**98 351**
Short-term	4 565	4 905	6 317	7 988	11 951	18 606	25 481	35 906	45 726
One to five years	1 440	1 878	2 787	3 941	6 316	10 177	14 696	19 308	24 670
Housing	1 976	3 304	4 010	4 734	5 547	5 764	5 770	5 662	5 422
Other long-term	268	1 024	1 450	1 951	2 867	6 078	9 542	13 366	18 982
Other (including interest unpaid)	0	796	2 115	2 850	3 580	3 575	3 855	3 465	3 551
Households	**714**	**1 187**	**2 239**	**3 324**	**5 602**	**11 753**	**18 368**	**23 878**	**36 565**
Short-term	335	633	1 058	1 442	2 217	3 496	4 532	6 375	10 387
One to five years	255	339	770	1 311	2 646	6 612	10 461	12 472	17 179
Housing	115	197	346	470	562	1 020	1 815	2 986	5 838
Other long-term	9	10	17	37	88	380	1 333	1 746	2 788
Interest unpaid	0	9	47	64	89	245	228	299	373

Source: National Bank of Poland.

Table 18. **Consolidated general government operations, 1996-1999**[1]

GFS definition

	1996		1997		1998		1999	
	Zl million	Per cent of GDP	Zl million	Per cent of GDP	Zl million	Per cent of GDP	Zl million	Per cent of GDP
General government revenue	**163 754**	**42.2**	**197 386**	**41.8**	**225 209**	**40.7**	**251 752**	**40.9**
Direct taxes	44 530	11.5	52 915	11.2	61 052	11.0	48 554	7.9
PIT	33 282	8.6	38 938	8.2	45 436	8.2	32 561	5.3
CIT	11 248	2.9	13 977	3.0	15 616	2.8	15 993	2.6
Indirect taxes	45 327	11.7	57 145	12.1	65 612	11.9	75 809	12.3
Social security contributions	35 313	9.1	42 954	9.1	50 969	9.2	52 962	8.6
Other taxes and non-tax revenue	38 584	9.9	44 372	9.4	47 576	8.6	74 427	12.1
General government expenditure	**175 806**	**45.3**	**210 684**	**44.6**	**238 800**	**43.1**	**270 977**	**44.0**
Current expenditure	160 997	41.5	192 446	40.7	216 290	39.1	249 210	40.5
Goods and services	60 593	15.6	71 889	15.2	82 351	14.9	104 338	17.0
Transfers and subsidies	86 119	22.2	104 352	22.1	115 891	20.9	125 879	20.4
Interest payments	14 285	3.7	16 205	3.4	18 048	3.3	18 993	3.1
Capital expenditure	11 929	3.1	16 748	3.5	20 397	3.7	19 439	3.2
Lending minus repayments[2]	2 880	0.8	1 490	0.3	2 113	0.4	2 328	0.4
Balance	**–12 052**	**–3.1**	**–13 298**	**–2.8**	**–13 591**	**–2.5**	**–19 225**	**–3.1**
Memorandum items:								
Nominal GDP	387 826		472 350		553 561		615 560	
Privatisation revenue	3 750	1.0	6 538	1.4	7 069	1.3	13 368	2.2
Contributions transferred to second-pillar pension funds (Zl billion)							3.1	0.5

1. Excluding public sector payment arrears.
2. Excluding privatisation receipts.

Source: Ministry of Finance.

Table 19. **Consolidated general government operations,[1] 1999**

GFS definition

	Central government		Local government		Social Security		Extra-budget. accounts (central + local)		Consolidated general government	
	Zl million	% of GDP	Zl million	% of GDP	Zl million	% of GDP	Zl million	% of GDP	Zl million	% of GDP
Revenue and grants	**125 946**	**20.5**	**64 009**	**10.4**	**92 506**	**15.0**	**51 631**	**8.4**	**251 752**	**40.9**
Current revenue	125 828	20.4	25 187	4.1	68 873	11.2	37 735	6.1	247 235	40.2
Tax revenue	118 336	19.2	18 057	2.9	60 430	9.8	21 080	3.4	208 041	33.8
Non-tax revenue	7 492	1.2	7 130	1.2	8 443	1.4	16 655	2.7	39 194	6.4
Grants	82	0.0	35 853	5.8	23 633	3.8	12 466	2.0	82	0.0
Other revenue	36	0.0	2 969	0.5	0	0.0	1 430	0.2	4 435	0.7
Expenditure[2]	**143 032**	**23.2**	**64 977**	**10.6**	**98 698**	**16.0**	**51 780**	**8.4**	**270 977**	**44.0**
Goods and services	25 639	4.2	40 674	6.6	1 600	0.3	43 893	7.1	104 338	17.0
Subsidies and transfers	86 447	14.0	11 698	1.9	96 776	15.7	2 908	0.5	125 879	20.4
Interest	18 572	3.0	209	0.0	206	0.0	6	0.0	18 993	3.1
Capital expenditure and net lending	12 374	2.0	12 396	2.0	116	0.0	4 973	0.8	21 767	3.5
Balance[3]	**–17 086**	**–2.8**	**–968**	**–0.2**	**–6 192**	**–1.0**	**–149**	**0.0**	**–19 225**	**–3.1**
Financing	**17 086**	**2.8**	**968**	**0.2**	**6 192**	**1.0**	**149**	**0.0**	**19 225**	**3.1**
Foreign	576	0.1	0	0.0	0	0.0	0	0.0	576	0.1
Domestic	16 510	2.7	968	0.2	6 192	1.0	149	0.0	18 649	3.0
Bank	1 587	0.3	523	0.1	2 162	0.4	–1 287	–0.2	2 985	0.5
Non-bank	1 575	0.3	425	0.1	4 030	0.7	1 436	0.2	2 296	0.4
Privatisation	13 348	2.2	20	0.0	0	0.0	0	0.0	13 368	2.2
Memorandum items:										
Nominal GDP (Zl million)	615 560									
Privatisation revenue (Zl million)	13 348		20						13 368	

1. Excludes public sector payment arrears.
2. Includes loans extended by the central government to extra-budgetary funds.
3. Excludes privatisation receipts (central and general government only).

Source: Ministry of Finance.

Table 20. **Financing of the central government**
In Zl million

	1996	1997	1998	1999	2000	2001 Draft budget
Central budget net borrowing	**9 167**	**5 903**	**13 191**	**12 479**	**15 366**	**20 540**
Domestic	9 780	8 085	16 488	13 627	20 385	22 362
Treasury bills[1]	–763	4 433	–2 698	–218	–4 328	–29
Treasury bills purchased by the NBP	2 068	–2 101	–	–	–	–
Treasury bonds	13 867	9 790	24 093	20 909	23 640	27 947
Privatisation receipts[2]	–	–	7 069	13 347	26 746	18 000
Other (net)	1 222	5 521	2 123	3 083	–800	–1 082
Long-term debt repayment	–5 554	–8 435	–10 016	–14 252	–13 634	–19 635
Flood's loan (from NBP)	–	1 000	–1 000	–	–	–
Loans granted[3]	–	–	–	–4 841	–2 892	–123
Compensations	–	–	–	–	–3 393	–2 520
Bank account	–1 060	–2 123	–3 083	–4 401	–4 954	–197
Foreign	–613	–2 183	–3 297	–1 148	–5 020	–1 823
Memorandum items:						
Net borrowing in per cent of GDP	2.4	1.2	2.4	2.0	2.2	2.6
Nominal GDP	387 826	472 350	553 561	615 560	690 400	781 724

1. In 1996-1997, together with loans.
2. Before 1998, privatisation receipts were included in the revenues of the general government.
3. In 1999, loans to ZUS amounted to Zl 4 000 million and loans to Healthcare funds amounted to Zl 847 million; in 2000, these figures were Zl 2 000 million and Zl 1 000 million, respectively.

Source: Ministry of Finance.

Table 21. **Finances of main social protection funds**

Zl million, cash basis

	1996	1997	1998	1999	2000	2001
Social Insurance Fund (FUS)						
Revenues	52 198	62 636	71 960	73 910	80 205	100 538
of which: Transfers from the State budget	6 031	7 000	8 793	9 952[1]	15 919	26 662
Expenditures	51 218	63 835	72 779	80 403	86 641	100 538[2]
of which: Pensions + disability benefits	44 082	54 244	62 386	69 626	74 711	85 254
Social Insurance Fund for Farmers (KRUS)						
Revenues	8 095	10 069	11 316	13 638	14 436	16 116
of which: Transfers from the State budget	7 550	9 444	10 652	12 891	13 682	15 288
Expenditures	8 019	10 056	11 311	13 738	14 457	16 120
of which: Pensions + disability benefits	7 656	9 463	10 442	11 465	12 206	13 502
Labour Fund						
Revenues	7 540	7 011	5 119	5 481	6 061	7 535
of which: Transfers from the State budget	4 621	3 402	881	673	839	1 680
Expenditures	7 418	6 585	4 816	5 579	6 922	8 124
of which: Unemployment benefits	6 381	4 764	2 321	2 713	3 699	4 031
Health Care Fund						
Revenues	–	–	–	20 913	23 336	26 648
of which: Transfers from the State budget	–	–	–	1 987	–	–
Expenditures	–	–	–	21 761	24 227	26 648
Total						
Revenues	67 833	79 716	88 395	113 942	124 038	150 837
of which: Transfers from the State budget	18 202	19 846	20 326	25 503	30 440	43 630
Expenditures	66 655	80 476	88 906	121 481	132 247	151 430
of which: Pensions + disability benefits	51 738	63 707	72 828	81 091	86 917	98 756

1. 1999 FUS' revenues include Zl 202 million transfer from the State budget.
2. 2001 FUS' expenditures include Zl 1 809 million, which are overdue transfers to the pension funds.

Source: Ministry of Finance.

Table 22. **Finances of National Fund for Environmental Protection and Water Management (NFOSiGW) and of regional and local environmental funds (domestic resources)**

In Zl million

	1998				1999				
	NF	VF	GF	Total	NF	VF	PF	GF	Total
Financial resources at the beginning of the year	**160**	**262**	**170**	**592**	**547**	**322**	**0**	**280**	**1 149**
Revenues	**1 520**	**1 460**	**479**	**3 459**	**1 258**	**1 316**	**119**	**480**	**3 173**
Fees and fines	769	806	414	1 989	467	642	114	406	1 629
Own earnings	751	654	65	1 470	791	674	5	74	1 544
Repaid loans	414	335		749	473	398			871
Interests from loans granted	233	142		375	220	139			359
Revenues from financial operations	84	86		170	90	66			156
Other	20	91	65	176	8	71	5	74	158
Expenses	**1 134**	**1 399**	**367**	**2 900**	**1 755**	**1 298**	**45**	**391**	**3 489**
Financial aid (subsidies) for environment protection	1 057	1 244	367	2 668	1 583	1 154	45	391	3 173
Overhead expenditure	20	58		78	24	50			74
Other (mainly equity investments)	57	97		154	148	94			242
Financial resources at the end of the year	**547**	**322**	**282**	**1 151**	**50**	**339**	**73**	**371**	**833**

Note: NF: National Fund (NFOSiGW); VF: Voivodship (provincial) funds; PF: Poviat (county) funds; GF: Gmina (municipality) funds. For more details on funds structure see Chapter IV.

Source: National Fund for Environmental Protection and Water Management.

Table 23. Selected extra-budgetary funds and agencies

According to supervisory institution

	1998		1999	
	Revenue	Expenditure	Revenue	Expenditure
	Zl million			
Minister of the Treasury	**3 119**	**2 312**	**2 756**	**2 315**
Agency for Military Property	31	30	165	152
Privatisation Agency	3	4	7	7
Agency for Industrial Development	753	598		
Polish Agency for Regional Development	44	42	80	83
Agricultural Property Agency of the Treasury	1 016	850	1 086	883
Polish Agency for Foreign Investment	13	14	6	7
Polish Press Agency	37	37	36	38
Military Housing Agency	1 222	737	1 376	1 145
Minister of Agriculture and Rural Development	**13 595**	**14 295**	**16 881**	**17 070**
Agency for Restructuring and Modernisation of Agriculture	854	1 223	1 104	1 014
Administrative Fund	372	376	434	420
Social Insurance Fund for Farmers (KRUS)	11 316	11 311	13 638	13 738
Prevention and Rehabilitation Fund	24	24	28	27
Farm Land Protection Fund	41	39	15	17
Agricultural Market Agency	988	1 322	1 662	1 854
Minister of Labour and Social Policy	**80 112**	**79 884**	**82 071**	**88 692**
Alimony Fund	679	708	891	893
Guaranteed Employee Benefits Fund	270	17	123	32
Labour Fund	5 119	4 816	5 481	5 579
Social Insurance Fund (FUS)	71 960	72 779	73 910[1]	80 403
State Rehabilitation Fund	2 084	1 564	1 666	1 785
Minister of Economy	**354**	**307**	**398**	**359**
Agency for Material Reserves	322	280	365	331
Technology Agency	11	11	12	11
State Agency for Restructuring of Hard Coal Mining	22	16	21	17.5
Minister of Transportation and Maritime Economy				
Agency for Construction and Exploitation of highways	196	179	n.a.	n.a.
Head of Combatant Office				
State Combatant Fund	115	120	98	128
Minister of Culture and National Heritage				
Creativity Promotion Fund	1	1	1	1
Minister of Environment				
National Fund for Environmental Protection and Water Management	1 216	458	929	409
Minister of Regional Development and Housing				
Central Fund for Geodetic and Cartographic Economy	13	17	18	12

1. Includes Zl 202 million transfer from the State budget.

Source: Ministry of Finance, Ministry of the Treasury, Ministry of Economy.

Table 24. **State debt and debt service**

Nominal value in Zl million

	1996	1997	1998	1999
	Stock			
Total debt in per cent of GDP	**47.9**	**46.9**	**42.9**	**42.8**
Total debt	**185 603**	**221 650**	**237 400**	**264 370**
1. Domestic debt	79 609	104 058	121 182	134 676
TS on domestic markets	74 042	87 966	101 565	113 275
Active Treasury securities	52 377	60 147	73 427	98 051
Passive Treasury securities	21 665	27 820	28 138	15 224
Other domestic debts	5 567	16 092	19 618	21 401
2. Foreign debt	105 994	117 592	116 218	129 694
TS on international markets	23 437	24 074	21 392	25 239
Foreign bonds	1 181	2 778	2 801	3 230
Brady bonds	22 255	21 297	18 591	22 010
Credits	82 550	93 517	94 826	104 455
Paris Club	76 094	85 300	86 928	94 580
Guaranteed outside Paris Club	278	196	105	0
World Bank	4 710	5 484	5 720	6 868
Other	1 468	2 537	2 074	3 008
Liquidation of clearing balances	7	0	0	0
Total debt service	**14 391**	**16 271**	**17 911**	**18 777**
Domestic	11 021	12 588	14 141	14 894
Foreign	3 370	3 683	3 770	3 883
In per cent of budget expenditures	13.2	12.9	12.8	13.6
In per cent of GDP	3.7	3.4	3.2	3.0
Debt guaranteed by the central government	**19 628**	**21 086**	**19 723**	**18 565**
Domestic	10 071	11 315	10 676	9 489
Foreign	9 557	9 771	9 047	9 076

Source: Ministry of Finance.

Table 25. **External debt**[1]

Stock at end of period, US$ million

As of 29 September 2000

	1995	1996	1997	1998	1999
Monetary authorities	**174**	**265**	**792**	**925**	**1 844**
Loans	174	78	58	32	23
Currency and deposits	–	187	734	893	1 821
General government	**44 656**	**36 271**	**34 402**	**34 098**	**32 124**
Debt securities[2]	8 701	7 562	7 818	7 037	6 925
Bonds and notes	7 777	6 884	7 343	6 672	6 779
Money-market instruments	924	678	475	365	146
Other investment	35 955	28 709	26 584	27 061	25 199
Loans	35 936	28 708	26 584	27 061	25 199
Other liabilities	19	1	0	0	0
Banks	**1 834**	**2 518**	**3 683**	**5 131**	**6 553**
Loans from direct investors (Intercompany loans)	–	87	141	160	139
Debt securities	–	200	488	236	10
Bonds and notes	–	200	306	215	10
Money-market instruments			182	21	0
Other investment	1 834	2 231	3 054	4 735	6 404
Loans	452	488	1 104	2 084	3 681
Currency and deposits	1 346	1 685	1 950	2 651	2 723
Other liabilities	36	58	0	0	0
Other sectors	**5 847**	**8 487**	**10 771**	**19 009**	**23 829**
Loans from direct investors (Intercompany loans)	1 713	2 681	4 326	6 218	7 106
Debt securities	11	107	347	1 416	2 272
Bonds and notes	–	31	325	1 328	2 249
Money-market instruments	11	76	22	88	23
Other investment	4 123	5 699	6 098	11 375	14 451
Trade credits[3]	1 276	2 197	1 862	3 560	4 656
Loans	2 847	3 502	4 236	7 815	9 750
Other liabilities	–	–	–	–	45
Total external debt	**52 511**	**47 541**	**49 648**	**59 163**	**64 350**
Long-term	48 811	42 572	44 541	50 746	53 739
Short-term[4]	3 700	4 969	5 107	8 417	10 611

1. Compiled in compliance with the requirements of international organizations (IMF, OECD, World Bank).
2. The stock of securities issued in international markets (Brady bonds and Eurobonds) was adjusted with the stock of such securities held by Polish residents.
3. In March 1999, regulations imposing reporting obligations on non-residents with regard to information for the balance of payments and international investment position purposes were changed. The scope of reporting units was extended. In this context, the NBP has received data from units not covered by the reporting obligation in the past. Accordingly, the figure for outstanding trade credits for 1998-1999 has changed. Since it was not possible to adjust data for 1996-1997, adjusted time series are presented for 1998-1999.
4. Since information on a breakdown by maturity on trade credits is not available the total amount was included into short-term debt.

Source: National Bank of Poland.

Table 26. **Arrears on taxes and social security contributions**
In Zl million

	1995	1996	1997	1998	1999
Taxes	5 196	5 271	4 922	6 723	8 478
VAT	1 578[1]	1 384	2 006	2 888	4 429
Excise duty	139	202	287	289	360
CIT	1 337	1 178	1 197	1 085	1 145
PIT	1 217	1 437	1 513	1 812	1 993
Other	925	1 070	919	650	551
Social security contribution	4 207	4 759	5 859	8 323	9 740
State enterprises	3 150	3 399	4 122	6 111	n.a.
Private enterprises	1 057	1 360	1 737	2 212	n.a.

1. Including outstanding turnover tax liabilities.
Source: Ministry of Finance.

Table 27. **The many tracks of ownership transfer**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Number of enterprises (end-period stock)										
Commercialisation[1]										
Started	58	308	480	636	845	1 075	1 229	1 269	1 366	1 454
Completed through:										
Capital privatisation[2]	6	27	51	96	132	159	183	227	244	262
Public offerings[3]	5	11	12	15	22	27	28	37	42	43
Trade sales	1	16	39	81	110	132	152	165	169	176
Written tenders (sealed bids)	0	0	0	0	0	0	3	25	33	43
NIF-programme (mass privatisation)[4]	0	0	0	0	0	321	512	512	512	512
Debt-equity swaps (under the law on financial restructuring)[5]	0	0	0	0	60	90	115	130	130	130
Direct privatisation										
Started	31	415	696	892	1 023	1 174	1 371	1 564	1 699	1 847
of which: Through leasing	24	339	557	672	736	788	869	1 036	1 120	1 216
Completed	0	182	475	707	945	1 054	1 243	1 417	1 572	1 727
Liquidations (under the law on state-owned enterprises)										
Started	18	540	857	1 082	1 245	1 358	1 405	1 420	1 584	1 641
Completed	0	19	86	186	303	396	564	675	752	820
Bankruptcies (under the bankruptcy law)	–	–	314	634	814	1 045	1 559	n.a.	n.a.	n.a.
Liquidation of agricultural enterprises	0	0	720	1 338	1 645	1 654	1 654	1 654	1 654	1 654
Income from privatisation (flows into the State budget, in Zl million)										
Total[6]	–	171	484	780	1 595	2 642	3 750	6 538	7 069	13 347
Leasing and sale of liquidated assets	–	30	174	287	323	406	973	359	428	389
Capital privatisation:	–	141	310	493	1 272	2 236	2 777	6 179	6 620	12 949
of which: Privatisation of banks	0	0	1	54	425	521	831	2 925	1 535	8 285

1. Also referred to as corporatisation.
2. Also referred to as indirect privatisation. The State typically retains ownership of a portion of the shares.
3. Often combined with direct sales to strategic investors, but nonetheless recorded as public offerings.
4. Some of the enterprises have been floated or declared bankrupt in 1996-97, and therefore appear in other lines of the table as well.
5. Sometimes combined with capital privatisation.
6. In 1998, total revenues included Zl 20 million of other revenues not listed below, and in 1999 this figure was Zl 10 million.

Source: Ministry of the Treasury.

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(10 2001 34 1 P) ISBN 92-64-19031-7 – No. 51871 2001
ISSN 0376-6438