
The impact on the European Union of Ukraine's potential future accession



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Executive summary

The process of Ukraine's accession to the European Union has started in the unprecedented circumstances of a full-scale war and associated damages and human losses. The accession process will likely overlap with Ukraine's reconstruction after the war, increasing the EU's influence in terms of fostering the institutional development of Ukraine, and providing strong incentives for Ukraine to move towards compliance with the accession criteria.

Following an introduction in chapter 1, chapter 2 provides a brief historical overview of economic and governance reforms in Ukraine before the full-scale Russian aggression.

- Until 2013, Ukraine's record of economic and state reform was not impressive;
- The Euromaidan protest movement in 2014 marked a turning point and resulted in a shift towards a Western orientation in politics and the economy, including the conclusion of the EU-Ukraine Association Agreement with a Deep and Comprehensive Free Trade Area;
- The pace of economic reform has slowed substantially since March 2020, while the role of the president has been strengthened since Volodymyr Zelensky became president in 2019;
- In terms of World Bank governance indicators and Freedom House's democracy scores, Ukraine ranks in the lower half of actual and potential EU candidate countries, and worse than any EU country;
- The most critical areas for further reform and EU accession negotiations include political governance, the constitutional balance of power, the judiciary, the rule of law, decentralisation and fighting corruption.

Chapter 3 sketches possible war scenarios.

- Ongoing war, frozen conflict and sustained peace are the three main scenarios, with the first being the most probable in the next few years, potentially replaced by the second in the medium term.
- Sustained peace would require either a regime change in Russia, or Ukraine's readiness to make a substantial territorial and geopolitical concession to Russia, both looking rather unlikely at time of writing.
- The ongoing war makes large-scale reconstruction and EU entry problematic, though it does not exclude the start of accession negotiations.
- A frozen conflict could allow reconstruction, and EU entry (as in the case of Cyprus), but at a high level of security risk.

Chapter 4 focuses on Ukraine's EU accession process and has six parts.

First, the EU-Ukraine Association Agreement (AA) and Deep and Comprehensive Free Trade Agreement (DCFTA) resulted in an intense economic relationship, but major gaps persist when measured against the possibility of EU single market membership.

- Goods: mostly free trade, but some tariff-rate quotas remain for agricultural products; also, there are some differences between Ukraine and the EU in terms of rules and procedures, meaning customs checks need to remain in place. The remaining tariffs were temporarily suspended after the invasion.
- Services: little additional liberalisation compared to WTO schedules.
- Capital: almost fully liberalised.
- Labour: decided by individual EU countries under bilateral agreements with Ukraine. The temporary protection directive was activated after the invasion.
- Financial assistance from the EU budget to Ukraine would be much larger if Ukraine was an EU member.

Second, previous EU enlargements offer several lessons.

- EU accession has the potential to transform would-be members by triggering reforms that not only prepare the country for EU accession, but also reinforce its democratic governance, economic prosperity and rule of law.
- However, the history of enlargement shows a mixed picture of successes and failures in achieving this potential, both before and after accession.
- In central Europe, a virtuous circle developed between domestic reforms, progress towards accession and foreign direct investment.
- Such a virtuous circle has not developed in the Western Balkans (apart from Croatia), because the EU's commitment to accession has been too ambivalent and the process has moved too slowly, while in the region, the commitment to reform and boosting administrative capacity has been too weak.
- Credibility of the accession promise is vital to incentivise reform.
- An important success factor is coherence, meaning that reforms done for reasons of EU accession are also perceived as necessary for the country's development.
- Consistency from the EU side is key; criteria must be assessed objectively without favouritism or arbitrary changes. Vetoes by EU countries unrelated to merit tend to derail reform momentum, like in the Western Balkans.
- Interim incentives offered by the EU can unlock difficult reforms (eg police reform in Bosnia and Herzegovina was rewarded with visa liberalisation).
- The Cooperation and Verification Mechanism for Bulgaria and Romania to enforce conditionality after accession has had mixed outcomes.

Third, the European Commission's 2020 Revised Enlargement Methodology (REM) includes useful changes, but these failed to accelerate reform in the Western Balkan countries.

Fourth, the enlargement methodology should be adapted to Ukraine and to other candidate countries.

- The novel and useful reversibility principle (certain benefits can be withdrawn if a candidate country stops meeting certain conditions) introduced by the REM has not been followed with the Western Balkans; this should change, and objective criteria should apply consistently to all enlargement countries.
- More specific conditions should be set with more detailed guidance, especially for the removal of martial law after the war and the restoration of full independence to state institutions in Ukraine.
- Sectoral integration that goes beyond the AA and DCFTA should incentivise reforms.
- Phased (staged) integration would incentivise reform by rewarding reforms with benefits, but may involve the risk of never reaching full membership status.
- Post-accession compliance could be improved by inserting benchmark indicators in the accession treaties, and suspension of voting rights and EU funds in case these benchmarks are not met.
- Setting an indicative target date for enlargement could promote positive competition among candidate countries, though potentially would create some risks.

Fifth, a merit-based accession process for Ukraine would not disadvantage the Western Balkans and could incentivise the reform process there.

Sixth, the reconstruction and the EU accession processes in Ukraine should be combined.

- The aim of the reconstruction must not be simply to rebuild but also to transform the governance of Ukraine's institutions.
- The creation of a Ukraine Reconstruction and European Integration Agency, building on the European Commission's Directorate-General for Structural Reform Support and the Multi-Agency Donor Coordination Platform for Ukraine, should be a priority.

Chapter 5 takes a long-term perspective and has seven parts.

First, regarding EU governance, the EU institutional framework currently could cope with some additional members, especially if accession treaties include the post-accession compliance tool that we propose in chapter 4, section 4 (suspension of voting rights and EU funds in case of non-compliance with EU fundamental values). Reform of the EU's institutional framework would be desirable, but lack of progress with it should not block enlargement.

Second, internal security and the rule of law pose challenges that can be addressed.

- Major efforts, supported by the EU, will be needed in Ukraine to take small arms and light weapons back into safe custody, requiring measures already while the Russia's aggression continues, and a comprehensive approach when the aggression ends.
- The EU must not compromise on the quality and resilience of the rule of law and corruption control in further enlargements. The EU has improved its toolkit for current members, which we recommend applying to Ukraine even before its EU entry.
- Institutionalising important changes in the functioning of the EU via accession treaties is a faster and less politically complicated method than opening an EU treaty revision negotiation. A procedure for suspension of voting rights and EU funds could be inserted into an accession treaty and could also be applied to existing members.

Third, security concerns will have a much greater significance for Ukraine's accession than for previous accessions.

- The earlier central and eastern European EU entrants joined NATO before joining the EU, but NATO membership looks more uncertain for Ukraine.
- The interaction between NATO's evolution and the development of the EU's security and defence capabilities and policies will be crucial.
- Ukraine's EU membership would significantly increase the EU's military and security capabilities, yet the EU-Russia border would be much longer, with implications for border management.
- For the period after accession, the overall security goals of the EU will be largely determined by the conduct of the war and the terms under which it ends.
- A regime change in Russia would shift the focus from security issues to encouraging a democratic and pro-European Russia.

Fourth, substantial immigration is expected from Ukraine to the EU.

- We expect that a low share of Ukrainian refugees will return to Ukraine once the war is over.
- After Ukraine's EU entry, its population will likely shrink significantly further because of migration into the EU, similarly to other low-income central European EU countries.
- Eurostat's projection suggests the EU working-age population will decline by 57 million from 2022 to 2050 in the absence of net immigration, which would lead to dramatic labour shortages and question the sustainability of welfare systems. Any foreseeable immigration from Ukraine would compensate just a small fraction of this decline.

Fifth, Ukraine's entry into the EU would benefit EU GDP via trade, migration and foreign direct investment (FDI) channels.

- A large body of literature concludes that past EU enlargements boosted economic growth and employment, both in the new and the incumbent members.
- We document the remarkable economic convergence of central European EU members, while Western Balkan countries have been less successful, and Ukraine even less successful.

- Trade and FDI have played major roles in central Europe's economic convergence. Yet EU membership might not automatically bring about a spectacular trade integration; geographical closeness, local markets and the quality of governance likely matter.
- The low FDI and trade intensities of the Ukrainian economy imply that there is a large potential for further financial and trade integration between Ukraine and the EU. However, to exploit this potential, a stable peace agreement, a successful reconstruction process and major governance and institutional reforms in Ukraine are needed. EU accession would necessitate governance and institutional reforms in Ukraine and thereby contribute to deeper economic integration between the EU and Ukraine.
- By setting up two scenarios, we estimate that there is a large potential to increase EU-Ukraine trade, even in a low-growth scenario, and even more so in a high-growth scenario. This, in turn, would increase EU GDP.
- The return on FDI assets held in central European countries was higher than the return on FDI assets held in western Europe, which signals that the return on FDI assets held in Ukraine might be high too, resulting in sizeable profit transfers from Ukraine to western European investors.

Sixth, the accession of Ukraine into the European Union will have a noticeable impact on the EU's energy sector, including greater energy security and lower energy costs.

- Ukraine has substantial potential in natural gas, renewable generation and nuclear power. It could export large volumes of low-carbon electricity, blue and green hydrogen, natural gas and energy-intensive products, such as (green) steel to the EU.
- Ukraine will be a major market for energy technology as destroyed and/or long-outdated networks and plants need to be refurbished or replaced.
- The accession of Ukraine will also require a recalibration of European energy and climate targets (renewables, energy efficiency, climate).
- Prior to EU accession, it would be advantageous for Ukraine to join the EU's emissions trading system to avoid the carbon border adjustment mechanism and facilitate integration into EU clean-tech sectors.
- Ukraine, as a member of the Vienna-based Energy Community, is already committed to gradually implement the energy and climate acquis. The EU should foster the efficient integration of Ukraine into the European energy system and involve Ukraine in the governance of its internal energy market.

Seventh, Ukraine's inclusion in the EU's budget would involve significant net transfers to the country under current rules, before taking into account the fiscal and other benefits that EU27 countries would obtain after Ukraine's entry.

- By applying current Multiannual Financial Framework (MFF) allocation rules, we calculate that Ukraine would obtain €32 billion (baseline scenario) or €27 billion (alternative scenario) in cohesion policy payments, €85 billion (baseline scenario) or €68 billion (alternative scenario) in Common Agricultural Policy payments and €7 billion (baseline scenario) or €6 billion (alternative scenario) in payments from other EU programmes (all numbers are at current prices and refer to the whole 2021-2027 MFF). Spending on European public administration could increase by €4 billion (baseline scenario) or €3 billion (alternative scenario), while the EU would save about €2 billion from funds allocated to the neighbourhood.
- For cohesion policy allocations, the 2.3 percent of GDP maximum cap for most payments is the crucial parameter, since in the absence of the cap, Ukraine would have obtained about €180 billion, six times more.
- Current EU members would obtain €24 billion (baseline scenario) or €19 billion (alternative scenario) less in cohesion funding than in the approved budget, because Ukraine's EU membership would reduce the EU average GNI *per capita*, which is an indicator of fund allocation. Some EU regions currently classified as 'less developed regions' would graduate to 'transition regions', and some current 'transition

regions' would graduate to 'more developed regions', implying lower cohesion funding.

- Ukraine's contribution to the EU budget would be €14 billion (baseline scenario) or €11 billion (alternative scenario) if we assume that the country pays the same percent of its GDP as the size of the overall MFF in EU GDP.
- Altogether, the net EU-budget-related cost of Ukraine's EU membership to current EU countries would amount €137 billion (baseline scenario) or €110 billion (alternative scenario) at current prices in total in 2021–2027, which is 0.13 percent (baseline scenario) or 0.10 percent (alternative scenario) of EU27 GDP.
- These numbers exaggerate fiscal costs to EU27 countries, because they do not take into account the tax and social security revenue increases for EU27 countries as a result of Ukraine's entry into the EU (EU27 companies would benefit from EU-funded projects in Ukraine and from greater Ukrainian imports from the EU27, thereby creating jobs and tax revenues in EU27).
- Transitional arrangements after Ukraine's EU entry could be put in place, as was the case with other central and eastern European entrants, which would limit EU budget allocations to Ukraine for several years.

Annex 1 details our calculations for the EU budget.

1. Introduction

The European Union granted candidate status to Ukraine on 23 June 2022¹, just four months after the country submitted its membership application, at the time when the full-scale Russian aggression began. The rapid approval of Ukraine's candidate status indicates the determination of EU members to integrate the war-hit nation. EU integration has been a slow process in the past, partly because it requires deep institutional changes in aspiring members, which are difficult to implement. Nevertheless, enlargement has been a powerful and successful tool to foster such changes, benefitting both the applicant country and the EU.

When completing this study (November 2023), the war remained underway without prospect of a quick end. In October 2023, approximately 18 percent of Ukraine's territory remained outside its authorities' control². In 2022, the first year of the war, Ukrainian GDP contracted by 29.1 percent compared to 2021³. According to the Second Rapid Damage and Needs Assessment prepared by the World Bank Group, the Government of Ukraine, the European Commission and the United Nations (2023), for the first year of the war (until 24 February 2023), the direct damage to buildings and infrastructure amounted to €126 billion, of which 38 percent related to housing, 26 percent to transport, 8 percent to energy infrastructure, 8 percent for industry and commerce, and 6 percent for agriculture. The reconstruction and recovery needs for the next ten years were estimated at €383 billion, up to 260 percent of Ukrainian GDP in 2022. In 2022, Ukraine lost more than 6 million of its pre-war population, primarily because of a mass refugee outflow to the EU.

Thus, the process of Ukraine's accession to the EU has started and will continue, at least for some time, in the unprecedented circumstances of a full-scale war and associated damages and human losses. Another specific element in Ukraine's accession process is that even before the February 2022 Russian invasion, Ukraine's socioeconomic and governance performance looked worse than that of other post-communist countries of central and eastern Europe when they started their EU accession processes. On the other hand, Ukraine managed to advance its economic ties with the EU thanks to, among others,

1 European Council meeting (23 and 24 June 2022) – Conclusions, <https://www.consilium.europa.eu/media/57442/2022-06-2324-euco-conclusions-en.pdf>.

2 See Council on Foreign Relations, 'War in Ukraine', <https://www.cfr.org/global-conflict-tracker/conflict/conflict-ukraine>.

3 See https://www.imf.org/en/Publications/WEO/weo-database/2023/October/weo-report?c=926.&s=NGDP_RPCH,&sy=2021&ey=2023&ssm=0&scsm=1&sc=0&ssd=1&ssc=0&sic=0&sort=country&ds=.&br=1.

the Association Agreement with the EU, including the Deep and Comprehensive Free Trade Area (DCFTA), which entered into force in 2017.

The main objective of this study is to evaluate the impact on the EU of a possible future EU accession of Ukraine, focusing on economic consequences and institutional developments. We separate the impacts of the accession process (which might last for several years, if not decades, during which the already deep economic ties between the EU and Ukraine are likely to deepen further) and the long-term impacts after Ukraine's possible EU entry.

The accession process will likely overlap with Ukraine's reconstruction after the war, in which EU states and companies are expected to play pivotal roles. From the EU side, reconstruction support will likely boost the EU's influence in fostering the institutional development of Ukraine. From the side of Ukraine, reconstruction support and EU membership prospects will likely provide strong incentives to progress toward complying with the Copenhagen criteria. These unprecedented circumstances make the appropriate framework for addressing Ukraine's development and reconstruction needs and its interaction with the accession process a crucial issue. The EU accession process might need to be reformed in how it applies to all EU candidate countries, not only Ukraine.

Once Ukraine becomes a member, it will influence the EU in various ways. We focus on economic (trade, internal market, GDP), social (migration, employment), energy (energy security, decarbonisation), financial (private capital flows, EU budget), institutional (the functioning of the EU and EU governance), and internal security and rule-of-law impacts.

This study has six chapters. We start with a brief historical overview of economic and governance reforms in Ukraine before the full-scale Russian aggression and compare Ukraine's performance with that of other EU candidates and selected EU members (chapter 2). This is followed by an analysis of potential war scenarios and their impacts on Ukraine's reconstruction and EU accession process (chapter 3). Then, we discuss various aspects of Ukraine's EU accession process: implementation of the EU-Ukraine Association Agreement, lessons from the previous enlargements, the Revised Enlargement Methodology and its potential adaptation to the specifics of Ukraine's accession, and interaction between reconstruction and accession (chapter 4). Chapter 5 takes a long-term perspective, trying to assess various impacts of Ukraine's EU membership on EU functioning. The problems discussed include the EU's governance, internal security and the rule of law, security orientation of the EU, trade, internal market and GDP, migration and employment, energy security and decarbonisation, and the EU budget. Chapter 6 summarises the findings and conclusions of our study.

2. Ukraine: an assessment 1991 – 2021/2023

In this chapter, we present a brief history of economic and political developments and reforms in Ukraine from 1991, when the country obtained its independence (section 2.1) and compare Ukraine's performance with other EU candidates and potential candidates (section 2.2).

2.1 Economic and governance developments 1991-2021/2023

2.1.1 Unfavourable reform dynamics before 2014

Until 2013, Ukraine's record in reforming its economy and state was not impressive (Aslund, 2015). The late start of macroeconomic stabilisation and liberalisation (the end of 1994) and slow and chaotic reforms in the 1990s and 2000s led to macroeconomic and financial crises in 1993, 1998-1999, 2008-2009 and 2014-2015 (Dabrowski, 2007; 2017). The slow pace of reform helped build powerful oligarchic groups that benefited from macroeconomic imbalances, structural distortions and opaque legislation. They parasitised numerous state-owned enterprises (SOEs) and captured national and local politics.

The Orange Revolution in 2004 seemed to bring new opportunities and hopes for democratic and market

transition (see Karatnycky, 2005). However, these were lost because of personal rivalries between the Revolution leaders and the lack of a coherent and consequent reform vision on the part of subsequent governments. Eventually, the victory of Viktor Yanukovich in the presidential election in January 2010 led to the reversal of the post-Orange Revolution democratisation gains. Government policy was captured by the oligarchic clan around President Yanukovich and his family.

The Euromaidan protest movement, which started in November 2013 and culminated with the fall of President Yanukovich in February 2014, marked a turning point in contemporary Ukrainian history⁴. It signified a shift towards a clear West-facing orientation of politics and the economy. Although it served as the pretext for Russian intervention, the annexation of Crimea and the war in Donbas, it also opened a new window of political opportunity for reforming the Ukrainian state and economy.

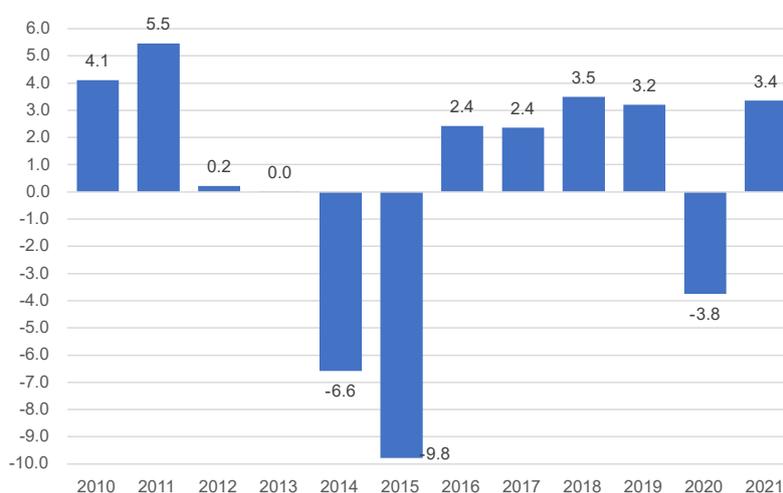
Since 2014, Ukraine has had two presidents and four prime ministers, with the reform effort concentrated on the economic and political systems.

2.1.1. Economic reforms⁵

In the economic sphere, the Yatsenyuk government (2014-2016) and the National Bank of Ukraine (NBU) concentrated on macroeconomic stabilisation, which had been seriously damaged between the end of 2013 and February 2015, and banking sector restructuring. Four International Monetary Fund programmes supported this effort – the Stand-by Arrangement (SBA) approved in 2014, replaced by the Extended Fund Facility (EFF) in 2015, and two subsequent SBAs in 2018 and 2020⁶. The EFF involved partial debt reduction negotiated with private foreign investors in 2015-2016 (IMF, 2015). No programme was fully disbursed because of problems with respecting their conditions.

Nevertheless, Ukraine managed to avoid the danger of debt, balance-of-payments and banking crises that could have happened in 2014 and early 2015 (IMF, 2015). It returned to moderate growth between 2016 and 2019 and 2021, interrupted by a COVID-19-related output decline in 2020 (Figure 1). In the same period, the general government (GG) deficit and GG gross debt to GDP were reduced, NBU gross international reserves increased, and the hryvnia's exchange rate stabilised. Inflation went down. However, it started growing again in 2021, on top of global inflationary pressure (Figure 2).

Figure 1: Ukraine: GDP in constant prices, annual percent change, 2010-2021



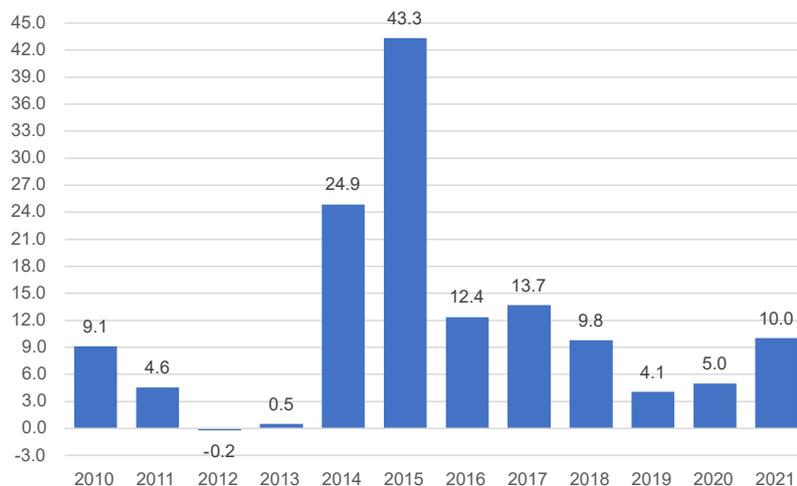
Source: IMF World Economic Outlook database, April 2023.

4 Euromaidan refers to the mass protest in Kyiv, which started in November 2013 when then-President Viktor Yanukovich rejected signing the Association Agreement with the EU at the last minute. It ended in February 2014 with the resignation of President Yanukovich.

5 This subsection draws from Dabrowski (2023).

6 See <https://www.imf.org/external/np/fin/tad/extarr2.aspx?memberkey1=993&date1Key=2023-09-30>.

Figure 2: Ukraine: inflation, end of period consumer prices, percent change, 2010-2021



Source: IMF World Economic Outlook database, April 2023.

The Groysman government (2016-2019) continued reforms. It eliminated subsidies for natural gas and district heating and initiated the restructuring of Naftogas (in 2016). It helped to reduce excessive natural gas consumption and dependence on gas imports from Russia. The government also started electricity market reform (Dabrowski *et al*, 2020a).

In 2017, the government managed to obtain parliamentary approval for pension reform, which helped partly reduce the liabilities of the public pension system in subsequent years⁷. It also initiated reform of the healthcare sector.

The years of Groysman's government were marked by the beginning of the implementation of the Association Agreement between the European Union (EU), including a Deep and Comprehensive Free Trade Area (DCFTA), which entered into force on 1 January 2016. The DCFTA and the revoking of the bilateral free trade agreement by Russia led to the radical reorientation of Ukrainian trade from Russia to the EU (Dabrowski *et al*, 2020b).

Unfortunately, the governments of Yatsenyuk and Groysman did practically nothing to privatise SOEs, accounting for a large share of the Ukrainian economy. Only Honcharuk's government (2019-2020) tried to relaunch a privatisation process (Prokhorov and Yablunovskyy, 2020). It initiated small privatisation via the electronic public procurement platform Prozorro. In 2020, the parliament elected in 2019 replaced the old long list of companies for which privatisation was prohibited, with a new, much shorter list. In March 2020, it also lifted partially the moratorium on the sale of agricultural land⁸, which had been in place since 2001 (the new law entered into force in July 2021).

The Honcharuk government also started preparations for the privatisation of several big companies. However, a replacement of Honcharuk's government by one led by Prime Minister Denys Shmyhal in March 2020, along with the COVID-19 pandemic, led to a halt of the implementation of these plans. Nevertheless, small-scale privatisation has been continued.

The pace of reform has slowed substantially since March 2020⁹ and there has been no new reform momen-

7 Vitali Rybak, '10 Things You Should Know About Ukraine's Pension Reform', *Ukraine World*, 10 October 2017, <https://ukraineworld.org/en/articles/reforms/10-things-you-should-know-about-ukraines-pension-reform>.

8 Oleksiy Sorokin, 'Ukrainian parliament lifts longstanding moratorium of farmland sales', *Kyiv Post*, 31 March 2020, <https://www.kyivpost.com/ukraine-politics/ukrainian-parliament-lifts-longstanding-moratorium-of-farmland-sales.html>.

9 Anders Åslund, 'Coronavirus crisis: Ukraine needs IMF support not political purges', *UkraineAlert*, 10 March 2020, Atlantic Council, <https://atlanticcouncil.org/blogs/ukrainealert/coronavirus-crisis-ukraine-needs-imf-support-not-political-purges/>.

tum since then, apart from reforms explicitly requested by the European Commission and the IMF. The macroeconomic situation also deteriorated in 2020 because of the COVID-19 pandemic and related lockdown measures. In 2021, the economy recovered partly from the pandemic shock (Figures 1 and 2). However, the continuous perception of the unfavourable business and investment climate reflected the uneven and incomplete reform process before the pandemic and war.

The Russian aggression caused a GDP drop of 29.1 percent in 2022 (compared to 2021) and shook macroeconomic equilibrium. The economy has had to become a subject of war command management, although the authorities have tried to allow market mechanisms to work where possible (Boyarchuk and Dabrowski, 2023).

2.1.2 Governance reforms 2014-2021

In the political sphere, the Euromaidan in 2014 resulted in the reinstatement of the 2004 constitutional amendments (Dabrowski *et al*, 2020a). These moved part of the president's power to the parliament by granting the latter the authority to appoint and control the government (previously subordinated to the president). However, the double victory of Volodymyr Zelensky in 2019 (in presidential and parliamentary elections) and the absolute parliamentary majority of his party (Servant of the People) moved the balance of power back to the president and his administration. After the full-scale Russian invasion started in February 2022, the war and martial law further concentrated prerogatives in the hands of the president. They also dismantled part of systemic checks and balances, for example, by introducing controls over the media (Boyarchuk and Dabrowski, 2023).

In 2016, a package of constitutional and legislative changes initiated the reform of the judicial branch of government, aiming to strengthen the rule of law and radically improve contract enforcement and the protection of property rights. The structure of the Ukrainian court system was simplified (moving from four to three tiers), and merit-based recruitment of supreme court judges was initiated (Bilak *et al*, 2016). However, this reform has been progressing slowly with many zigzags, and Ukraine is still only at the beginning of the process of building an independent and professionally credible judiciary.

The same relates to various law-enforcement agencies, many of them legacies from the Soviet era and a source of harassment of the business community and ordinary citizens. Again, reforms in this sphere have been only partial (Gherasimov and Solonenko, 2020). They have concentrated on forming the new patrol police, reforming tax enforcement and reforming the tax and customs administration (still unfinished at time of writing). Reform of other police formations and the Security Service of Ukraine (Sluzhba Bezpeki Ukrainy, SBU) is less advanced. Reform of the General Prosecutor's Office has been tried a few times but never completed.

However, since 2014, Ukraine has managed to reform its armed forces, which so far have been able to resist Russian aggression.

Between 2014 and 2019, in response to the conditionality imposed by the IMF, European Commission and other donors, Ukraine created a system of anti-corruption institutions¹⁰. It includes the National Agency for Prevention of Corruption (NAPC), the National Anti-Corruption Bureau (NABU), the Special Anti-Corruption Prosecutor's Office (SAPO) and the High Anti-Corruption Court (HACC). The NAPC collects e-declarations of civil servants and checks that declared funds and assets correspond with the lifestyle of public officials and members of their families. NABU investigates top-level corruption cases and submits them (under the supervision of SAPO) to the HACC. HACC litigates the indictments filed by NABU. However, establishing these institutions has not diminished corruption in Ukraine or the international perception of it meaningfully (see section 2.2).

Worse, in 2019-2020, the Constitutional Court of Ukraine issued several rulings on the unconstitutionality of the NABU Law and the appointment of the NABU chief. These rulings paralysed the work of this institution for a certain period.

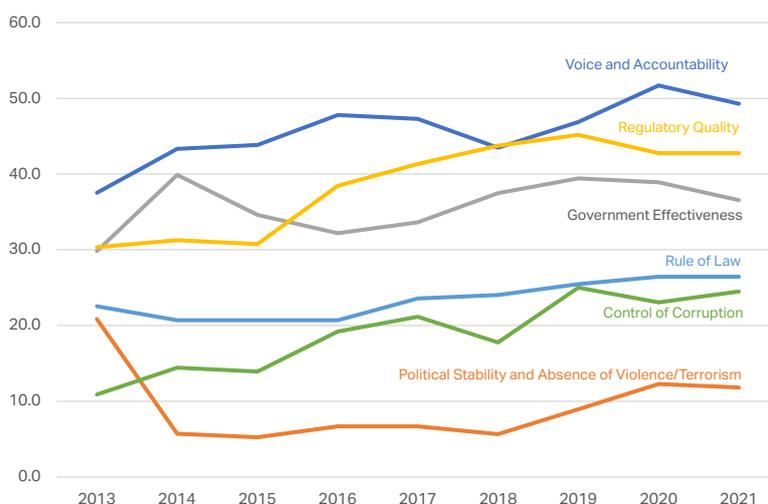
10 See Transparency International Ukraine, 'Anti-corruption infrastructure', <https://ti-ukraine.org/en/project/anti-corruption-infrastructure/>.

After years of political fighting, the parliament adopted a new election code in December 2019, which reintroduced the proportional system (which existed before 2012) based on partly open lists and multi-seat constituencies. The mixed electoral system that governed parliamentary elections in 2012, 2014 and 2019 weakened political parties, helped oligarchs and other interest groups to elect their representatives, and encouraged political corruption. However, there is still a long list of election-related issues requiring further legislative action, including rules on financing of election campaigns, use of the media, including social media in election campaigns, and strengthening the independence of the Central Election Commission (Opora, 2020).

The long-awaited decentralisation of the Ukrainian state has been implemented only partly. The draft constitutional changes intended to open the way for genuine local and regional self-government were blocked by parliament in 2015, primarily because of opposition to the special status of Eastern Donbas, which was part of the same legislative package. However, some essential decentralisation reforms have been conducted, including the voluntary amalgamation of the lowest territorial units, hromadas, into the United Territorial Communities (UTC), and some degree of fiscal decentralisation, mainly related to education and healthcare (Jarabik and Yesmukhanova, 2017; Hanushchak *et al*, 2017). This partial decentralisation has been considered successful and has strengthened the resilience of local communities during the Russian aggression (Boyarchuk and Dabrowski, 2023).

Figure 3 shows moderate progress in all World Bank World Governance Indicators (see section 2.2.2 for a cross-country comparison), except the 'Political Stability and Absence of Violence/Terrorism' indicator (due to the ongoing conflict in Donbas). However, 2020-2021 were marked by reform stagnation or partial reversal.

Figure 3: Ukraine: World Bank's World Governance Indicators (percentile rank), 2013-2021



Source: World Bank's World Governance Indicators.

2.2. Ukraine's performance compared to other actual and potential EU candidates

In this section, we compare Ukraine's economic and governance indicators in 2021 with seven other actual EU candidates (Albania, Bosnia and Herzegovina, Moldova, Montenegro, North Macedonia, Serbia and Türkiye), two potential candidates (Georgia and Kosovo) and five EU countries (Bulgaria, Greece, Hungary, Poland and Romania). The EU comparator countries were chosen to include countries that are geographically close to Ukraine, some of which have relatively low governance quality in the EU. We divide our analysis into two parts: level of economic development and governance indicators.

2.2.1. Level of economic development

Table 1 presents GDP *per capita* in 2019 (ie pre-pandemic and pre-war year) according to two measures: (1) in constant prices and purchasing power parity (PPP) in 2017 international dollars and (2) in current dollars.

According to the first measure, Ukraine has the third lowest GDP *per capita* (ahead of Kosovo and Moldova), far behind Türkiye and Montenegro and the EU member states included for comparison. However, the gaps between Ukraine and Albania, Georgia and Bosnia and Herzegovina were not significant. Ukraine's GDP *per capita* amounted to 28.8 percent of the EU average.

The picture was less favourable when one compared GDP *per capita* in current prices (and current exchange rates). Ukraine looked like the poorest country among all actual and potential EU candidates, and selected EU member states, although not much behind Moldova, Kosovo and Georgia. Ukraine's GDP *per capita* in current prices amounted to only 10.5 percent of the EU average.

Table 1: GDP *per capita* in EU actual and potential candidate countries, and selected EU countries, 2019

Country	Constant prices, PPP, 2017 international dollar	Percent of EU average	Current prices, \$	Percent of EU average
Actual & potential candidates				
Albania	13,863	30.9	5,345	15.2
Bosnia and Herzegovina	14,390	32.0	5,867	16.7
Georgia	14,976	33.3	4,694	13.3
Kosovo	11,361	25.3	4,433	12.6
Moldova	12,702	28.3	4,377	12.4
Montenegro	21,559	48.0	8,911	25.4
North Macedonia	16,712	37.2	6,073	17.3
Serbia	18,318	40.8	7,417	21.1
Türkiye	28,486	63.5	9,133	26.0
Ukraine	12,903	28.7	3,688	10.5
Selected EU member states				
Bulgaria	23,421	52.2	9,914	28.3
Greece	29,660	66.1	19,141	54.6
Hungary	33,044	73.6	16,779	47.8
Poland	33,259	74.1	15,695	44.8
Romania	30,103	67.1	12,928	36.9
EU average	44,850		35,031	

Source: IMF World Economic Outlook database, April 2023.

The ongoing war has deteriorated both figures for Ukraine dramatically.

2.2.2. Governance indicators

Table 2 compares Ukraine with other EU actual and potential candidates using six World Governance Indicators. They have been computed by the World Bank on a scale from 0 to 100, in which a higher figure means better performance. In 2021, before the war started, Ukraine performed relatively well in the 'Voice and Accountability' category, which may be interpreted as the proxy for democratisation. It ranked slightly behind Montenegro, North Macedonia and Albania, further behind the selected EU countries, but ahead of Moldova, Georgia, Kosovo, Serbia, Bosnia and Herzegovina and Türkiye.

Table 2: World Bank's World Governance Indicators (percentile rank) in EU actual and potential candidate countries, and selected EU countries, 2021

Country	Voice and Accountability	Political	Government effectiveness	Regulatory quality	Rule of law	Control of corruption
		Stability and Absence of Violence/Terrorism				
EU actual and potential candidates						
Albania	50.2	49.5	53.4	59.6	43.8	31.7
Bosnia and Herzegovina	36.2	33.5	13.5	46.2	42.8	28.8
Georgia	47.3	31.6	72.1	82.7	56.7	75.5
Kosovo	43.5	44.3	42.8	43.3	43.3	44.7
Moldova	48.3	41.0	37.0	52.4	41.8	35.6
Montenegro	53.1	42.5	53.8	66.8	52.9	54.3
North Macedonia	52.2	50.0	50.0	66.3	52.4	43.3
Serbia	41.1	43.4	55.8	53.4	51.0	36.1
Türkiye	23.7	12.3	49.5	49.0	36.5	40.4
Ukraine	49.3	11.8	36.5	42.8	26.4	24.5
Selected EU member states						
Bulgaria	56.5	58.0	45.7	66.7	52.4	48.1
Greece	77.8	50.9	67.1	66.2	60.5	59.5
Hungary	59.0	73.1	70.5	67.6	67.6	55.2
Poland	63.8	61.3	61.4	75.7	64.3	68.1
Romania	64.3	64.2	46.2	61.9	62.4	51.4

Source: World Bank's World Governance Indicators.

However, Ukraine's scores were less favourable in other categories, primarily 'Political Stability and Absence of Violence/Terrorism' (partly the result of the ongoing conflict in Donbas), 'Rule of law' and 'Control of corruption', in which Ukraine was the worst performer in the whole group of EU candidates and selected EU countries.

To deepen our comparative analysis of democratic institutions and governance, we also look at the Freedom House Nations in Transit survey (Smeltzer *et al*, 2023) assessing the situation in 2022. It uses a scale of 1 to 7, with 1 representing the lowest and 7 the highest level of democracy. All candidate countries record the middle Democracy Scores between 3 and 4 (Freedom House classifies them as 'Transitional or Hybrid Regimes'). With a score of 3.36, Ukraine is ranked ahead of Georgia, Moldova and Bosnia and Herzegovina, but behind other candidate countries (Greece and Türkiye are not included in this survey), and selected EU members (although the gap with Hungary is not large).

Looking at individual subcategories, Ukraine is rated high for its civil society and electoral process, less favourably for local democratic governance and independent media, and poorly in national democratic governance, judicial framework and independence, and corruption.

Table 3: Freedom House's Nations in Transit 2023 democracy scores (and their components) in EU actual and potential candidate countries, and selected EU countries

Country	NDG	EP	CS	IM	LDG	JFI	CO	DS
EU actual and potential candidates								
Albania	3.25	4.25	4.75	3.50	4.50	3.25	3.00	3.79
Bosnia and Herzegovina	1.75	4.50	4.25	3.25	3.25	2.75	2.75	3.21
Georgia	2.25	3.00	4.00	3.25	2.75	2.50	3.50	3.04
Kosovo	3.00	3.50	4.75	3.25	3.50	2.75	2.25	3.29
Moldova	2.75	4.00	4.75	3.00	2.50	2.75	2.25	3.14
Montenegro	3.25	4.25	5.25	3.25	4.25	3.25	3.00	3.79
North Macedonia	3.50	4.50	4.75	3.50	4.25	3.25	3.25	3.86
Serbia	3.25	4.25	5.25	3.00	4.00	3.50	3.25	3.79
Ukraine	2.50	4.50	5.25	3.25	3.50	2.25	2.25	3.36
Ukraine	49.3	11.8	36.5	42.8	26.4	24.5		
Selected EU member states								
Bulgaria	4.25	5.50	5.50	3.50	4.75	4.25	3.75	4.50
Hungary	3.00	4.00	4.00	3.00	4.25	4.00	2.75	3.57
Poland	3.50	5.75	5.50	4.25	5.50	3.25	4.00	4.54
Romania	4.25	4.75	5.50	3.50	4.25	4.25	4.00	4.36
Romania	64.3	64.2	46.2	61.9	62.4	51.4		

Source: Smeltzer *et al.* (2023). Notes: NDG – National Democratic Governance, EP – Electoral Process, CS – Civil Society, IM – Independent Media, LDG – Local Democratic Governance, JFI – Judicial Framework and Independence, CO – Corruption, DS – Democracy Score.

Overall, both surveys (World Bank and Freedom House) suggest the most critical areas of further reforms and EU accession negotiations: political governance and constitutional balance of power, judiciary, the rule of law, decentralisation and fighting corruption.

3. War scenarios

The war's outcome will influence Ukraine's reconstruction process and EU accession. We analyse three scenarios:

1. Active kinetic war,
2. Frozen conflict,
3. Sustained peace.

When preparing this report, the first scenario seems to be the most probable in the short term (1-2 years), which the second scenario may replace in the medium term (a ceasefire without sustained peace). The third scenario would require either a regime change in Russia or Ukraine's readiness to make a substantial territorial and geopolitical concession to Russia, both looking unlikely.

For several reasons, the ongoing war (scenario 1) makes a large-scale reconstruction process impossible.

- First, the most devastated regions (east, southeast and south of Ukraine) are either beyond the political control of Ukrainian authorities (Russia occupies them) or too close to the front lines.
- Second, a specific aspect of the war, Russian air attacks against civilian and commercial targets in the entire territory of Ukraine, brings into question the rationale of more ambitious reconstruction projects in non-frontier regions.
- Third, the security risk for non-Ukrainian private investors will likely be too high. However, the risk toler-

ance of specific groups of Ukrainian investors might be higher. For example, large-scale entrepreneurs could reallocate their businesses from the frontier regions to the western part of the country, and small and medium-sized enterprises might operate on well-known local markets. Moreover, international donors may offer various forms of war insurance to de-risk investments.

- Fourth, the official donors must concentrate their resources on military and humanitarian aid, macro-financial support to the Ukrainian budget and balance of payments, and emergency reconstruction of the most critical infrastructure.

Completing the EU accession process while the war is ongoing would be problematic.

- First, in the ongoing war and the martial law conditions, political rights and civil liberties must remain restricted, and some democratic procedures suspended¹¹. The same applies to freedom of information and media freedom. Fighting corruption may also become more complicated in the war conditions (think about the series of corruption scandals in the Ministry of Defence in 2023¹²). Ukraine is unlikely to fully adopt all the *acquis communautaire* related to democracy, rule of law, human rights, and respect for and protection of minorities (the first pillar of the Copenhagen criteria) before the war ends.
- Second, the same limitations apply to the second pillar of the Copenhagen criteria, ie a functioning market economy. Even if the Government of Ukraine does not overuse instruments of a command war economy (Boyarchuk and Dabrowski, 2023), a normal functioning of a market mechanism and a complete integration of the Ukrainian economy with the European single market in the war conditions seems problematic.
- Third, implementing several EU policies and regulations in such a situation can also meet obstacles. This concerns, for example, the protection of EU external borders.
- Fourth, the EU does not have experience accepting candidates remaining in a state of war. Furthermore, if the EU member state is "*...a victim of armed aggression on its territory*", Article 42.7 of the Treaty on European Union (TEU) obliges other member states to provide a victim of the aggression "*... aid and assistance by all the means in their power*". Even if this obligation "*... shall not prejudice the specific character of the security and defence policy of certain Member States*," it may be difficult to accept a new member that is in a serious and prolonged conflict.

However, the ongoing war does not create obstacles to starting EU accession negotiations with Ukraine (if it meets the conditions defined by the European Council and European Commission) and their progress in those chapters where possible. A frozen conflict (scenario 2) would remove most obstacles to reconstruction and EU membership mentioned above. In fact, one EU member state (Cyprus) remains in the state of a frozen (unresolved) conflict from almost 50 years ago. Moreover, the EU has experience of member states with borders that were contested by Russia: when Estonia joined in 2004, Russia had still not recognised its post-Soviet borders. Moreover, the Federal Republic of Germany was a founding member despite the post-war division of its territory, with Soviet troops present there. The rest of Germany joined the EU in 1990 without a formal accession process.

However, Russia's potential to unfreeze a frozen conflict, unless a fundamental regime change happens in Russia, will cause a much higher security risk for private investors, especially for non-residents, than what was observed in the period between 2014 and 2021.

11 According to the constitution of Ukraine, the parliamentary elections were to be held in October 2023 and presidential elections in spring 2024. However, martial law automatically suspended these dates.

12 Melinda Haring, 'Removal of defense minister shows wartime Ukraine is changing', *UkraineAlert*, 5 September 2023, Atlantic Council, <https://www.atlanticcouncil.org/blogs/ukrainealert/removal-of-defense-minister-shows-wartime-ukraine-is-changing/>.

4. Preparing Ukraine for accession

This chapter starts by summarising the current EU-Ukraine agreements regulating the legal aspects of co-operation and the degree of Ukraine's integration into the EU single market, which is the starting point for the accession process. It then reviews lessons from previous enlargements and analyses how to adapt the accession process for Ukraine, while not disadvantaging the Western Balkan countries. The last subsection evaluates the interaction between reconstruction and accession.

4.1 The EU-Ukraine Association Agreement and Deep and Comprehensive Free Trade Agreement

From an economic perspective, joining the EU essentially means becoming a member of the single market, which entails having no internal borders or regulatory obstacles to the free movement of goods, services, labour and capital. EU countries also benefit from common EU policies, some of which – in particular the Common Agricultural Policy and cohesion policy – have major implications for the EU budget.

As far as Ukraine is concerned, its economic relationship with the EU is already quite intense thanks to the Association Agreement (AA) signed in 2014. As part of the AA, a Deep and Comprehensive Free Trade Agreement (DCFTA) has been implemented since January 2016, while the rest of the AA entered into force in September 2017.

The purpose of this section is to assess the gap between the current EU-Ukraine economic relationship embodied in the AA/DCFTA and the additional access to the single market and EU budgetary support that Ukraine would obtain from joining the EU.

The section is divided into three parts. The first part focuses on the DCFTA, which covers three out of the four dimensions of the single market: trade in goods, trade in services and capital movements. The second part focuses on the fourth dimension of the single market, namely labour mobility, which is not covered by the DCFTA, except in relationship to trade in services. The third part concentrates on EU financial assistance and the EU budget.

4.1.1 The DCFTA

For trade in goods, the DCFTA has abolished tariffs on most EU imports from Ukraine, but tariff-rate quotas (TRQs) will likely remain in place on some agricultural goods that are important to Ukraine¹³, including certain meats and meat products, certain milks and milk products, and certain cereals and cereal products. The DCFTA also facilitates trade by making customs procedures more efficient and by the gradual approximation of Ukrainian legislation, rules and procedures, including standards, to those of the EU.

For trade in goods, therefore, the DCFTA provides a very high level of access for Ukrainian products to the EU market (and to EU goods to the Ukrainian market, though with some time lag), but even at the end of the process of gradual approximation to EU legislation, access provided by the DCFTA will fall short of access to the single market in three respects. TRQs on key agricultural products will remain in place; some divergences in rules and procedures between Ukraine and the EU will continue to prevail, hence there will be technical barriers to trade between them; and customs checks will need to remain in place to administer the TRQs and verify product conformity. More broadly, customs checks will remain in place since the DCFTA does not create a customs union between the EU and Ukraine.

In June 2022, due to the invasion of Ukraine by Russia, the EU adopted Regulation 2022/870, which temporarily suspended all outstanding tariffs (including the TRQs) on EU imports from Ukraine until June 2024. Following a surge of imports of certain cereals and the imposition of (illegal) measures by five EU

13 The DCFTA contains a list of 40 products subject to TRQs for EU imports from Ukraine. It also provides, however, for the possibility to remove some products from the list and/or enlarge the TRQs if the two parties agree to do so. See Taran (2020) for a discussion from a Ukrainian perspective.

member states with borders with Ukraine (Bulgaria, Hungary, Poland, Romania and Slovakia), the EU reintroduced import limitations on these products in May 2023, initially for one month. This was later extended until 15 September 2023, which was when the European Commission decided not to prolong these restrictions. However, Hungary and Poland decided to continue them unilaterally. Initially Slovakia did too, before abandoning them a few days later. Other EU member states and the European Commission regard these measures as both unnecessary and in contradiction to EU law. At the time of writing, the conflict remains unresolved.

For trade in services, the DCFTA provides relatively little additional liberalisation compared to the liberalisation undertaken by the EU and Ukraine in their respective World Trade Organisation (WTO) General Agreement on Trade in Services (GATS) schedules. These DCFTA commitments fall far short of the kind of liberalisation that prevails in the single market, which implies that the access provided by the DCFTA to Ukrainian services to the EU market (and to EU services to the Ukrainian market) will remain far inferior to what membership to the EU single market would imply.

Finally, the DCFTA provides for the liberalisation of capital movements between the EU and Ukraine, which comes close (but does not equal) the situation that prevails within the EU single market. Progress before the war was limited in this area, partly because Ukraine implemented far reaching restrictions on capital movements and regulatory barriers to foreign investors. Since the full-scale invasion, Ukraine has further tightened these restrictions.

4.1.2 Labour mobility

The DCFTA does not cover the subject of labour mobility, except for temporary movements of key personnel and other specific categories of highly skilled persons engaged in liberalised services activities.

The mobility of all other workers is covered in a part of the AA, which is outside the DCFTA. This part of the AA simply says that access to employment in the EU for Ukrainian workers is a matter to be decided by individual EU countries under bilateral agreements with Ukraine. In other words, the AA does not foresee the free movement of Ukrainian workers to and in the EU and leaves the matter of labour mobility entirely in the hands of EU countries (apart from the caveat mentioned above)¹⁴. The free movement of Ukrainian workers to and within the EU would normally only occur after Ukraine's accession to the EU. In previous EU enlargements, full labour market access only occurred after a transition period. Given the current, unprecedented access of Ukrainian refugees to the labour market, such transitory periods may or may not be feasible and desirable following Ukraine's accession.

In March 2022, shortly after the start of the Russian invasion of Ukraine, the EU activated – for the first time since it was introduced in 2001, in the aftermath of the Yugoslav Wars – the temporary protection directive in favour of Ukrainian refugees (mostly women and children). This made it mandatory for all EU countries to grant Ukrainian refugees not only temporary residence permits, housing, medical assistance and education for children, but also temporary access to national labour markets.

As of March 2023, 4 million Ukrainians had benefitted from this status¹⁵. However, only a minority of the adult (women) refugees had taken on a job, either because they had to look after their children, their knowledge of the host country's language was limited, or their qualifications were not recognised (Eurofound and the European Union Agency for Fundamental Rights, 2023).

4.1.3 EU financial assistance and the EU budget

According to a European Commission press release, between 2014 and 2021, the EU and European financial institutions mobilised over €17 billion in grants and loans for Ukraine (European Commission, 2022)

14 At the end of 2021, 1.57 million Ukrainians lived in the EU (Guild and Groenendijk, 2023). Migration from Ukraine was largely temporary and circular in nature (Disney and Szyszczak, 2022), and concentrated in eastern EU countries, which granted work permits to Ukrainian workers to make their own migration flows to western EU countries (Libanova, 2019).

15 See <https://www.consilium.europa.eu/en/infographics/ukraine-refugees-eu/>.

– most of which were loans in the framework of macro-financial assistance¹⁶. Had Ukraine been a member of the EU, it would have received €124 billion in grants from the 2021-2027 EU budget and would have contributed to it by €14 billion (see section 5.7)¹⁷.

In conclusion, compared to the current situation in which Ukraine has an Association Agreement with the EU, joining the EU would have three important implications for the EU-Ukraine economic relationship. It would liberalise trade in goods, mainly in agricultural products; it would increase labour movements; and it would significantly increase financial assistance from the EU budget to Ukraine, as a result of the country joining the Common Agricultural Policy and cohesion policy.

The main economic issues related to Ukraine's EU membership can therefore be summarised in three words, typical of previous EU enlargements: agriculture, labour and budget. What is also typical of previous enlargements is that these costs to the current EU countries would be manageable (Ukraine has roughly the same population as Poland) and would produce important economic benefits to Ukraine in terms of economic convergence (see section 5.5), provided some basic requirements, like good quality governance, are in place by the time the country joins the EU.

4.2 Lessons from previous enlargements

One of the great promises of the EU accession process is its potential to have a transformative effect on prospective members by promoting reforms that not only prepare the country for EU accession, but also improve its democratic governance, economic prosperity and rule of law (Grabbe, 2006). The history of enlargement gives a mixed picture of successes and failures in achieving this potential, both before and after accession (Grabbe and Sedelmeier, 2010).

In central Europe, a virtuous circle developed between domestic reforms, progress towards accession and foreign direct investment. This circle did not develop in most Balkan countries (apart from Croatia) because the commitment to accession was too ambivalent and the process moved too slowly on the EU side, while in the case of the Balkan countries, their commitment to reforms and administrative capacity were too weak to respond. Further impediments were the complications of the post-conflict status issues, which themselves deterred FDI.

It is therefore important to look closely into the conditions under which the accession process promotes reform, and how to adapt these conditions to the case of Ukraine to maximise the potential for transformation. That may require a different sequencing of parts of the accession process for Ukraine than for the Western Balkans and Moldova, even though a consistent enlargement methodology should be applied to all candidates.

For all countries, the fundamental conditions for success in using accession conditionality to promote domestic reforms are that the process is credible, the conditions are coherent and they are applied consistently (Grabbe, 2006). On credibility, Ukraine is currently more highly motivated than in the past owing to the war and to the solid promise of eventual accession made when the EU granted candidate status in 2022. However, candidate status is no guarantee of a quick accession, clearly demonstrated by the experience of Türkiye and the Western Balkans. Governments usually lose motivation when the EU gives mixed signals about whether the ultimate goal of the reforms is full membership. Motivation is highest, by contrast, when accession looks realistic within the next decade. That does not necessarily mean that setting

16 See https://economy-finance.ec.europa.eu/eu-financial-assistance/macro-financial-assistance-mfa_en.

17 In this paragraph we focused on peacetime support to Ukraine. Since the war began, the EU (including its member states) provided substantial humanitarian, financial, and military assistance to Ukraine. In June 2023, the European Commission proposed the Ukraine Facility, an instrument to provide financial support of €50 billion in grants and loans over the 2024 – 2027 period for both the short-term recovery, and medium-term reconstruction and modernisation needs of Ukraine. The Ukraine Facility comprises three pillars: 1) financial support in the form of grants and loans; 2) a Ukraine Investment Framework with the purpose of attracting public and private investments; 3) technical assistance and supporting measures. Pillar 1) requires Ukraine to develop a "Ukraine Plan" in collaboration with the Commission for the financing to be disbursed, which will detail Ukraine's vision for the country's recovery, reconstruction and modernisation.

a target-date for accession is a good idea, if the EU or the country cannot maintain that timeframe. But it does mean that it is better to sequence the reforms so that the hardest ones happen when accession looks possible within the mandate of the current government, which is the peak moment of motivation to take the risks, do the hard work, and reap the reward before the next election.

On coherence, domestic reformers are empowered to go further when they can argue that the reforms required for EU accession are also good for the country itself. This was very evident in central Europe, when political leaders were able to argue that difficult economic and anti-corruption measures were beneficial for prosperity and the functioning of the state, not only because the EU demanded them. Then the accession process is not only about technical compliance by the country's elite with the EU's legal order, but an effort that also benefits the people of the country. That is fundamental to maintaining public support for the reforms, for example, of institutions that guarantee the rule of law, after accession. For Ukraine, there will be many domestic reforms that will be needed even during Russia's aggression, such as reducing corruption and reforming state institutions. It is essential that political leaders explain the benefits of these measures for Ukrainians, and not just say that they need to happen because the EU is asking for them.

On consistency, the EU must apply the accession criteria and access to the next stages of the process objectively, without favouritism or arbitrary changes that are not related to meeting the set conditions for accession. The accession process involves many veto-points at different stages that existing EU countries can use to block a candidate. If those are used to gain leverage in a bilateral dispute or to punish a country that has voted out a leader favoured by that EU country's government, the whole accession process loses its power to move reforms forward because it is evident that other factors are determining progress towards accession. The negative effects of this type of inconsistency have already been experienced in the Western Balkans, and that could also happen to Ukraine.

The history of enlargement shows that an effective way to promote reform is to set interim incentives, especially when the reward is one that is politically important to a government or to citizens. For example, police reforms that required cooperation between the three entities in Bosnia and Herzegovina were so politically contentious that they were achieved only when set as a condition for visa liberalisation (Grabbe *et al*, 2010). The other lesson from this example is the motivating power of benefits that citizens can perceive directly in their daily lives, the most important being freedom to travel to EU countries and to work there¹⁸.

Attempts to enforce conditionality after accession have had mixed outcomes. The first one was the Cooperation and Verification Mechanism (CVM) that the EU created for the 2007 accessions of Bulgaria and Romania, whereby the progress of these countries on a range of rule-of-law and governance issues was monitored by the Secretariat-General of the Commission, whose reports were then discussed by the Council.

Empirical research suggests that EU monitoring can have a positive impact on state compliance even without material sanctions: despite low expectations by EU institutions, compliance in Romania was significantly better than in Bulgaria after accession in 2007 (Lacatus and Sedelmeier, 2020). Romania's better compliance record was primarily the result of successful domestic institution-building, particularly strong anti-corruption institutions. Bulgaria's fight against corruption lacked this powerful institutional base and was less effective. However, the CVM had both direct and indirect effects on institution-building. By providing Romanian citizens with an objective and credible assessment of anti-corruption measures and how far the government tried to interfere with them, the EU's monitoring created a social constraint in the country itself on attempts by the government to curb the power of institutions, and as a focal point for societal mobilisation against such interference (Lacatus and Sedelmeier, 2020). Given how vulnerable rule-of-law institutions are to governmental interference, this is an important lesson for future accessions: that con-

18 Ukrainians currently have the right to travel and work anywhere in the EU because of the war. This right is subject to an annual renewal of the Temporary Protection Directive by the EU, so labour market access could still become part of the accession conditionality in future.

sistent attention is needed to ensure the continued independence of state institutions, particularly those concerned with the rule of law, even many years after accession.

Another related problem is that a country meets the rule of law and governance *acquis* on the date of accession, but later backslides, like Hungary and Poland. In section 5.2.2, we return to this issue and make suggestions for how to try to prevent such a situation.

4.3 The current accession process following the Revised Enlargement Methodology

The Commission defined the stages in the accession process more clearly under its Revised Enlargement Methodology (REM), entitled 'Enhancing the accession process - A credible EU perspective for the Western Balkans' (European Commission, 2020), which was endorsed by the General Affairs Council in March 2020. Its aim was to set out "concrete proposals for strengthening the accession process, by making it more predictable, more credible, more dynamic and subject to stronger political steering" (European Commission, 2020).

The new methodology was intended to make the process more predictable for the candidates (Dabrowski, 2020), and thereby increase their motivation to meet the conditions set. The addition of more EU-Balkans dialogue, discussions and meetings was intended to create a stronger political steer.

An important change was the introduction of negative conditionality as well as positive, to ensure a merit-based process. For the first time, candidates could also move backwards in the process, and the Commission introduced a decision-making model for initiating corrective measures, which can relate to issues not in the *acquis*. However, the use of this reversibility in conditionality has been weak so far (see below).

The negotiating chapters¹⁹ are now organised in six thematic clusters, to focus on the most important and urgent reforms per sector. Candidates have to meet opening benchmarks for opening each cluster of chapters. The cluster as a whole is opened for negotiation rather than individual chapters. The 33 chapters of the *acquis* were grouped into six clusters, meaning that up to nine chapters can be opened at once. There are opening benchmarks per cluster, and meeting interim benchmarks for Chapters 23 (Judiciary and Fundamental Rights) and 24 (Justice, Freedom, and Security) is a precondition for any advancement in all other clusters.

Negotiations on fundamentals²⁰ are now opened first and closed last, to ensure the focus of governments on rule of law, functioning of democratic institutions and economic reform programmes. A new provision is that "A roadmap for the rule of law chapters equivalent to the previous action plans will constitute the opening benchmark. Interim benchmarks will continue to be set. No other chapter will be provisionally closed before these benchmarks are met." This change was an important step intended to address problems with one-party control of state institutions, and to push for improvements in the independence as well as the functioning of the judiciary.

These changes were accommodated within the existing negotiating framework, which maintains veto power for member states at every stage of the negotiation, as well as at the end. That was important to the member states as a means of ensuring national control. However, the use of these vetoes had the effect of slowing down the process considerably, and at times vetoes had been clearly motivated by political preferences of one of the EU country governments against one of the political parties in power in a candidate country, or by bilateral issues not related to the EU accession. This political use of the veto lessens the credibility of the whole process and the conditionality, reducing the motivation governments have to make reforms.

Overall, the changes to the Revised Enlargement Methodology were substantial. The new approach

19 The EU organises accession negotiations into 35 'chapters' that cover all the different parts of its policies and legal *acquis communautaire*, as well as the broader requirements of membership. The Commission conducts the negotiations on behalf of the whole EU, but the Council must agree unanimously to the formal opening and closing of each chapter, as well as other parts of the negotiations, giving each EU member many veto points in the process.

20 Fundamentals are defined as chapters 23 (judiciary and fundamental rights), 24 (justice, freedom and security), 5 (public procurement), 18 (statistics) and 32 (financial control), as well as economic criteria, functioning of democratic institutions and public administration reform.

to political commitment helped to address the mismatch between words and action on both sides, largely because public statements are clearer and they are more often followed by non-political administrative work and reforms working towards accession (Nechev *et al*, 2021). As shown by the experience of previous enlargements, this dynamic is what delivers the best results, with technical work on reforms driven by a predictable process that has clear political commitment on both sides.

However, the REM failed in accelerating reform in the Western Balkan countries. Some countries have even advanced further in the other direction, with one party concentrating its power over state institutions (European Commission, 2023).

4.4 How to adapt the accession process for Ukraine

There are good reasons for the EU to modify the methodology further for Ukraine to become more effective in pushing forward with reforms, and to ensure that they are maintained after accession and when governments change. In particular, the current circumstances of war and the history of poor governance in Ukraine (as discussed in chapter 2) warrant a particular focus on implementation of reforms and maintenance of sufficient administrative capacity to enforce EU norms.

If the war were to end decisively and Russia withdrew its troops, Ukraine would have the opportunity to follow the central European pattern rather than the Balkan one.

The EU could take the following measures to enhance the accession methodology to address these potential problems in Ukraine's accession process.

Reversibility: An important innovation under the REM was the introduction of reversibility of these benefits, whereby they can be withdrawn if a candidate country stops meeting certain conditions. This is an important way of stopping backsliding by future governments, both before and after accession. However, the Commission's track-record in using this reversibility principle has so far been weak in the Western Balkans, reducing its credibility (Mihajlović *et al*, 2023). That needs to be remedied in future, with objective criteria applied consistently to all the enlargement countries.

Specificity: To achieve greater objectivity and make the conditions more credible, the EU could set more specific conditions, with more detailed guidance on what is required to meet them. Vagueness and generality in conditions opens more room for interpretation and hence potential political interference. This is especially important on the vital areas of rule of law. The EU still lacks fundamental definitions and measures for concepts such as independence of the judiciary and due process, not having an *acquis* or secondary law in this area. For this reason, it is difficult to encourage reforms under Chapters 23 and 24 of the accession negotiations. For Ukraine, it will be vital for the EU to set out more detailed guidance on issues such as the removal of martial law after the war and the restoration of full independence to state institutions that should not remain under executive control in peacetime. EU pre-accession assistance and conditionality will also need to focus on increasing Ukraine's limited implementation capacity so that the *acquis* can be applied in practice.

Sectoral integration: To incentivise reforms in Ukraine, there are opportunities to go beyond the association agreement and DCFTA to facilitate progressive integration in ways that encourage particular reforms, even in advance of starting negotiations (Wolczuk *et al*, 2023).

Already there are detailed proposals to increase the incentives for reform in a more predictable accession process in the Western Balkans which could also apply to Ukraine. Mihajlović *et al* (2023) recently set out a template for staged accession that goes beyond their initial proposals of 2021, based on more reforms being rewarded with more benefits, and more active use of reversibility if there is stagnation and backsliding on reform. Their proposal envisages four distinct stages of integration, with pre-accession stages that involve gradual institutional participation and increased funding, as well as advanced sectoral integration and post-accession conditionality.

These proposals merit serious consideration also for Ukraine's accession process. Phased integration into EU policies would show Ukrainians the benefits of taking on EU standards and norms during the period of greatest motivation and mobilisation of resources. This would be especially important to encourage the Ukrainian side to address the most sensitive and difficult issues, such as rule of law, reducing the need for

post-accession conditionality. In addition, progressive integration would take Ukraine's relationship with the EU beyond the AA and DCFTA, which would help to increase trade and investment links with the EU, further increasing economic ties beyond the formal negotiations.

However, to achieve these benefits, sectoral integration would have to allow Ukraine to move forward into more economic and social integration as part of a process leading to eventual accession. The Ukrainian side would become disillusioned and reluctant to engage in this kind of phased process if it became a form of gatekeeping that introduced further hurdles before accession, or even afterwards if it meant that some parts of EU membership remained out of reach²¹. The EU side would need to set out clearly how the formal accession negotiations would be articulated with the sectoral integration in order to make it work as a motivating and integrating dynamic.

Post-accession compliance: New ideas are now emerging about conditions in the accession treaties, which have the force of primary law, that would yield new methods of ensuring post-accession compliance that are far more binding than the Cooperation and Verification Mechanisms. The Franco-German working group that reported to the General Affairs Council on 18 September 2023 proposed further changes (Costa *et al*, 2023). An important step forward would be to set benchmarks with indicators of rule of law and separation of powers that have legal force by their inclusion in the accession treaty. If these are not met, it would trigger a Council decision on suspension of voting rights. This could be a powerful enforcement mechanism. Moreover, access to EU budget funds could be made conditional on adherence to these standards, extending the conditionality already set on the RRF to the main EU budget. This option is further detailed in section 5.2.2.

Target dates and positive competition: The group of 12 French and German experts (Costa *et al*, 2023) echoed the proposal of European Council President Charles Michel of a target-date of 2030 for the next enlargement, but framed the goal as being the EU's own readiness for enlargement, with that year as the first possible date for the candidates to be able to accede if they are ready.

The benefits of setting a target year are that:

- A date creates political momentum for the process of getting ready on both sides, providing motivation for preparatory work in the administration as well as at political level.
- The target starts a positive competition between the candidate countries because governments want to avoid falling behind their peers and failing to join on the same date. It therefore creates more political accountability because voters can see clearly whether their government is falling behind others. This incentive was important in speeding up the reforms and preparations in central Europe in the years before the 2004 enlargement and could provide the motivation to Balkan governments that has hitherto been lacking.
- The EU is not obliged to enlarge in the target year, but the time-horizon justifies reforms within the Union that are required in any case to prepare for enlargement.

The disadvantages are that:

- Some candidate countries may focus their efforts on diplomatic lobbying of member states rather than difficult reforms, arguing that they cannot be left behind on that date for historical reasons or because of special relationships.
- If candidates meet the conditions and successfully conclude negotiations by the target date but the EU is not ready to admit them, for example because of an impasse on its own institutional reform or the EU budget, this would cause huge disillusionment and potentially negative political repercussions for pro-EU governments in the candidate countries.

21 For example, Bulgaria and Romania are still excluded from the Schengen area of passport-free travel 16 years after accession because of the objections of a small number of other members.

4.5 How to avoid disadvantaging the Western Balkan countries

So long as Ukraine is engaged in a merit-based accession process that requires the country to meet all the conditions for membership, the country's progress towards accession should not disadvantage the Western Balkans. On the contrary, the geopolitical push for Ukraine's integration has already energised the accession process in new ways. It has forced political leaders in the Western Balkans to consider how they can keep up with Ukraine. Once Ukraine starts accession negotiations, there is an opportunity for the Western Balkans to enter a positive competition for faster progress that would make the process more transparent to the public, which could help citizens to hold political leaders to account for unmet conditions owing to lack of reforms. That could help overcome the current frustration over lack of progress in the Western Balkans region.

The key now is to maintain a credible accession process with consistent use of conditionality that rewards progress in reforms and alignment with EU standards with interim incentives, and confronts backsliding with reverses of direction.

4.6 Interaction between reconstruction and accession

As already discussed in section 2.2, the quality of governance in candidate countries, one of the conditions for EU accession, poses a major problem to Ukraine, in particular with respect to corruption. In 2023, and in preceding years, Ukraine ranked last but one in the EBRD's well-governed indicator among the ten current candidate countries, and even worse than Russia and Belarus²².

It is difficult to assess how governance has evolved in Ukraine since February 2022, though the EBRD well-governed indicator worsened somewhat for Ukraine from 2021 and 2022, and various surveys show a significant drop in public approval of the police activities since the start of the war, a dramatic increase in disapproval of the activities of the Ukrainian parliament, and a worsening of corruption perceptions (section 5.2.2)²³. What is more appropriate is to reflect on how governance will evolve after the end of the hostilities, and how reconstruction might contribute to raising the quality of governance in Ukraine.

There are several scenarios for the evolution of governance in Ukraine after the war. At one end of the spectrum is a pessimistic scenario, whereby Ukraine remains entangled in the poor governance that prevailed prior to the war for deep structural reasons that have affected the country for several decades. At the opposite end is an optimistic scenario, in which the war brings about societal changes resulting in the breaking down of the negative structural factors that have long prevailed. In this scenario, the post-war situation ushers a new era with a quality of governance that allows Ukraine and the EU to envisage EU accession in the foreseeable future.

The issue we discuss here is the interaction between reconstruction and accession, in particular whether and how reconstruction can help domestic forces in Ukraine move away from the bad governance that has long prevailed in the country and towards a new situation with better governance, and ultimately EU accession.

The starting point of the analysis is the observation that reconstruction should not entail only the physical reconstruction of Ukraine, but also the building of a new social-political compact, with better govern-

22 See Table 5.1. ATQ scores for six key qualities of a sustainable market economy of EBRD (2022). ATQ stands for assessment of transition qualities. This well-governed indicator is a composite indicator of 30 other indices related to the quality of public governance, integrity and control of corruption, rule of law, and corporate governance frameworks and practices. We included Moldova and Georgia as well among the ten candidate countries.

23 Martial law has meant the suspension of institutional checks and balances (for example, media freedom) and centralisation of power in the hands of the president and his administration (see subsections 2.1.2 and 5.2.2). There were also incidences of corruption in the Ministry of Defence, which led to personal changes at the top of this institution. See *Reuters*, 'Ukraine presses on with defence ministry overhaul, names three deputy ministers', 5 October 2023, <https://www.reuters.com/world/europe/ukraine-presses-with-defence-ministry-overhaul-names-three-deputy-ministers-2023-10-05/>.

ance, as occurred in Western Europe after the Second World War with the help of the Marshall Plan²⁴.

The cost of reconstruction is likely to be very high for Ukraine. A joint assessment released by the European Union, the Government of Ukraine, the United Nations and the World Bank in March 2023 put the cost of reconstruction and recovery at €383 billion, 2.6 times the country's estimated 2022 GDP and 2.3 times the EU's 2022 budget (World Bank *et al*, 2023). The cost is high simply because the war damage is very substantial, but it would be a pity if the money for reconstruction and recovery was used simply to rebuild the country to its pre-war condition. Together with the World Bank and other international agencies that will participate in the reconstruction of Ukraine, the Government of Ukraine and the European Commission must ensure that the money is also used to transform the governance of institutions in Ukraine.

Inspired by the experience of the Marshall Plan, Mylovanov and Roland (2022) proposed the creation of a Ukraine Reconstruction and European Integration Agency²⁵, with the task of coordinating the rebuilding of Ukraine and helping it to reform its institutions to be aligned with the EU regulatory and legal framework in preparation for entry into the EU. The Agency should be led by the EU, located in Kyiv and work in close cooperation with the Government of Ukraine²⁶.

Setting up such agency should be a priority for the Commission, but luckily it would not start from scratch. The European Commission already has a Directorate-General for Structural Reform Support (DG REFORM), which according to its website "*coordinates and provides tailor-made technical support to EU Member States, in cooperation with the relevant Commission services. The support is primarily provided through the Technical Support Instrument (TSI). The goal is to support Member States' efforts to design and implement resilience-enhancing reforms, thereby contributing to the EU's recovery from the COVID-19 crisis, improving the quality of public services and getting back on the path of sustainable and inclusive growth.*" Currently the TSI can only be used to support reforms in the EU countries. This should be changed in the next Multiannual Financial Framework (MFF) to cover Ukraine and other candidate countries.

24 Gorodnichenko *et al* (2022) also emphasise that the reconstruction of Ukraine should be a transformation rather than rebuilding the country to its pre-war situation.

25 A similar solution was proposed by Boyarchuk (2023).

26 The idea that the EU should lead the international process of economic reform and recovery in Ukraine is widely accepted, including in the United States. See, for instance, Shatz *et al* (2023).

5. Long-term effects of Ukraine's accession on the EU

This chapter analyses selected aspects of the impact of Ukraine's accession to the EU, based on the assumption that Ukraine undergoes a major reconstruction effort. We analyse the implications for EU governance, internal security and the rule of law, the security orientation of the EU, trade, internal market and GDP, migration and employment, energy security and decarbonisation, and the EU budget.

5.1 EU governance

The EU operated with 28 members before the exit of the United Kingdom, and the institutional framework should be able to absorb one or a few additional members.

The ongoing debate on EU institutional reform²⁷, for example, reducing the list of decisions that require unanimous voting by member states, has merit on its own and should be continued. However, it should not be tied to the EU enlargement process, which can be handled successfully within the existing institutional setting. Otherwise, it could prevent the accession of new member states for several years or even decades.

The most crucial issue for the functioning of the EU is the unanimity requirement for many decisions. The EU has a good track record in reaching consensus on critical questions, but national vetoes sometimes block common decisions. The risk that Ukraine, or other new members, rely frequently on their veto power would be reduced with the inclusion of the post-accession compliance tool in the accession treaties, as we proposed in section 4.4 (suspension of voting rights and EU funds in case of non-compliance with EU fundamental values).

However, there are certain specific institutional questions which must be solved in the Accession Treaty or decision-making process according to the existing Treaties (similar to earlier enlargements). We list four such issues.

5.1.1 Number of seats in the European Parliament

According to Article 14.2 of the TEU, the European Parliament can have a maximum of 750 members (plus President), with degressively proportional representation of each member state. The detailed allocation of seats between member states is decided unanimously by the European Council on the initiative of the European Parliament and with its consent.

In the 2019-2024 legislative term, the European Parliament has 705 members. In the 2024-2029 legislative term, it will have 720 members²⁸. That is, there are 31 potential seats for new member states. This would be insufficient for Ukraine, because Ukraine's population was 34.8 million at the end of 2022 (down from 41.0 million at the end of 2021), which could be translated into approximately 40 seats. There are two possible solutions in such a situation: i) reallocating seats between member states, as it happened when Croatia joined the EU; ii) changes in the upper limit of seats determined by Article 14.2 of the TEU via the Accession Treaty.

5.1.2 Composition and the voting pattern in the Council

The representative of Ukraine will participate in the work of the Council, like representatives of other member states. The qualified majority voting (QMV) rules determined by Article 16.4 of the TEU will not require changes. According to this article, Ukraine's voting power in the Council will be proportional to its share of the total EU population (including Ukraine). At the end of 2022, it would amount to 7 percent of the total.

5.1.3 Composition of the European Commission

27 See, for example, the Franco-German Working Group report (Costa *et al*, 2023).

28 See European Parliament, 'EU elections: how many MEPs will each EU country get in 2024?' <https://www.europarl.europa.eu/news/en/headlines/eu-affairs/20180126STO94114/eu-elections-how-many-meps-will-each-eu-country-get-in-2024>.

Ukraine, like other member states, would delegate a commissioner. The increase in the number of commissioners due to Ukraine's and other candidates' accession should be manageable given the experience of the current and previous Commissions, in which two- or even three-tier levels of management/policy coordination were adopted, with some commissioners performing more senior roles (Commission Executive Vice-President or Vice-President) and other being 'ordinary' commissioners. The attempt to reduce the number of commissioners in the Lisbon Treaty (Article 17.5 of the TEU) has never materialised because of the negative outcome of the ratification referendum in Ireland. To enable the successful outcome of the second Irish referendum, the European Council in 2008 agreed that the Commission shall continue to include one national of each member country (based on the provision of the Article 17.5 of the TEU)²⁹.

5.1.4 Other EU governing bodies

The functioning of other EU governing bodies and institutions, for example, the Court of Justice of the European Union, are sufficiently regulated by the current treaties and do not require changes because of the accession of new member states. In most cases, Ukraine will have the right to delegate/propose its representative/candidate.

5.2 Internal security and the rule of law

The war will leave enormous security problems that will take years of determined efforts at many levels of society to overcome. These problems will be on the EU's doorstep, regardless of whether Ukraine is a member of the Union or not, and it is impossible to keep them completely outside when people, weapons and corruption networks will be crossing borders between open societies.

The question is whether these security challenges can be more effectively handled through the EU accession process than through a third-country relationship or through what the neighbourhood policy has tried before³⁰. The accession process gives the EU much more leverage over the Ukraine authorities to tackle problems such as arms trafficking, corruption, and challenges with regard to border control, and it will make more money and technical assistance resources available to boost Ukrainian efforts. If that is not sufficient, the EU may decide to allow the country to join but not admit it to the Schengen area, as happened with Bulgaria and Romania, so that border controls remain in place and create post-accession conditionality. However, the rule of law is the most important area where improvement during the accession process is essential to ensure the good governance of the enlarged EU, particularly to ensure consistent application of EU law by independent judiciaries and effective law enforcement.

5.2.1 Small arms and light weapons trafficking

The war has necessitated mobilisation of much of the Ukrainian population and put a large number of weapons into the hands of citizens as well as the military. Major efforts will be needed to take the small arms and light weapons (SALW) in the country back into safe custody, and to prevent them being used for criminal activity or sold onto international markets in the surrounding region. Expert studies on the illegal arms trade find that currently there is no substantial outflow of weapons from the military operations in Ukraine, although data is poor (Galeotti and Arutunyan, 2023). The illegal arms trade in Europe remains dominated by supplies from ex-Yugoslavia, despite the growing internal market for SALW in Ukraine since 2014³¹ (Prentice and Zverev, 2016).

However, the greatest risk of weapons proliferation will come when the fighting stops; for example, the wars in the Balkans in the 1990s led to some 6 million small arms still in circulation in the region (German

29 See Brussels European Council, 11-12 December 2008 Presidency conclusions, <https://data.consilium.europa.eu/doc/document/ST-17271-2008-INIT/en/pdf>.

30 See Lehne (2014) for an assessment of the ineffectiveness of the European Neighbourhood Policy in motivating reforms.

31 Alessandra Prentice and Anton Zverev, 'Ukraine, after war, becomes a trove for black market arms trade', *Reuters*, 25 July 2016, <https://www.reuters.com/article/us-ukraine-crisis-arms-insight-idUSKCN1050ZE>.

Federal Foreign Office, 2020). Proliferation increases dramatically when military-owned stockpiles fall into the hands of traffickers on the darknet (Wisotzki, 2021). That is the major challenge on which the EU will need to provide support during the eventual process of demobilisation, to ensure that the Ukrainian authorities maintain control of weapons stockpiles and to provide an effective amnesty and buy-back programmes for arms.

Experience from the Western Balkans, where the control of weapons proliferation is generally seen to have been a failure (Galeotti and Arutunyan, 2023), suggests that only a comprehensive approach can work that tackles the root causes of supply and demand. Not only physical security and stockpile management are important, but also border cooperation and enhancing law enforcement (Wisotzki, 2021). Already while Russia's aggression is still ongoing, Ukraine could start addressing fundamentals: the country lacks a legal statute to regulate the possession, sale or manufacture of firearms, and it needs to improve accounting and inventory, and to tackle corruption (Galeotti and Arutunyan, 2023).

5.2.2 Rule of law and corruption

The rule of law will be the central plank of Ukraine's accession preparations for two reasons that have both grown in importance in recent years: one is the long-standing problems of poor governance and corruption in Ukraine itself, but the other is the EU's difficulty in addressing the erosion of the rule of law in some of its current member states. As discussed in section 4.3, the Revised Enlargement Methodology made the rule of law chapters into fundamentals on which progress in all other chapters depends.

After Ukraine applied for membership in 2022, the EU further intensified its focus on the rule of law by setting seven benchmarks for opening negotiations, which go beyond the Revised Enlargement Methodology fundamentals. Two of the seven benchmarks are about the selection and vetting of judges, two about corruption and money-laundering, one on the anti-oligarch law, one on media freedom, and the last on national minorities. On 8 November 2023, the Commission recommended that Ukraine and Moldova should start accession negotiations, but that the Council should adopt a negotiating framework only once further reforms to improve the rule of law and good governance are completed. This offer of starting negotiations is hugely motivating for Kyiv and Chisinau to tackle these difficult issues with a vigour that previous governments lacked.

According to the assessments of independent Ukrainian NGOs, the main deficits remain in reform of the constitutional court, to improve vetting of judges and ensure independence from political influence, and law enforcement (New Europe Center, 2023). Previous attempts at reform of the judiciary before the war, notably the efforts started in 2016, stalled on competitive selection of judges and may even have reversed by the end of 2020 (Emerson and Movchan, 2021).

A comprehensive assessment of corruption in Ukraine and attempts to tackle it since 2014 by Rudolph *et al* (2023) concluded that the country has made great progress but is "at best ... midway through its campaign to root out oligarchy" and "corruption remains deeply entrenched throughout the governing system". Although anti-corruption systems are operating during the war, largely thanks to decentralisation, martial law suspended vital public transparency measures and instruments put in place since 2014, such as asset e-declarations, financial reporting requirements and competitive procurement bidding disclosure. The president's role in breaking corrupt state-private networks is central, as the concentration of power in the president's office gives him unique powers to change ministers and wings of government that have not yet undergone reform (Rudolph *et al*, 2023).

The stakes are high for Ukraine's government to raise standards significantly in terms of rule of law and to tackle corruption – both to address widespread public concern and to ensure that further enlargement does not deepen the EU's problems in this area. A poll conducted in July 2023 found that Ukrainian citizens consider corruption to be pervasive across the country (94 percent of those polled), with the most serious type being grand political corruption (81 percent) (USAID, 2023). An IRI poll in September 2023 found a significant drop in public approval of the activities of the police since the start of the war, and a dramatic increase in disapproval of the activities of the Rada (Ukrainian parliament) from 21 percent in April 2022 to 67 percent

in September 2023 (International Republican Institute, 2023). Other local polls suggest that many Ukrainians think corruption has worsened since the start of the war. Ukraine is in a dual fight: the war against Russia and an internal battle about its own governance (Jarábik, 2023).

The EU cannot afford to compromise on the quality and resilience of the rule of law in further enlargement. In addition to its role in ensuring the democratic accountability of governments at national level, rule of law is fundamental to the functioning of the single market and the EU's community of law (Grabbe and Lehne, 2019). The problem is that, although the rule of law is a well-established and well-defined constitutional principle of EU law (Pech, 2022), the EU long lacked an effective system to address the undermining of rule of law at national level by ruling parties that seek to capture state institutions, particularly the judiciary. The EU has very limited institutional means to contest violations of rule of law, especially on values (McCrea, 2022).

To rectify this deficit, the EU has developed a 'rule of law toolbox' to contain backsliding, including an annual cycle of reports, Commission assessments and recommendations to EU countries on their justice systems, anti-corruption frameworks, media pluralism and media freedom, and other institutional issues related to checks and balances (European Commission, 2023a). These constitute a comprehensive set of instruments, but their effectiveness depends on how far political leaders in other EU countries use the reports and recommendations to challenge the governments that are shown to undermine the rule of law (Bard *et al*, 2022). The Commission's capacity to use infringement actions is limited, and the slow speed of legal action through the Court of Justice of the European Union puts little pressure on offending governments to restore the independence of state institutions. More effective has been the conditionality imposed for protection of the Union budget passed at the end of 2020. Through three different channels – the Conditionality Regulation, Recovery and Resilience Facility, and MFF – the EU has withheld some € 28.7 billion from Hungary and €110 billion from Poland, mainly because of failure to meet milestones on judicial independence (for both countries) and corruption (Hungary) (Scheppele and Morijn, 2023).

However, the political difficulties in using the toolbox and financial conditionality with current members will make the EU understandably very reluctant to admit further countries where future governments might undermine the rule of law. The EU has several options to enhance its capabilities to ensure effective rule of law after further enlargement. The first and least controversial is to start applying the rule of law toolbox in advance of accession, whereby Ukraine would join the annual reporting cycle to establish clear and enduring standards across the public administration that are capable of lasting after accession. If it proves to be possible to reform the EU's treaties over the medium term, changes could include reform of Article 7 TEU, extending rule of law conditionality to all EU funds and the MFF, and the creation of a joint chamber of the higher courts and tribunals of the EU, as well as the creation in the short term of a new Office for Transparency and Probity, as recommended by the Franco-German Working Group (Costa *et al*, 2023). However, treaty change may prove to be impossible to agree among the current 27 members – either in the European Council or in national ratification processes, as happened when the constitutional treaty was rejected in referendums in 2005.

Another route to achieve institutional reforms for protection of the rule of law would be to include them in the accession treaty that the EU signs with Ukraine. Accession treaties are intergovernmental agreements that have the force of primary law in the EU³², so they can be used to institutionalise important changes. This would be a faster and less politically complicated method than re-opening the TEU if the EU wants to create powerful sanctions, particularly the suspension of an EU country's voting rights in the Council, or of its funds from the EU budget and other financing mechanisms. Moreover, the power to suspend the rights of the new members could also apply to existing members through the accession treaty.

However, all accession treaties must be agreed unanimously by all the current EU countries and ratified by national parliaments and the European Parliament. That means the agreement will be needed of parties that might be contesting the use of the rule of law conditionality mechanism at the time accession negotiations are concluded. The political viability of this method will therefore depend on which parties are in power in EU

32 See <https://eur-lex.europa.eu/summary/EN/legisum:l14530>.

countries when the EU concludes accession negotiations with Ukraine, and whether all member states' governments and parliaments can agree unanimously at that point in time to such sanctions.

5.3 Security strategy of the EU

Since the invasion of Ukraine in 2022, EU countries have defined their strategies towards Russia much more clearly, with implications for the EU's role in security and defence. Some countries, such as France, would like more strategic autonomy for the EU in areas such as joint procurement and planning, while others want to rely more on NATO. However, the EU countries that are most hawkish about Russia want both. The war has resulted in greater concern in most EU countries about improving resilience to security threats to European countries themselves – not only territorial defence but also disinformation, cyber-attacks on civilian infrastructure and other hybrid threats.

The most significant differences between views in the EU capitals are on how far to go in cutting off the remaining dependencies on Russia, particularly energy (gas, oil and the supplies of fuel and equipment for the nuclear industry) and how to reduce Russian influence within European societies and institutions. During Ukraine's accession process, these issues will grow in significance as major decisions will concern how far and how fast the EU should integrate Ukraine into its foreign and security policies and information channels. If Russia remains hostile to Ukraine's EU ambitions, it will cause a hardening of the positions of EU countries on how to handle Ukraine's integration into these areas, as well as its eventual accession.

The interaction between NATO's evolution and the development of the EU's security and defence capabilities and policies will matter too. Already NATO membership has changed Sweden's and Finland's approaches to security and defence. For example, Sweden has announced its intention to increase its defence budget by nearly one-third³³. If Ukraine joins NATO prior to joining the EU, which was the sequencing in previous accessions, then the locus of political debates about hard defence against future Russian aggression are likely to move to the North Atlantic Council, although the EU will remain concerned with hybrid threats, disinformation, hidden channels of influence and defence procurement cooperation.

Ukraine's EU accession would significantly increase the EU's military and security capabilities. On accession, Ukraine will have one of the largest armies in the EU, with fresh experience of resisting external aggression, fighting terrorism, cyberattacks, disinformation campaigns and other forms of modern warfare. It will also have a large defence industry. Before the war, Ukraine already participated in several international military interventions, including Iraq, Afghanistan and United Nations peacekeeping missions.

For the period after accession, the overall security strategy of the EU will be largely determined by the conduct of the war and the terms under which it ends. The circumstances will be very different depending on how secure Ukraine's borders and sovereignty are, and what kind of regime is in power in Russia. Attitudes towards Russia in both Ukraine and existing EU countries will also be influenced by whether Russian war crimes and aftermath of Russia's aggression can be appropriately managed through some kind of process of justice and reconciliation.

Ukraine's accession would reinforce the group of EU countries that are very sensitive to the recent past of war crimes and concerned about future Russian aggression. If Ukraine remains under military threat, for example with Russian troops remaining on its territory, then it is bound to be the most hawkish member-state on Russia. However, if Russia's aggression is decisively ended, thanks to a settlement under which a new Russian regime agrees to desist from future aggression and recognises Ukraine's sovereignty and territorial integrity, then Ukraine and the other EU countries that have borders with Russia would be less preoccupied with defensive security – and more likely to seek ties that encourage democratic and pro-European forces in Russian politics.

Even in these best of circumstances, the enlarged EU will have to manage a considerably longer external border with Russia and Belarus. Before Russia annexed parts of Ukraine in 2014, the Ukrainian-Russian

33 See Government Offices of Sweden, 'Military budget initiatives for 2024', 22 September 2023, <https://www.government.se/articles/2023/09/military-budget-initiatives-for-2024/>.

border was 1974 km, while the border with Belarus is 1084 km long. Ukraine also has a long sea border with the Black Sea of 1300 km. The EU will have to reinforce its capabilities to help Ukraine to manage what will become these external borders of the Union, for example by expanding the mandate of its FRONTEX border agency.

The period of accession preparations will offer multiple opportunities for the EU to work with the Ukrainian authorities on implementing the integrated border management strategy, as it is already doing through the EU Advisory Mission (EUAM) in several Ukrainian regions as well as Kyiv³⁴. Already during the conflict, Ukraine has established joint border management with Moldova on the countries' mutual border.

5.4 Migration and employment

About 15 percent of the Ukrainian population fled the country after the full-scale of invasion started in February 2022, and three-quarters of them are registered for temporary protection in the EU. Most are women and children. Their integration into the EU labour market is partial and dependent on what host governments can offer in terms of qualification recognition, childcare and education. Men of fighting age are not allowed to leave the country, and many of them have been killed or injured³⁵. Quite a few Ukrainian families may put down roots and not return, with men joining their families living abroad after the war, but others will go home. Ukraine is itself experiencing labour shortages at present. These are all parameters to take into account that did not apply in previous accessions.

In the longer-term, under free mobility with the EU, further migration is expected from Ukraine to the EU. This section analyses the immigration of Ukrainian citizens to the EU during two timeframes:

- Short- and medium-term: whether current refugees stay or return to Ukraine after the war ends, and for those staying, whether their partners currently in Ukraine join them.
- Long-term: expected immigration into the EU once free movement of labour applies to Ukrainian workers.

We also look at EU demographic projections, which foresee a large decline in the working-age population in the years to come, and compare this decline with scenarios for immigration from Ukraine.

5.4.1 Ukrainian refugees in the EU and prospects for their return

Among the 6.3 million Ukrainian refugees worldwide, 4.1 million benefitted from temporary protection in the EU as of September 2023 (Table 4)³⁶. Most of them are women and children, though 29 percent of working age refugees are men (last row of Table 4).

34 See the interview with Rolf Holmboe, the new head of the European Union Advisory Mission (EUAM) Ukraine, 'Rolf Holmboe: "Ukraine Holds the Key to Accelerating Integration with the EU – Establishing the Rule of Law in All Spheres"', 30 October 2023, <https://www.euam-ukraine.eu/news/opinion/rolf-holmboe-ukraine-holds-the-key-to-accelerating-integration-with-the-eu-establishing-the-rule-of-law-in-all-spheres/>.

35 In August 2023, the New York Times reported that Ukraine does not disclose its wartime losses even to the American government, yet some estimates suggested that about 70,000 Ukrainian soldiers had died in the conflict by that time. Helene Kuiper, Thomas Gibbons-Neff, Erik Schmitt and Julian E. Barnes, 'Troop Deaths and Injuries in Ukraine War Near 500,000, U.S. Officials Say', New York Times, 18 August 2023, <https://www.nytimes.com/2023/08/18/us/politics/ukraine-russia-war-casualties.html>.

36 At the time of writing, mid-November 2023, UNHCR reported 6.3 million Ukrainian refugees worldwide (<https://data2.unhcr.org/en/situations/ukraine>). The Eurostat reported in Table 4 refers to end-September 2023.

Table 4: Age and gender composition of Ukrainian beneficiaries of temporary protection in the EU, September 2023

		Number of people				Percent of total			
		Females	Males	Unknown	Total	Females	Males	Unknown	Total
EU25	0-13	517,040	533,005	710	1,050,755	12.9%	13.3%	0.0%	26.2%
EU25	14-17	148,055	169,765	180	318,000	3.7%	4.2%	0.0%	7.9%
EU25	18-34	670,425	309,585	600	980,610	16.7%	7.7%	0.0%	24.4%
EU25	35-64	1,034,040	395,100	855	1,429,995	25.7%	9.8%	0.0%	35.6%
EU25	65+	171,930	64,530	240	236,700	4.3%	1.6%	0.0%	5.9%
EU25	Total	2,541,490	1,471,985	2,585	4,016,060	63.3%	36.7%	0.1%	100.0%
EU27	Total	2,607,095	1,501,350	2,660	4,111,105	63.4%	36.5%	0.1%	100.0%
EU25	18-64	1,704,465	704,685	1,455	2,410,605	70.7%	29.2%	0.1%	100.0%

Source: Bruegel calculations using Eurostat's 'Beneficiaries of temporary protection at the end of the month by citizenship, age and sex – monthly data [migr_asytpsm__custom_8710942]' dataset. Note: EU25 refers to EU27 except France and Hungary. France does not report data on children, while Hungary reports only total data, but not according to age groups.

There is relatively little literature on the return migration of refugees compared to other motivations for migration (Al Husein and Wagner, 2023). Generally, the voluntary return of refugees from a rich country to a poor one is rare (Dadush, 2018). But there are many determinants of a refugee's decision to return and historical patterns of return migration diverge. Harild *et al* (2015) identified security and livelihood (ie access to education, property, adequate services etc) as crucial factors. Time spent and commensurate social networks and integration in the host country have been identified as important determinants, as well as the legal right to work in the host country³⁷.

Looking at previous refugee crises, there is large variation in the rates of return migration. For example, there was a high rate of return of Yugoslavian refugees from Germany – 700,000 citizens fled to Germany in the early 1990s, 350,000 of whom had left Germany by 2000 after the end of a temporary visa measure (Rapoport *et al*, 2019). There have also been episodes of high levels of return migration after decades as refugees in other countries, such as in Angola where up to 80 percent of refugees had returned within five years of the end of an almost 30 year conflict (Harild *et al*, 2015), whereas some Sri Lankan refugees preferred to stay in India after a long conflict that ended in 2009 (George *et al*, 2015). Syria has seen a very low rate of return migration. According to UNHCR's latest return intention survey, 56 percent of Syrians wish to return one day, but only 1.1 percent planned this for the next 12 months³⁸. Even though many parts of the country have not seen conflict since 2018, the political situation means that it is not viable for many to return.

It is thus difficult to predict whether Ukrainian refugees might return. It depends on their integration into the EU, the political situation, the state of conflict in Ukraine and how long the war lasts, among other factors. One aspect of return migration that the EU can pre-empt is the demographic challenge – women face higher barriers to return migration, because of greater fears of potential insecurity following return, fewer opportunities to participate in peace and reconstruction processes, and greater difficulties in securing livelihoods (Harild *et al*, 2015). Given that 71 percent of working-age Ukrainian refugees are women (Table 4), these barriers may reduce the prevalence of a future return migration.

Based in part on evidence that few refugees return voluntarily to poor countries once they settle in rich countries, even once security is re-established at home, Dadush and Weil (2022) expected that large numbers of Ukrainian refugees would be likely to remain in European host countries, and will likely be joined by

37 Sandra Joireman, 'Ukrainian refugees might not return home, even long after the war eventually ends', *The Conversation*, 5 April 2022, <http://theconversation.com/ukrainian-refugees-might-not-return-home-even-long-after-the-war-eventually-ends-180294>.

38 See UNHCR, 'Syria situation', <https://reporting.unhcr.org/operational/situations/syria-situation#:~:text=Refugee%20returns%20to%20Syria%20continue,in%20the%20next%2012%20months>.

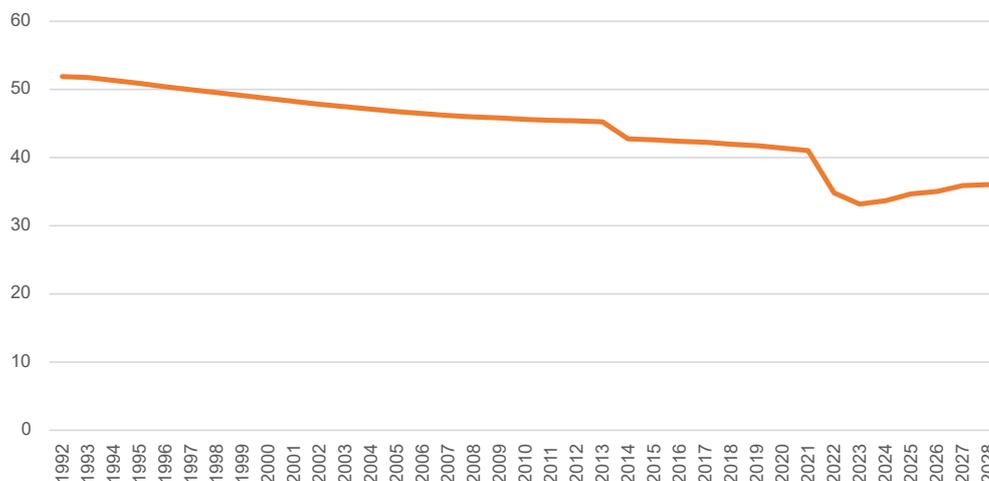
others when Russia's aggression is over, including many men who remained to fight.

Whether refugees stay in the EU after the at-most three-year long period of temporary protection expires in March 2025 depends not only on their intentions, but also on whether EU countries allow refugees to stay and grant work permits to partners from Ukraine. We see a likelihood that EU countries will allow this, an opinion shared by many people we interviewed.

We are not aware of numerical forecasts of Ukrainian refugee returns, though one can infer implicit assumptions from recent population projections, like the IMF's October 2023 World Economic Outlook projections.

The IMF expects a decline in the Ukrainian population by 7.8 million from 41.0 million in 2021 to 33.2 million in 2023 (Figure 4). Given that in the absence of the war, the population would have declined by about half a million people over these two years (the average decline in 2014-2021 multiplied by two). This implies about 7 million refugees are leaving because of the war, which is slightly higher than the 6.3 million estimates of UNHCR. Looking ahead, the IMF expects a gradual increase in the Ukrainian population to 36.1 million by 2028. The 2.9 million projected increase in 2023-2028 implies that a large share of current Ukrainian refugees will return to Ukraine. Moreover, by assuming that in the absence of refugee returns, Ukraine's population would decline at the same percentage rate in 2023-2028 as it actually declined from 2014 to 2021, the IMF projection implies that 3.8 million refugees will return to Ukraine by 2028, which is a 61 percent return rate. Tverdostup (2023) assumed an even higher, 80 percent, return rate. These seem to be optimistic assumptions, even in a positive scenario in which the war ends soon and a high degree of security returns, in light of the literature reviewed above, which argues that the return rate (after the initial cause of emigration was resolved) was typically low in earlier episodes of sudden refugee outflows. This time, a new wave of emigration from Ukraine might also occur in parallel with the return of some refugees to Ukraine, if husbands join their wives and children who emigrated to the EU and elsewhere during the war.

Figure 4: IMF projections for Ukraine's population, millions, 1992-2028



Source: IMF World Economic Outlook database, October 2023.

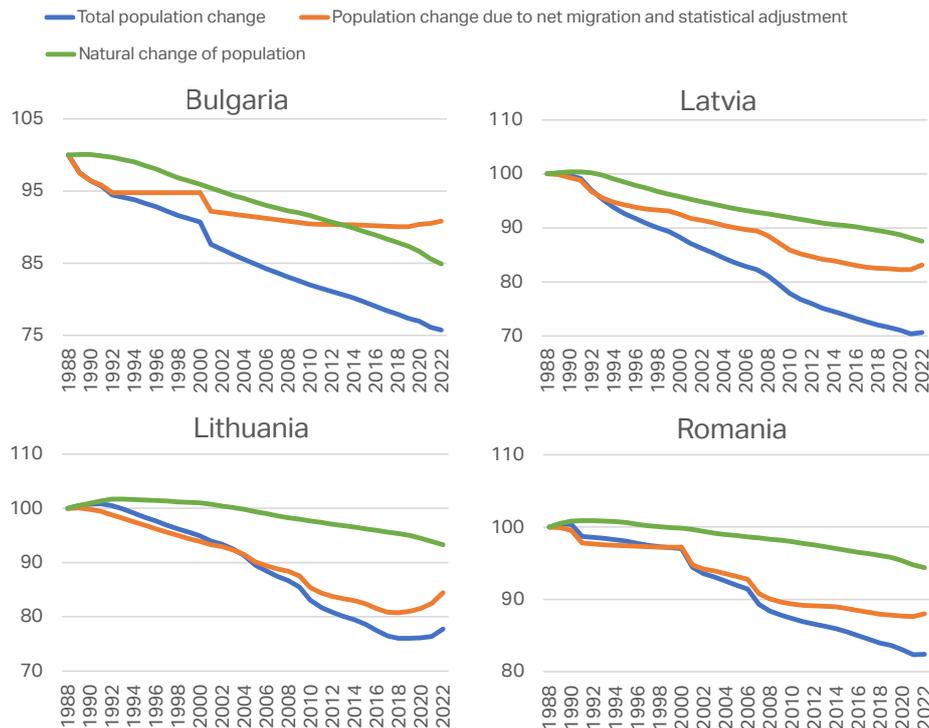
We therefore do not rely on IMF and any other projection for Ukrainian population, but set up two illustrative scenarios:

- The high-return scenario: 40 percent of refugees will return to Ukraine by 2028.
- The low-return scenario: 20 percent of refugees will return to Ukraine by 2028.

5.4.2 Possible long-term migration from Ukraine to the EU

Some central and eastern European countries that joined the EU experienced major reductions in population (Figure 5), offering lessons for possible scenarios for emigration from Ukraine into the EU³⁹. Beyond natural decline (more deaths than live births), net migration also played an important role. Unfortunately, the relevant Eurostat dataset presents net migration and statistical adjustments in one category, yet presumably, net migration is the dominant factor⁴⁰. In Latvia and Lithuania, net emigration reduced the population by about 20 percent from 1988-2021, while in Bulgaria and Romania it was by about 10-12 percent. Net immigration in 2022 has resulted from the inflow of Ukrainian refugees.

Figure 5: Population decline in four EU countries, 1998-2022, 1988=100



Source: Bruegel calculation based on Eurostat's 'Population change - Demographic balance and crude rates at national level [demo_gind_custom_8630016]' dataset. Note: Eurostat publishes population stock data for 1 January each year, while population change data refers to the period of 1 January – 31 December each year. We shifted the 1 January population stock data to 31 December of the previous year and report accordingly, so that this year-end stock number reflects the changes that occurred from 1 January – 31 December of the same year.

As Figure 6 indicates, these four countries had significantly higher levels of GDP *per capita* when mass emigration occurred than Ukraine now, relative to eight advanced western and northern EU countries (EU8)⁴¹. The low GDP *per capita* of Ukraine also reflects low wages for workers. Thus, there will be an even

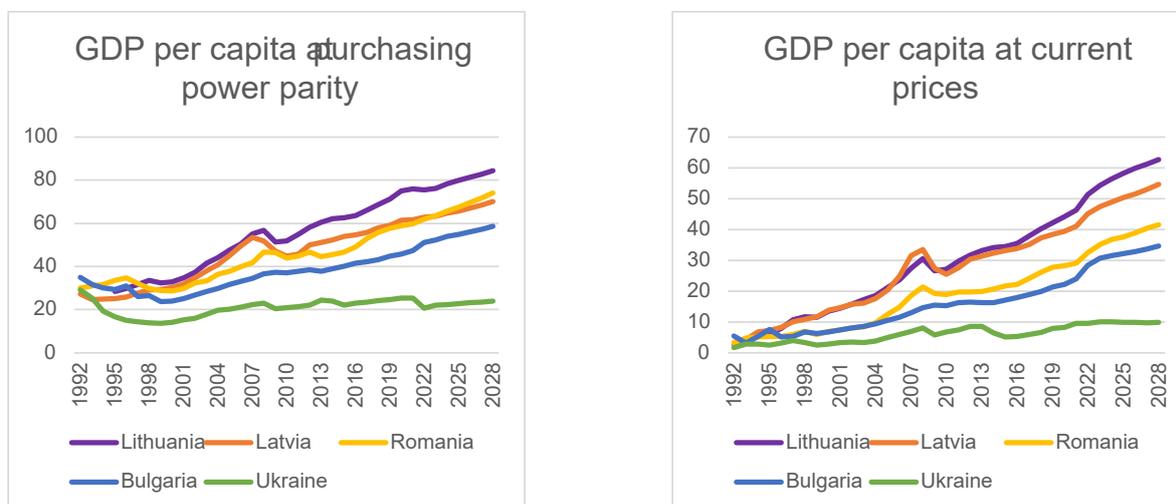
39 We are thankful to Rainer Münz for the discussions that inspired some of the analysis in this section and the next section.

40 Figure 5 suggests some data issues, like zero net emigration from Bulgaria in 1992-2000 and a sudden big emigration in 2001. A similar downward level shift is noticeable for Romania in 2001, after minor net emigration in 1991-2000.

41 We compare economic performance relative to eight advanced EU countries (Austria, Belgium, Denmark, Finland, France, Germany, Netherlands, and Sweden) and not to the EU average, for three reasons. First, the most developed countries of the EU constitute a palpable group to which convergence should be measured. Second, the EU average includes the converging central and eastern European countries themselves, while a good comparator group should not include the countries that are analysed. Third, the EU average also includes the southern EU, a region falling behind, and convergence to a falling-behind group is not a great success. Luxembourg and Ireland could be included in the group of advanced EU countries, but we do not include them because of their unique structure relating to the large role of foreign multinationals and profit shifting.

greater financial incentive for Ukrainians to move to higher-income EU countries once free labour mobility applies to Ukraine, than there were for workers in the four central and eastern European countries during the period of massive emigration.

Figure 6: GDP per capita measured in purchasing power parity and in current prices, EU8 = 100, 1992-2028



Source: Bruegel based on IMF World Economic Outlook dataset, October 2023. Note: 2023-2028 values are IMF forecasts. EU8 includes Austria, Belgium, Denmark, Finland, France, Germany, Netherlands, and Sweden. We do not include Luxembourg and Ireland due to their unique economic structures.

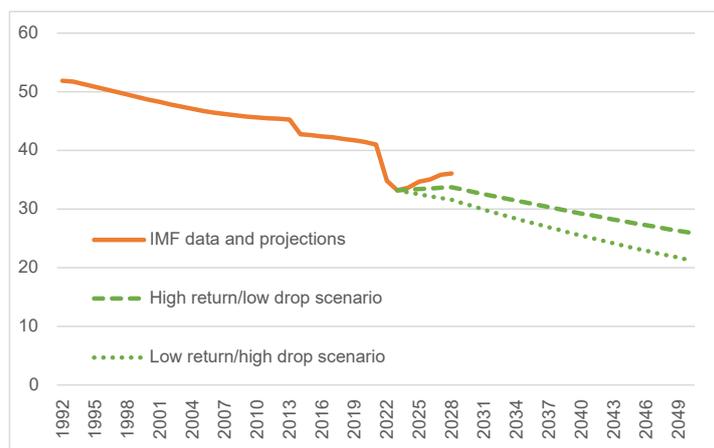
Based on these experiences, a 20-30 percent reduction in population due to emigration is not inconceivable for Ukraine. The main question, however, is the base year to which this reduction could be compared. Compared to 1992, Ukraine's population had already declined by 21 percent by 2021 from 51.9 million to 41 million. Due to war-induced refugee outflows and continued natural decline, Ukraine's population declined further to 33.2 million by 2023, equivalent to 19 percent of the 2021 population. As we argued in the previous section, it is unlikely that a large share of refugees will return after the war. Considering these major population declines and limited expected return of refugees, in our scenarios we assume that from 2023, apart from return migration discussed in the previous section:

- The low-drop scenario: the resident population will decline by twice the percent rate of decline on average from 2014-2021, ie by 1.18 percent per year.
- The high-drop scenario: the resident population will decline by three times the percent rate of decline on average from 2014-2021, ie by 1.77 percent per year.

The results of our two scenarios, as well as the IMF's projection, are displayed in Figure 7. These imply a halving Ukraine's population from 1992 to 2050 under the high return/low drop scenario, and an almost 60 percent reduction in the low return/high drop scenario⁴².

42 Tverdostup (2023) projected the Ukrainian population at around 35 million in 2035. The main difference between her and our results is that she assumes 80 percent of refugees will return after the war, while we assume either 40 percent (high-return scenario) or 20 percent (low-return scenario).

Figure 7: Population scenarios for Ukraine, million people, 1992-2050



Source: Bruegel based on IMF World Economic Outlook dataset, October 2023, United Nation's World Population Prospects 2022, and own assumptions for the scenarios.

To separate the impact of natural change and emigration, we use the United Nations's medium fertility variant projection⁴³ for the percentage rate of natural change for 2023-2050, and apply this percentage rate to the population under our scenarios. Under the high return/low drop scenario, net immigration into Ukraine in 2024-2028 would amount to 1.8 million (largely due to partial return of refugees), while net emigration from Ukraine would amount to 2.7 million people in 2029-2050. Under the low return/high drop scenario, there would be even a net emigration of 0.4 million people during the refugee return period of 2024-2028 (more people leaving than the returning refugees), while net emigration in 2029-2050 would amount to 5.8 million.

5.4.3 EU demographic outlook and projected immigration

How does our hypothetical additional 3 million to 6 million additional Ukrainians moving abroad up to 2050 compare with the EU demographic outlook?

One must consider that not all emigration from Ukraine would come to the EU, though with increased EU integration, most likely a very large share of Ukrainian emigrants would come to the EU.

According to EUROPOP2023⁴⁴, the latest Eurostat population projections, the EU27 population would shrink significantly in the absence of immigration, from 451 million in 2022 to 406 million in 2050 (Table 6). The number of elderly people is set to increase by 32 million over this period, while the number of working-age people (defined here as the 20-64 years old age cohort) is set to decline by 57 million and the number of children (under 20) by 21 million. Such population changes would increase the old-age dependency ratio significantly and pose a major threat to the sustainability of European welfare systems.

43 See <https://population.un.org/wpp/Download/Standard/MostUsed/>.

44 See https://ec.europa.eu/eurostat/cache/metadata/en/proj_23n_esms.htm.

Table 5: No immigration scenario of EUROPOP2023 for EU27 population, 2022-2050, million people

	Population in 2022	Change from 2022 to 2030	Change from 2030 to 2040	Change from 2040 to 2050	Population in 2050
0-19	91.5	-7.7	-8.6	-4.3	70.9
20-64	264.0	-14.6	-20.6	-21.6	207.3
65+	95.9	13.0	13.5	5.7	128.1
Total	451.4	-9.4	-15.6	-20.2	406.2

Source: Bruegel using Eurostat's 'Population on 1st January by age, sex and type of projection [proj_23np__custom_8622694]' dataset. Note: Eurostat publishes population stock data for 1 January each year. We shifted the 1 January population stock data to 31 December of the previous year and report accordingly.

EUROPOP2023 also includes baseline assumptions (and two alternative scenarios) for net immigration (Table 6). According to baseline assumptions, 41 million people are expected to migrate into the EU (that is, in net terms, 41 million more immigrants to the EU than emigrants leaving the EU). Thus, the additional 3 million to 6 million Ukrainian immigrants included in our scenarios account for a small share of total expected immigration into the EU and would just make EU's chronic labour shortages slightly less pressing.

Table 6: Baseline net immigration assumption of EUROPOP2023 for the EU27, 2023-2050, million people

	2023-2030	2031-2040	2041-2050	Total 2023-2050
0-19	3.1	4.5	3.4	11.1
20-64	7.3	9.4	11.1	27.9
65+	0.0	0.6	1.5	2.1
Total	10.5	14.5	16.0	41.0

Source: Bruegel using Eurostat's 'Population on 1st January by age, sex and type of projection [proj_23np__custom_8622694]' dataset.

5.5 Trade, FDI, internal market, GDP

Eastern enlargements in 2004, 2007 and 2013 integrated countries at a relatively low level of development into the EU. In this section, we first analyse the economic convergence record of these countries in comparison with Ukraine and then summarise the literature on the growth effect of EU enlargements – both on existing and new members. The literature concludes that the main channels for such effects are foreign direct investment, trade and migration, and thus, we analyse these factors and set up two scenarios for the possible impact on foreign trade of Ukraine's accession to the EU.

5.5.1 Central and eastern Europe's convergence over the past three decades

Central European countries have successfully reduced the gap with advanced western and northern European countries, after the economic contraction following the collapse of the socialist economic system (Figure 8).

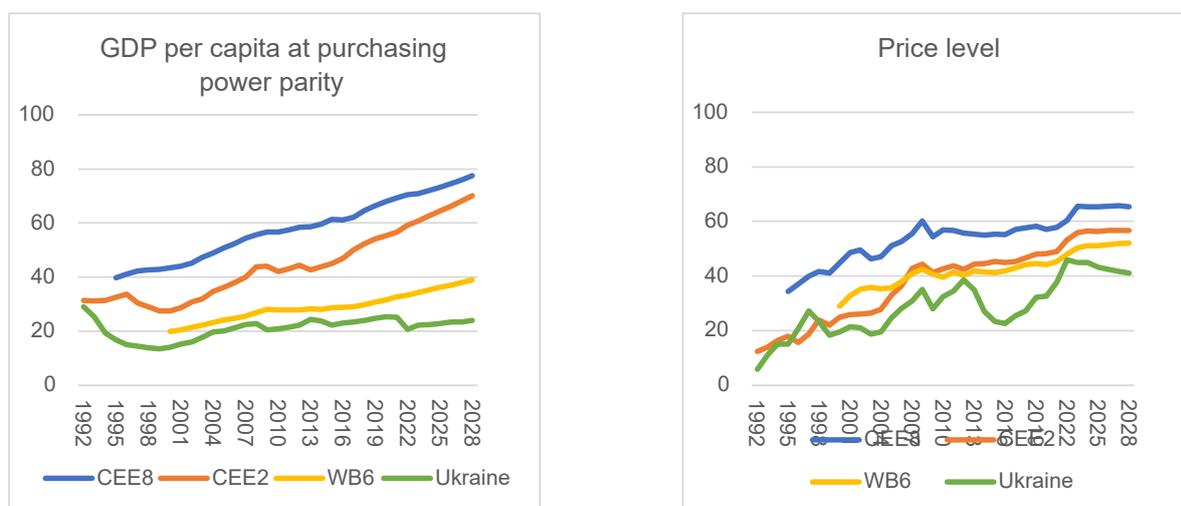
The eight central European countries that joined the EU in 2004 (CEE8) were particularly successful in this regard. Despite some unsustainable developments prior to the global financial crisis of 2008, such as credit and housing booms and large current account deficits, the convergence of these countries continued, and on average, they reached 70 percent of the GDP *per capita* at purchasing power parity (PPP) of eight advanced western and northern EU countries (EU8) in 2022. According to IMF projections, their convergence is set to continue, and they are projected to reach 77 percent of EU8 by 2028. The price level of CEE8 also reduced the gap to EU8, though less so than the per-capita income.

Bulgaria and Romania (CEE2), two countries with lengthier post-socialist recessions and later entry into the EU (2007), also demonstrated remarkable convergence from early 2000. However, their convergence stalled for half a decade after the global financial crisis, but since then, their pace of convergence has outstripped CEE8.

The six western Balkan countries (WB6) have been less successful so far. Starting from lower GDP *per capita* levels in 2000, 20 percent of EU8, they reached 33 percent in 2022. While academic research found that EU membership of CEE8 and CEE2 fostered their convergence (see section 5.5.2), one cannot exclude the hypothesis that the lack of any foreseeable target EU entry date has not helped WB6.

Ukraine had a lengthy post-socialist recession, followed by some catching up from 1999-2008. Since then, only limited additional catching-up was achieved by 2021 (from 23 percent of EU8 in 2008 to 25 percent in 2021). Russia's full-scale invasion in 2022 resulted in a major economic contraction. According to IMF forecasts, Ukraine will not reach its pre-war level compared to EU8 by 2028.

Figure 8: Economic convergence to advanced EU countries, EU8 = 100, 1992-2028



Source: Bruegel based on IMF World Economic Outlook dataset, October 2023. Note: 2023-2028 values are IMF forecasts. EU8 = Austria, Belgium, Denmark, Finland, France, Germany, Netherlands, and Sweden. We do not include Luxembourg and Ireland due to their unique economic structures. CEE8: Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia. CEE2 = Bulgaria and Romania. WB6 = Albania, Bosnia and Herzegovina, North Macedonia, Kosovo, Montenegro and Serbia.

5.5.2 The economic impact of EU enlargement on existing EU countries: conclusions from the literature

According to literature, EU enlargement boosts economic growth and employment, both in the new and the incumbent members. While most of this literature focuses on new members, several studies find such positive effects on incumbent members, too.

Before the 2004 enlargement, several papers projected a positive growth impact on existing member states. For example, Baldwin *et al* (1997) and Breuss (2002) estimated a 0.2-0.5 percent GDP impact on old member states.

Based on data from the first few years after the 2004 enlargement, the European Commission (2009) reported no conclusive evidence of negative impacts in incumbent member states on wages and standard of living. The report found that those old member states particularly benefited from enlargement, which increased their FDI and trade with the new member states. Enlargement affected trade positively in the EU and increased the average GDP share of exports and imports in old member states. On the other hand, the share of inward FDI decreased in the old member states following enlargement, because investors from both the EU and outside the EU seem to have exploited better investment opportunities in the new member states. Ultimately, the report concluded that enlargement has supported trade creation and increased growth

opportunities for producers, and wider choice for consumers, both in new and old member states.

Baas and Brücker (2010) concluded that the eastern enlargement of the EU was accompanied by a substantial increase in trade, capital movements and migration between the incumbent and the new member states. They found, using a CGE model, that eastern enlargement positively impacted German and UK real GDP (by about 1 percent), trade with EU countries (by about 3 percent), employment (by slightly more than 1 percent), wages (0.8 percent in Germany, 0.3 percent in the UK), and government revenue (by 1 percent), among other macroeconomic indicators. They noted that these effects are larger than those found in previous studies.

Using a multi-country dynamic general equilibrium model to study the economic effects of the 2004 enlargement of the EU, Caliendo *et al* (2021) concluded that the welfare of the pre-2004 EU countries increased by 0.04 percent, while the welfare of new member states increased by 1.17 percent. Within the old member states, welfare gains were mostly concentrated in high-skilled households (0.14 percent increase), while low-skilled households benefitted from only 0.02 percent welfare increase. They demonstrated that the reduction in migration and trade costs with the enlargement were crucial factors for welfare increases, and the old member states would have gained less without changes to trade policy.

To summarise, pre-2004 studies foresaw welfare gains from enlargement for incumbent EU members, and post-2004 studies estimating the impact of enlargement confirmed such positive effects. The main channels for such effects are foreign direct investment, trade and migration, and thus, we analyse these factors.

5.5.3 Foreign direct investment

Foreign direct investment (FDI) has been a major driver of the economic convergence of central European countries (Figure 9 and Figure 10), as the literature has also highlighted. Improved protection of property rights with EU entry, low wages compared to western Europe and geographical closeness to western Europe were the main drivers of FDI inflows. FDI entered various sectors, most notably manufacturing and finance. Manufacturing investments kept the share of manufacturing production in GDP in CEE8 well above that in western Europe, and also boosted trade integration (see the next section and Figures 11 and 12). Banking FDI resulted in western European banking groups taking a dominant role in CEE banking systems.

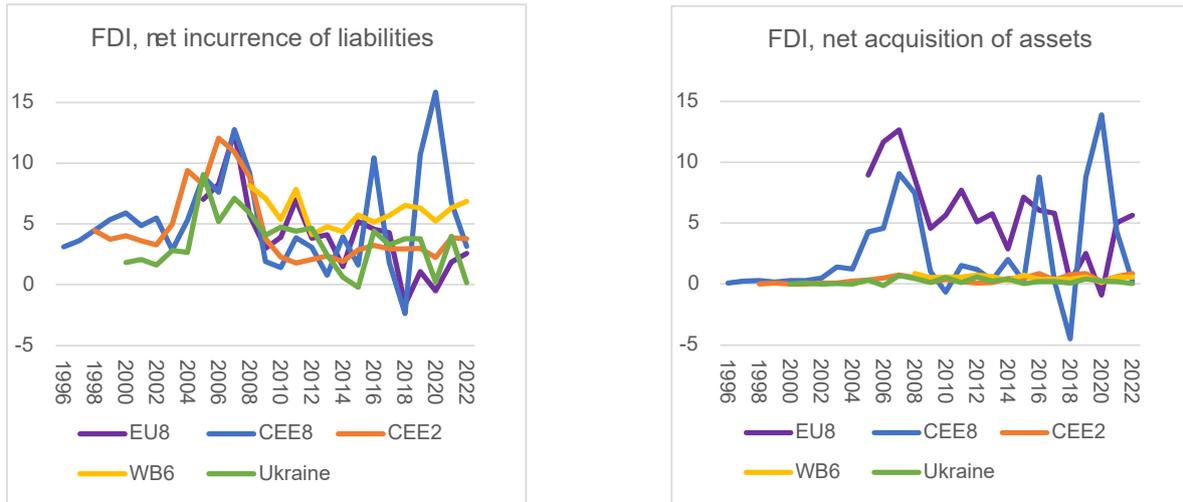
Interestingly, FDI inflows into WB6 were also relatively high and stable throughout the past fifteen years for which data is available (Figure 9), and the stock of FDI liabilities increased to a relatively high level, 69 percent of GDP in 2022, below the 86 percent figure for CEE8 but above the 50 percent figure for CEE2.

Ukraine also received a considerable amount of FDI between 2005-2012, but such inflows have been volatile since, falling to practically zero in 2014-2015 (the 2014 Russian annexation of Crimea and consequent geopolitical risks), in 2020 (COVID-19 pandemic) and in 2022 (Russia's full-scale invasion of Ukraine).

There is a major scope for deepening financial integration between Ukraine and the EU, which would also boost Ukraine's GDP and contribute to increased economic cooperation between Ukraine and the EU. Obviously, this depends on ending the war and achieving a high-level of military and economic security, as well as on rule of law improvements in Ukraine and lifting current account and capital account controls. Such deepened financial integration would benefit EU GDP growth, too.

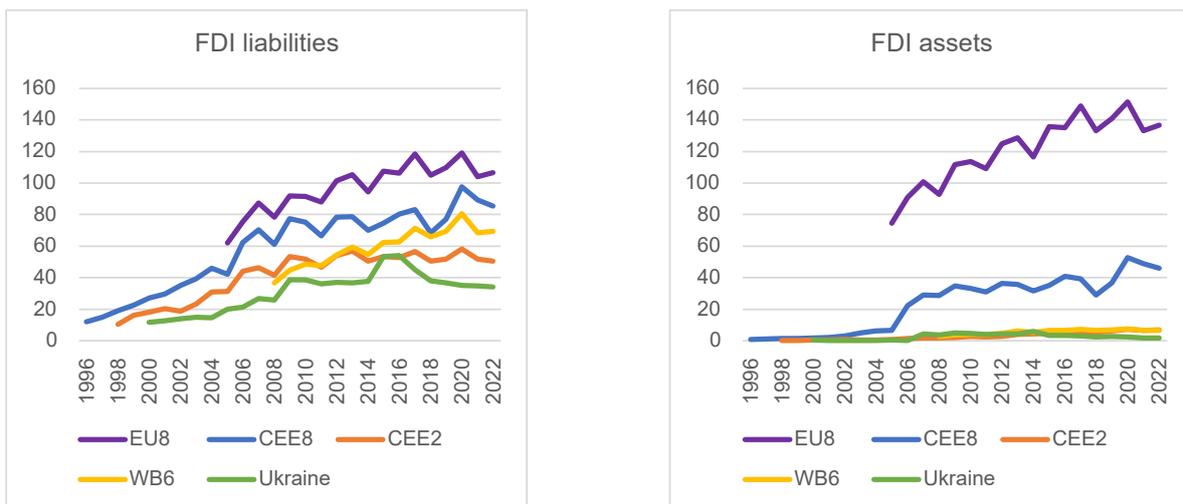
Finally, while our focus in this section is on accumulating FDI liabilities in CEE, that is, FDI inflows from western Europe and other parts of the world to CEE, the right panel of Figure 9 also shows the acquisition of FDI assets abroad, and the right panel of Figure 10 the stock of FDI assets. Advanced western and northern EU countries (EU8) possess more assets than liabilities, demonstrating that these countries are net investors abroad. Among CEE countries, only CEE8 possesses a significant amount of FDI assets, suggesting that some companies in this region have grown large enough to start investing abroad, which is an indicator of the level of development. In contrast, CEE2, WB6 and Ukraine possess hardly any FDI assets.

Figure 9: Foreign direct investment flows, percent of GDP, 1996-2028



Source: Bruegel based on IMF International Financial Statistics (FDI) and World Economic Outlook dataset (GDP). Note: See the definition of the country groups in the note to Figure 8.

Figure 10: Foreign direct investment stocks, percent of GDP, 1996-2028



Source: Bruegel based on IMF International Financial Statistics (FDI) and World Economic Outlook dataset (GDP). Note: See the definition of the country groups in the note to Figure 8.

5.5.4 Trade

Deepening trade integration with the EU, partly resulting from greater FDI (see Section 5.4.3), has been a powerful driver of economic development in CEE8, as identified in the literature. By the end of the 1990s, CEE8 had a similar export/GDP share to EU8 (Figure 11), but since then, CEE8 exports, and also imports (Figure 12), have grown much faster. Export/GDP reached 69 percent in CEE8, well above of EU8 (43 percent of GDP), WB6 (39 percent of GDP) and CEE2 (37 percent of GDP). Ukraine had an even higher, or at least similar, level of export/GDP to EU8, WB6 and CEE2 from 1994-2021, but the full-scale Russian invasion resulted in a sizeable drop in total Ukrainian exports in 2022, while the countries of the four country groups experienced an increase in that year.

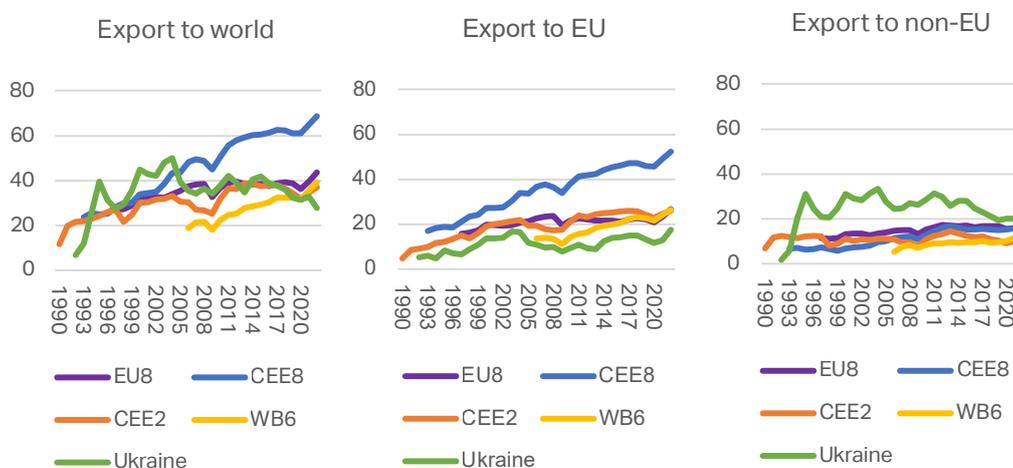
When differentiating between exports to the EU and non-EU, it is evident that exporting to EU was the main driver of CEE8 export growth, with an increase from 27 percent of GDP in 2000 to 52 percent in 2022,

while their exports to non-EU countries increased much less, from 7 percent of GDP in 2000 to 16 percent of GDP in 2022 (middle and right panels of Figure 11). In contrast, CEE2 achieved much less export growth, both to the EU and non-EU: exports to EU increased from 19 percent in 2000 to 26 percent in 2022, while exports to non-EU remained at 11 percent of GDP in 2022 as in 2000, with some fluctuations in the interim period. The different performances of CEE8 and CEE2 could relate to geographical closeness (CEE8 is closer to western Europe than CEE2), better local markets (such as qualified workers, local suppliers and infrastructure), and better institutions in CEE8 than in CEE2. Whatever the reason, the contrast between CEE8 and CEE2 suggests that EU membership might not automatically bring such a spectacular trade integration as was observed in CEE8.

Ukraine gradually shifted its foreign trade away from Russia and towards the EU even before Russia's aggression in February 2022. In 1996, Russia's share of Ukrainian imports was 50 percent, which was reduced to 30 percent by 2013 (Darvas *et al*, 2023). Following the illegal annexation of Crimea in 2014, the decline in Russia's share accelerated and was reduced to 8 percent by 2021. Since the invasion, foreign trade has completely stopped between Russia and Ukraine. Because of the difficulties with sea transportation since the war started, Ukraine's exports to more distant countries have declined, while the EU has introduced various measures to facilitate trade between Ukraine and the EU. As a result, the total trade of Ukraine fell severely in 2022 (exports declined by 32 percent in value and imports declined by 21 percent), but exports to EU actually increased (by 9 percent), while imports from the EU declined less (4 percent) than total imports. Thus, the EU's share of Ukraine's trade increased further in 2022.

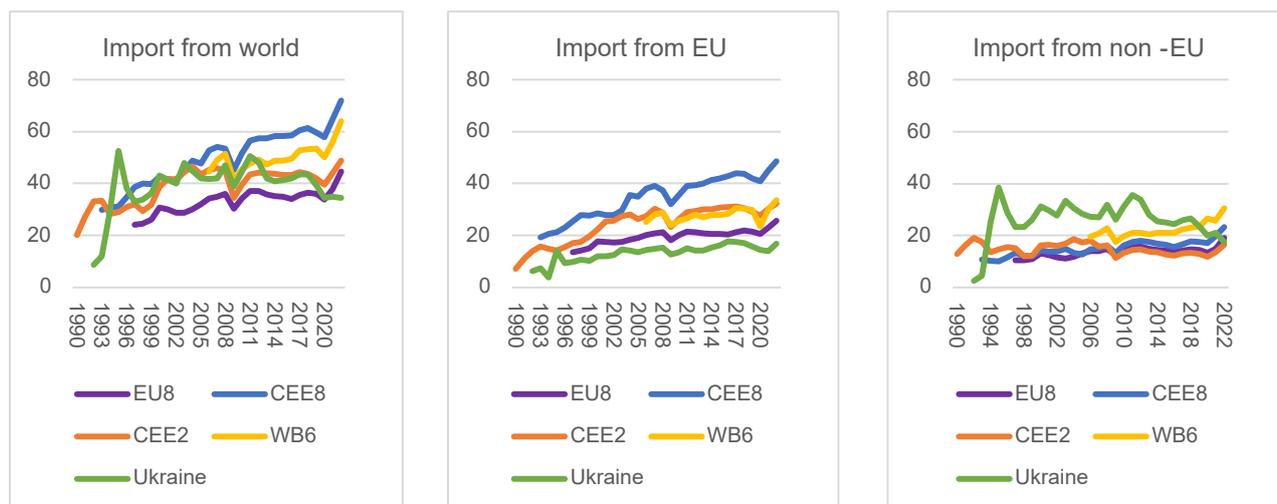
Once the war ends and the previous transportation options are reinstated, Ukraine might increase its trade with more distant countries, while trade with the EU could be boosted if Ukraine's integration into the EU's single market continues because of the harmonisation of national laws and standards.

Figure 11: Export, percent of GDP, 1990-2022



Source: Bruegel based on IMF Direction of Trade Statistics (export) and IMF World Economic Outlook database October 2023 (GDP). Note: export is valued at Free on board (FOB). See the definition of the country groups in the note to Figure 8.

Figure 12: Import, percent of GDP, 1990-2022



Source: Bruegel based on IMF Direction of Trade Statistics (import) and IMF World Economic Outlook database October 2023 (GDP). Note: import is valued at Cost, Insurance, Freight (CIF). See the definition of the country groups in the note to Figure 8.

5.5.5 Scenarios

Any economic forecast or projection is subject to uncertainties, but in the case of Ukraine, medium- and long-term projections are even more uncertain. The remaining duration and final outcome of the war are unclear, as well as whether the security situation and improvements in economic governance will allow private foreign investors to return to the country, how economic reconstruction will take place, whether the millions of (mostly women and children) refugees will return to Ukraine, or instead if men of working age (who cannot leave the country while the war is ongoing) will join their wives and partners abroad and thereby reduce Ukraine's population even further.

Nevertheless, we set up two illustrative scenarios, partly drawing on the experiences of the three central and eastern European country groups we studied in the previous sections. We first establish these scenarios for Ukraine and then study the implications for the EU.

High-growth scenario: the war will end, and a stable peace agreement is reached in a few years from now, possibly with a friendly Russia after a change in Russian leadership. The reconstruction process, along with governance and institutional reforms, encourage FDI inflows into Ukraine. Numerical assumptions:

- Reconstruction achieves restoration of the 2021 level of Ukrainian GDP *per capita* at PPP relative to EU8 by 2028, ie 25.2 percent. This is a more optimistic assumption than the October 2023 IMF WEO projection.
- From 2028-2040, Ukrainian GDP *per capita* at PPP relative to EU8 will increase, in percentage points, as the average of the 16 countries studied in the previous section from 2010-2019, ie the aggregate of CEE8, CEE2 and WB8. We calculate the average from 2010-2019 to exclude the period of the global financial crisis and the preceding years, which were characterised by unsustainable bubbles in many of these countries, and also to exclude the period of the COVID-19 pandemic. This implies that in 2040, Ukrainian GDP *per capita* at PPP will be 38 percent of EU8 (Figure 13, left panel).
- Ukrainian price level: we make assumptions analogous to GDP *per capita* (Figure 13, right panel). Note that IMF projections also expected a reduction in the Ukrainian price level after the sudden increase in 2022-2023.
- Ukrainian population: 40 percent of the refugees will return by 2028, while from 2023, apart from return migration, the resident population will decline twice as fast (in percent terms) as on average from 2014-

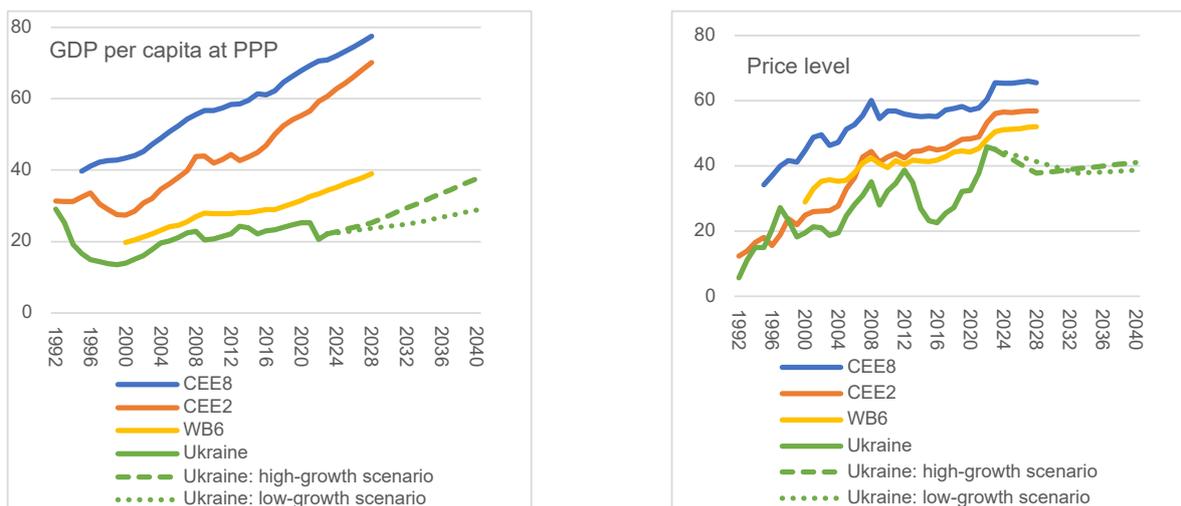
2021 (see section 5.4 for further details).

- EU8 GDP *per capita* at current prices: IMF projection up to 2028, 3 percent annual growth (corresponding to 1 percent real growth and 2 percent inflation) from 2029.
- Ukrainian trade with the EU: the same growth, as percentage of GDP, as for the average of the 16 CEE countries in 2010-2019 (Figure 14).

Low-growth scenario: the war drags on for several years; no stable peace agreement is reached; the reconstruction process progresses slowly; war-insecurity and weak governance and institutional reforms do not encourage FDI inflows into Ukraine. The main difference in numerical assumptions compared to the high-growth scenario is that post-war recovery is assumed to last for five more years (ending in 2033 instead of 2028), half of growth and price level convergence and half of refugee returns are assumed compared to the high-growth scenario. Thus, the numerical assumptions are:

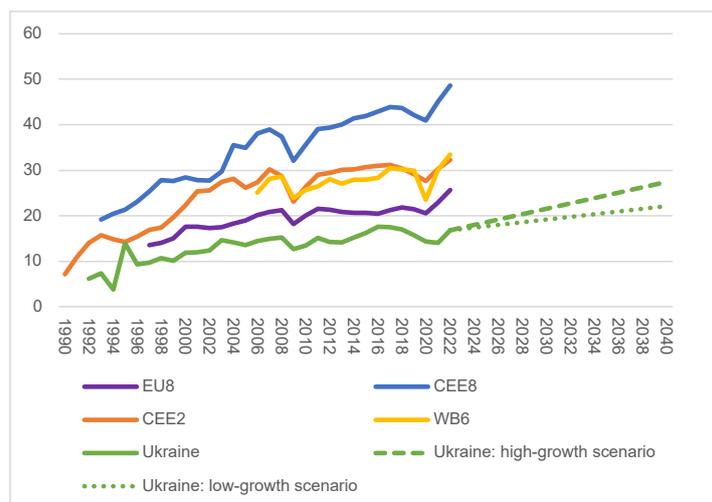
- Reconstruction restores the 2021 level of Ukrainian GDP *per capita* at PPP relative to EU8 by 2033.
- From 2033-2040, Ukrainian GDP *per capita* at PPP relative to EU8 will increase, in percentage points, as one-half of the average of the 16 countries studied in the previous section from 2010-2019. This implies that in 2040, Ukrainian GDP *per capita* at PPP will be 29 percent of EU8 (Figure 13, left panel).
- Ukrainian price level: we make assumptions analogous to GDP *per capita* (Figure 13, right panel).
- Ukrainian population: 20 percent of the refugees will return by 2028, while from 2023, apart from return migration, the resident population declines three-times as fast (in percent terms) as on average from 2014-2021 (see section 5.4 for further details).
- EU8 GDP *per capita* at current prices: IMF projection up to 2028, 3 percent annual growth (corresponding to 1 percent real growth and 2 percent inflation) from 2029.
- Ukrainian trade with the EU: one-half of the growth, as percentage of GDP, as for the average of the 16 CEE countries in 2010-2019 (Figure 14).

Figure 13: GDP scenarios for Ukraine, 1992-2040



Source: Bruegel based on IMF World Economic Outlook dataset, October 2023. Note: 2023-2028 values are IMF forecasts for CEE8, CEE2 and WB6, while 2024-2040 values for Ukraine are our scenarios. See the definition of the country groups in the note to Figure 8.

Figure 14: Scenarios for Ukraine's imports from the EU, percent of GDP, 1992-2040



Source: Bruegel based on IMF Direction of Trade Statistics (import) and IMF World Economic Outlook database October 2023 (GDP). Note: See the definition of the country groups in the note to Figure 8.

To report our main findings, we convert GDP and trade with EU to 2023 prices, by assuming a 2 percent discount rate, corresponding to our 2 percent inflation assumption post-2028. For simplicity, we also assume a 2 percent inflation rate for the \$ value of Ukrainian GDP and trade in 2010-2019, the period to which we compare our 2030-2040 scenarios. For reasons explained earlier, we exclude the period of the COVID-19 pandemic and the period of Russia's invasion of Ukraine from the comparison, to be able to offer a more medium/long-term perspective. We then compare constant price dollar figures to euros, using the average dollar/euro rate in January-November 2023.

Our calculations suggest that there is scope for expanding EU-Ukraine trade even under a low-growth scenario, which could result in more than 40 percent increase in (constant price) imports in 2030-2040 compared to 2010-2019, while our high-growth scenario suggests a 140 percent increase. We did not factor EU enlargement specifically into our scenarios, because of the difficulties in isolating the impact of EU enlargement from other factors, most notably the resolution of the war and domestic reforms. Nevertheless, it is fair to say that a possible EU enlargement would likely imply an outcome closer to the optimistic than to the low-growth scenario, since the EU entry of Ukraine is inconceivable without a durable peace treaty and major institutional reforms, including rule-of-law improvements, which are pre-conditions for EU entry.

Table 7: Scenarios for Ukraine's GDP and import from the EU, annual averages, € billions in 2023 prices

	Ukraine's GDP	Ukraine's import from EU
2010-2019	151	23
2030-2040 High-growth scenario	227	56
2030-2040 Low-growth scenario	160	33

Source: Bruegel, as described in the main text.

Translating growth of EU exports to Ukraine to an impact on EU GDP involves making various assumptions that we would prefer to avoid making. However, it useful to recall the main channels through which existing EU countries can benefit from the entry of new countries:

- The admission of new members increases the size of the EU's single market, which facilitates trade;
- Trade with new members boosts domestic production and employment in existing members, thereby generating more corporate profits and wages in existing EU countries;
- Foreign direct investment in new EU countries creates corporate profits for parent companies in existing members⁴⁵;
- Immigration from new members boosts the labour supply in existing EU countries, which already suffer from labour shortages, with their demographic outlooks suggesting a dramatic reduction of the labour force in the years to come.

5.6 Energy security and decarbonisation

The accession of Ukraine into the European Union will have a noticeable impact on the EU's energy sector, including impacts on energy security and energy costs. The impacts will depend strongly on the pathway Ukraine chooses in the next years, and what investments it is able to attract. Ukraine has substantial potential in terms of natural gas, renewables generation and nuclear power. Accession to Euratom would increase nuclear safety in Ukraine, to the benefit of Ukraine and all its neighbours.

If capital cost is kept in check – eg through preferential lending and a reliable regulatory framework – Ukraine might be able to export substantial volumes of low-carbon electricity, blue and green hydrogen, natural gas and energy-intensive products such as (green) steel. This can help to reduce energy prices, especially in central and eastern Europe. However, in the absence of sufficient investments, fully integrating Ukraine into Europe's carbon and electricity market might cause higher electricity prices in the region.

Ukraine's somewhat overbuilt energy infrastructure might, after war-related bottlenecks are resolved, serve to provide gas and electricity interconnection and balancing services to the entire region.

At the same time, Ukraine will be a major market for energy technology because destroyed and/or long-outdated networks and plants need to be refurbished or replaced. Thereby, there is a huge potential for investments to reduce energy consumption while maintaining or improving the corresponding services. Financial services for energy supply and energy efficiency investments will be in high demand.

The accession of Ukraine will also require a recalibration of European energy and climate targets (renewables, energy efficiency, climate). Either Ukraine's targets (set within the Energy Community framework) are upgraded to be in line with ambitious EU overall targets, or the targets of all EU countries are readjusted to ensure the Union can still meet its targets when Ukraine joins with targets that are in line with its stage of development.

Overall, Ukraine's significant energy potential (5.6.1) can substantially contribute to Europe's energy security. At the same time, the implementation of the European regulatory framework in Ukraine (see 5.6.2 to 5.6.4) will be crucial to ensure that energy supplies from Ukraine contribute to achieving Europe's decarbonisation objectives.

5.6.1 Ukraine's energy potential

Ukraine has a substantial energy potential and offers investment opportunities to EU investors.

- Solar power: Thanks to its size, Ukraine has good potential for solar power. The sector saw very bumpy development before the war as the government proved unable to set up a credible and efficient support framework. During the war, deployment of small-scale solar improved energy security for many

45 Darvas and Hüttl (2017) documented that the return on FDI investment in central European countries was relatively high.

consumers⁴⁶, though data is scarce⁴⁷. Regulatory treatment and network access rules might still have to catch up with this development to maximise the benefits of these new capacities.

- Wind energy: On a per-capita basis, Ukraine has better potential than the average European country. Before the war, only the private electricity incumbent DTEK was able to develop a wind park in Ukraine, and a second has been completed during the war. In the past, the technology was held back by inconsistent rules on network access and support mechanisms.
- Bioenergy: Ukraine has a strong comparative advantage in agricultural production due to its soil, climate and size. Corresponding wastes are already being used for biogas production and there is some more potential. Due to bad forest governance and illegal logging, forests have likely been overused (Hrynyk *et al*, 2023). The question of whether Ukraine should dedicate some of its agricultural land to energy crops is not easy to answer. While the technical potential is there, its economic and ecological justification is unclear.
- Natural gas: Ukraine was a massive natural gas producer in the 1980s (80 bcm per year) and still holds substantial reserves. Pre-war attempts to get foreign and domestic investors to ramp up production again largely failed. The main bottleneck was likely a lack of a credible and conducive regulatory framework.
- Hydrogen: thanks to its renewables potential and existing gas infrastructure Ukraine is seen as a potentially significant exporter of hydrogen to (other) EU countries. The competitiveness of Ukrainian hydrogen on European markets will depend mainly on the capital cost (driven by war, macro and regulatory risks) and alternative uses of low-cost renewable electricity Ukraine would have to generate.
- Nuclear: Ukraine has inherited a strong nuclear industry that used to meet more than half of the electricity demand. With the help of western nuclear fuel, they continue to provide a significant contribution to Ukraine's electricity mix. The latest drafts of an energy strategy indicate ambitious plans for nuclear energy. Whether these will materialise in a persistently high capital-cost environment with a diminishing supply of young nuclear engineers is an open question.

In an ideal scenario, EU membership for Ukraine would unleash a wave of investments into the underutilised energy-production potential of Ukraine. The reasoning here would be that EU membership would lower the cost of capital, lead to improved (more credible) regulatory frameworks and provide network access to an attractive export market that can justify investments. This is underpinned by a still very strong electricity and gas interconnection capacity towards its western neighbours.

At the same time, EU membership will have two opposite effects on energy demand in Ukraine. On the one hand, the very high levels of energy intensity will converge towards EU averages, based on most inefficient parts of the capital stock being replaced first. On the other hand, economic growth thanks to membership of the internal market will increase demand. Overall, these two factors might balance out on aggregate, but imply a shift in energy consumption from industry (coal and electricity) towards transport (oil) (Zachmann *et al*, 2023).

Ukraine's energy sector remains either largely monopolised and/or under state control. The result is a lack of competition and predictable cashflows, which in turn lead to a profound lack of investment and inefficient signals for production and consumption. The EU accession process is the best opportunity to push through structural solutions that create competition and a reliable regulatory framework. As the often quite open formulations in the EU *acquis* alone do not guarantee the emergence of consistent energy legislation that efficiently addresses country specificities, Ukraine and partners should work hard on developing a framework that can really enable efficient operation, appropriate investments and fair sharing of cost and benefits in the energy system.

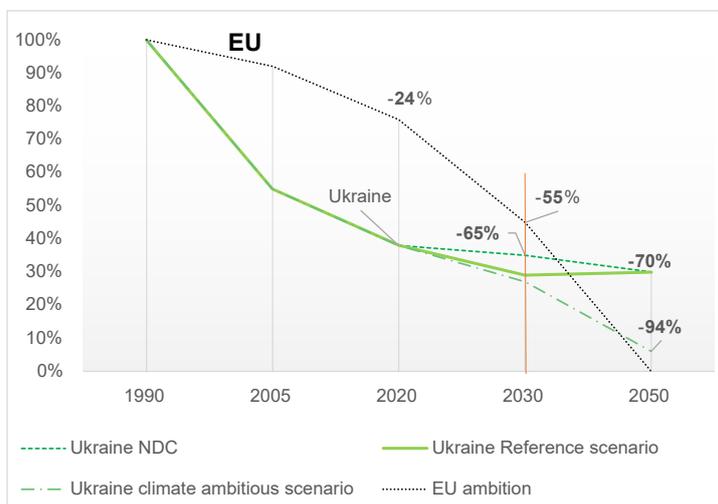
46 Michael Birnbaum, 'Ukraine found an unlikely too to resist Russia: solar panels', *The Washington Post*, 20 May 2023, <https://www.washingtonpost.com/climate-solutions/2023/05/20/ukraine-solar-hospitals-attack-russia/>.

47 Overall, some 500 MW of solar were expected to be deployed during 2023. See Уляна Букатюк, 'Попри війну в Україні збудують до 1000 МВт зеленої генерації у 2023-му – Герус', *Forbes*, 16 August 2023, <https://forbes.ua/news/popri-viynu-v-ukraini-do-kintsya-roku-zbuduyut-do-1000-mvt-zelenoi-generatsii-gerus-16082023-15450>.

5.6.2 Adjusting member states' targets

Ukraine already has energy and climate targets that it agreed in the framework of the Energy Community, in which the EU and eight countries commit to implement the *acquis communautaire* in the energy and climate area. Those targets are binding⁴⁸ and might in some scenarios require additional policies to be achieved.

Figure 15: Ukraine's greenhouse gas emission targets compared to 1990



Source: Zachmann *et al* (2023). Note: NDC is the 2021 announced nationally determined (mitigation) contribution of Ukraine to the Paris Agreement. Values are in emission reduction (including land use, land use change and forestry) compared to 1990 levels. The reference and the climate ambitious scenario stem from the modelling underpinning the NDC.

Figure 15 shows that Ukraine was able to commit to more aggressive emission reductions by 2030 compared to 1990 (minus 65 percent) than the EU (minus 55 percent), thanks to a massive drop in emissions after the end of the Soviet Union. Even before the war, a reference scenario implied that Ukraine was on course to overachieve this 2030 reduction target, which is almost certain now due to the terrible loss of population and economic activity that has cut emissions in a disastrous way. To achieve net-zero emissions early in the second half of the century, however, Ukraine needs to make additional efforts.

Ukraine's targets are typically below the EU aggregate targets. This implies, that if Ukraine joins the Union, three scenarios are possible:

1. Ukraine will have to increase its own targets to the EU aggregate level – which would look rather unfair as its targets would then be higher than those of other post-2004 member states with low GDP;
2. The wider Union (old EU + Ukraine) will fail on its targets;
3. The targets of all member states are recalibrated to achieve the joint targets but also to not overburden Ukraine.

In our view, the third option is most likely but, for example, the underlying formula to share the renewables target (42.5 percent for 2030) among member states are rather complex and some parameters (such as renewable energy potential) are less objective than they look.

5.6.3 Emissions trading system

By joining the EU, Ukraine would also join the EU emissions trading system (ETS), the bloc's cap-and-trade system that from 2024 will cover not only the energy sector, energy-intensive industry and aviation, but

⁴⁸ Missing the targets could lead to infringement procedures that can lead to losing voting rights in the energy community.

also maritime shipping. But even prior to EU accession, it would be advantageous for Ukraine to join the ETS (or put in place an equivalent system) in order to avoid the EU's Carbon Border Adjustment Mechanism (CBAM) and to facilitate integration into EU clean-tech sectors.

The process for joining the European system can be organised in stages, eg (1) starting with ramping up the existing very low carbon tax and making it more efficient, (2) creating an own pilot ETS modelled on the EU system, and (3) fully joining the EU system. This will involve answering many questions, the most crucial being about the level of the emissions cap for Ukraine, the amount of allowances Ukraine is allowed to allocate and how many of those, and to which industries, it can hand out for free.

During the transition, if differences between the stringency and level of Ukrainian carbon pricing are deemed insufficient, Ukrainian exporters of covered products to the EU might have to buy CBAM compliance units.

5.6.4 Integrating Ukraine in EU energy policies

Institutionally, Ukraine, as a member of the Vienna-based Energy Community, is already committed to gradually implement the energy and climate acquis. Together with the accession process, the conditionalities of the Ukraine Facility and the commitments in the Association Agreement, several overlapping and complementary processes exist to guide Ukraine's approximation to EU rules. The risk is that formal approximation does not lead to the efficient integration of Ukraine into the European energy system. To reduce this risk, EU attention/conditionalities should:

- Focus on outcomes (eg whether new market players enter),
- Be based on strategic prioritisation of action (cross-border trade rules maybe more important than oil stocks),
- Be monitored constantly,
- Be followed by the agreed consequences if not properly implemented.

Otherwise, there is a risk that Ukraine will waste time and resources on bureaucratically transposing unimportant rules that do not affect the country much. Hence, a strategic view from European partners is needed to bring forward the big reforms necessary to make Ukraine a valuable participant in the single energy market.

Even before membership, Ukraine can be much more closely integrated into the internal electricity and gas market. As Ukraine's electricity system was already synchronised with that of continental Europe in the first days after Russia's full-scale attack, and as substantial transmission capacities exist or can be restored, Ukraine can become a major electricity player in the region. But this requires profound reforms of the governance of wholesale and cross-border trade in Ukraine, including, potentially, ways to deal with carbon emissions.

In preparation for Ukraine's membership, the EU can already increasingly involve Ukraine in the governance of its internal energy market by:

- Making the Ukrainian regulator an observer in the European Agency for the Coordination of Energy Regulators (ACER),
- Making the Ukrainian transmission system operators for gas and electricity observers in the corresponding European Network of Transmission System Operators (ENTSO),
- Making the Ukrainian electricity transmission system operator a member in a Regional Coordination Centre (RCC).

5.7 EU budget

Ukraine's GDP *per capita* (measured at purchasing power parity) was less than 30 percent of the EU average in 2021 – about half of Bulgaria's value. The economic contraction caused by the war has widened income differences. Ukraine will likely benefit from fast recovery during the reconstruction period, yet most likely, per-capita income will remain well below the level of the EU country with the lowest value (section 5.5). At the same time, Ukraine would have a fifth of all the agricultural land in an enlarged EU – assuming Ukraine's territorial integrity is restored and polluted and mined agricultural land is cleaned up for production.

Once Ukraine joins, transitional periods might apply before the country has access to certain EU budget benefits, as was the case with earlier eastern EU enlargements, implying that EU budget funding to Ukraine could be initially lower than in the long run and would later gradually increase. We are not interested in speculating about such transitional arrangements, which would be the outcome of political negotiations. Instead, we analyse the possible long-term effects of Ukraine membership on the EU budget, after eventual transition periods have expired.

Another aspect requiring some attention is that the shares of the EU's cohesion and agricultural spending have declined over the past few Multiannual Financial Frameworks (MFFs) and may decline in the future, while cross-country allocations, including various caps and other parameters, might change, too. We do not wish to speculate about the expected magnitude of these changes, nor about the possible contributions from new own resources to the EU budget.

Thus, we estimate the impact of a hypothetical EU membership of Ukraine on the EU's 2021-2027 MFF by assuming that all rules of this MFF continue to apply – with the sole exception of the overall ceiling. The calculations for the Common Agricultural Policy and cohesion policy are detailed in Annex 1 and are summarised below, along with our assumptions for other types of EU budget spending.

We report the results of two scenarios, each of which features a number of assumptions for agricultural land, GDP and population development:

- The baseline scenario: (a) Ukraine regains its territorial integrity, and polluted and mined agricultural land is cleaned up for production; (b) the war does not result in a permanent decline in Ukraine's GDP or population, but the economy and population develop according to 2020 projections.
- The alternative scenario: (a) Ukraine's agricultural land is reduced by 20 percent (either because some parts of the country remain under Russian control, or polluted and mined land is not cleaned up for production); (b) there is a permanent decline in Ukraine's GDP and population by 20 percent due to the war.

Table 8 presents the main numbers for MFF commitments.

Table 8: The 2021-2027 Multiannual Financial Framework: EU expenditures without and with Ukraine (current prices, € billion)

A: Baseline scenario

	Approved budget		Hypothetical budget with Ukraine	
	EU27	EU28	of which EU27	of which Ukraine
Cohesion policy	393	401	369	32
Common Agricultural Policy	379	463	379	85
Neighbourhood and the world	111	109		
European public administration	82	87		
Others	246	254	246	7
Total	1,211	1,313		
Percent of GDP	1.12%	1.20%		

B: Alternative scenario

	Approved budget		Hypothetical budget with Ukraine	
	EU27	EU28	of which EU27	of which Ukraine
Cohesion policy	393	400	374	27
Common Agricultural Policy	379	446	379	68
Neighbourhood and the world	111	109		
European public administration	82	86		
Others	246	252	246	6
Total	1,211	1,293		
Percent of GDP	1.12%	1.19%		

Source: Bruegel as described in this report.

Our main assumptions and results are the following:

- We assume Ukraine is treated as a full EU member in the budget and no transitional periods apply.
- We group EU expenditures into five main categories: 1) Cohesion Policy, 2) Common Agricultural Policy (CAP), 3) Neighbourhood and the world, 4) European public administration, 5) other.
- Among these five categories, cross-country allocation methods have been specified well only for Cohesion Policy. These methods mostly depend on numerical formulas, though there are some adjustments without a specified method. We assume that the cross-country allocation methods for the EU-27+Ukraine hypothetical 2021-2027 MFF remain the same as the approved EU27 2021-2027 MFF. We thus apply the current allocation methods to the enlarged EU28 in a bottom-up way, that is, we calculate what each region (for funds that are distributed to regions) or country (for funds that are distributed to countries) would obtain, and add up the resulting components, without considering the approved overall upper ceiling for Cohesion Policy (€393 billion at current prices in total for 2021-2027). We find that in the baseline scenario, current EU27 members would obtain €24 billion less than in the approved budget, while Ukraine would obtain €32 billion (at current prices in total in 2021-2027). The combination

of these two results implies that the total envelope for cohesion policy would increase by just €8 billion, from €393 billion to €401 billion, a 2 percent overall increase. In the alternative scenario, the reduction in cohesion funding to EU27 members would be €19 billion, Ukraine would obtain €27 billion, and the total envelope for cohesion policy would be €400 billion.

- The reason for some current EU27 countries obtaining less is that a large share of Cohesion Policy allocation depends on regional income level, relative to the EU average, and Ukraine's EU membership would reduce the EU average GNI *per capita* (more so in the baseline scenario than in the alternative scenario). Thereby, some regions currently classified as 'less developed regions' would graduate to 'transition regions' and some current 'transition regions' would graduate to 'more developed regions', implying less cohesion policy funding.
- The reason for Ukraine obtaining only €32 billion in the baseline scenario (and €27 billion in the alternative scenario) is that for most Cohesion Policy payments, an overall upper limit applies. This limit is 2.3 percent of annual GDP (in the 2021-2027 MFF) for countries with less than 55 percent of EU average GNI *per capita* at purchasing power standards (PPS), the category to which Ukraine would belong. Without this upper limit, Ukraine would obtain more than €170 billion, if we apply the current allocation criteria to all components of Cohesion Policy. Thus, this cap would reduce payments to Ukraine to just one-sixth of the amount without the cap.
- For these calculations, we used late-2020 projections for 2021-2027 – projections that were available at the time when the MFF was designed. Thus, the baseline scenario does not take into account the adverse economic impact of the war on Ukraine, while for the alternative scenario, we assumed a 20 percent reduction in Ukraine's GDP.
- For Common Agricultural Policy (CAP) funds, for which no specific cross-country allocation formula is available, we assume that the allocations to the current 27 EU members remain unchanged, and that Ukraine would obtain a payment amounting to the product of its land area and the average per hectare payments for the 13 countries that joined the EU from 2004-2013. We calculate the hectare payments separately for three main CAP items: direct payments, rural development and market measures. We find that in the baseline scenario, Ukraine would obtain €85 billion in CAP payments in 2021-2027 at current prices, implying that the CAP budget would be extended from the approved €379 billion to €463 billion, a 22 percent increase. In the alternative scenario, Ukraine's CAP payment would be €68 billion, and the overall CAP budget would be €446 billion, an 18 percent increase.
- By being an EU member, Ukraine would not benefit from payments from the 'Neighbourhood and the world' heading of the MFF, amounting to a total €111 billion in 2021-2027. Thus, for our counterfactual exercise of including Ukraine in the MFF, we must reduce this €111 billion amount by the expected amount that Ukraine would have obtained as a non-EU member in 2021-2027, seen from 2020, when the MFF was designed. No precise amount is specified for this in MFF regulations. The largest component of this heading is the 'Neighbourhood, Development and International Cooperation Instrument – Global Europe' (NDICI – Global Europe) instrument, with €80 billion in funding, of which €19 billion is allocated to the neighbourhood⁴⁹. From this neighbourhood allocation, the Multi-annual Indicative Programme (MIP) 2021-2027 for Ukraine⁵⁰ indicated €640 million for Ukraine in 2021-2024, while allocations for 2025-2027 are left for later decisions. Since Ukraine (outside the EU) might have obtained support from other elements of this heading, we reduce the total €111 billion by €2 billion under our hypothetical scenario of Ukraine being an EU member, in both the baseline and the alternative budget scenarios.

49 See European Commission, 'Neighbourhood, Development and International Cooperation Instrument – Global Europe (NDICI – Global Europe)', https://neighbourhood-enlargement.ec.europa.eu/funding-and-technical-assistance/neighbourhood-development-and-international-cooperation-instrument-global-europe-ndici-global-europe_en.

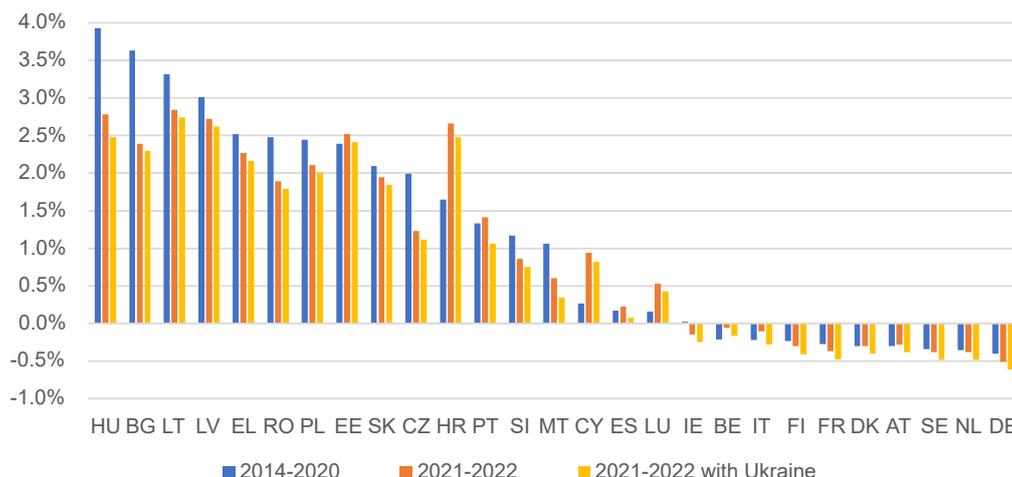
50 See European Commission, 'Multi-annual Indicative Programme (MIP) 2021-2027 for Ukraine', https://neighbourhood-enlargement.ec.europa.eu/system/files/2022-01/C_2021_9351_F1_ANNEX_EN_V2_P1_1618650.PDF.

- Spending on European public administration would also likely be higher if Ukraine was an EU member. Ukraine's EU membership would have boosted the EU population by 9 percent, while EU GDP would have increased by 1 percent in 2021-2027 (both numbers are based on 2020 projections and assume our baseline scenario). We assume that public administration costs would have increased by 5 percent in the baseline scenario, the average of these two numbers, raising the €82.47 billion costs of the approved MFF⁵¹ to €86.63 billion, an increase of €4.16 billion (though after rounding, Table 8 seemingly suggests a €5 billion increase). In the alternative scenario, the same calculation suggests a €3.34 billion increase to €85.51 billion.
- Finally, we combine all other EU spending categories into an 'Other' group, which include single market, innovation, digital, migration, border management, security and defence, among others. We assume such spending plans for the EU27 remain the same in the hypothetical budget with Ukraine as in the approved budget (€246 billion) and that Ukraine would get an amount proportional to what the 13 countries that joined the EU in 2004-2013 obtained. Since these spending items are not pre-allocated across countries, we assume a hypothetical allocation corresponding to each country's average allocation of the same spending categories in the 2014-2020 MFF. We then relate these amounts to both GDP and population and calculate two hypothetical amounts for Ukraine: 1) one is based on the assumption that Ukraine would obtain the same amount as a percentage of GDP as the 13 newer member states, and 2) the other is based on the assumption that Ukraine would get the same amount per population as the 13 newer member states. We then calculate the average of these two figures, which is €7 billion in the baseline scenario and €6 billion in the alternative scenario.
- Taken together, the overall size of the 2021-2027 MFF would increase from €1,211 billion to 1,313 billion (in total in 2021-2027 at current prices) in the baseline scenario, or from 1.12 percent of EU27 GDP to 1.20 percent of EU28 GDP, were Ukraine a member of the EU. Payments to Ukraine would amount to €124 billion, public administration costs would go up by €4 billion, and the EU budget would save €2 billion from external actions. Altogether, the extra spending because of Ukraine's EU membership could amount to €126 billion (=124+4-2) in the baseline scenario. Ukraine's contribution to the EU budget would be €14 billion if we assume that the contribution would amount to 1.20 percent of GDP, while EU27 countries would obtain €24 billion less from Cohesion Policy. Altogether, the net cost (in terms of the EU budget) of Ukraine's EU membership to EU27 countries would amount to €137 billion (=126-14+24) at current prices in total in 2021-2027, which is 0.13 percent of EU27 GDP, in the baseline scenario. In the alternative scenario, the net cost (in terms of the EU budget) of Ukraine's EU membership to EU27 countries would amount €110 billion at current prices in total in 2021-2027, which is 0.10 percent of EU27 GDP.

This cost would hardly change the net beneficiary/payer status of current members. Several net beneficiaries (Hungary, Bulgaria, Latvia, Lithuania, Greece, Romania, Poland, Czechia, Slovenia and Malta) already faced a sizeable reduction in net payments in 2021-2022 compared to the 2014-2020 MFF period (Figure 16). For these countries, the additional reductions in net payments would be small compared to the decrease they faced already. Most net payers would need to contribute about 0.1 percent more of their GDP to the EU budget in our baseline scenario.

51 The €82.47 billion overall European public administration costs of the approved MFF are composed of €63 billion for the administrative expenditure of the institutions and €19.5 billion for European schools and pensions. The cost of institutions and schools would likely go up immediately after Ukraine's entry, but the increase in pensions is expected much later when the new employees of EU institutions hired due to Ukraine's entry will retire. We do not discriminate pension costs from other public administration costs because our goal is estimating the long-run impact of Ukraine's entry.

Figure 16: Net balances with the EU budget under the baseline scenario (% GNI)



Source: Bruegel based on EU budget execution data from the European Commission on and own calculations. Note: EU budget expenditures considered are composed of total expenditure allocated to each country, except European public administration. Non-EU, other, earmarked and European public administration expenditures, as well as NGEU expenditures, are not included. Revenues considered are composed of ‘total national contributions’, which include contributions based on GNI, VAT, plastic packaging waste levy and various cross-country adjustments. Revenues considered do not include customs duties, sugar levies and other revenues, such as fines and EU borrowing to finance NGEU.

It is important to emphasise that the net cost in terms of the EU budget is not the same as the net fiscal cost to EU27 governments, and it does not take into account other benefits of Ukraine’s membership. For example, EU27 companies will participate in EU programmes financed in Ukraine, thereby generating more profits that are taxed at home, and also likely create more employment in their home countries too, resulting in higher income tax and social security revenues at home. EU spending in Ukraine will generate imports from EU27 countries. If EU funds improve the economic outlook of Ukraine, the implication is a larger European market benefitting all EU countries. All these direct and indirect effects create jobs and tax revenues at home from EU spending in Ukraine, but are not included in our calculations above. Furthermore, there are broader benefits arising from EU spending on public goods in Ukraine that benefit every EU country, such as EU social spending in Ukraine, which will improve the skills and qualifications of the Ukrainian labour force, with better-qualified workers potentially moving from Ukraine to the EU27. EU climate spending in Ukraine would reduce Ukraine’s greenhouse-gas emissions, thereby benefitting EU27 and non-EU countries alike.

6. Concluding remarks

The process of Ukraine's accession to the EU has started in the historically unprecedented circumstances of a full-scale war and associated material damage and human losses. The accession process will likely overlap with Ukraine's reconstruction after the war, increasing the EU's influence in fostering the institutional development of Ukraine and providing strong incentives for Ukraine to progress toward complying with the EU accession criteria. However, as long as the war continues, completing the accession process will be problematic.

In 2021, the last year before the full-scale war, Ukraine performed rather poorly in terms of domestic governance, including rule of law, democracy and control of corruption. Various indicators suggested that in these respects, Ukraine ranked in the bottom half of ten possible EU candidate countries, and worse than any current EU country. While there are major challenges in measuring institutional changes during the past two years of war, some indicators suggest a deterioration in governance standards. This implies

that Ukraine must make major improvements before its chances of joining the EU can be assessed. EU accession talks and reconstruction support after the war would provide incentives for Ukraine to implement the difficult reforms and would give EU partners the ability to influence these reforms.

The offer of an EU membership perspective in June 2022 may prove to be a game changer in Ukraine's complicated economic and institutional transition in the previous three decades. Experience of earlier EU enlargements, especially those that involved central and eastern European countries (2004, 2007 and 2013), demonstrated that if well managed, accession processes create a strong incentive to improve governance and institutions, and to accelerate economic and social convergence. However, the ultimate results depend on whether the EU accession process catalyses a process of domestic reform that allows the new member to implement the EU's *acquis communautaire* effectively. This catalyst effect depends in turn on the willingness of existing member states to deliver on their enlargement promise and to actively help in the accession process. These same dynamics will be important for Ukraine and other candidates in the current enlargement round. For Ukraine, both domestic determination and external support are essential, especially against the backdrop of Russia's aggression against Ukraine.

According to the Revised Enlargement Methodology adopted by the EU in 2020, the first and most critical cluster of accession negotiations (and the priority area for domestic reforms) includes political governance, the constitutional balance of power, the judiciary, the rule of law, decentralisation and fighting corruption. Success or failure in these areas should determine the speed of the accession process and its outcome for all candidates.

Further adaptation of the accession process will be necessary for Ukraine's particular circumstances. Phased integration into EU policies prior to accession would help deliver economic and social benefits that would give a reason for the hard-pressed population to support further reforms and invest in applying EU standards and policies, even in difficult circumstances. The EU should also enhance the reversibility of progress in negotiations and increase the specificity of its requirements in key areas, such as rule of law, in order to keep critical reforms on track. New methods of ensuring post-accession compliance may be required, particularly for rule-of-law standards.

Target dates for accession can be valuable as long as they are set with conditions that create positive competition between candidates. That would be important to maintain a fully merit-based process, which is the best way to ensure that the Western Balkan countries are not disadvantaged relative to Ukraine. EU accession can benefit the Ukrainian state, economy and society. It will also benefit the EU as a whole and current member states, especially those bordering Ukraine. As was seen with previous enlargements, it can increase the EU's GDP, employment and investment, widen and deepen the single market, increase intra-EU competition and boost external trade. It can generate an additional inflow of workers to current member states when they suffer from shrinking working-age populations (on the other hand, it may deepen a long-term labour shortage in Ukraine). Moreover, a well-managed accession process will enhance the EU's security by focusing sustained political attention and financial resources on the key risks resulting from the war (such as proliferation of small arms and light weapons) and on improving border management. The new border between the EU and Russia and Belarus will be much longer than it is now, and the additional external and internal security challenges (unless Russia and Belarus turn to peace and democracy) need to be managed collectively. Without the accession process, the long-standing problems of corruption and poor governance in Ukraine are unlikely to be resolved, whereas EU conditionality and additional aid provide external incentives and greater transparency that will force current and future governments to tackle them.

Ukraine's accession will have a noticeable impact on the EU's energy sector, including greater energy security and lower energy costs. Ukraine has substantial natural gas, renewable generation and nuclear power potential. It could export large volumes of low-carbon electricity, blue and green hydrogen, natural gas and energy-intensive products, such as (green) steel, to the EU. Ukraine will be a significant market for energy technology, as destroyed or long-outdated networks and plants need to be refurbished or replaced.

Geopolitically, Ukraine's accession will stabilise the EU's eastern neighbourhood. It will also significantly increase the EU's military and security capabilities. Ukraine will have one of the largest armies in the EU,

with fresh experience in resisting external aggression, fighting terrorism, cyberattacks, disinformation campaigns and other forms of modern warfare. It will also have a large defence industry.

On the other hand, the accession of Ukraine will create several challenges for the EU.

The net cost (to the EU budget) of Ukraine's EU membership to EU27 countries would amount to €137 billion at current prices in 2021-2027, which is 0.13 percent of EU27 GDP in our baseline scenario. In our alternative scenario, the net EU-budget related cost would be €110 billion at current prices in 2021-2027, or 0.10 percent of EU27 GDP. However, these EU-budget related costs do not include the tax and social security revenue increases for EU27 countries as a result of Ukraine's entry into the EU (EU27 companies will benefit from EU-funded projects in Ukraine and from greater Ukrainian imports from the EU27, thereby creating jobs and tax revenues in EU27), nor the broader benefits, including more qualified Ukrainian workers moving to the EU27 and reduced Ukrainian greenhouse-gas emissions.

Because of the Ukrainian economy's higher energy and CO₂ intensity, the EU will have to recalibrate European energy and climate targets (renewables, energy efficiency, climate).

To address the enlargement-related challenges, some EU policies, particularly the Common Agriculture Policy and Cohesion Policy, should be adjusted to the environment of the enlarged Union before completing the accession of Ukraine and other new members. However, EU27 farmers benefitted from large subsidies over past decades and thereby were able to modernise their production and became competitive. Withholding such support from Ukrainian farmers, or providing much less support, would breach the equal treatment principle. In any case, the accession treaties will likely include transition provisions aimed at gradually phasing in these policies for Ukraine, as was done during the previous rounds of eastern enlargement.

EU enlargement to cover Ukraine (and other actual and potential candidates) may stress the Union's decision-making process, especially in areas requiring unanimity. Therefore, reforming the EU's institutional framework and decision-making process would be desirable, but a lack of progress should not block enlargement. In our opinion, the existing EU institutional framework could cope with some additional members, especially if accession treaties include post-accession compliance tools, including suspension of voting rights and EU funds in case of non-compliance with EU fundamental values or failures, or reversals in the rule of law and corruption control.

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Annex 1: MFF calculations

We estimate the impact of a hypothetical EU membership for Ukraine on the 2021-2027 Multiannual Financial Framework by assuming that all rules of this MFF apply, with the exception of the overall ceiling. Most likely, there will be transitional periods during which certain benefits to Ukraine will be restricted, as was the case with earlier eastern enlargements. The shares of cohesion and agricultural spending in total EU spending – the two main spending categories from which Ukraine would benefit – could decline further by the time Ukraine joins. Various caps and other parameters that determine the cross-country distribution of funds might change. We do not speculate about such possible changes but apply all the rules of the 2021-2027 MFF in our calculations.

We group EU expenditures into five main categories: 1) cohesion policy, 2) Common Agricultural Policy (CAP), 3) Neighbourhood and the world, 4) European public administration, 5) Others. In this annex, we detail our calculations for cohesion policy and the CAP under our baseline scenario. Our assumptions and calculations for the other three spending categories are described in section 5.7 of the main part of this report, as are the altered assumptions for our alternative scenario.

Throughout this section, we focus on commitment appropriations, not payment appropriations, even if some of the variables include payment in the name, like direct payments.

A1.1 Common Agricultural Policy (CAP)

The CAP budget is composed of two main funds:

- The 'first pillar': European Agricultural Guarantee Fund (EAGF) amounting to €291.1 billion at current prices in 2021-2027, of which up to €270 billion will be provided for income support schemes (called "direct payments"), with the remainder dedicated to supporting agricultural markets;
- The 'second pillar': European Agricultural Fund for Rural Development (EAFRD) amounting to €87.4 billion from the MFF (and an additional €8.1 billion from NextGenerationEU that we do not include in our calculations).

There is no numerical formula for the cross-country allocation of CAP funds; rather it is the result of a complex negotiation process. However, the 'external convergence' principle for direct payments per hectare continues to apply in the 2021-2027 MFF. Specifically, the July 2020 European Council⁵² concluded that (point 89): "*The external convergence of direct payments will continue. All Member States with direct payments per hectare below 90 percent of the EU average will close 50 percent of the gap between their current average direct payments level and 90 percent of the EU average in six equal steps starting in 2022. This convergence will be financed proportionately by all Member States. Additionally, all Member States will have a level of at least €200 per hectare in 2022 and all Member States shall reach at least €215 per hectare by 2027.*"

Country-specific pre-allocations for the direct payment component of EAGF (which incorporate the impact of the external convergence principle) and the full EAFRD are provided. During the first two years of the 2021-2027 MFF, the existing 2014-2020 CAP regulations continued to apply, as set out in the transitional regulation adopted on 23 December 2020 (Regulation (EU) 2020/2220). For 2023-2027, the country-specific pre-allocations are included in annexes of Regulation (EU) 2021/2115.

For direct payments and rural development, we use the pre-allocated values after minor adjustments to make sure that the sum of country-specific annual amounts is equal to the annual amounts reported on

52 See <https://www.consilium.europa.eu/en/press/press-releases/2020/07/21/european-council-conclusions-17-21-july-2020/>.

the relevant Commission webpage⁵³. For the €21.1 billion agricultural markets measure of EAGF, country-specific allocations are available only for a few sectors (wine, apiculture, hops, olive oil and table olives) and for a few countries. Since these allocations amount to only a small share of the total available CAP funds, instead of using this partial information, we assume that the share of each of the 27 current EU members of market measures in 2021-2027 will be the same as their shares were (among the current 27 members) in the actually implemented 2014-2020 MFF⁵⁴.

Thus, for €270 billion + €87.4 billion = €354.4 billion of CAP funds pre-allocations are available, while for the remaining €21.1 billion CAP funds, we assume that the cross-country allocation in 2021-2027 will remain the same as it was in 2014-2020, implying only a limited approximation in our calculations.

While only direct payments are related to the size of agricultural land, partly via the external convergence principle, in our calculations we assume that Ukraine's CAP funds would be proportional to its agricultural land for all three main types of payments: direct payments, market measures and rural development. Specifically, we assume that Ukraine's hypothetical funding per hectare would be the as the (weighted average) of the 13 countries that joined the EU in 2004-2013.

Three different concepts of land area are used in CAP calculations (European Commission, 2023):

- Utilised agricultural area (UAA): the total area irrespective of any claim for direct payments;
- Potentially eligible area (PEA): the total area declared by beneficiaries and potentially eligible for payment;
- Determined area (DA): the total area declared by beneficiaries and for which all eligibility conditions are met.

In 2021 in the EU27, PEA was 9.2 percent smaller than UAA, and DA was 3.9 percent smaller than PEA. In the 13 countries that joined the EU from 2004-2014, PEA was 10.9 percent smaller than UAA and DA was 0.4 percent smaller than PEA. At the time of MFF planning, the expected future values of these land area variables are not known. However, since there is little change from year to year, using 2021 values, which is available in European Commission (2023), would provide a reasonable approximation for the whole 2021-2027 MFF.

Obviously, Ukraine is not included in European Commission (2023) and thus the indicators UAA, PEA and DA are not available for Ukraine. To include Ukraine in our calculations, we downloaded data on 'Agricultural land' (AL) from the Food and Agriculture Organisation of the United Nations (FAO). The comparison of the first two data columns of Table 9 shows that AL from FAO and UAA from European Commission (2023) are identical or practically identical for most EU countries, with the notable exceptions of Greece, Malta, Slovenia and Spain. To proximate Ukraine's UAA, we multiply Ukraine's AL with the weighted average ratio of UAA/AL of the 13 countries that joined the EU from 2004-2013. We approximate Ukraine's PEA and DA similarly. The last line of the table shows that Ukraine would account for slightly more than 20 percent of EU's agricultural land after enlargement, assuming that Ukraine's territorial integrity is restored after Russia's war, which is our baseline scenario in section 5.7 of the main text of this report.

Next, we calculate the ratio of direct payments, rural development payments and market measures in 2021-2027 to the DA of each EU country and approximate Ukraine's figures as the product of its DA and the weighted average per hectare values of the 13 countries that joined the EU in 2004-2013. This calculation suggests that in total, Ukraine would obtain €85 billion (at current prices) CAP funding from the 2021-

53 See https://agriculture.ec.europa.eu/common-agricultural-policy/financing-cap/cap-funds_en. Our adjustments are minor. For example, for 2023, this webpage indicates €38.48 billion for 2023 direct payments (without detailing its country-composition), while Annex V of Regulation (EU) 2021/2115 indicates €38.61 billion (with country composition). In such cases, we proportionally increased or decreased the country-specific amounts in the annexes of Regulation (EU) 2021/2115 to match the total yearly value as reported in the above listed webpage.

54 The budget execution tables (https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/2021-2027/spending-and-revenue_en) also include, beyond spending in the then-28 EU members, CAP spending which are 'earmarked' (9 percent of total market interventions), and 'other' and 'non-EU' CAP spending (both of these are negligible) that we disregard.

2027 MFF and thereby become the largest beneficiary of CAP, ahead of France (€66 billion), Spain (€46 billion), Germany (€43.5 billion), and Italy (€40 billion).

The last line of the table shows that Ukraine's share of direct payments would be lower than its share of land area, reflecting lower direct payments per hectare in the 2004–2013 new members compared to earlier members. It would obtain a much lower share of market measures too. On the contrary, Ukraine would obtain a higher share of rural developments funds than its share of land area, reflecting a higher intensity of such funds in the 2004–2013 new members.

Table 9: Ukraine's hypothetical support from EU CAP in the 2021-2027 MFF (baseline scenario)

	Agricultural land	Utilised agricultural area	Potentially eligible area	Determined area	Direct payments	Rural development	Market measures	Total CAP	Total CAP
	2021, 1000 hectares				2021-2027, EUR millions, current prices			2018 prices	
Austria	2,597	2,602	2,535	2,277	4,737	3,764	205	8,707	7,738
Belgium	1,366	1,368	1,372	1,312	3,460	599	611	4,670	4,151
Bulgaria	5,047	5,047	3,841	3,803	5,699	2,042	244	7,985	7,097
Croatia	1,476	1,476	1,112	1,096	2,590	2,152	74	4,815	4,280
Cyprus	123	123	133	132	333	172	59	564	501
Czechia	3,530	3,530	3,531	3,530	5,977	1,876	165	8,018	7,126
Denmark	2,618	2,618	2,595	2,555	6,029	550	126	6,705	5,959
Estonia	987	987	969	967	1,391	637	44	2,072	1,841
Finland	2,268	2,268	2,286	2,245	3,642	2,566	71	6,279	5,580
France	28,554	28,898	26,893	25,529	50,923	10,564	4,625	66,112	58,756
Germany	16,591	16,592	16,713	16,590	34,368	7,907	1,273	43,548	38,702
Greece	5,867	5,137	4,302	3,975	14,143	4,031	539	18,713	16,631
Hungary	5,044	5,049	4,976	4,961	8,692	3,017	389	12,098	10,752
Ireland	4,337	4,337	4,667	4,433	8,294	2,256	160	10,709	9,518
Italy	12,403	12,987	10,509	9,705	25,369	9,771	4,836	39,976	35,528
Latvia	1,970	1,970	1,767	1,758	2,472	850	66	3,389	3,012
Lithuania	2,938	2,937	2,887	2,870	4,156	1,415	130	5,701	5,066
Luxembourg	133	133	122	120	229	89	40	358	319
Malta	9	11	7	7	32	145	4	181	161
Netherlands	1,812	1,812	1,767	1,740	5,016	530	404	5,950	5,288
Poland	14,499	14,522	14,201	14,167	21,807	9,555	1,122	32,484	28,869
Portugal	3,962	3,980	3,073	2,852	4,338	3,913	882	9,133	8,117
Romania	13,079	13,079	9,775	9,758	13,777	7,000	536	21,313	18,942
Slovakia	1,856	1,856	1,839	1,826	2,832	1,875	85	4,792	4,259
Slovenia	611	479	457	439	920	797	65	1,782	1,584
Spain	26,228	24,420	21,165	19,146	33,997	7,820	4,194	46,011	40,891
Sweden	3,003	3,003	2,928	2,903	4,798	1,534	131	6,463	5,744
EU27	162,908	161,223	146,420	140,695	270,020	87,430	21,080	378,530	336,411
Ukraine	41,311	41,229	36,731	36,584	57,061	25,460	2,408	84,930	75,479
EU27+Ukraine	204,219	202,452	183,151	177,279	327,081	112,890	23,488	463,460	411,890
Ukraine's share in EU28	20.2%	20.4%	20.1%	20.6%	17.4%	22.6%	10.3%	18.3%	18.3%

Source: Agricultural land is from the Food and Agriculture Organisation of the United Nations for all countries. Utilised agricultural area, Potentially eligible area, and Determined area are from European Commission (2023) for EU27 countries and our approximation for Ukraine, assuming that their ratios to Agricultural land is the same as in the average of the 13 countries that joined the EU in 2004-2013. Direct payments and rural development for EU27 countries are from the relevant legislations (after minor adjustments), while for market measures we assume that the percent distribution across countries will remain the same in 2021-2027 as it was in 2014-2020. For Ukraine, we approximate the three main CAP spending items as the product of its land area measured by DA and the weighted average per hectare (DA) values of the 13 countries that joined the EU in 2004-2013.

The Financial Times reported a leaked Council calculation, which suggested €96.5 billion CAP funding of Ukraine in the 2021-2027 MFF under current rules⁵⁵. This estimate is 14 percent higher than our €85 bil-

55 Henry Foy, 'EU estimates Ukraine entitled to €186bn after accession', *Financial Times*, 4 October 2023, <https://www.ft.com/content/a8834254-b8f9-4385-b043-04c2a7cd54c8>.

lion estimate. The methodology of the Council calculation is not detailed; the only information is that “the study employs a simple extrapolation of the EU’s existing budget rules”.

Emerson (2023) estimated that in 2022, Ukraine would have obtained €10.9 billion CAP funding. Our estimate is higher than the estimate of Emerson (2023) for four main reasons. First, he disregarded Ukraine’s land areas occupied by Russia. By contrast, since we are interested in analysing the long-term impact of Ukraine’s EU entry on the EU budget and do not wish pre-judge the possible outcomes of the war, we consider Ukraine’s full agricultural land territory as reported by FAO, assuming that the country’s territorial integrity will be restored. Second, the land area concept ‘arable land’ Emerson (2023) used differed from the concepts UAA, PEA and DA used by the Commission and us for CAP calculations. Third, he used actual budget implementation data for a particular year, 2022, treating all CAP funds similarly, while we discriminate between the three main types of CAP funds and use the direct payment and rural development pre-allocations for 2021-2027 and our estimate for market measures. And fourth, he used the average of Poland and Romania to scale Ukraine’s possible payments, while we use the weighted average of all the 13 countries that joined the EU in 2004-2013.

A1.2 Cohesion policy

The Common Provision Regulation (CPR) 2021/1060 sets out the global resources available for Cohesion Policy in the MFF and the methodology for allocating resources per member state (Regulation (EU) 2021/1060). It is the only element of the EU budget with a publicly available, transparent cross-country allocation methodology.

A1.2.1 Cohesion policy funds in the 2021 – 2027 MFF

Articles 109 and 110 of CPR 2021/1060 detail the size of the funds through which Cohesion policy is implemented, which are summarised in Table 10.

Table 10: Cohesion policy breakdown: Funds supporting economic, social and territorial cohesion in the 2021 – 2027 MFF (€ billions)

Fund	2018 prices	Current prices
European Regional Development Fund (ERDF)	200.36	226.05
European Social Fund Plus (ESF+)	87.32	99.26
Cohesion Fund (CF)	42.56	48.03
Interreg	8.05	8.96
Outermost regions	1.93	2.17
Just Transition Fund (JTF)	7.5	8.45
Total	347.72	392.94

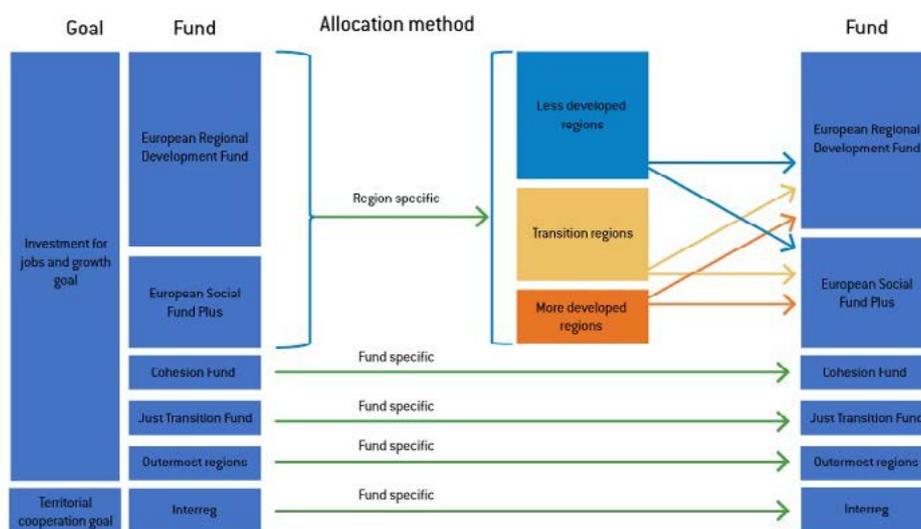
Source: Based on CPR Regulation 2021/1060, which lists global resources in 2018 prices, and ‘The EU’s 2021-2027 long-term Budget and NextGenerationEU: Facts and Figures Brochure’, which lists global resources in current prices. The JTF was extended with a €10 billion top up (2018 prices) by NGEU, which is not included in this table. Article 110(3) specifies that €10 billion (2018 prices) from the Cohesion Fund is to be transferred to the Connecting Europe Facility (CEF), reducing member states’ allocations accordingly. This is not reflected in this table. Current price allocations for outermost regions are estimated using the average scaling factor for 2018 prices – current prices, given that current price allocation is not available.

Although resources are delivered to member states through the above funds, allocation is not uniquely determined by these funds, but also by goal and region type. There are two goals in the 2021-2027 MFF: the investment for jobs and growth (IJG) goal, and the territorial cooperation goal (Interreg). There are three region types specified in the 2021–2027 MFF: less-developed regions, transition regions and more-developed regions.

The ERDF and the ESF+ do not have their own allocation methodologies, but cross-country allocations for these two funds are determined together through three distinct methodologies based on regional prosperity, as separate calculation methods are used for less developed, transition, and more developed

regions. On the other hand, the CF and the JTF have own methodologies. Figure 17 gives an overview of the funds and their allocation principles.

Figure 17: Visualisation of cohesion policy allocation structure



Source: Bruegel visualisation based on our understanding of Annex XXVI of CPR Regulation 2021/1060 and Commission Press Release on the 'Allocation method for the Just Transition Fund', available at https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_66.

ERDF and ESF+

While the legislation specifies separate quantities for ERDF and ESF+ funds, for allocation they are combined and determined by three methodologies differing according to the level of development of NUTS2⁵⁶ regions: less-developed regions, transition regions and more-developed regions. Regions are determined by their GDP *per capita* (at purchasing power standards, PPS) relative to the EU27 average, shown in Table 11. Allocations to each of these regions entail multiple steps.

For less-developed regions, an initial absolute amount per year is calculated using the product of the regional population and the regional GDP *per capita* PPS relative to the EU27 average. This value is scaled by the member state's GNI *per capita* relative to the EU27 average. To this amount is added premiums based on multiple variables. These variables are regional unemployment, regional youth unemployment, regional rates of low education, national greenhouse gas emissions outside the emissions trading scheme and national net non-EU migration.

For transition regions, an initial regional allocation is determined based on a linear interpolation of regional GDP *per capita* PPS compared to the EU27 average, interpolated between a lower and upper bound. To this amount, the same premiums as for less-developed regions are added.

For more-developed regions, an initial total financial envelope for all member states is determined by the size of the eligible population. This financial envelope is then allocated to regions based on the values of several socio-economic and demographic indicators relative to the average of all more developed regions. These indicators are regional population, unemployment rate, employment rate, tertiary education attainment, early leavers from education and training, GDP *per capita* PPS and population density. Two of the premiums which apply to transition regions and less developed regions also apply: national greenhouse gas emissions and national net non-EU migration.

56 Nomenclature of Territorial Units for Statistics level 2: Basic regions for the application of regional policies.

Table 11: Region classification for the funds to ERDF and ESF+ under the IJG goal

Region type	Relative to EU average GDP <i>per capita</i> at PPS	Allocation methodology
Less developed regions	GDP <i>per capita</i> < 75%	Annex XXVI; 1(a) – 1(g)
Transition regions	75% <= GDP <i>per capita</i> <= 100%	Annex XXVI; 2(a) – 2(g)
More developed regions	100% < GDP <i>per capita</i>	Annex XXVI; 3 – 6
More developed regions	100% < GDP <i>per capita</i>	Annex XXVI; 3 – 6

Source: Bruegel based on CPR Regulation 2021/1060, Article 108. Average GDP *per capita* 2015-2017.

Once regional allocations have been calculated, they are disbursed to member states through the ESF+ and ERDF. There is no publicly disclosed methodology for how the regional allocations are converted to the two funds.

CF, Interreg and outermost regions

Allocations for the CF, Interreg and outermost regions have unique methodologies⁵⁷. The CF is only allocated to member states whose GNI *per capita* in PPS in 2015-2017 was less than 90 percent of the EU27 average. The initial size of the entire CF is the product of the total eligible population of the countries that meet the GNI condition and the average aid intensity per head of €62.9. This amount is distributed to member states based on their surface area, population and relative prosperity.

Allocations for Interreg are determined by four variables related to population. These variables are the population of outermost regions, total population of member states, population living within 25km of a border and the geographical distribution of the population of border regions.

For outermost regions, the initial financial envelope is determined by the product of the total eligible population and average yearly aid intensity per head of €40. This financial envelope is allocated to outermost regions proportionally by their populations.

Just Transition Fund

The financial resources for the Just Transition Fund are from both the MFF (€7.5 billion) and NGEU (€10 billion). Here we focus on the MFF. The allocation of the Just Transition Fund funding depends on various indicators: greenhouse gas emissions, employment in the mining of coal and lignite, employment in industry with high carbon intensity, production of peat and oil shale. GNI *per capita* is also factored in, and there is an overall upper limit per country (for the MFF, the Commission initially proposed € 2 billion per country⁵⁸, which apparently was reduced to €1.5 billion; Regulation (EU) 2021/1056) as well as a lower limit (€6 per inhabitant).

Caps and safety nets

After calculating a baseline allocation of the individual funds above, points 10 – 23 of Annex XXVI comprise minimum safety nets and maximum caps which apply to the total sum of funds for a country. They also contain several additional provisions.

A1.2.2 Our approach

We follow a bottom-up approach to calculate Ukraine's possible cohesion policy payments: we do not assume any particular value for total cohesion policy payments for an enlarged EU that also includes Ukraine, but we apply the allocation methods to regions (ERDF and EFS+) and countries (other funds) for each of the current 27 EU members and Ukraine, and add up the results of these calculations to obtain the total number.

We present detailed calculations for less-developed regions, transition regions and more-developed

57 The methodology for allocation of the CF is in Annex XXVI; 7(a) – (b); the methodology for Interreg is in Annex XXVI; 8(a) – (d); the methodology for outermost is in Annex XXVI; 9.

58 See https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_66.

regions under the combined ERDF and ESF+ and for the Cohesion Fund, which together account for 95 percent of all cohesion policy funds⁵⁹.

We do not replicate the official allocations for the remaining 5 percent of all cohesion policy funds: Interreg, outermost regions, and JTF.

- Interreg calculations require very granular population data from GEOSTAT⁶⁰. We are unable to find equivalent data for Ukraine. For Ukraine's Interreg allocation, we make a simple assumption based on Ukraine's relative population to Poland.
- Outermost regions: we assume that none of Ukraine's regions would qualify as an outermost region.
- JTF: data limitations hinder detailed calculations. Yet since the distribution of the JTF also depends on the difference between the national GNI *per capita* and the average EU GNI *per capita*, Ukraine would likely be subject to the € 1.5 billion cap.

To master the methodology of cohesion policy fund allocations, we start by replicating the allocations for the current EU27 members to check how closely our calculation matches the official allocation. We need this methodology to allocate the cohesion policy funds across EU27+Ukraine in our hypothetical scenario of Ukraine being an EU member state, and thus need to verify that we can replicate the official methodology with a high degree of accuracy.

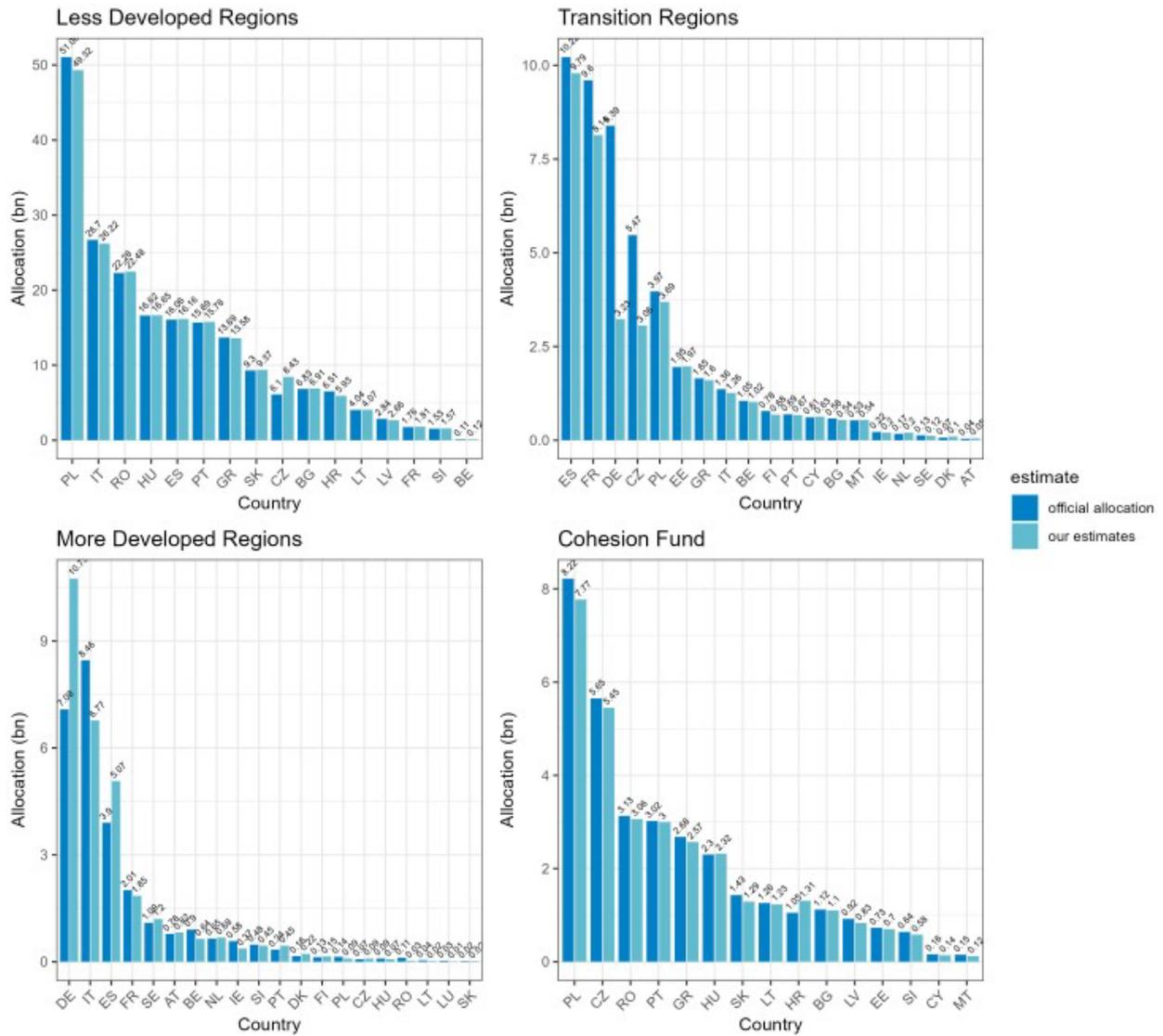
A1.2.3 Replication of cohesion policy cross-country allocations in the 2021 – 2027 MFF

Figure 18 contains our replication of the four main component parts of the IJG goal, compared to the official allocations from Commission's Implementing Decision 2021/1131. In many cases, we replicate to a high degree of accuracy. In other cases, our replication is not sufficiently precise. However, discrepancies between our replications and official allocations are largely reduced when we sum these component parts, shown in Figure 18. In all but six cases, we replicate this sum with an error of less than 10 percent.

59 We do not convert the combined ERDF and ESF+ allocations for less developed, transition, and more developed regions to these two funds.

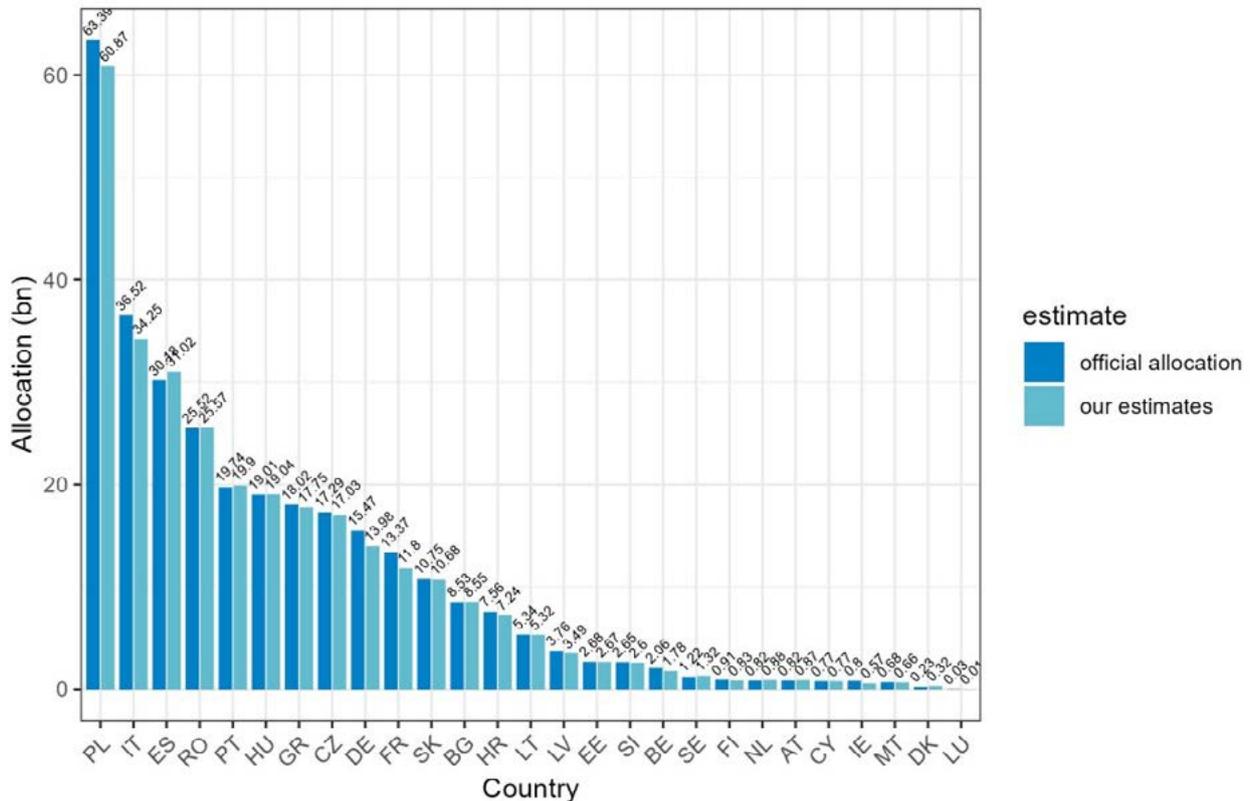
60 See <https://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/population-distribution-demography/geostat>.

Figure 18: Cross-country allocations of the four main components of the IJG goal, 2018 prices, € billions



Source: Official allocation: Commission Implementing Decision (EU) 2021/1131 of 5 July 2021; Bruegel calculations for our estimates.

Figure 19: Cross-country allocations of sum of the four main components of the IJG goal, 2018 prices, € billions



Source: Official allocation: Commission Implementing Decision (EU) 2021/1131 of 5 July 2021; Bruegel calculations for our estimates.

There are numerous reasons for not being able to replicate the official cross-country allocations perfectly.

First, there are several steps in the methodology that we are unable to apply. Under Additional Provisions in Annex XXVI of CPR 2021/1060, points 14 and 16 apply minimum safety nets relative to the 2014–2020 allocation on a regional level. Whilst official allocations for the 2014–2020 MFF are publicly available at a national level, they are unavailable at the regional level, which would be required to calculate this safety net. This makes it impossible to apply points 14 and 16, as well as the second party of point 13, which requires a 25 percent transfer of funds from more-developed regions to transition regions at a country level if point 16 applies. Given the large underestimate of Germany’s allocation for transition regions, and corresponding large overestimate for more developed regions, we suspect this may have applied to Germany. However, we are unable to verify.

Second, we do not attempt to include transfers between funds that Article 111 allows for. Such transfers are agreed between the Commission and the Member State in either the Partnership Agreement or in the context of the mid-term review.

Third, point 10 of Annex XXVI applies a maximum cap of funds based on annual GDP projections of the Commission for the 2021–2027 period. We use GDP forecasts from the AMECO November 2020 dataset, since we assume this data would closely represent the data that the Commission had available at the time of calculations. This dataset contains GDP forecasts until the year 2025. To have forecasts until 2027, we assume the growth rate between 2024 and 2025 when assuming the Commission’s forecasts for 2026 and 2027, while the Commission has likely used different projections for 2026–2027⁶¹.

61 After projecting current price forecasts, we convert these forecasts to 2018 prices when applying point 10, which might not involve a major calculation error.

Fourth, we do not calculate the premium for CO2 emissions when calculating allocations for less developed, transition and more developed regions. There is no readily available dataset from Eurostat with country emissions outside the emissions trading scheme, and calculating this for 2005–2030, the period for which reduction targets apply, would be a major task.

Fifth, in the case of missing data, we impute based on the best next level of granularity. This is either the NUTS1 regional data or national data. Whilst this may not be the best choice, given that some regions did not have partial time series that we could extend, this was the best umbrella method available.

Sixth, we use data downloaded from Eurostat in September 2023. This may be different from what the Commission used when calculating allocations.

Seventh, for calculations where an initial envelope is determined by the 2015–2017 average GDP *per capita* PPS, we assume a multiplication factor of 1.022 to attain 2018 prices, while the Commission could have used a different method.

Eighth, we use many datasets from Eurostat in our calculations. These may not directly correspond to what the Commission used in its calculations of the cohesion policy, but we have no way of verifying the specific datasets they use.

Finally, we treat Croatia as one NUTS 2 region due to data limitations, though most likely, this does not distort our calculations. Croatia changed its NUTS 2 classifications in 2021, increasing from two regions to four regions. When the Commission calculated allocations for the 2021–2027 MFF, it naturally used Croatia’s 2-region classification of the time. However, currently, some datasets only report data for the old NUTS 2 classification, while others only report the new classification. We therefore treat Croatia as one region. Given that all of Croatia was considered a less developed region in the 2021–2027 MFF, this does not pose major issues.

A1.2.4 Introducing Ukraine into the 2021–2027 MFF under our baseline scenario

Ukraine’s GDP and GNI at PPS

EU budget calculations use GDP and GNI data measured at purchasing power standard (PPS) as defined by Eurostat. Such data is not available for Ukraine, but other datasets include Ukraine’s GDP and GNI data at purchasing power parity (PPP), which is, in principle, is the same concept as PPS. However, for EU countries for which PPS data is available from Eurostat and PPP data is available from other datasets, we noticed some discrepancies. We therefore approximate GDP and GNI data at PPS for Ukraine by scaling Ukraine’s data to Bulgaria, the EU country with the lowest level of per-capita income.

Specifically, we first calculate the ratio of Ukraine’s average GDP *per capita* PPP in current international dollars in 2015–2017 to Bulgaria’s same indicator using the IMF’s World Economic Outlook database. We then multiply Bulgaria’s GDP *per capita* PPS (from AMECO November 2020) by this ratio. For approximating GNI, we use the ratio of GNI *per capita* PPP in current international dollars from World Development Indicators and follow the same procedure. We summarise these values for Ukraine, and how this changes the EU average in Table 12.

Table 12: GNI and GDP estimates for Ukraine and the EU, average 2015 – 2017, current price PPS (baseline scenario)

	Ukraine	EU27	EU27 + Ukraine
GNI <i>per capita</i> PPS	7,993	28,260	26,490
GDP <i>per capita</i> PPS	7,715	28,300	26,502

Source: AMECO November 2020 Database for EU27; Bruegel calculations as described in the main text for Ukraine and EU27+Ukraine.

Since the less-developed, transition and more-developed region allocations for the IGJ goal of ERDF and ESF+ cohesion policy are calculated at the NUTS2 level, we use equivalent data for Ukraine. Ukraine’s

statistics report regional data for 28 regions in Ukraine. NUTS2 regions typically contain between 0.8 million and 3 million individuals. All but two of the Ukrainian regions report populations which fall within this range, so we assume that these regions would be roughly equivalent to NUTS2 regions.

Regional GDP *per capita* PPS for each of these Ukrainian regions is required to determine region's classification into less-developed, transition and more-developed regions. Since we do not have information on within-Ukraine price-level differences, we assume that the same overall Ukrainian PPS/current price factor for each region. We find that all regions, except for Kyiv city, would qualify as less developed regions (Table 13). Kyiv city would qualify as a transition region.

Table 13: Ukrainian regions by GDP *per capita*

Region	Gross Regional Product (UAH)	GDP <i>per capita</i> PPS estimate (000s)	Percentage of EU GDP <i>per capita</i> PPS (EU27+1)
Ukraine	57494.00	7.72	29.11%
Autonomous Republic of Crimea
Vinnitsya	47393.67	6.36	24.00%
Volyn	38211.33	5.13	19.35%
Dnipropetrovsk	79445.33	10.66	40.23%
Donetsk	32827.00	4.41	16.62%
Zhytomyr	39639.33	5.32	20.07%
Zakarpattya	27637.67	3.71	13.99%
Zaporizhzhya	61844.67	8.30	31.31%
Ivano-Frankivsk	38890.67	5.22	19.69%
Kirovohrad	47317.67	6.35	23.96%
Luhansk	12967.33	1.74	6.57%
Lviv	46946.67	6.30	23.77%
Mykolayiv	50692.67	6.80	25.67%
Odesa	51494.67	6.91	26.07%
Poltava	84509.67	11.34	42.79%
Rivne	35437.33	4.76	17.94%
Sumy	43426.00	5.83	21.99%
Ternopyl	30924.33	4.15	15.66%
Kharkiv	57458.33	7.71	29.09%
Kherson	37439.00	5.02	18.96%
Khmelnyskiy	39799.67	5.34	20.15%
Cherkasy	49465.33	6.64	25.05%
Chernivtsi	25066.00	3.36	12.69%
Chernihiv	44020.33	5.91	22.29%
Kyiv county	74743.00	10.03	37.85%
Kyiv city	195442.33	26.23	98.96%
City of Sevastopol

Sources: first data column: State Statistics Service of Ukraine; second and third data columns: Bruegel calculations as described in the main text.

Difficulties in applying the MFF's cohesion policy allocation methods to Ukraine

The application of the MFF's cross-country allocation methodology for less-developed, transition and more-developed regions face the limitations we listed in the previous section when applying the methodol-

ogies to EU27 countries. Additionally, there are some Ukraine-specific issues too.

First, our calculations for regional GDP *per capita* PPS assume the same conversion factor from current price to PPS in each region of Ukraine. This ignores regional price disparities since the price level is unlikely to be uniform across the country.

Second, UKRStat does not report data for Crimea since 2014. Therefore, we are bound to exclude this region from our calculations. Furthermore, whilst data is reported for Donetsk and Luhansk, data excludes the temporarily occupied territories within these regions at the time.

Third, we do not apply point 15 of annex XXVI to Ukraine: "No transition region shall receive less than what it would have received if it had been a more developed region." It requires multiple data inputs, some at quite a granular level, not all of which we could not find for Ukraine. Given the small allocation that Kyiv city would receive, this would likely make negligible changes to our results.

Fourth, there are a number of safety nets for the 2021-2027 cohesion policy allocation which are based on what the region received in the 2014-2020 allocation. We do not apply this safety net for Ukraine because we did not estimate Ukraine's hypothetical allocation under the 2014-2020 MFF.

Finally, we do not calculate the premium for CO2 emissions outside the ETS, nor for low levels of education, due to data availability limitations.

Our estimate for Ukraine's Cohesion Policy allocations

Our calculations for Ukraine's hypothetical allocation from the four main cohesion policy components before applying caps, safety nets, and bonuses, produce very large results: Ukraine's less developed regions are allocated €166 billion, the Kyiv transition region is allocated €0.4 billion, and €23 billion is allocated for the country from the Cohesion Fund, in 2018 prices. However, these allocations are directly affected by point 10 of Annex XXVI, which limits the maximum amounts a member state can receive from the funds supporting economic, social, and territorial cohesion states. For countries with average GNI *per capita* (in PPS) in 2015-2017 below 55 percent of the EU27 average, the category to which Ukraine would belong, this cap is 2.3 percent of GDP. This cap reduces Ukraine's cohesion policy allocations to less than one-sixth than what the country would obtain in the absence of this cap. By using the IMF's October 2020 projections and extending them to 2026-2027 as before, the 2.3 percent GDP cap results in € 23.71 billion funding in total in 2021-2027, in 2018 prices. This amount is distributed between less developed regions (€ 20.70 billion), the Kyiv transition region (€ 0.05 billion) and the Cohesion Fund (€ 2.89 billion).

We assume that Ukraine's transfer from the CF to the Connecting Europe Facility (CEF) would be similar to Hungary's transfer of €0.71 billion at 2018 prices, given their similar pre-CEF CF allocation. This reduces the CF to €2.18 billion, but it does not alter Ukraine's total cohesion policy funding.

Not all indicators (greenhouse gas emissions, employment in the mining of coal and lignite, employment in industry with high carbon intensity, production of peat and oil shale) used for the allocation of the Just Transition Fund are available for Ukraine. However, the difference between the national GNI *per capita* and the average EU GNI *per capita* is also a factor for JTF allocations, which would boost Ukraine's allocation to a high level. There is also an upper limit of €1.5 billion (at 2018 prices) per country, which is binding only for Poland among the EU27. This €1.5 billion cap would also be binding for Ukraine and thus we use this amount for Ukraine.

Beyond the maximum transfer level determined by Article 10 that we calculated so far, an additional provision for population declines in point 19 of Annex XXVI might have also benefited Ukraine. This annex specifies that "Where the population of a Member State has declined, on average, by more than 1 percent per year, between the periods 2007-2009 and 2016-2018, that Member State shall receive an additional allocation equivalent to the total fall in its population between those two periods multiplied by € 500." Ukraine's population declined from 46 million people on average in 2007-2009 to 42.2 million in 2016-2018, corresponding to an average annual decline of 0.95 percent. While this is marginally below the 1 percent threshold set in the regulation, the gap to this threshold is so small that we assume this bonus would have also applied to Ukraine. Thus, we multiply the 3.8 million people decline with the €500 per person support, resulting in an extra €1.89 billion at 2018 prices.

We assume that Ukraine may have benefitted from a premium similar to those received by ten countries in point 22 of Annex XXVI. These premia are for the purpose of boosting competitiveness, growth and job creation, but no formula is provided, nor any justification for why these ten countries obtained certain amounts. Poland received €600 million (at 2018 prices) for its less developed regions. Given the similarity in population size, we assume that Ukraine may have received a similar “boost” to Poland.

Both the boost and the population premium are allocated to less developed regions, increasing the total allocation for less developed regions to €23.19 billion at 2018 prices.

Finally, we assume that Ukraine’s Interreg allocation would be equivalent to Poland’s multiplied by the ratio of average Ukrainian population in 2015-2017 to the average Polish population of the same period.

Overall, we find that Ukraine would have received a total of €28.20 billion (at 2018 prices) or €31.88 billion (at current prices) over the 2021-2027 MFF period (Table 14).

Table 14: Ukraine’s hypothetical support from EU cohesion policy in the 2021-2027 MFF, € billion (baseline scenario)

	2018 prices	Current prices
Less-developed regions	20.70	23.41
Transition regions	0.05	0.06
More-developed regions	---	---
Cohesion Fund	2.18	2.47
Connecting Europe Facility	0.71	0.80
Interreg	0.57	0.63
Just Transition Fund	1.50	1.69
Compensation for population decline	1.89	2.14
Boosting competitiveness	0.60	0.68
Total	28.20	31.88

Source: Bruegel.

A1.2.5 How Ukraine’s EU membership would have altered the EU27 country allocation for cohesion policy?

If Ukraine were a member of EU, the EU average GNI *per capita* would have been lower (Table 12). Therefore, some of the EU27 regions currently considered as less-developed regions might have qualified as transition regions. Similarly, some transition regions may have been classified as more-developed regions. Since a higher regional classification implies less cohesion policy funding, Ukraine’s EU membership would have altered the allocation to existing EU member states in the 2021-2027 budget.

Since we were not able to replicate the current cohesion policy allocations exactly, but only to a high level of accuracy, we use a difference-approach to estimate the impact of Ukraine’s EU membership on current EU27 countries. That is, for each EU27 country, we calculate the difference between our calculation for EU27+Ukraine and our calculation for EU27 (which was presented in the previous section) and add this difference to the official allocation to arrive at our estimate for cross-country allocations under the hypothesis that Ukraine was a member of the EU.

Given the decrease in average EU GNI *per capita* PPS due to Ukraine’s EU membership, Malta and Cyprus would no longer qualify for the CF. Furthermore, given the change in average EU GDP *per capita* PPS, no Belgian regions would qualify as less-developed regions. Finally, Malta and Sweden would no longer contain transition regions and would entirely qualify as more developed regions.

Yet a number of countries would see no change in their allocations. Since we follow the bottom-up methodology with no regard for maximum funds following the introduction of Ukraine, unchanged allocations are likely due to unchanged regional classifications, or maximum caps and minimum safety nets applying.

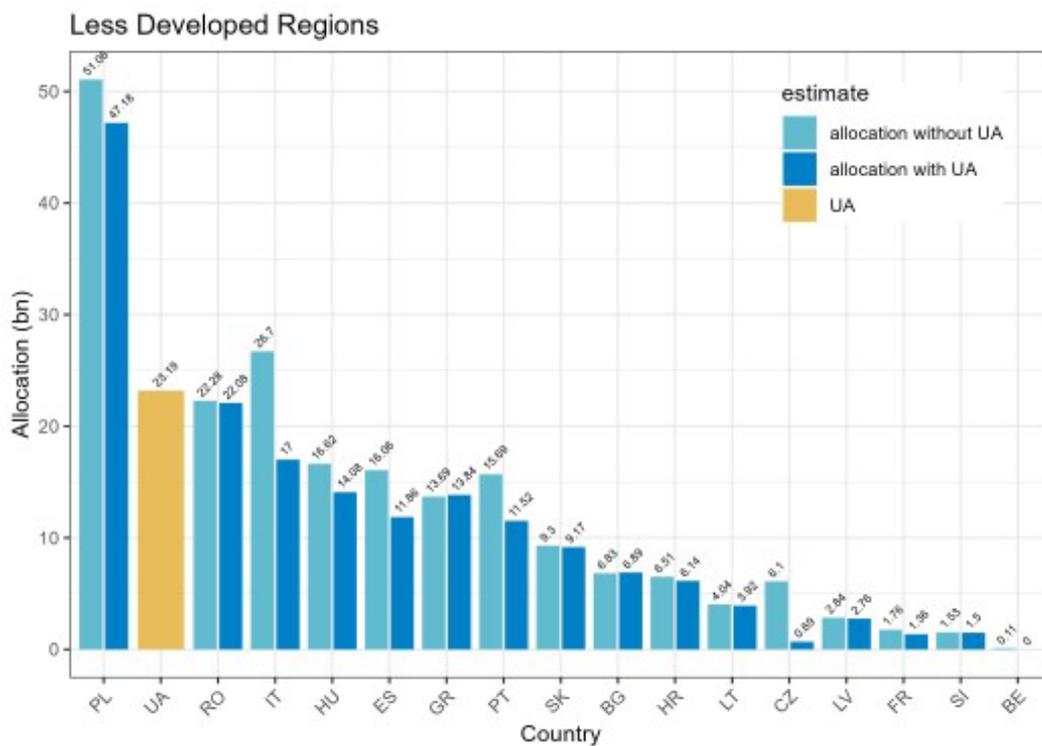
The results are displayed for the four main components of cohesion policy in Figure 20, and for the sum of these four components in Figure 21 and in Table 15. Table 15 also shows the aggregate for the EU27 and the EU27+Ukraine.

The EU27 would have obtained €20.09 billion (at 2018 prices) less from cohesion funds, had Ukraine been a member of the EU. Less developed EU27 regions would have obtained €31.13 billion less (partly because there would be fewer regions classified as less developed in the EU25 after Ukraine reduces the average GDP *per capita* of the enlarged EU), while transition regions would have obtained about €6 billion more and more developed regions €4 billion more – reflecting that more EU27 regions would be classified as transition and more developed regions after Ukraine’s entry.

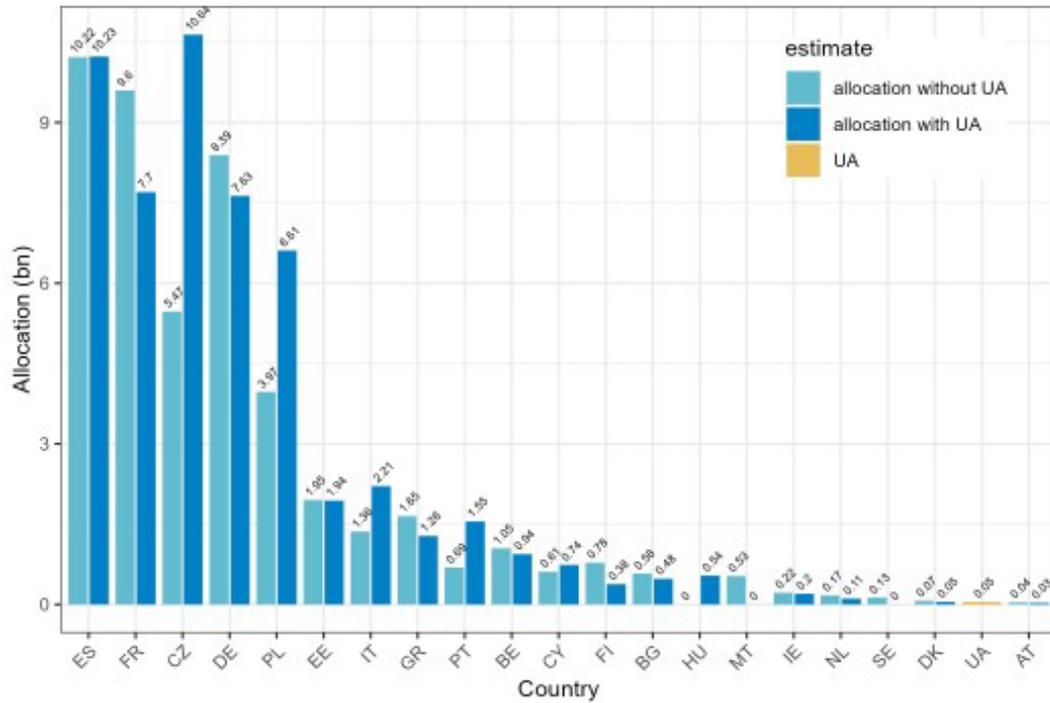
Italy would face the largest reduction (measured in euros at 2018 prices) by €8.5 billion, followed by Spain (€3.74 billion), Portugal (€3.65 billion) and Hungary (€2.1 billion). Poland’s allocation would not change because it was limited by the 2.3 percent of GDP cap, which continues to apply to Poland.

Ukraine would obtain €25.42 billion (at 2018 prices) from these four main cohesion policy components, and thereby, the EU27’s €308.12 billion allocation without Ukraine would increase to €313.45 billion with Ukraine (at 2018 prices), leading to a relatively small increase in overall cohesion policy spending.

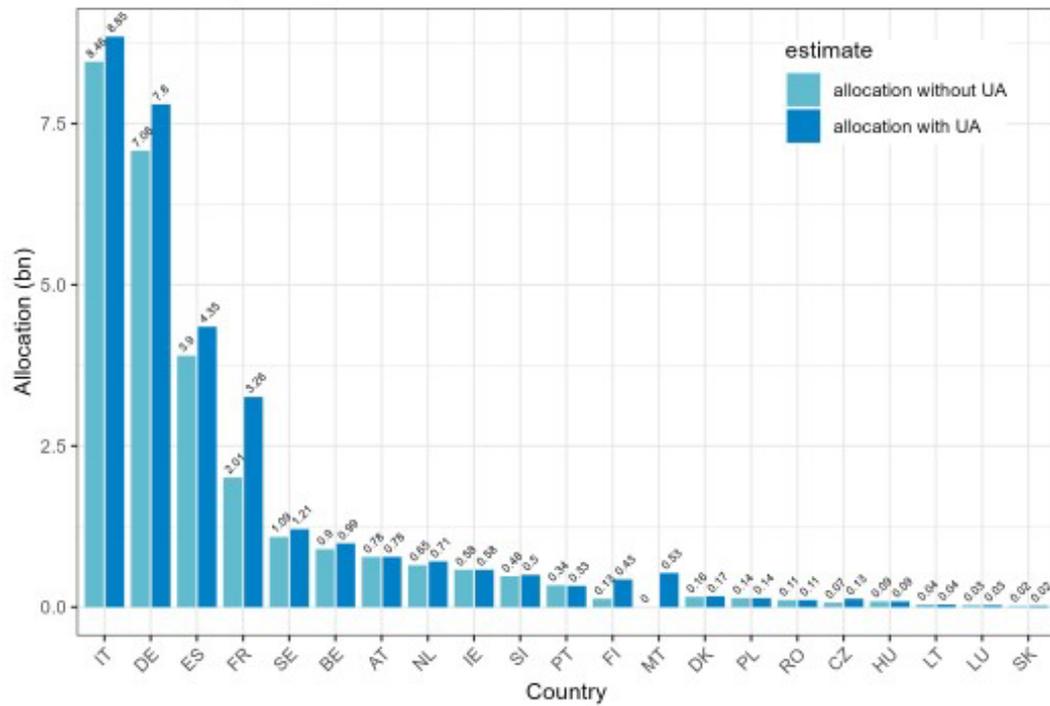
Figure 20: Official allocation of four main components of the IJG goal in the 2021-2027 cohesion policy and modified allocation if Ukraine was a member of the EU, at 2018 prices, € billions (baseline scenario)



Transition Regions



More Developed Regions



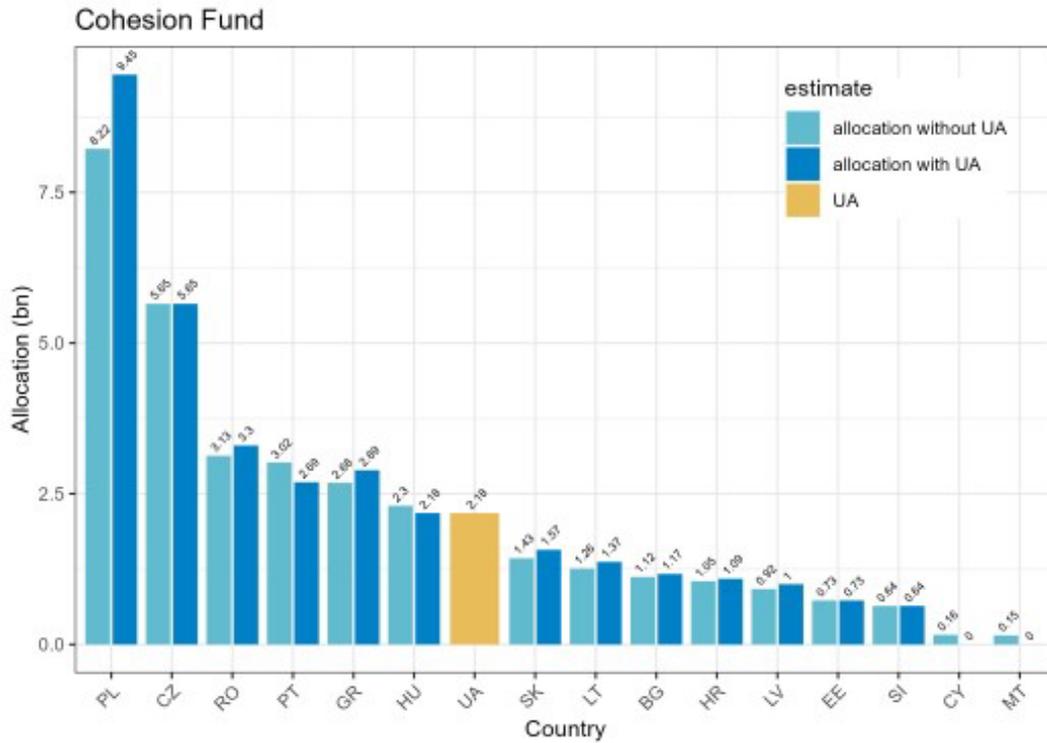


Figure 21: Cohesion policy funds in the in the 2021-2027 MFF: with and without Ukraine, sum of the four main components, at 2018 prices, € billions (baseline scenario)

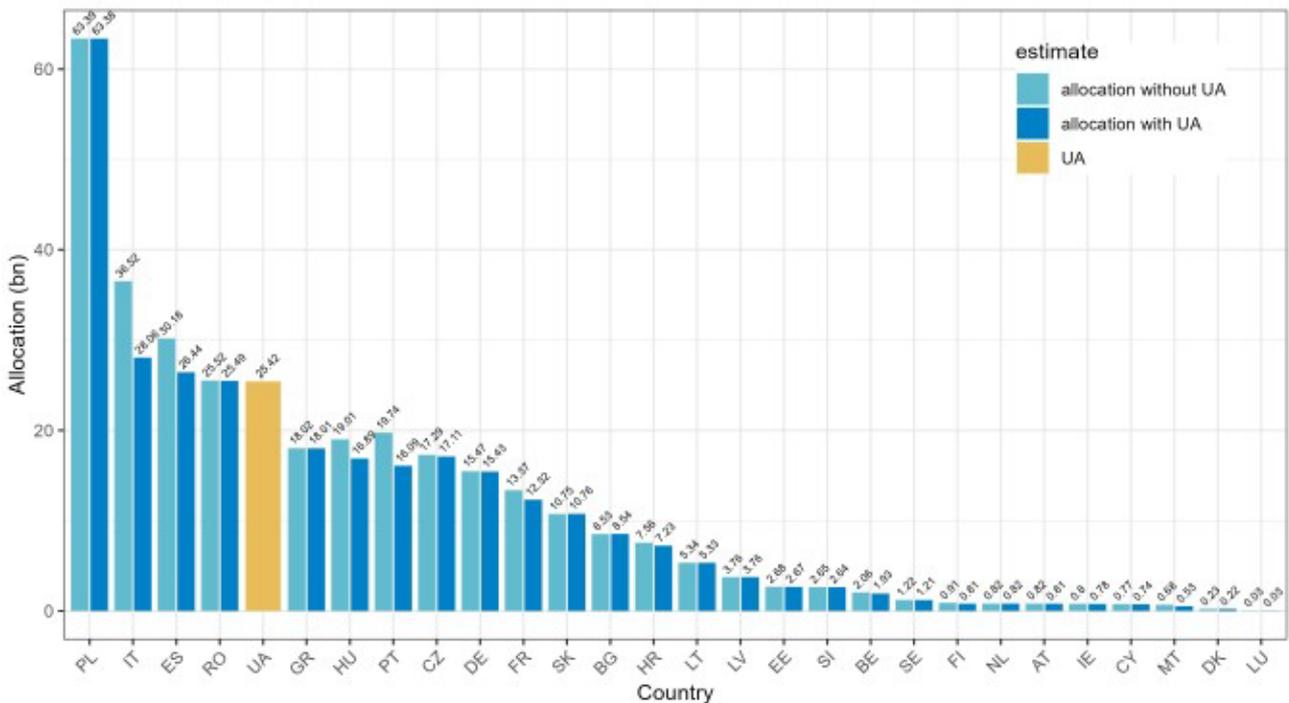


Table 15: Cohesion policy funds in the in the 2021-2027 MFF: with and without Ukraine, sum of the four main components, at 2018 prices (baseline scenario)

Country	Estimate	Less developed regions (€ billion)	Transition regions (€ billion)	More developed regions (€ billion)	Cohesion Fund (€ billion)	Total (€ billion)	€ change (billion)	Percentage change
AT	allocation without UA	0	0.04	0.78	0	0.82		
	allocation with UA	0	0.03	0.78	0	0.81	-0.01	-1%
BE	allocation without UA	0.11	1.05	0.9	0	2.06		
	allocation with UA	0	0.94	0.99	0	1.93	-0.13	-6%
BG	allocation without UA	6.83	0.58	0	1.12	8.53		
	allocation with UA	6.89	0.48	0	1.17	8.54	0.01	0%
CY	allocation without UA	0	0.61	0	0.16	0.77		
	allocation with UA	0	0.74	0	0	0.74	-0.03	-4%
CZ	allocation without UA	6.1	5.47	0.07	5.65	17.29		
	allocation with UA	0.69	10.64	0.13	5.65	17.11	-0.18	-1%
DE	allocation without UA	0	8.39	7.08	0	15.47		
	allocation with UA	0	7.63	7.8	0	15.43	-0.04	0%
DK	allocation without UA	0	0.07	0.16	0	0.23		
	allocation with UA	0	0.05	0.17	0	0.22	-0.01	-4%
EE	allocation without UA	0	1.95	0	0.73	2.68		
	allocation with UA	0	1.94	0	0.73	2.67	-0.01	0%
ES	allocation without UA	16.06	10.22	3.9	0	30.18		
	allocation with UA	11.86	10.23	4.35	0	26.44	-3.74	-12%
FI	allocation without UA	0	0.78	0.13	0	0.91		
	allocation with UA	0	0.38	0.43	0	0.81	-0.1	-11%

FR	allocation without UA	1.76	9.6	2.01	0	13.37		
	allocation with UA	1.36	7.7	3.26	0	12.32	-1.05	-8%
GR	allocation without UA	13.69	1.65	0	2.68	18.02		
	allocation with UA	13.84	1.28	0	2.89	18.01	-0.01	0%
HR	allocation without UA	6.51	0	0	1.05	7.56		
	allocation with UA	6.14	0	0	1.09	7.23	-0.33	-4%
HU	allocation without UA	16.62	0	0.09	2.3	19.01		
	allocation with UA	14.08	0.54	0.09	2.18	16.89	-2.12	-11%
IE	allocation without UA	0	0.22	0.58	0	0.8		
	allocation with UA	0	0.2	0.58	0	0.78	-0.02	-3%
IT	allocation without UA	26.7	1.36	8.46	0	36.52		
	allocation with UA	17	2.21	8.85	0	28.06	-8.46	-23%
LT	allocation without UA	4.04	0	0.04	1.26	5.34		
	allocation with UA	3.92	0	0.04	1.37	5.33	-0.01	0%
LU	allocation without UA	0	0	0.03	0	0.03		
	allocation with UA	0	0	0.03	0	0.03	0	0%
LV	allocation without UA	2.84	0	0	0.92	3.76		
	allocation with UA	2.76	0	0	1	3.76	0	0%
MT	allocation without UA	0	0.53	0	0.15	0.68		
	allocation with UA	0	0	0.53	0	0.53	-0.15	-22%
NL	allocation without UA	0	0.17	0.65	0	0.82		
	allocation with UA	0	0.11	0.71	0	0.82	0	0%
PL	allocation without UA	51.06	3.97	0.14	8.22	63.39		
	allocation with UA	47.18	6.61	0.14	9.45	63.38	-0.01	0%

PT	allocation without UA	15.69	0.69	0.34	3.02	19.74		
	allocation with UA	11.52	1.55	0.33	2.69	16.09	-3.65	-18%
RO	allocation without UA	22.28	0	0.11	3.13	25.52		
	allocation with UA	22.08	0	0.11	3.3	25.49	-0.03	0%
SE	allocation without UA	0	0.13	1.09	0	1.22		
	allocation with UA	0	0	1.21	0	1.21	-0.01	-1%
SI	allocation without UA	1.53	0	0.48	0.64	2.65		
	allocation with UA	1.5	0	0.5	0.64	2.64	-0.01	0%
SK	allocation without UA	9.3	0	0.02	1.43	10.75		
	allocation with UA	9.17	0	0.02	1.57	10.76	0.01	0%
EU27	allocation without UA	201.12	47.48	27.06	32.46	308.12		
	allocation with UA	169.99	53.26	31.05	33.73	288.03	-20.09	-7%
UA	UA	23.19	0.05	0	2.18	25.42		
EU27+UA	allocation with UA	193.18	53.31	31.05	35.91	313.45		

Source: Bruegel.

Emerson (2023) estimated that in 2022, Ukraine would have obtained €9 billion cohesion policy funding. Our estimate is lower than the estimate of Emerson (2023), because he simply scaled Ukraine's possible cohesion policy funding the funding of Poland and Romania by using population size, while we use the exact methodology from Common Provision Regulation (CPR) 2021/1060, including the overall cap per country. Similarly, the leaked Council calculation as reported by the Financial Times⁶², suggested €61 billion in cohesion policy funding for Ukraine in 2021-2027, which is double our estimate. Quite likely, this Council calculation did not take into account the 2.3 percent of GDP cap. Furthermore, the leaked Council calculation predicted that nine EU member states would no longer be eligible for CF. We only predict that Malta and Cyprus would no longer be eligible.

62 Henry Foy, 'EU estimates Ukraine entitled to €186bn after accession', *Financial Times*, 4 October 2023, <https://www.ft.com/content/a8834254-b8f9-4385-b043-04c2a7cd54c8>.