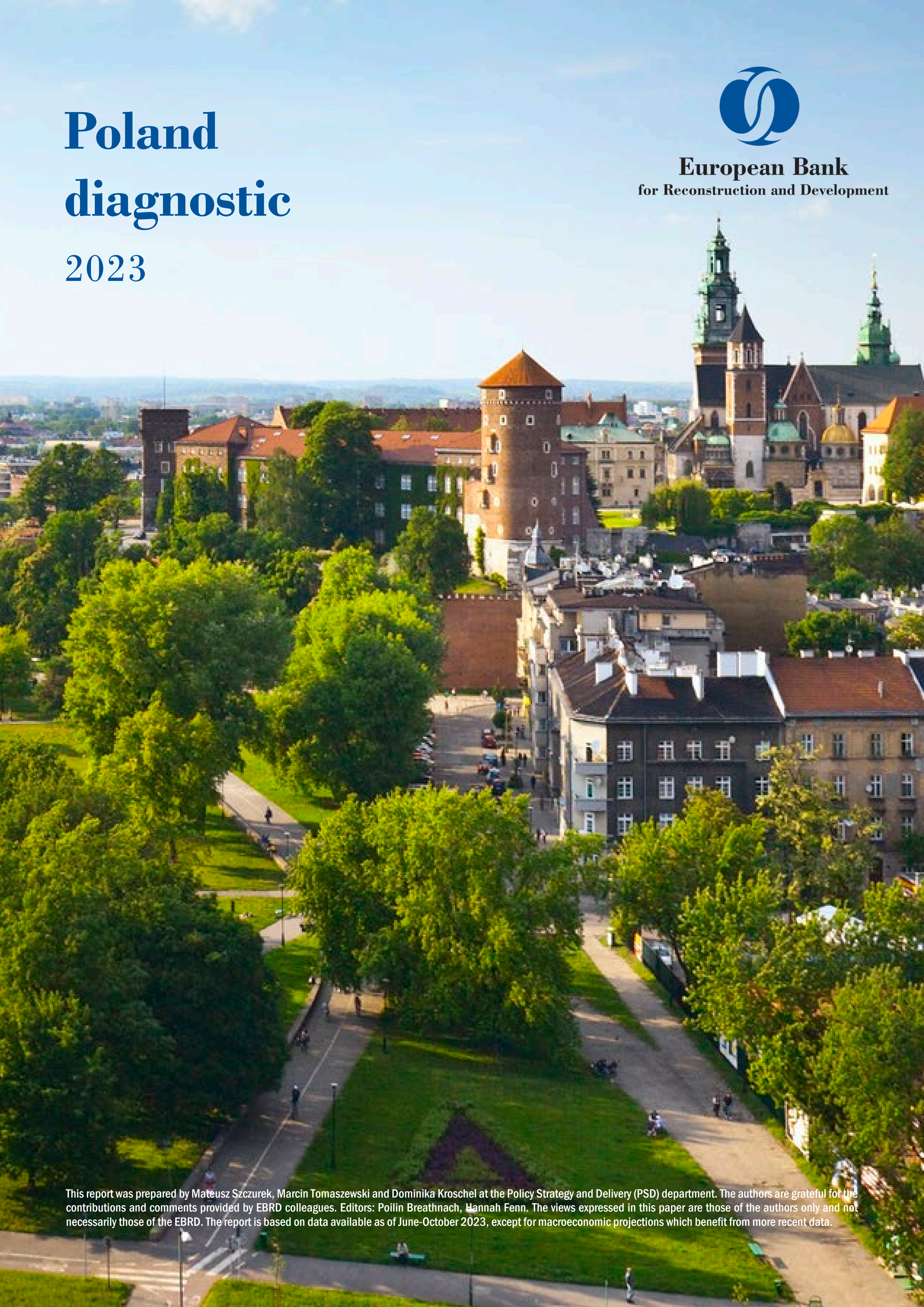
Poland diagnostic

2023



European Bank
for Reconstruction and Development

This report was prepared by Mateusz Szczurek, Marcin Tomaszewski and Dominika Kroschel at the Policy Strategy and Delivery (PSD) department. The authors are grateful for the contributions and comments provided by EBRD colleagues. Editors: Poilin Breathnach, Hannah Fenn. The views expressed in this paper are those of the authors only and not necessarily those of the EBRD. The report is based on data available as of June-October 2023, except for macroeconomic projections which benefit from more recent data.

Country diagnostics are an EBRD tool for identifying the main obstacles to entrepreneurship and private-sector development and helping to shape the Bank's strategic priorities and project selection in new country strategies. Each diagnostic informs the EBRD's policy engagement with the authorities in that country.

Country diagnostics assess the progress and challenges of investee economies in developing a sustainable market economy. Private-sector development and entrepreneurship are at the heart of the Bank's mandate in the regions where the Bank operates, but the private sector in all EBRD economies faces a range of problems and obstacles. The diagnostic highlights the key challenges facing private companies, shows where each economy stands compared with its peers in terms of six qualities of transition – competitive, well-governed, green, inclusive, integrated and resilient – and points out the main deficiencies and gaps in each quality.

The diagnostics draw on a range of methodologies and best practices for assessing how big different obstacles are. Extensive use is made of in-house expertise across the EBRD, along with surveys such as the Business Environment and Enterprise Performance Survey (BEEPS) and the Life in Transition Survey (LiTS), as well as other cross-country surveys and reports from institutions such as the World Bank, World Economic Forum and Organisation for Economic Co-operation and Development (OECD). For some larger countries, the diagnostics also draw on specially commissioned studies on selected issues that are critical to private-sector development in that economy.

The diagnostics are led by the EBRD's Policy Strategy and Delivery team, drawing substantially on the expertise of sector, governance and political experts in the Policy Strategy and Delivery department (PSD) and consulting widely with relevant experts across the EBRD when preparing the final product. The diagnostics are shared with the EBRD Board during the country strategy process and published during the public consultation period.

The views expressed in the diagnostic papers are those of the authors only and not of the EBRD.

For more information, go to: https://www.ebrd.com/publications/country-diagnostics

Executive summary

Poland has been at the forefront of economic convergence since the 1990s, and this has not changed despite economic challenges since the outbreak of Covid-19. Despite the shock of Russia's war on Ukraine, Poland has recorded the fastest cumulative growth rate in the European Union (EU) since 2019. Its convergence is underpinned by the diversity of its economy, its flexibility – that is, its ability to reinvent and restructure itself – its strategic position and educated workforce. In 2023, income per capita reached 80 per cent of the EU average (in purchasing power terms).

Poland's private sector dominates the economy, but the importance of state-owned enterprises (SOEs) has increased. According to the latest EBRD *Life in Transition Survey 2023*, the private sector accounts for 53.2 per cent of employment, above that of its three Visegrád (V3) comparators, the Czech Republic, Hungary and the Slovak Republic, but considerably less than Germany.

This diagnostic report highlights the key transition challenges that can be broadly attributed to the following individual Assessment of Transition Qualities (ATQs).

Competitive

Investment levels remain low, and productivity improvements in the manufacturing sector have been negligible. Unless remedied, this combination of low total factor productivity growth, low private investment and declining demographics poses risks to long-term economic growth. Stiffer competition, more internationalisation, especially among smaller firms, digitalisation and innovation leading to the more efficient use of resources, are all needed for Polish manufacturing to fill the 30 per cent productivity gap between that of Poland and the EU average. Although the level of government investment in Poland is similar to the average of the EU-11, fully leveraging the national Recovery and Resilience Facility (RRF) and the 2021-27 Multiannual Financial Framework could significantly enhance Poland's struggling private capital accumulation. This improvement could come from potentially eliminating barriers related to infrastructure or energy costs. Boosting the economy's innovative capacity will enable domestic enterprises to increase productivity, produce more advanced products and services, and move higher in regional and global supply chains, thus increasing value added and incomes.

Well governed

State-owned enterprises in Poland play an important role in several sectors of the economy. Among the SOEs that are listed, market capitalisation is largely concentrated in the fuel and financial sectors, which together account for nearly 70 per cent of total SOE capitalisation. The fuel sector is a leader here following recent mergers and acquisitions conducted by the largest listed company in central Europe, state-controlled gas giant PKN Orlen. The high share of state-controlled companies' assets in stock-exchange capitalisation and gross domestic product (GDP) thus reflects to some extent the regional importance of Poland and its corporations. At the same time, the prevalence of state control in commercial sectors is above the regional average. The World Bank Business of the State database (of firms with majority, minority, indirect or subnational ownership) identifies state-owned firms in over 90 per cent of the 77 analysed sectors. Based on the latest EBRD *Life in Transition Survey 2023*, SOEs account for 8.8 per cent of total employment, similar to the average of the V3 comparators. The SOE share of employment has increased by nearly 70 per cent over the past seven years. Better institutional governance could be the basis for Poland's long-term economic growth and the stable functioning of the country. At the same time, the growing importance of SOEs calls for more effective management and greater SOE independence.

Green

Poland is one of the most energy- and emissions-intensive EU member states and its energy mix is still very much dominated by fossil fuels. The greenhouse gas (GHG) intensity of the economy is more than 50 per cent higher than the EU average due to its coal-based power generation, the economy's reliance on heavy manufacturing, its inefficient heating (both district and individual) and obsolete road transport fleet.

Over the last two decades, Poland has made only limited strides in decarbonising its economy. Estimates from the Ministry of Climate and Environment suggest that over €280 billion will be needed for renewable energy and grid investments by 2040.

In terms of air quality, Poland ranks among the worst in the EU, posing major environmental and health concerns. Decarbonising the transport sector will be key to reducing both emissions and Poland's dependency on fossil-fuel imports from Russia, but hurdles regarding the development and use of sustainable transport remain. Effective waste management has also been a challenge for Poland for many decades. In its Recovery and Resilience Plan, Poland has earmarked 47 per cent of its Recovery and Resilience Facility funding for climate objectives.

Inclusive

Poland's transition towards a low-carbon economy is long and wide-sweeping, sparking demand for workers to obtain green skills and other appropriate qualifications. Poland relies heavily on coal for energy, and coal mining is still a significant employer in the country, so any shift to a greener economy will mean disruption for the workers and communities that rely on the coal-mining industry. Poland's relatively tight labour market, however, should significantly ease the labour transition, as will targeted support from employers and policy partners to achieve a just transition.

A much wider and tougher just-transition issue concerns the users of fossil fuels. A significant part of the population relies on coal for residential heating, and the cost of moving to cleaner sources of energy such as gas or heat pumps can be prohibitive at current market rates. In addition, the limited public transport network, particularly in more remote areas, exacerbates accessibility issues. Tackling these challenges, along with energy security concerns, poses a political and fiscal hurdle.

Russia's invasion of Ukraine in February 2022 resulted in the large-scale forced displacement of Ukrainian citizens to a number of EU host countries, especially Poland. That has triggered new challenges in the areas of labour market, housing, education or social security. The demographic profile of Ukrainian refugees in 2022 – dominated by women, children and older people – was completely different to earlier, predominantly male-dominated waves of economic migration from Ukraine, Belarus and Asia. Another unusual factor has been the ability of the refugees to go back and forth between Poland and Ukraine without losing their refugee status. The refugee population's close links to its home country are likely to promote a more rapid rebuilding of Ukraine in time.

Integrated

The outward foreign direct investment (FDI) of Polish companies remains low, but there are also opportunities to improve this. Nearshoring and friendshoring, for example, provide opportunities for greater regional integration, including establishing Poland as a gateway for the post-war reconstruction of Ukraine. To provide the best chances of this happening, better transport and logistics infrastructure in eastern Poland is critical so that Polish companies can expand easily into Ukraine to engage in and prepare for the country's reconstruction.

Resilient

Poland is at the forefront of capital market development in the EBRD regions. While capital market conditions are robust, market depth, liquidity and diversification remain low compared with more advanced markets. Despite the local capital market providing a well-established source of funding, Polish companies still rely mostly on bank credit for their financing needs. In addition, geopolitical instability in the region and rising bond yields, in part related to higher inflation levels, as well as higher interest-rate levels have adversely affected market conditions, creating higher borrowing costs, which have contributed to a lower number and volume of local securities issuance.

The Polish banking system is generally well diversified and has solid fundamentals. However, the banking sector, while well capitalised and very liquid, faces some legal and regulatory risks, such as those linked to foreign currency-denominated mortgage loans. Notably, Poland leads the EBRD's EU region in terms of green bond issuance, with an outstanding amount of €6.6 billion. At the same time, Poland continues to lag significantly in terms of environmental, social and governance (ESG) bond issuances, trailing most EU Member States. The Polish private-equity and venture-capital system is still under-developed. Similarly, household participation in capital markets tends to be very low.

In terms of energy resilience, various strategic investments allowed for diversification of gas supplies away from Russia. The country's first offshore wind farm is expected to boost renewable energy generation and improve the resilience of the electricity sector. Smart grid infrastructure, including cross-border electricity interconnections, require vast additional investment to ensure a seamless electricity supply to meet demand.

Contents

1. Political and economic overview

1. Political economy

Poland is an advanced transition country with established foundations of a market economy and multiparty democracy, firmly anchored in the European Union (EU) (since 2004) and the North Atlantic Treaty Organization (NATO) (since 1999).

In Poland's mixed parliamentary-presidential political system, executive power is vested in the president and the Council of Ministers (government), headed by the prime minister. The president appoints the prime minister and, on his nomination, other members of the Council of Ministers, who typically represent the majority party or coalition. The Sejm (the lower chamber of parliament) must pass a vote of confidence in the government by absolute majority.

Since the mid-2000s, Poland's political landscape has been dominated by the competition between the national liberal Civic Platform (PO) and the national conservative Law and Justice (PiS) party. Ideological differences and political rivalry have resulted in the polarisation of Polish politics and public sentiment. The main issues of disagreement are the independence of the judiciary and the media, personal freedoms and societal values, and relations with the EU.

During its eight years in power from 2015 to 2023, the PiS-led United Right coalition undertook wide-ranging policy revisions, most notably of the judiciary, including the Constitutional Tribunal, the Supreme Court, the National Council for the Judiciary, the organisation of ordinary courts and the disciplinary regime for judges. These moves were seen as undermining the system of checks and balances and judicial independence and infringing EU law. Having concluded that there was "a systemic threat" to the rule of law in Poland, the European Commission in December 2017 triggered a special rule-of-law procedure in the framework of Article 7(1) of the Treaty on European Union (TEU) and launched several rule-of-law-related infringement procedures against Poland. The Commission also withheld the disbursement of €35.4 billion in post-pandemic funds under the national Recovery and Resilience Facility (RRF).

The last parliamentary elections on 15 October 2023 resulted in political change, ushering in a significant shift in Poland's political economy landscape. The governing coalition, comprising the PO-based Civic Coalition (KO), the centre-to-centre-right Third Way (Trzecia Droga) alliance and the Left Alliance (Lewica), has committed to undoing many of the changes implemented by the previous administration, including restoring the rule of law, strengthening judicial independence, de-politicising state institutions and state-controlled media, and improving the transparency of SOE governance. The new coalition has also pledged to strengthen Poland's position within the EU and can be expected to take a more consensus-oriented approach to relations with EU institutions.

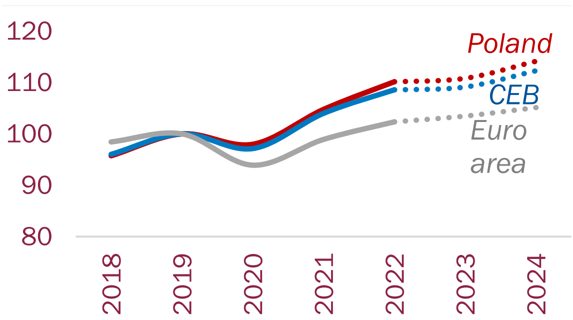
The new coalition government is likely to face many challenges. Ideological differences between the three coalition partners could test the cohesiveness of their policies over time. The PiS remains the largest party in the Sejm. Unwinding changes in the judiciary and other state institutions will be met with entrenched and determined opposition. The coalition's lack of the required three-fifths majority to overturn a veto by the president, with whom it will cohabitate until mid-2025, could slow policymaking.

Russia's war of aggression against neighbouring Ukraine has dramatically changed Poland's geopolitical environment and created new and significant challenges. Socioeconomic pressures have increased: the economy, which proved resilient following the Covid-19 pandemic, has been hit by high energy prices and inflation. Millions of people who fled the war in Ukraine have passed through the country's border with Poland, with nearly 1 million of them currently registered for temporary protection – the second-highest number of all European countries. In view of the aggravated security risks, defence spending has risen to 4 per cent of GDP and is likely to remain high in the coming years.

2. Convergence potential

Poland has been at the forefront of economic convergence since the 1990s and this has not changed since the outbreak of Covid-19. Despite the shock of Russia's war on Ukraine, Poland has recorded the fastest cumulative growth rate in the EU since 2019 (Chart 1). Its convergence is underpinned by the diversity of its economy, its flexibility – its ability to reinvent and restructure itself – and its strategic position, coupled with its educated workforce. Poland's flexible exchange rate also acts as a shock absorber, offsetting terms-of-trade hits to its competitiveness, while the successful integration of Ukrainians fleeing the war has eased the country's labour-market tightness. However, the latter has not endured, as some refugees have been conscripted into the Ukrainian army.

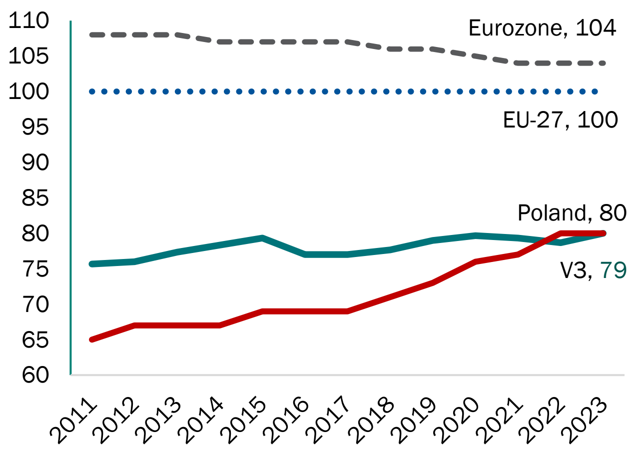
Chart 1. Real GDP (index, 2019=100)



Source: Eurostat, European Commission forecasts (European Commission, 2023a).
Note: CEB = Central Europe and the Baltic states.

As a result, GDP per capita (in purchasing power terms) grew from 65 per cent to 80 per cent of the EU average between 2011 and 2023 (see Chart 2). At the same time, actual individual consumption (a measure that better reflects citizens' welfare) reached 86 per cent of the EU average, just below Spain. Extrapolating these convergence trends would see Poland catching up with the per capita income levels of Italy in 2037 and the United Kingdom in 2040.

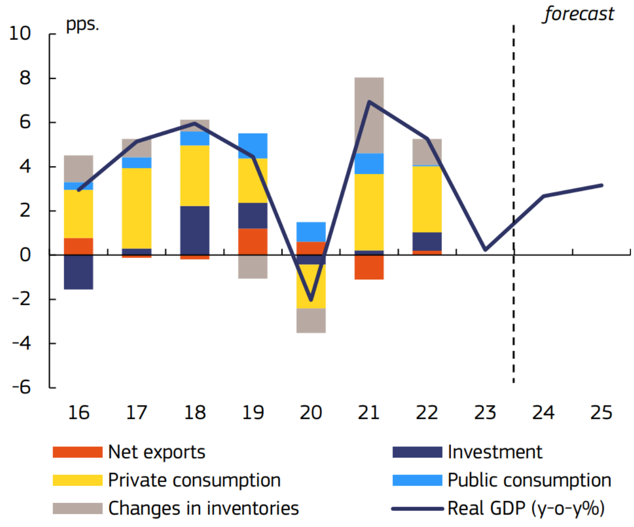
Chart 2. GDP per capita, percentage of the EU-27 average (in purchasing power standards)



Source: Eurostat.
Note: V3 = the other members of the Visegrád Group – the Czech Republic, Hungary and the Slovak Republic.

After a sharp slowdown in economic activity in 2023, a significant rebound of growth is expected in the near term and the convergence process will continue. In 2024, it is anticipated that domestic demand will benefit from fiscal policies designed to boost household disposable income, such as salary increases for certain public-sector employee groups and further enhancements to social benefit amounts. Assuming energy price protective measures largely persist, a notable boost in economic growth is expected. This growth will also be bolstered by the continued resolution of supply disruptions in the global energy markets. Between 2025 and 2026, a significant surge in the receipt of EU funds from the 2021-27 financial framework is projected to propel GDP growth. Conversely, over the next few years, domestic economic expansion is expected to receive only minimal support from external demand, owing to the projected modest recovery in the eurozone. As the impact of the severe supply shock diminishes, a considerable reduction in consumer price index (CPI) inflation is forecast, especially compared with 2022-23. The disinflationary process is expected to gain further support from declining inflation rates within Poland's economic sphere, the easing of previous global supply-chain interruptions and the current strengthening of the zloty exchange rate, leading to decreased growth in import prices. However, the decline in domestic inflation might be tempered by a strong resurgence in demand, fuelled by fiscal initiatives, which is anticipated to bridge the existing negative output gap throughout the projection period, according to the latest Inflation report by the Polish central bank (NBP, 2024).

Chart 3. Contribution to annual GDP growth, percentage points

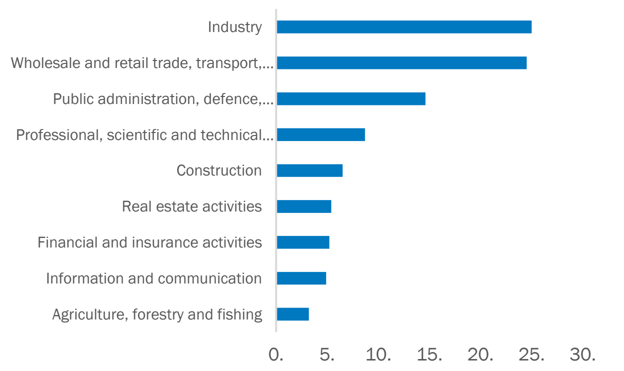


Source: European Commission Winter 2024 Economic Forecast.

3. Economic structure and private-sector overview

The industrial sector generated 28 per cent of Polish GDP in 2022, almost matching the traditional champion in this area, the Czech Republic, and exceeding not only the EU average (20.7 per cent), but also that of other industry-heavy countries in the region. At the same time, Polish heavy industry is responsible for the largest share (40 per cent) of final electricity consumption in Poland (see more on hard-to-abate sectors in the Green chapter). The importance of agriculture and construction has declined steadily, reaching typical EU levels, while services have remained significantly below average (see Chart 4).

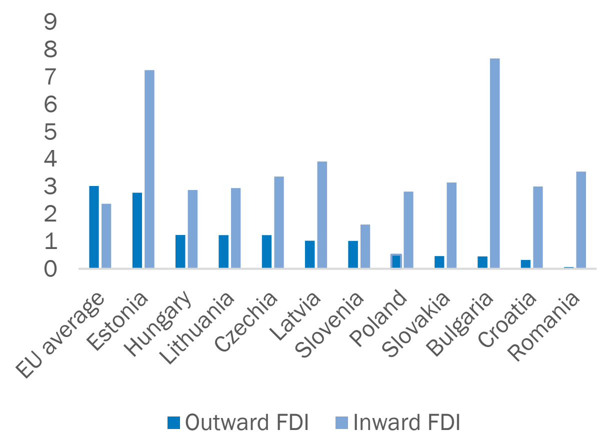
Chart 4. Economic sectors, percentage of 2022 gross value added



Source: Eurostat.

The EU remains a crucial economic partner for Poland. The EU accounted for 70 per cent of Polish trade and 55 per cent of FDI flows (inward and outward) in 2022. Polish outward FDI averaged just 0.5 per cent of GDP over the 2003-22 period, which is not only lower than the 3 per cent EU average, but also substantially below that of its V3 peers –the Czech Republic, Hungary and the Slovak Republic – and the three Baltic states – Estonia, Latvia and Lithuania (see Chart 5).

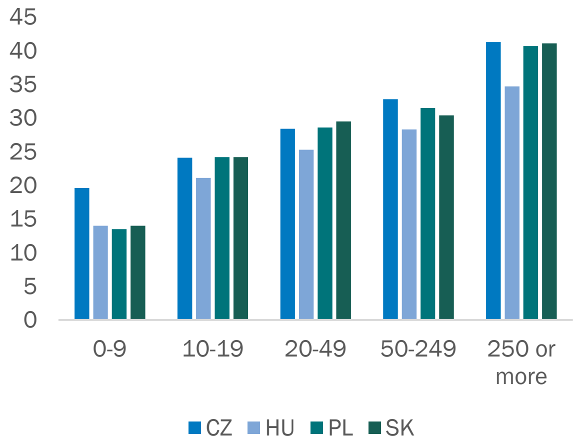
Chart 5. Outward and inward FDI (average 2003-22, percentage of GDP)



Source: UNCTAD.

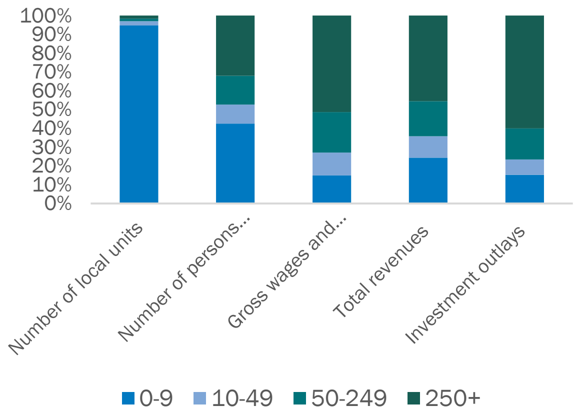
Micro, small and medium-sized enterprises (MSMEs) dominate the corporate landscape in terms of numbers, but their share of investment, revenues and wages paid is far smaller. Ninety-five per cent of all companies employ fewer than nine people, but a large part of that number is made up of self-employed entities, some of them registered solely for tax optimisation or labour-code evasion purposes. Consequently, their share of salaries paid or total investment in the economy is just 15 per cent, and their labour productivity is just a third of that of the largest companies (Chart 6).

Chart 6. Productivity (gross value added per person employed, € 000s, total economy)



Source: Eurostat.

Chart 7. Polish corporate structure in 2021



Source: stat.gov.pl

Poland's private sector plays a dominant role in the whole economy, but the importance of state-controlled enterprises has increased. According to the latest EBRD *Life in Transition Survey 2023*, the private sector accounts for 53.2 per cent of employment, above that of its V3 comparators, but considerably less than Germany. The public sector accounts for 21.3 per cent of total employment, while the rest of Poland's employment is by state-owned enterprises, private and state-owned banks, foreign firms or self-employment. Foreign ownership in the banking sector decreased from 59 per cent in 2016 to about 47 per cent in 2020 (see Chart 8), while the state's stake increased significantly during the same period, from 28 per cent to 40 per cent (see Chart 9).

Chart 8: Foreign ownership of banks, 2014-20

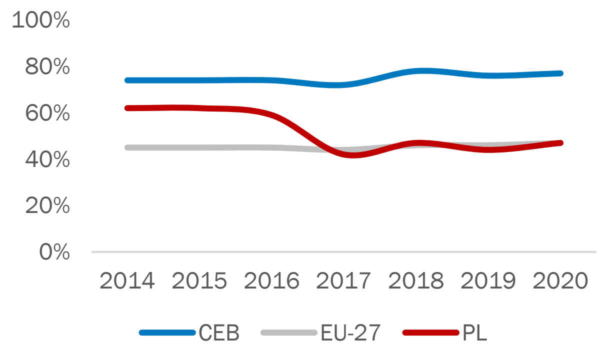
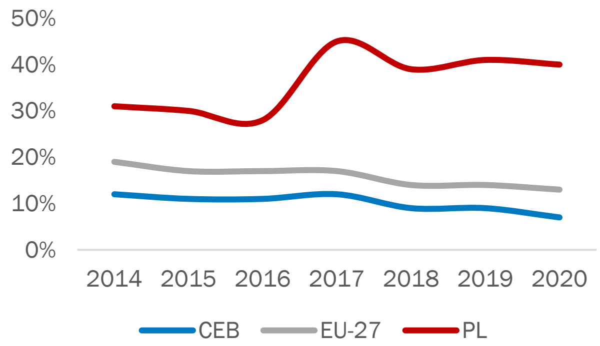


Chart 9. State ownership of banks, 2014-20



Source: Authors' calculations based on Panizza (2023).

Note: A bank is considered state owned if the state holds at least a 20 per cent ownership stake. This threshold is commonly used in literature on the topic, because a 20 per cent stake is typically sufficient to exert control over the bank.

Box 1: Impact of the Covid-19 pandemic and the war in Ukraine on the Polish economy

By end 2022, Poland's economy had not only recovered the output losses brought about by the Covid-19 pandemic, but had fully returned to trend growth. First, the private sector was underleveraged at the outset of the pandemic. Then, relatively generous support packages in 2020-21 were followed by substantial energy-shock "shields" in 2022. In addition, supply-chain disruptions were less painful for the diversified Polish economy than for some of its V3 peers. What is more, the war on Ukraine and the massive inflow of refugees not only supported domestic demand, but boosted foreign employment, sparing Poland some of the worst labour shortages in the already tight EU labour market. However, financing of the economy was disrupted by the war, increased exchange-rate and interest-rate volatility, and growing uncertainty surrounding domestic credit institutions fuelled by FX mortgage court cases and credit holidays for PLN mortgage debtors. Capital market access remained very patchy and completely frozen at times, while nominal private credit growth turned negative in 2023. This is particularly worrying in the context of the country's perennially low investment share of GDP.

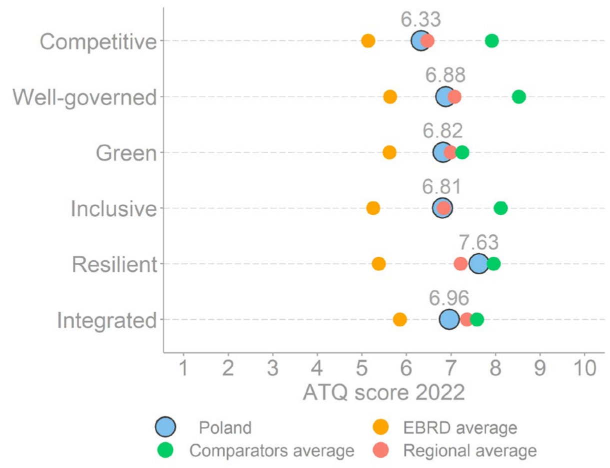
2. Qualities of a sustainable market economy

In the EBRD's 2022 Assessment of Transition Qualities (ATQs), Poland achieved lower scores than the Central Europe and the Baltic states (CEB) regional average on five of the six desirable qualities that are subcomponents of the ATQs, but showed strong resilience. The ATQs are composite indices of six desirable qualities of a sustainable market economy – competitive, well governed, green, inclusive, resilient and integrated. They are obtained by combining information on an extensive number of indicators and assessments.

Poland is the most resilient, but the second least integrated economy in the CEB region. The country performs similarly to the rest of the region on the competitive, well-governed, green and inclusive qualities. In terms of resilience, Poland outperforms the regional average by more than 0.4 index point, while the gap on integration stands at 0.4 index point (see Chart 10).

While Poland surpasses the EBRD average on all dimensions, examining sub-indices for each aspect can reveal significant transition gaps. For instance, challenges remain pronounced in areas such as air pollution within the Green ATQ or outward FDI in the Integrated ATQ. The following sections provide a more detailed discussion on each of the ATQs.

Chart 10. EBRD 2022 ATQs

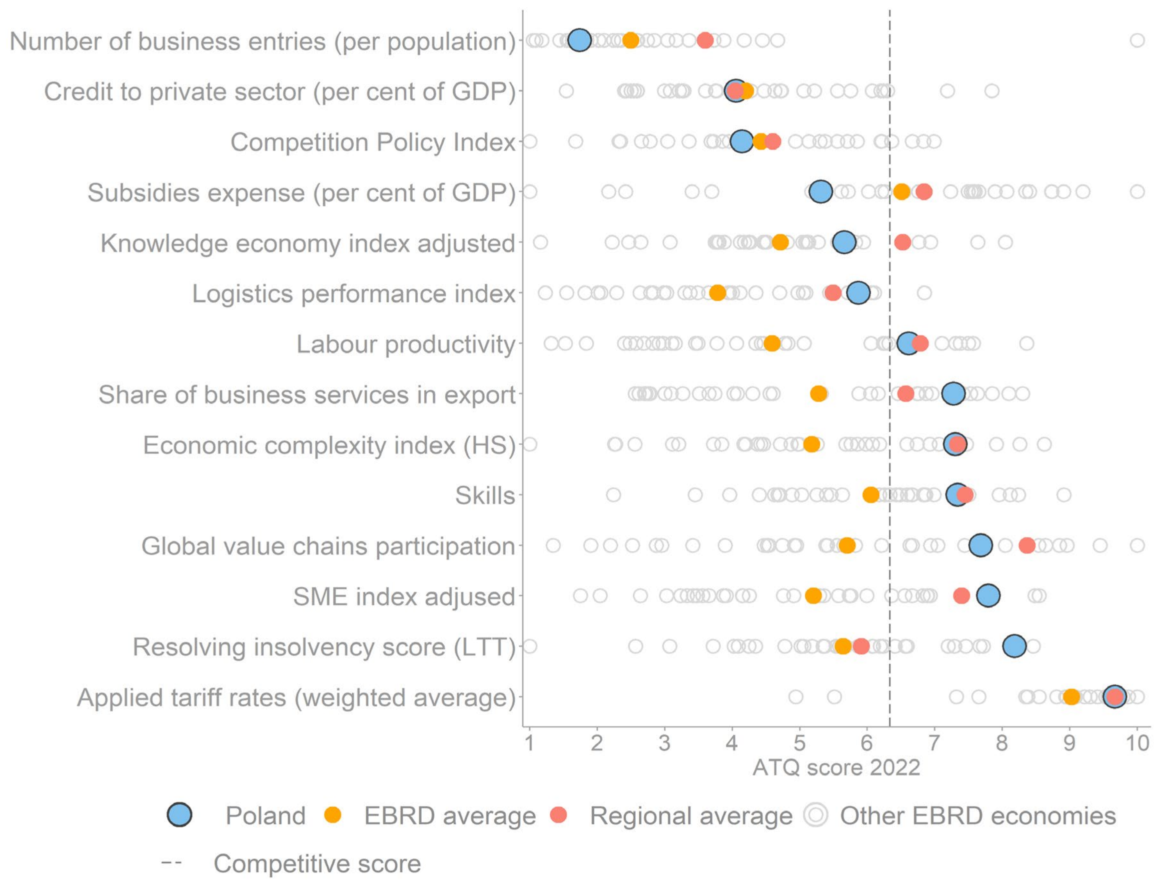


Source: EBRD calculations.
Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

Competitive [ATQ = 6.63]

Poland ranks sixth among the economies in which the EBRD invests in the Bank's 2022 assessment of the competitive transition quality.

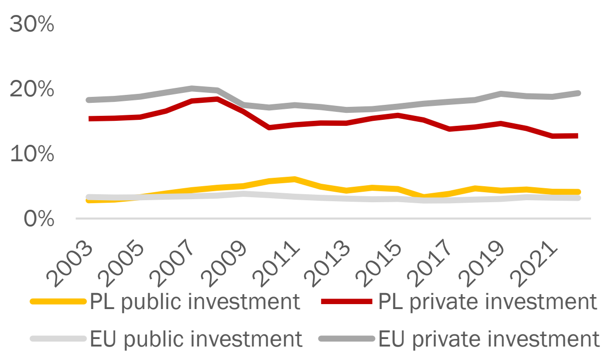
Chart 11: EBRD 2022 assessment of the competitive transition quality



Source: EBRD calculations.
Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

Investment levels remain low, while productivity improvements in the manufacturing sector have been negligible. Poland has seen impressive economic growth over the past three decades, but two worrying trends mar the medium-term outlook. First, private investment levels are low and have been on a decided downward trend over the past decade. Second, manufacturing total factor productivity has been stagnant over the same period.

Chart 12. Public and business investment (percentage of GDP)



Source: Eurostat.

While labour productivity growth has been a healthy 4 per cent, total factor productivity in the manufacturing sector has grown barely 1 per cent since 2012 (World Bank, 2021). This suggests that Polish manufacturing firms are struggling to improve their use of available resources and are relying on capital deepening to improve labour productivity.

At the same time, overall investment growth has been worryingly low compared with the EU-11 countries. The private investment share of GDP fell from 18.4 per cent in 2008 to 12.7 per cent in 2022, bringing overall investment to just 16.8 per cent, well below the EU's 22.5 per cent (Chart 12).

This combination of low total factor productivity growth, low private investment and worsening demographics, unless remedied, pose risks to long-term economic growth. Without increased investment, labour productivity will not be able to grow sufficiently for Poland to ensure full wage and prosperity convergence with western Europe.

Firm-level estimates point to a worrying trend of negative inter-firm productivity shifts, suggesting that output is moving to slower-growing firms. Stiffer competition, more internationalisation, especially among smaller firms, digitalisation and innovation leading to the more efficient use of resources are all needed for Polish manufacturing to fill the 30 per cent productivity gap to the EU average.

Increased investment is another way to secure labour productivity growth. The *European Investment Bank Investment Report 2022/2023* (EIB, 2023) cites three factors as an obstacle to investment distinctly more often than the EU average: i) uncertainty about the future, ii) energy costs and iii) availability of finance. While heightened uncertainty is understandable amid current geopolitical concerns, it could be remedied to some extent by a more predictable policy and legal environment, such as a stronger public consultations process. We will come back to the two other obstacles in subsequent sections.

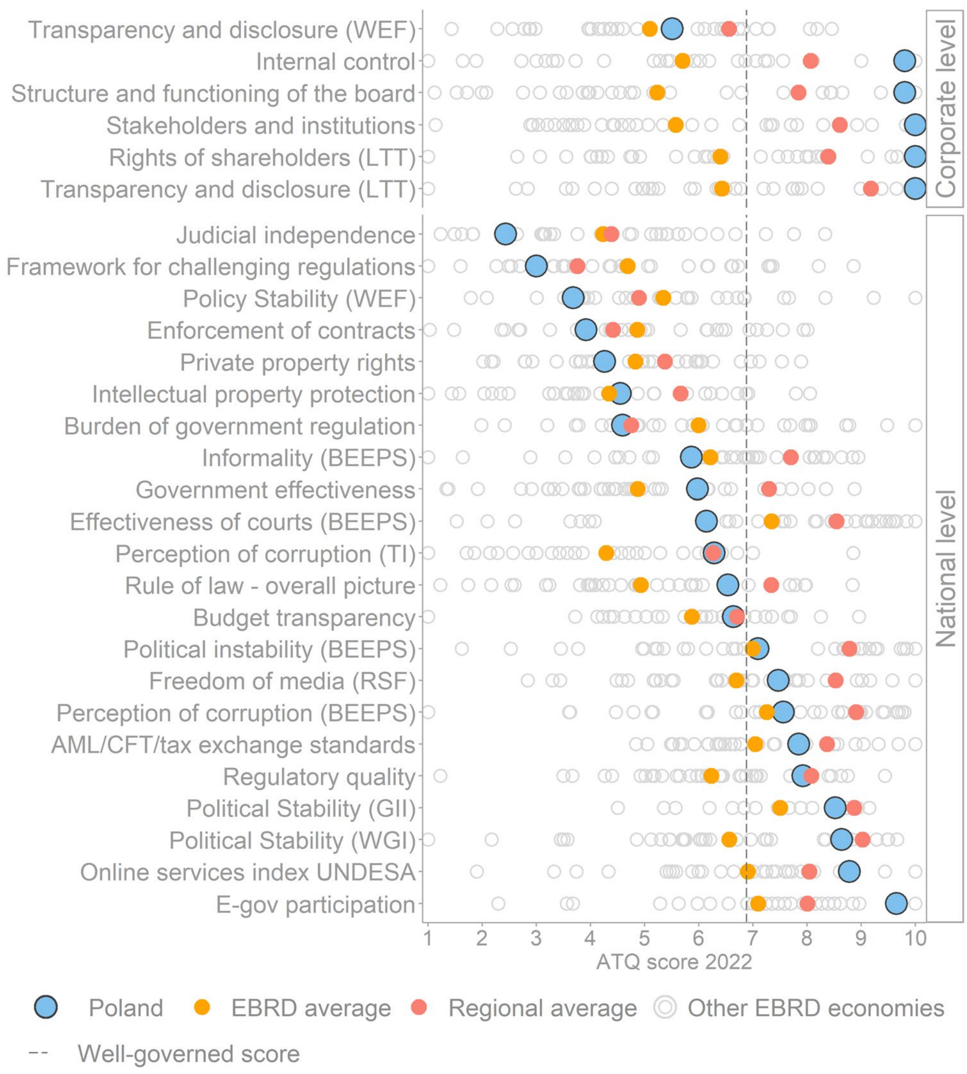
While the share of government investment does not really differ from the EU-11 average, making sure that the RRF and the 2021-27 Multiannual Financial Framework are fully utilised would boost Poland's ailing private capital accumulation by potentially also removing obstacles in the areas of infrastructure or energy costs.

Strengthening the innovative capacity of the economy will enable domestic enterprises to increase productivity, create more advanced products and services and move higher in regional- and global supply chains, thus increasing value added and incomes. Numerous efforts have been made in recent years and total research and development (R&D) spending has been increasing steadily, reaching 1.4 per cent of GDP in 2020 (ranking Poland 17th in the EU), up from 0.9 per cent in 2014. Nevertheless, Poland only ranks 25th on the 2021 European Innovation Scoreboard and is classified in the lowest category of emerging innovators.

Well governed [ATQ = 6.32]

Poland ranks sixth among the economies in which the EBRD invests in the 2022 Bank assessment of the well-governed transition quality.

Chart 13. EBRD assessment of the well-governed transition quality



Source: EBRD calculations.
Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

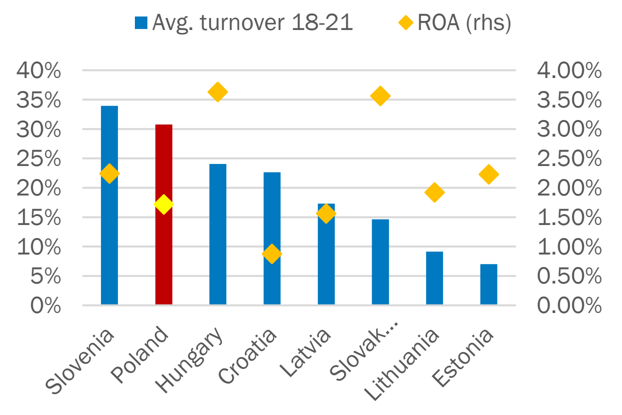
State-owned enterprises

State-owned enterprises in Poland play an important role in several sectors of the economy. Among the SOEs that are listed, market capitalisation is largely concentrated in the fuel and financial sectors, which together account for nearly 70 per cent of total SOE capitalisation (Ministry of State Assets, 2023). The fuel sector is a leader here following recent mergers and acquisitions conducted by the largest listed company in central Europe, state-controlled gas giant PKN Orlen. The high share of state-controlled company assets in Poland's stock exchange capitalisation and GDP thus reflects to some extent the regional importance of the country and its corporations. At the same time, the prevalence of state control in commercial sectors is above the regional average. The World Bank Business of the State database (of firms with majority, minority, indirect or subnational ownership) identifies SOEs in over 90 per cent of the 77 analysed NACE sectors (Statistical Classification of Economic Activities in the European Community) (World Bank, 2023).

Improving institutional governance could be the basis for Poland's long-term economic growth and the stable functioning of the country. SOEs played a significant role in the post-pandemic recovery, mitigating the effects of the crisis and countering the economic downturn, notably through state-controlled infrastructure-related companies. Also, SOEs exhibited more stable employment policies in the early days of the Covid-19 pandemic or during the global financial crisis (EBRD, 2020).

At the same time, the growing importance of SOEs calls for more effective management and greater SOE independence. As the commercial, social and political goals of SOE management teams become blurred, the negative side effects of state-owned firms start to mount. Such side effects could include damage to the competitive landscape, greater investment risk as a result of the unpredictability of corporate policy, and political favouritism threatening pluralism and democracy. These could materialise even if the companies remain profitable.

Chart 15. SOE turnover and return on assets, 2018-21 average



Source: Authors' calculations based on the Orbis database, IMF (2023)

In recent years, the governments of developed countries have enjoyed a steady fall in borrowing costs relative to other borrowers in the economy. This phenomenon, called "debt revenue" by Ricardo Reis (2022), was particularly striking in the G7 countries, where the return on private capital grew from around 5 percent in the 1980s to a plateau of around 8 per cent in the 2000s, while the return on public debt plummeted from more than 10 per cent in the 1980s to less than 2 per cent in 2020.

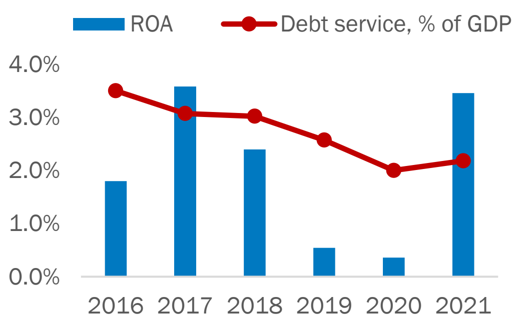
Debt revenue improves fiscal sustainability. It could also tip the balance on the benefits of state ownership. From a purely fiscal accounting point of view, selling off state assets to reduce debt and financing costs might be counterproductive if the return on said assets is consistently higher than the cost of public debt.

While estimates of the return on public asset capital typically point to lower returns, they still remain above return on public debt in G7 countries (Reis, 2022b). Such estimates are influenced by public assets that were never meant to deliver financial returns, such as the military, so presumably, listed SOEs could (and should) deliver returns closer to that of private capital.

In this section, we look at a simple measure of returns on state-controlled and publicly listed companies compared with debt-servicing costs in Poland (see Chart 16).

The return on capital of state-owned firms has fluctuated strongly over 2015-22 on the back of Covid-19 and the energy crisis. While the cost of debt servicing had been falling until 2021, it started to rise in 2022. At 2.8 per cent, average treasury debt costs in 2015-22 were about 0.5 percentage point higher than the average return on assets of state-owned listed companies. What is more, the Ministry of Finance predicts debt servicing costs to increase to an average of 4.3 per cent in 2023-27, raising the breakeven profitability bar even more.

Chart 16. SOE return on assets and debt-servicing costs



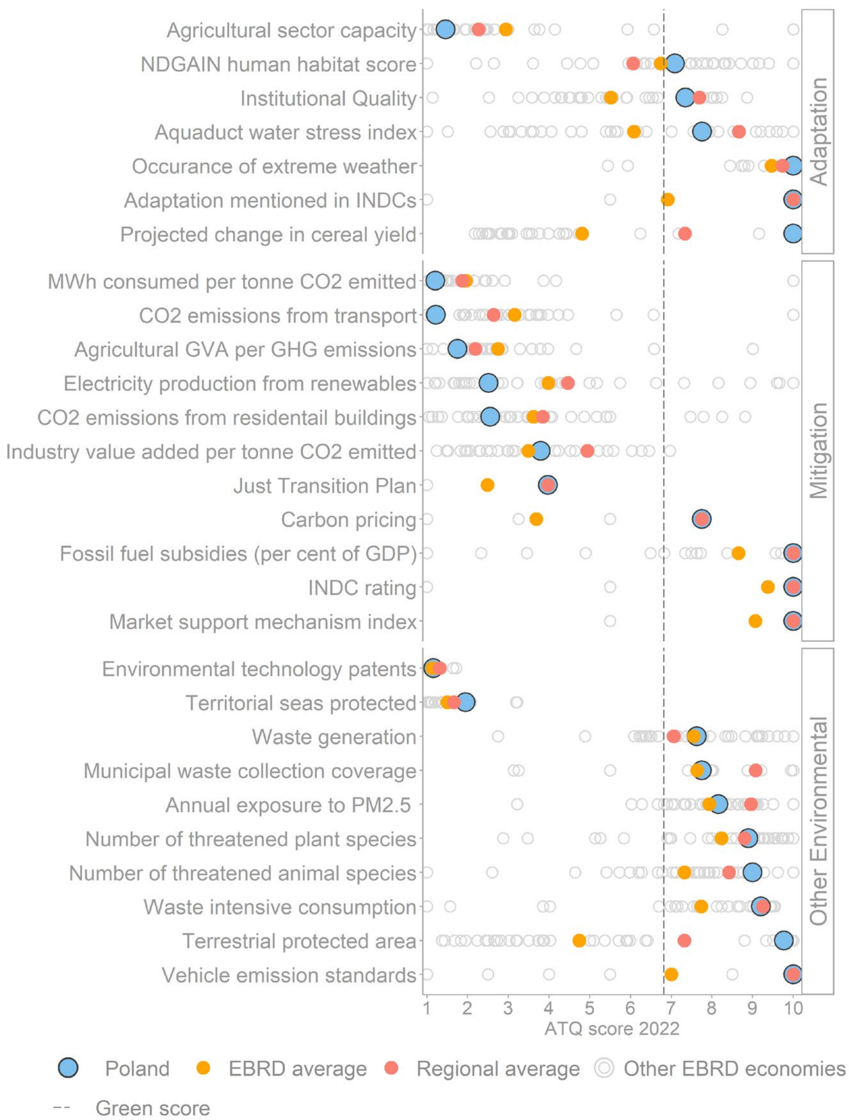
Source: Authors' calculations based on Orbis database, Polish Statistical Office.

On financial returns alone, therefore, it is difficult to claim that Poland's state ownership is worth it, even for the narrow subset of listed companies and in an environment of ultra-low interest rates. This indicates potential deficiencies in SOE management. Profitability considerations are not the only reason for state control; geopolitical, industrial policy coordination and even social arguments are often cited. However, SOEs may have a distortionary impact on capital markets in the form of issues with minority shareholder rights, the crowding out of private investment or irregular political party financing. In the absence of privatisation, this calls for major improvements in SOE governance.

Green [ATQ = 7.07]

Poland ranks sixth among the economies in which the EBRD invests in the Bank's 2022 assessment of the green transition quality.

Chart 17. EBRD 2022 assessment of the green transition quality



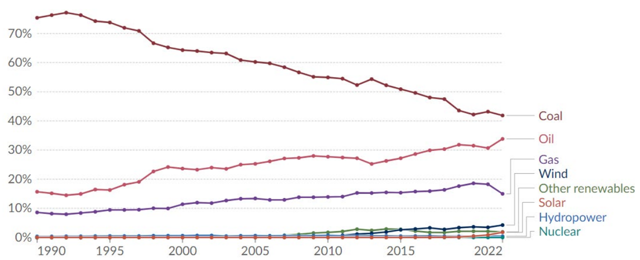
Source: EBRD calculations.

Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

Poland is one of the most energy and emission-intensive EU Member States and its energy mix is still very much dependent on fossil fuels. The greenhouse gas (GHG) intensity of the economy is 54 per cent above the EU average due to its coal-based power generation and the economy's reliance on heavy manufacturing, as well as its inefficient heating (both district and individual) and obsolete road transport fleet. If left unaddressed, Poland's high carbon intensity could seriously harm its economic competitiveness. Further efforts will be needed to demonstrate greater ambition under the European Green Deal, Climate Law and Fit for 55 Package.

Direct use of fossil fuels accounted for more than 60 per cent of the energy consumption in Poland in 2020. The fuel switch from fossil fuels to electricity and renewables in total energy consumption is progressing slowly, with total energy consumption expected to decrease only in the late 2020s. In 2022 the share of renewables in gross final energy consumption was 16.9 per cent (see Chart 18).

Chart 18: Share of energy consumption by source, Poland

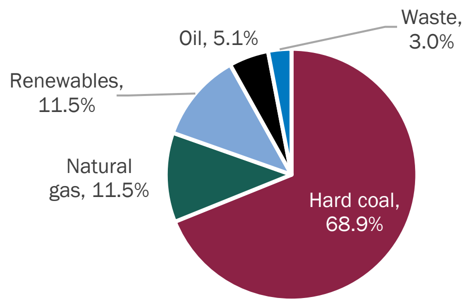


Source: National Energy and Climate Plan, Annex 1 (2024),

Electricity generation in Poland is currently dominated by fossil fuels, which accounted for 78 per cent in 2022 (71 per cent coal and 7 per cent gas). The energy mix is expected to change gradually in the coming years, with the number of coal units falling significantly and being replaced by new gas and renewable capacities. However, with the national grid's current capacity constraints and regulatory obstacles, renewable energy sources accounted only for about 22 per cent of electricity generation in 2021.

More than 68 per cent of residential heating is generated from coal (see Chart 19). According to the National Energy Efficiency Agency (KAPE), district heating – to which 53 per cent of the population is connected – is responsible for around 36 million tonnes of CO_2 emissions annually (around 11 per cent of total country emissions). The country's annual heat generation levels have decreased since 1990 due to greater energy efficiency, a milder climate and reduced industrial demand. Coal has been the main source of heat generation, while the shares of natural gas and biofuels have been increasing in recent decades. The share of renewable energy in district and individual heating is expected to grow to at least 32 per cent by 2030.

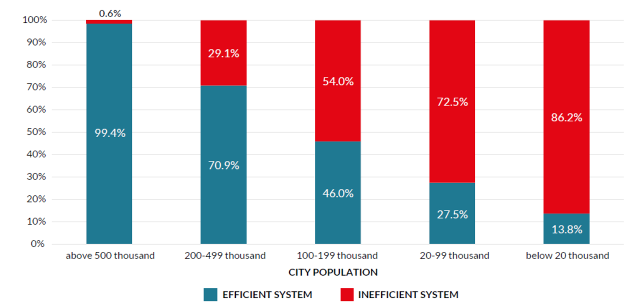
Chart 19. Generation of district heating by source, Poland (2020)



Source: National audit office (NIK 2023).

Only about 17 per cent of Poland's heating systems meet the requirement of "efficient district heating and cooling systems" in EU law. Distribution is unequal, with major cities (with more than 200,000 inhabitants) faring better (see Chart 20).

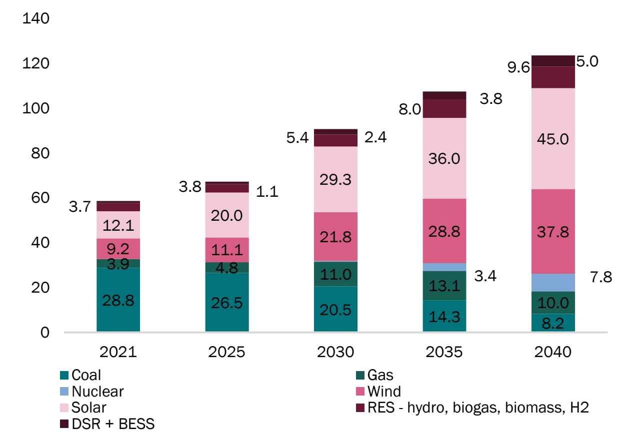
Chart 20. District heating systems' efficiency by city population in Poland



Source: Forum Energii (2019).

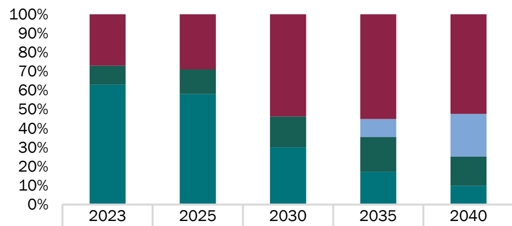
According to estimates by the Ministry of Climate and Environment (2023, 2024), over €280 billion will be needed for renewable energy and grid investments by 2040. This includes investment worth about €51 billion in offshore wind, €22 billion in onshore wind, €25 billion in solar, €33 billion in nuclear and €115 billion in transmission distribution investments. In addition, Charts 21 and 22 show the government's base scenarios for development of energy generation and installed capacity in Poland 2022-40. In the upcoming revision of the scenarios, the shares of renewable energy production are expected to be more ambitious.

Chart 21. Poland 2021-40 installed capacity (GW) – government scenario



Source: Ministry of Climate and Environment (2023, 2024).

Chart 22. Poland 2023-40 electricity generation – government scenario



	2023	2025	2030	2035	2040
Renewables	27.0%	29.0%	53.8%	55.0%	52.8%
Nuclear	0.0%	0.0%	0.0%	9.5%	22.6%
Gas	10.0%	13.0%	16.2%	18.3%	15.5%
Coal	63.0%	58.1%	30.1%	17.2%	10.0%

Coal Gas Nuclear Renewables

Source: Ministry of Climate and Environment (2023, 2024).

In the last two decades, Poland has made limited progress on decarbonising its economy. The country has been decarbonising at the second-slowest rate of the lower-income EU Member States, registering only an 8 per cent reduction in total GHG emissions between 2005 and 2020. Aside from its coal-dependent energy system, road transport and inefficient buildings are the other key sources of high GHG emissions.

Polish heavy industry is responsible for the largest share (40 per cent) of final electricity consumption in Poland. Industry remains an important economic sector for Poland, accounting for about 28 per cent of GDP, 20 per cent of employment and 77 per cent of exports. It relies heavily on the consumption of fossil fuels, however, with about 62 per cent of the primary energy use based on coal (12 per cent), gas (23 per cent) and oil (27 per cent). Energy efficiency is improving. In 2021, final energy intensity stood at 68 per cent of the 2004 level. Key decarbonisation drivers include the use of best available technologies (BAT) and the EU Emissions Trading System (ETS) for large emitters, higher fossil-fuel and energy prices in 2020-23 and new reporting requirements in value chains. Industry remains responsible for emissions of around 63 million tonnes of CO_2 annually (about 15 per cent of total country emissions).

The main challenges associated with the decarbonisation of the industry sector include:

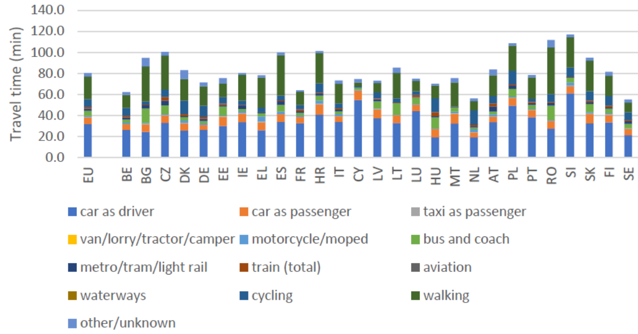
- maintaining the competitiveness of industrial production in Poland
- seizing the opportunities resulting from friendshoring, nearshoring and the market dynamics associated with the war in Ukraine
- a phase-out of free allowances in the EU ETS system for hard-to-abate sectors related to the introduction of the EU's Carbon Border Adjustment Mechanism (CBAM)
- improving the energy efficiency of industry
- enabling access to green energy on a large scale
- a lack of credible and ambitious transformation strategies
- mitigating the social consequences of automation and electrification technologies.

Poland's air quality is among the worst in the EU, posing major environmental and health concerns. According to the European Environment Agency (2023), there were more than 125 premature deaths per 100,000 inhabitants as a result of exposure to fine particulate matter ($PM_{2.5}$) in Poland in 2021, the second-highest number in the EU behind Bulgaria. With improvements to the energy efficiency of residential buildings and the phasing out of coal boilers in individual dwellings, Poland should reduce this number significantly if its air quality improves. The pollution comes from individual heating sources in residential buildings to a large extent, as well as from road congestion in urban areas. Around 3 million inefficient and polluting boilers need to be replaced as part of wider measures targeting the energy efficiency of buildings, in line with the EU's Renovation Wave strategy.

Decarbonising the transport sector will be key to reducing emissions, but challenges remain for the development and use of sustainable modes of transport. GHG emissions from the transport sector increased by 74 per cent from 36,25 Mt CO_2e to 63.06 Mt CO_2e in the period between 2005 and 2020 (and are expected to fall only by the end of the 2020s). The sector is the second-most polluting industry after energy production, with road transport responsible for the lion's share of sectoral emissions. A modal shift away from private road transport to less-polluting modes, such as rail and public transport, will thus be key to reducing emissions. Currently, individual road transport accounts for 82.5 per cent of all passenger transport, compared with a 12.4 per cent share of public transport (city- and long-distance buses, rail and urban rail transport). However, rail as a share of goods transport continues to decrease, falling from 12 per cent in 2010 to 9 per cent in 2020. Passenger rail is not an attractive alternative to private cars in many areas due to the low frequency of trains and insufficient integration with other modes of transport. The modernisation of railway lines in Poland to Trans-European Transport Network (TEN-T) standards is still lagging due to shortcomings in the implementation of investment projects. Public transport outside of urban areas has been in decline in recent years, while all segments of public transport have suffered from reduced passenger turnover and revenues on the back of the Covid-19 pandemic.

Green mobility faces challenges, especially when it comes to road passenger transport. In Poland, the development of a market for zero-emission passenger cars lags the overall trend in the EU. However, the electrification of the railway network is more advanced than the EU average. Public transport, including buses and railways, still constitutes an unattractive alternative to private cars. According to the European Commission Directorate General for Mobility and Transport (DG MOVE) European Passenger Mobility Survey, car travel (drivers or passengers) totals on average 60 minutes per day in Poland, compared with an EU average of 40 minutes (see Chart 23) (European Commission, 2022).

Chart 23. Travel duration by main travel mode for short-distance mobility on a working day



Source: European Commission (2022).

Resource productivity in Poland is below the EU average. Resource productivity expresses how efficiently an economy uses material resources to produce an economic outcome. Improving resource productivity can help minimise negative impacts on the environment and reduce a country's dependency on volatile raw material markets. With 1.3 purchasing power standards (pps) generated per kilogramme (kg) of material consumed in 2020, resource productivity in Poland lags the EU average of 2.2 pps per kg.

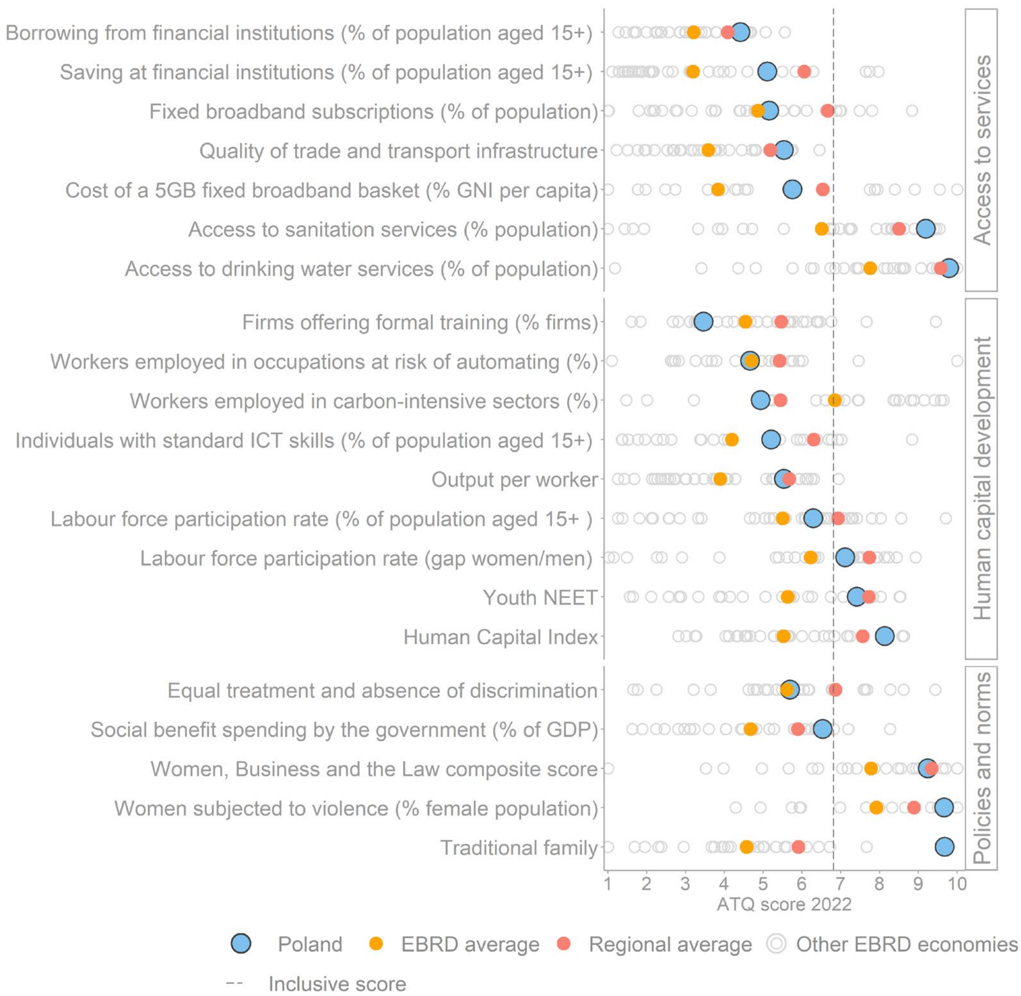
Effective waste management has been a challenge for Poland for many decades. Having been on a downward trend for many years, Poland's municipal waste generation has started to increase in recent years, reaching 336 kg per capita in 2019, although this is still well below the EU average of 501 kg per capita. After decreasing in the first half of the last decade, Poland's landfill rate has risen again over the last three years, reaching 43 per cent in 2019 (which is far above the EU average of 24 per cent). This means that landfilling and incineration (23 per cent) remain the predominant forms of waste treatment. Poland is also not on track to meet the EU 2020 or 2025 recycling targets, at 39 per cent in 2020, below the EU average of 48 per cent.

In its Recovery and Resilience Plan (RRP), Poland has earmarked 47 per cent of its RRF funding for climate objectives. The RRP includes measures to accelerate both the green and digital transitions and to reinforce economic and social resilience. It includes €23.9 billion in grants and €11.5 billion in loans to support crucial reforms and investments by 2026. Following the revision of the REPowerEU chapter, Poland's final allocation amounts to €59.8 billion, including €25.3 billion in grants and €34.5 billion in preferential loans.

Inclusive [ATQ = 6.63][1]

Poland ranks fifth among the economies in which the EBRD operates in the Bank's 2022 assessment of the inclusive transition quality.

Chart 24. EBRD 2022 assessment of the inclusive transition quality



Source: EBRD calculations.
Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

[1] The overall inclusive ATQ score consists of three sub-pillars: human capital development, access to services, and policies and norms.

The transition of the Polish economy towards low carbon emissions is a long and wide-sweeping process, generating new demand for "green skills" and appropriately qualified human capital. Employers will need to partner more closely with education providers – both local and international – to build the talent pipelines required to underpin the broader transition. This will encompass advanced skills in certain fields – for cutting-edge engineering and asset management roles – as well as lower-level technical skills – including, for example, heat-pump installers and maintenance technicians. The green economy transition will also continue to pose challenges for workers in high-emission industries, such as mining, to avoid the risk of "stranded" skills in the broader context of a just transition. The EBRD's continued strategic focus and established operational approaches to the human capital element of these changes underway will, therefore, continue to generate value for its policy partners, clients and their workers.

Poland is heavily reliant on coal for energy, and coal mining is still a significant employer in the country. The transition to a low-carbon economy will result in disruption for workers and communities reliant on the coal-mining industry. Poland's relatively tight labour market, however, should significantly ease the labour transition, as will targeted support from employers and policy partners to achieve a just transition. Coal mining employs approximately 75,000 people in Poland, with an average monthly wage of around PLN 10,744 (€2,460), according to data from the Polish Statistical Office (GUS). At the same time, the economy average wage reached PLN 7,670 (€1,760) in 2022.

A just transition in Poland could be further underpinned by investment in training and education programmes, support for new industries and businesses in affected regions, and the provision of social and economic safety nets for affected workers and communities.

A much wider and tougher just-transition problem is the challenge for users of fossil fuels in Poland. The country has a significant population that relies on coal for residential heating, and the cost of transitioning to cleaner sources of energy, such as gas or heat pumps, can be prohibitive at current market rates. According to data from the Alliance for Energy Efficiency (POBE, 2024), the cost of heating a single-family home using coal is around PLN 4,500 (€1,100) per year, compared with PLN 5,800 (€1,400) per year for gas and PLN 5,300-6,300 (€1,300-1,500) per year for heat pumps. This means that even if the alternative heating source is subsidised, many households may struggle to afford the transition to cleaner sources of energy. At the same time, the price volatility of coal in 2022 was even higher than that of gas.

Furthermore, Poland's public transport network is limited, particularly in more remote areas. According to data from Eurostat, only 46 per cent of the Polish population had access to a train station within 10 km of their home in 2019, compared with an EU average of 68 per cent. This limited access to public transport can make it difficult for people to reduce their reliance on fossil fuels for transportation.

Addressing the cost and availability issues associated with residential heating using cleaner sources of energy, as well as transport inclusion, are likely to be a bigger political and fiscal challenge, especially taking into account current energy security concerns. Renewables, energy storage solutions and support for public transport have to be part of the green transition process, if a just transition to a low-carbon economy is to support the needs of all Polish citizens.

Russia's invasion of Ukraine in February 2022 resulted in the large-scale forced displacement of Ukrainian citizens to a number of EU host countries. Poland's leading role as a receiving country for Ukrainian refugees within the EU was not unexpected, thanks to its strong social networks and civil society, as well as its geographical and cultural proximity to Ukraine. While the influx has stretched Poland's social, educational and housing services, public institutions have continued to function robustly, delivering valuable support to millions of refugees remaining in or passing through the country.

The demographic profile of the Ukrainian refugees – dominated by women, children and older people – of 2022 was completely different to earlier, predominantly male-dominated waves of economic migration from Ukraine, Belarus and Asia. The pace of economic integration of the refugee population was clearly effective, with some 70 per cent of Poland's refugee population working (compared with lower shares elsewhere, such as 17 per cent in Germany) (NBP, 2023). This successful integration can be attributed to a number of factors: i) the above-average share of tertiary education among migrants; ii) strong social and language links; and iii) swift policy moves, including instant access to social services, work permits and education at every level – something that has been especially important given the high share of women and children involved.

Another unusual factor has been the ability of the refugee population to go back and forth between Poland and Ukraine without losing their refugee status. This, together with the expanding scope of e-services and telework available in Poland, has resulted in a distinctly digital or hybrid aspect to the refugee journey and experience, in turn broadening and shaping people's economic opportunities. Of the aforementioned 70 per cent of the refugee population in work, 30 per cent continue to be employed by their original Ukrainian employers, while many children continue to be educated remotely in the Ukrainian language and according to the Ukrainian curriculum.

The refugee population's close links to its home country are likely to promote a more rapid rebuilding of Ukraine in time, supported by skills and best-practice transfer and closer professional, educational and business ties with Poland and other EU countries.

Integrated [ATQ = 7.25]

Poland ranks eighth among the economies in which the EBRD operates in the Bank's 2022 assessment of the integrated transition quality.

Chart 25. EBRD 2022 assessment of the integrated transition quality

Source: EBRD calculations.
Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

The outward FDI of Polish companies remains low. As mentioned in Chapter 1, the stock of outward FDI from Poland, at only 4.3 per cent of GDP in 2021, is below the EU average (115 per cent) and the country's V3 peers (62 per cent). At the same time, Poland's trade integration is high, at 108 per cent in 2022, above the EU-average of 88 per cent. According to fDi Markets data on 33 sectors, most of the projects by Polish companies abroad between 2018 and mid-2023 were in software/IT services, followed by business services, real estate and transport/warehousing. While the number of projects per year was 50-60 until 2021, this increased to 87 projects in 2022. The destination countries of those investments were Germany, the United States of America, the United Kingdom, Romania and the United Arab Emirates.

Nearshoring and friendshoring provide opportunities for greater regional integration, with Poland also becoming a gateway for the post-war reconstruction of Ukraine. The Covid-induced disruptions to supply chains, triggering longer delivery times and a rationing of goods and components, pushed multinational companies to shorten their supply chains and relocate critical processes closer to home. The war on Ukraine only accelerated that process, cutting off supplies from Russia and its supporters, such as Belarus. The effects of nearshoring and friendshoring are already visible in inward FDI flow data. In 2020, inward FDI flows to Poland increased to 3.2 per cent of GDP, then increased further to 5.3 per cent of GDP in both 2021 and 2022. According to the Polish Investment and Trade Agency, in 2022, foreign companies boosted their investments in Poland by 5.7 per cent compared with 2021 and by 37 per cent relative to 2020. Of the six largest investment sectors, three were considered innovative, namely: business support systems information technology (BSS-IT), R&D and e-mobility. Most projects had to do with the BSS-IT industry, while in terms of value, e-mobility was the largest sector. The increase in FDI inflows also reflected the relocation of Ukrainian companies to Poland, especially IT firms. In the first three quarters of 2022, according to a report by the Polish Economic Institute, Ukraine accounted for 45 per cent of total new foreign companies establishing a presence in Poland (PEI, 2022). Poland is regarded as a logistical gateway and launching pad for Ukraine's future reconstruction efforts. In addition, according to an fDi Intelligence report entitled *European Cities and Regions of the Future 2023 – the best and brightest among Europe's investment destinations*, two Polish cities feature among the top 10 large European cities (FT, 2023). Krakow secured third position in the overall ranking, followed by Poznan in seventh place.

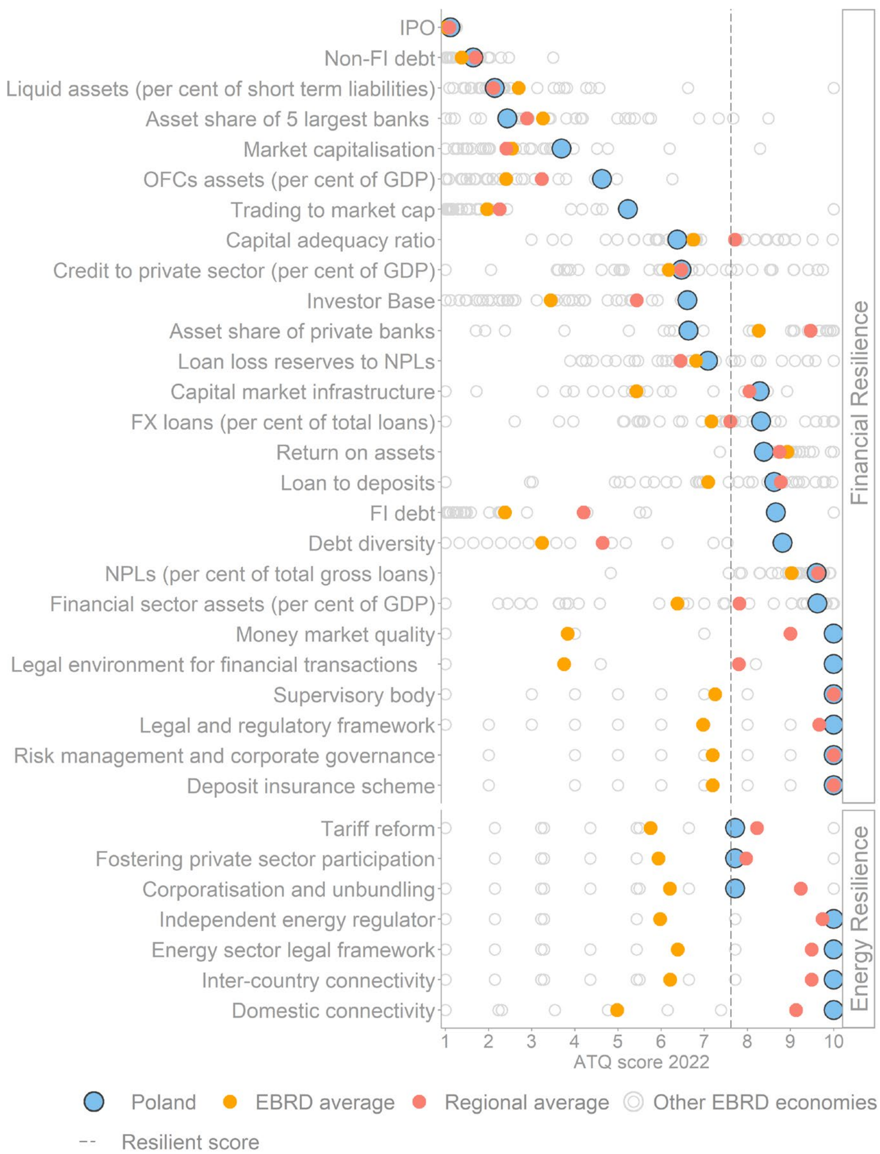
Better transport and logistics infrastructure in Eastern Poland is critical to Ukraine's post-war reconstruction and the eastward expansion of Polish companies. Further development of multimodal transport infrastructure, including road, rail and maritime routes, would improve connectivity, increase capacity and ensure smoother border crossings. Greater transport capacity through Poland would also allow for the smoother shipment of agricultural products from Ukraine to the rest of the world, especially through ports on the Baltic Sea.

Polish companies have expressed a willingness to engage in and prepare for the reconstruction of Ukraine. While Ukraine's reconstruction has not started yet, some Polish companies are already pursuing activities to mitigate the negative outcomes of the war. For example, PSE, the Polish grid operator, has supported and maintained electricity networks in Ukraine since 2022. At the same time, electricity exports from Poland to Ukraine have tripled. While Poland is integrated into the Ukrainian electricity system, the auction system has not yet been fully synchronised. The integration of Ukrainian electricity into the Polish system under European regulations poses a more significant challenge. Moreover, Ukraine's long-term independence from Russian gas is an opportunity for Gaz-System, the Polish natural gas transmission system operator, to enhance pipeline capacity, facilitating gas delivery from the Norwegian shelf through Poland to Ukraine. In terms of other sectors, most companies that want to invest in post-war Ukraine are in the construction sector and have expressed a willingness to build roads and bridges, rebuild private and public residential and commercial buildings, and so on.

Resilient [ATQ = 7.98]

Poland ranks first among the economies in which the EBRD operates in the Bank's 2022 assessment of the resilient transition quality.

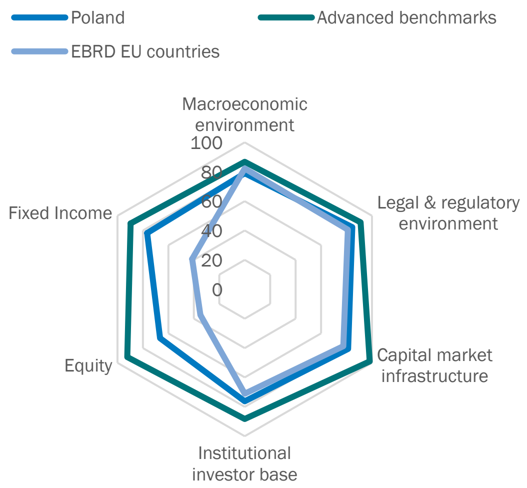
Chart 26. EBRD 2022 assessment of the resilient transition quality



Source: EBRD calculations.
Note: Visit https://2022.tr-ebrd.com/structural-reform/ for a list of indicators, data sources and methodological notes.

Poland leads the EBRD regions in many aspects of capital market development. This is reflected in, among other things, the FTSE Russell decision to upgrade the country to developed market status in September 2018, highlighting both the size and the liquidity of the local equity market, as well as its efficient trading and post-trade infrastructure. However, some gaps remain compared with more advanced countries, including in the debt capital markets. These include the liquidity and volumes of bank-issued bonds, including covered bonds, and the area of sustainable securities. Moreover, the Polish private equity/ecosystem has several deficiencies and lags even some peer economies in the CEE region. In addition, the small size of the pension funds limits the further development of Poland's capital markets.

Chart 27. EBRD Financial Market Development Index (FMDI)



Source: Updated 2022 data, see methodology in EBRD (2021).

Capital market conditions are robust, but market outcomes in terms of depth, liquidity and diversification of asset classes remain low compared with more advanced markets. This is illustrated by the EBRD's 2022 Financial Market Development Index (FMDI, see Chart 27). The FMDI score is derived from over 50 individual indicators split across two equally weighted sub-indices covering (i) the necessary conditions for sustainable market development and (ii) asset class-specific indicators reflecting the extent of such development.

Local securities markets were adversely affected by persistent geopolitical instability in the region, but signs of recovery are emerging. In the aftermath of the war on Ukraine, uncertainty and heightened market volatility weighed on capital markets. Market conditions for borrowers were particularly challenging during 2022. While the wider bond spreads witnessed that year abated somewhat, market conditions remain tight for borrowers on local markets. There were just 101 new bond listings on the Warsaw Stock Exchange during 2022, amid heightened uncertainty and geopolitical tensions in the region (compared with 148 in 2021 and 165 in 2023). In the first two months of 2024 alone, there were 70 new issues.

While the local capital market is a well-established source of funding for Polish companies, firms still rely mostly on bank credit for their financing needs. Poland's market funding ratio (share of corporate bonds and listed shares to total financing to the non-financial sector) stood at 48 per cent in 2021. This level is close to the EU average, but much lower than more advanced markets such as Germany, France and the Netherlands. However, it is notably higher than most other EU economies in which the EBRD operates, such as Romania, Bulgaria, Hungary and the three Baltic states – all of which were around or well below 30 per cent in 2021.

The Polish banking system is generally well diversified and demonstrates solid fundamentals. As of September 2023, the system comprised 29 commercial banks, together with a network of 492 cooperative banks and 34 branches of foreign banks. Bank assets stood at 88.8 per cent of GDP at the end of 2022. As of June 2023, Poland's soundness indicators were relatively strong, with a capital adequacy ratio of 21.7 per cent (total capital ratio) and 19.95 per cent (Tier 1 capital). Asset quality was broadly stable, with a ratio of non-performing loans of 4.9 per cent (September 2023). Debt securities, primarily government bonds, made up 32 per cent of the assets on banks' balance sheets – indicating a noteworthy bank-sovereign interdependence.

While the banking sector is well capitalised and very liquid, some legal and regulatory risks need to be accounted for. Legal risks related to foreign currency-denominated mortgage loans were the most significant.[2] In recent legal disputes over this matter, Polish courts have largely ruled against banks, and it is likely to be several years before the issue can be fully resolved. Beyond this, mortgage credit holidays and the need to comply with minimum requirements for own funds and eligible liabilities (MREL) are placing a temporary burden on Polish banks.

Poland is leading the EBRD EU region in terms of green bond issuance, with an outstanding amount of €6.6 billion. Several Polish companies and banks have issued green bonds, green covered bonds and sustainability-linked bonds in recent years. However, it is noteworthy that 95 per cent of the outstanding amount of green bonds were issued in foreign currency on international capital markets.

Poland continues to lag significantly in terms of environmental, social and governance (ESG) bond issuance, trailing most EU Member States, though several policy efforts are noteworthy. Examples of such measures are the drafting of a Sustainable Finance Roadmap and a strong focus on supporting the issuance of transition finance instruments, such as sustainability-linked bonds.

The Warsaw Stock Exchange (WSE) has become a major stock exchange in central and eastern Europe but continues to lag western European exchanges by some margin. For instance, while the WSE has a leading position within the EBRD region in terms of market capitalisation and turnover, its equity turnover makes up only a fraction of leading western European exchanges. In addition, several market participants continue to see the potential for improvement as regards the WSE's listing process.

The Polish private-equity and venture-capital system is still not very developed. As a share of GDP, both private equity and venture capital investment in Poland tend to lag that of its neighbours and the western European economies. Moreover, as of H1 2023, Poland ranked third lowest out of all EU Member States on the Association for Financial Markets in Europe's pre-initial public offering risk capital index, which measures investment from venture capital funds, growth private equity, business angels and equity crowdfunding as a share of risk capital and bank lending (AFME, 2023).

Similarly, household participation in capital markets tends to be very low. For instance, according to the Eurobarometer Flash 525, only 15 per cent of Polish households said they held bonds, listed shares or investment fund shares – the sixth-lowest level in the EU (EC, 2023b). In the same vein, according to the European Commission's 2023 CMU indicators, Polish households clearly lag most other EU countries in terms of direct and indirect investments in capital market products.

In terms of energy resilience, various strategic investments have enabled the diversification of gas supply away from Russia – for example, the liquefied natural gas terminal in Swinoujscie, opened in 2016; the interconnector with Lithuania, started in May 2022; and the Baltic Pipe gas pipeline to Norway and the interconnector with the Slovak Republic, both started in November 2022. The oil and crude oil segment maintains the heaviest reliance on fossil-fuel imports. In 2022, 47 per cent of crude oil imports came from Russia, while the shares for natural gas and hard coal stood at 19 per cent and 13 per cent, respectively (Forum Energii, 2023).

Poland's first offshore wind farm is expected to support renewable energy generation and improve the resilience of the electricity sector. In October 2023, Baltic Power, a special purpose vehicle jointly owned by ORLEN, the Polish multi-utility company, and Northland Power, a Canadian independent power producer, received a final investment decision to construct the wind project in the Baltic Sea. Once fully operational, the wind farm, which will have a capacity of up to 1.2 GW, is expected to generate electricity equivalent to 4,000 GWh, or around 2-3 per cent of Poland's current electricity generation. Further development projects have

[2] For example, see S&P Global Intelligence (2023).

been contracted for an additional 5.9 GW of capacity to come into the grid from 2025. The pipeline contains further projects with a total capacity of 12 GW, which will go through the permitting process in the coming years.

Smart grid infrastructure, including cross-border electricity interconnections, require more investments to facilitate undisturbed electricity flow to meet demand. This translates into €50 billion in transmission and €60 billion in distribution investments. This is particularly relevant, as more (variable) electricity will be generated from renewable energy sources as the electrification of the economy speeds up, electricity flows are redirected and Polish energy generation is decentralised. Today, the country's electricity is mostly produced in the coal-based south, but in future, the electricity flow is expected to run from north to south, as new facilities become operational on the Baltic coast (wind farms, solar farms and a nuclear power plant), both onshore and offshore (wind farms), and within self-balancing energy clusters and communities.

Reference list

AFME (2023), *Capital Markets Union Key Performance Indicators – Sixth Edition 2023*, London. Available at: https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME_CMU_KPIs2023_11.pdf.

EBRD (2020), *The State Strikes Back: Transition Report 2020-21*, London. Available at: https://www.ebrd.com/publications/transition-report-202021-state-owned-enterprises.

EBRD (2021), *System Upgrade: Delivering the Digital Dividend – Transition Report 2021-22*, London. Available at: https://2021.tr-ebrd.com/financial-market-development/.

European Commission (2022), *Study on new mobility patterns in European cities, Task A: EU wide passenger mobility survey*, Brussels. Available at: https://op.europa.eu/en/publication-detail/-/publication/adfc18f1-80e1-11ed-9887-01aa75ed71a1.

European Commission (2023a), Economic forecasts, Brussels. Available at: European Economic Forecast, Spring 2023 (europa.eu).

European Commission (2023b), *Monitoring progress towards a Capital Markets Union: a toolkit of indicators*, *Overview of CMU Indicators – 2023 Update,* Brussels. Available at: https://finance.ec.europa.eu/system/files/2023-08/230816-capital-markets-union-indicators_en.pdf.

European Environment Agency (2023), Premature deaths due to exposure to fine particulate matter in Europe, Copenhagen. Available at: https://www.eea.europa.eu/en/analysis/indicators/health-impacts-of-exposure-to.

European Investment Bank (2023), *EIB Investment Report 2022/2023: Resilience and renewal in Europe*, Luxembourg. Available at: https://www.eib.org/en/publications/20220211-investment-report-2022.

Financial Times (2023), European Cities and Regions of the Future 2023, *fDi Intelligence*, 16 February 2023. Available at: https://www.fdiintelligence.com/content/rankings-and-awards/european-cities-and-regions-of-the-future-2023-the-winners-82056.

B. Fojcik (2023), Polish banks may book more provisions to cover Swiss franc mortgage risk, London, *S&P Global Market Intelligence*. Available at: https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/polish-banks-may-book-more-provisions-to-cover-swiss-franc-mortgage-risk-73582192.

Forum Energii (2019), *Heating in Poland, 2019 Edition*, Warsaw. Available at: https://www.forum-energii.eu/en/heating-in-poland-2019-edition.

Forum Energii (2023), *Transformacja energetyczna w Polsce [Energy Transition in Poland], Edition 2023*, Warsaw. Available at: https://www.forum-energii.eu/rocznik-dane-o-energetyce.

International Monetary Fund (2023), World Economic Outlook Database, Washington, DC. Available at: https://www.imf.org/en/Publications/WEO/weo-database/2023/April.

Polish Ministry of Climate and Environment (2023), Prekonsultacje w zakresie aktualizacji dokumentów strategicznych – KPEiK/PEP2040 [Pre-consultations on the update of strategic documents – KPEiK/PEP2040], Warsaw. Available at: https://www.gov.pl/web/klimat/prekonsultacje-w-zkresie-aktualizacji-dokumentow-strategicznych-kpeikpep2040.

Polish Ministry of Climate and Environment (2024), *Annex 1 to the EPCIP: Transition scenario in market and technical conditions (with existing measures)*, Warsaw. Available at: https://commission.europa.eu/document/download/4c14e816-c65f-4f3a-9127-cd96ee68d055_en?filename=PL%20NECPupdate%20Part%201_EN.pdf.

Polish Ministry of State Assets (2023), Sytuacja ekonomiczna spółek giełdowych nadzorowanych przez MAP [Economic situation of listed companies supervised by MAP], Warsaw. Available at: https://www.gov.pl/web/aktywa-panstwowe/sytuacja-ekonomiczna-spolek-gieldowych-nadzorowanych-przez-map.

National Bank of Poland (2023), *The living and economic situation of Ukrainian migrants in Poland – the impact of the pandemic and the war on the nature of migration in Poland, Report of the questionnaire survey*, Warsaw. Available at: https://nbp.pl/wp-content/uploads/2023/05/Raport_Imigranci_EN.pdf.

National Bank of Poland (2024), *Inflation Report*, Warsaw. Available at: https://nbp.pl/wp-content/uploads/2024/03/Raport-o-inflacji-marzec-2024-ANG.pdf.

Supreme Audit Office (2023), Rozwój Efektywnych Systemów Ciepłowniczych [Heat is escaping, time is running out – the development of efficient district heating systems], Warsaw. Available at: https://www.nik.gov.pl/aktualnosci/rozwoj-systemow-cieplowniczych.html.

U. Panizza (2023), *Bank Ownership around the World*, CEPR Discussion Paper No. 18106, Paris and London, Centre for Economic Policy Research. Available at: https://cepr.org/publications/dp18106.

POBE (2024), Kalkulator POBE – koszty ogrzewania w typowych budynkach w I kw. 2024 r. [POBE calculator – heating costs in typical buildings in Q1 2019 2024], Krakow, Poland. Available at: http://pobe.pl/kalkulator-pobe-koszty-ogrzewania-w-typowych-budynkach/.

Polish Economic Institute (2022), Ukrainian companies in Poland since the start of the war in 2022, Warsaw. Available at: https://pie.net.pl/en/nearly-14000-ukrainian-firms-were-established-in-poland-from-january-to-september-2022/.

R. Reis (2022), Debt revenue and the sustainability of public debt, *Journal of Economic Perspectives*, 36(4): 103-124. Available at: https://www.aeaweb.org/articles?id=10.1257/jep.36.4.103.

R. Reis (2022b), *Which r-star: public bonds or private investment? Measurement and policy implications*, London, London School of Economics. Available at: https://personal.lse.ac.uk/reisr/papers/99-ampf.pdf.

World Bank (2021), *Paths of Productivity Growth in Poland*, Washington, DC. Available at: https://www.worldbank.org/en/country/poland/publication/productivity.

World Bank (2023), *The Business of the State*, Washington, DC. Available at: https://www.worldbank.org/en/publication/business-of-the-state.